

Project Evaluation Report

Report title:	Discovery Project 2 Midline Evaluation Report
Evaluator:	Oxford Policy Management
GEC Project:	Discovery Project
Country	Kenya
GEC window	GEC-Transition
Evaluation point:	Midline
Report date:	August 2019
Project Response:	<u>Annex 17</u>

Notes:

Some annexes listed in the contents page of this document have not been included because of challenges with capturing them as an A4 PDF document or because they are documents intended for programme purposes only. If you would like access to any of these annexes, please enquire about their availability by emailing uk_girls_education_challenge@pwc.com

Discovery Project Phase 2: Midline evaluation report

Oxford Policy Management

31 August 2019

About Oxford Policy Management

Oxford Policy Management is committed to helping low- and middle-income countries achieve growth and reduce poverty and disadvantage through public policy reform.

We seek to bring about lasting positive change using analytical and practical policy expertise. Through our global network of offices, we work in partnership with national decision makers to research, design, implement, and evaluate impactful public policy.

We work in all areas of social and economic policy and governance, including health, finance, education, climate change, and public sector management. We draw on our local and international sector experts to provide the very best evidence-based support.

Oxford Policy Management Limited
Registered in England: 3122495

Level 3, Clarendon House
52 Cornmarket Street
Oxford, OX1 3HJ
United Kingdom

Tel: +44 (0) 1865 207 300
Fax: +44 (0) 1865 207 301
Email: admin@opml.co.uk
Website: www.opml.co.uk
Twitter: [@OPMglobal](https://twitter.com/OPMglobal)
Facebook: [@OPMglobal](https://www.facebook.com/OPMglobal)
YouTube: [@OPMglobal](https://www.youtube.com/OPMglobal)
LinkedIn: [@OPMglobal](https://www.linkedin.com/company/OPMglobal)

Executive summary

Background

The Discovery Project Phase 2 (DP-2) is a multi-country project implemented by the Discovery Learning Alliance (DLA) in Ghana, Kenya, and Nigeria with funding from the UK Department for International Development (DFID) via the Girls' Education Challenge Transition (GEC-T) phase window. The first phase of this project ran from 2014 to 2017. The second phase, DP-2, builds on DP-1 and is being implemented from 2017 to 2020. The focus of this evaluation report is on DP-2.

Theory of Change

The underlying theory behind DP-2 is that, in contexts where marginalised girls face various socioeconomic and cultural barriers (e.g. early or forced marriage, the unaffordability of school, and the perceived value of education, specifically girls' education) and where education facilities and the quality of education are lacking, the ability of girls to enrol, regularly attend, learn, and continue their schooling are greatly constrained. The DP-2 design takes a holistic approach of investing in activities that aim to improve the quality of education, the self-efficacy of girls, and the engagement of community members in schooling.

The project does this through the introduction and use of sustainable technology, quality educational content and TPD, remedial classes, and life skills programming for clubs, as well as by fostering more enabling environments at the school and community level to successfully address the barriers and to achieve improvements in girls' attendance and learning (literacy, numeracy, and self-efficacy) and in their transition through primary and on to secondary school.

The TOC sets out a number of assumptions at various levels. For our analysis, we break down the assumptions and identify three main causal assumptions for desired learning and transition outcomes.

1. TPD and educational media (for both in-school teaching and for after-school remedial classes) lead to improved teaching quality, better school attendance, and better learning outcomes.
2. Girls' clubs improve girls' self-confidence, life skills, and educational and life aspirations (i.e. self-efficacy, which in turn improves their school attendance, retention, and learning outcomes).
3. Joint school leadership and community involvement in action planning to identify and address barriers to girls' learning and transition leads to changed attitudes and beliefs on the part of community members and to concrete actions in support of girls' education, which in turn increase girls' abilities to enrol, attend, learn, and continue with their schooling.

It is worth mentioning that, although these assumptions are presented as a linear process, these pathways are of course far from being so and are affected by a range of factors that hinder or promote the assumed results. Furthermore, some elements of these pathways can materialise without DP-2. Throughout our impact evaluation, therefore, we examine the broader context within which DP-2 functions to understand its contribution according to the context in each country.

Evaluation methods

The evaluation is a mixed-methods, theory-based evaluation (TBE). It is designed as a longitudinal evaluation with three rounds: baseline in 2018, midline in 2018, and endline in 2020. It includes a quasi-experimental impact evaluation, a qualitative impact evaluation, and a process evaluation.

Learning outcomes

Cohort	Baseline treatment	Midline treatment	Difference baseline to midline treatment	Baseline control	Midline control	Difference baseline to midline control	DID (treatment – control difference)
Literacy							
Ghana	23.9	31.9	9.1***	24.4	31.4	10.7***	-1.1
Kenya	56.3	61.0	5.5***	55.9	60.4	3.2***	0.7
Kenya (Wajir)	42.7	45.2	3.0	40.5	43.9	-4.8	3.5
Nigeria	2.1	7.8	6.4***	2.6	5.1	3.0***	3.8***
Numeracy							
Ghana	57.1	62.2	5.7***	57.2	61.2	6.2***	0.3
Kenya	51.9	58.9	6.9***	50.8	57.0	5.1***	1.1
Kenya (Wajir)	45.3	50.5	4.4**	44.3	47.1	-3.3	5.5*
Nigeria	33.3	47.0	15***	33.8	38.7	5.7***	9.3***

In Nigeria we find that DP-2 has had a strong and positive impact on both literacy and numeracy, far exceeding targets in both cases. Despite this undoubted positive outcome, it remains evident that learning outcomes for both literacy and numeracy remain behind curriculum expectations in Nigeria with the majority of girls likely to leave primary school without the ability to read English.

The evaluation does not find an impact on literacy or numeracy in Ghana or Kenya, for the overall samples. In Kenya in Wajir County, we do find a positive and statistically significant impact on numeracy, and a positive impact on literacy although this is not found to be statistically significant likely due to small sample sizes of girls in Wajir¹. It may be that impact takes longer to achieve in a context where baseline learning outcomes were better than in Nigeria.

DP-2 remedial classes and teacher training are found to be particularly supportive of improving learning outcomes in all three countries, demonstrated by regression analysis conducted to understand the predictors of improved learning outcomes. Across all three countries this analysis suggests that both remedial classes and DP-2 supported teacher training are positively associated with improvements in either literacy or numeracy. Qualitative research supports these findings. Across all three countries girls reported that remedial classes gave them a chance to go over complex concepts that they found difficult in the classroom, or to clarify any doubts they may have. With regards to DP-2 teacher training the girls' interviewed for the qualitative research across all three countries reported observing improvements in teachers' style and engagement with students. In particular they

¹ The sample was not designed to look specifically at impact in Wajir County.

reported that teachers were more receptive to being asked questions during and after lessons.

Sub-group analysis finds that poverty, disability, and experiences of physical punishment are associated with slower rates of improvement in learning outcomes.

Transition outcomes

The table below presents performance on the transition outcomes. We found that targets were met in Kenya and Nigeria, but not in Ghana. Whilst Ghana did not meet midline targets for transition, successful transition rates remain extremely high in Ghana at 96%, with almost no cohort girls dropping out of school and unsuccessful transition relating to grade repetition.

There are some differences in the pathways for successful transition across the three countries. Whilst within primary school progression is by far the most common transition pathway in all three countries, 12% of girls in Nigeria successfully transitioned a year early to Junior Secondary School (JSS), whilst in Kenya 10% of girls transferred to other primary schools because parents relocated or in search of lower cost or better quality schools.

The impact of DP-2 on transition from quantitative and qualitative findings suggest the importance of the CAP and DP-2 supported remedial classes in improving transition. Given that the GEC-T definition of unsuccessful transition includes grade repetition the link between DP-2 activities and transition is a complex process. Actions that address either attendance or learning outcomes are therefore likely to contribute to lower grade repetition rates. That CAP activities have been shown above to support improved attendance, through increased community level monitoring in Ghana and where working in Kenya, is likely to be in support of lower grade repetition. We also find evidence that remedial classes are positively associated with higher learning outcomes in all countries (through regression analysis presented in Section 3.1), and the clear success of remedial classes in Nigeria, which are also likely to be positively associated with lower grade repetition.

Baseline successful transition rate treatment (%)	Midline successful transition rate treatment (%)	Diff baseline–midline treat (% point)	Baseline successful transition rate control (%)	Midline successful transition rate control (%)	Diff baseline–midline control (% point)	DID (treat–contr diff) (% point)	baseline–midline target (% point)	% of target achieved
Ghana								
86.7	95.5	8.7***	88.3	97.2	9.6***	-0.3	1	0
Kenya								
86.8	97.0	10.6***	89.5	96.0	6.1***	3.3	1	330
Nigeria								
89.0	95.2	6.0***	88.1	90.6	1.7	3.7	1	370

Barriers to learning and transition

At midline, we found that the main barrier to learning and transition remains poverty. Household chores also remain as an important barrier to learning and transition in all three countries, but particularly in Ghana and Nigeria. School infrastructure also remains as a key barrier, particularly for Ghana and Nigeria. Distance to school emerged as a barrier in all three countries, in particular for children in rural communities, which is also linked to safety concerns when travelling to and from school, particularly in Ghana and urban Kenya. Weather conditions have emerged as a barrier to varying degrees across all three countries

A key barrier to highlight in Ghana and Nigeria that will become relevant at endline will be the availability of JSS, as cohort girls make the transition from primary school next year. The availability of JSS are significantly lower than primary schools in both countries significantly decreasing the opportunity for girls to attend school, as well as increasing the cost of reaching school, particularly for girls living in remote

Sustainability outcomes

DP-2's approach to sustainability has a heavy focus on the school and community levels. At the school level, DP-2 continues to strengthen positive school leaders to create a shared understanding of the value of education for all, including across parents and community members. This is supported by the identification of and investment in resource teachers. At the community level, DP-2 provides significant investment in community sensitisation and mentoring support to capacitate community members and schools to develop and implement Community Action Plans (CAP) to address barriers to education. At the systems level, DP-2 recognises the need to support change at the grassroots level with government mainstreaming to achieve systemic change and has committed to generating high-level commitment, ongoing support, and growing buy-in from government partners.

In this evaluation sustainability is measured for each DP-2 activity at three levels (community, school and system) against the overall GEC-T framework for sustainability. This framework measures the sustainability of GEC-T funded projects against a continuum of sustainability measured on a 0 – 4 scale, where a score of 0 would reflect “no sustainability” and a score of 4 would reflect an “established level of sustainability”.

Sustainability scores are presented in the table below, with targets in brackets. This presents a positive picture on the whole for sustainability with the majority of targets being met, and in some cases exceeded (for the system level in Nigeria and girls' clubs in Ghana).

At an aggregate level Ghana and Kenya score a 2 on the continuum of sustainability which relates to an “emerging” level of sustainability on the GEC-T continuum. This indicates that the evaluation finds evidence that there is improved practice and support for girls' education in areas that are being targeted by the project, but that this still requires significant support from DP-2. In Ghana this represents an improvement in the overall sustainability score over baseline, which is driven by improvements in the sustainability of its school-level activities and in particular girls' clubs where there is now a critical mass of schools who are implementing these. In Kenya there has been no change in sustainability overall since baseline, although we find a reduction in the sustainability of its community level activities. In particular, we find a reduced proportion of schools with an active CAP in place, which seems to be driven by a low level of community and parent engagement.

Sustainability						
	Community ML (target)	School			System ML (target)	Total
		Learning centres ML (target)	Teacher training ML (target)	Girls' clubs ML (target)		
Ghana	2 (2)	2 (2)	2 (2)	3 (2)	2 (2)	2
Kenya	1 (2)	2 (2)	2 (2)	2 (2)	1 (1)	2
Nigeria	3 (3)	2 (3)	3 (3)	2 (2)	3 (2)	3

Nigeria, which is rated as having the highest level of sustainability at midline, has been rated at a “becoming established” level of sustainability against the GEC-T continuum, an improvement over the “emerging” level of sustainability observed at baseline. This indicates that there is a critical mass of key stakeholders at different levels (including community leaders, head teachers or teachers, and Government officials) that have both been convinced of the benefits of DP-2 supported activities but also have demonstrated the capacity to begin to deliver these activities independently from DP-2. In particular improvements in overall sustainability have been driven by improvements at the system and community level. At the system level due to the systematic efforts to engage with government stakeholders at both local and state level and crucially with the Ministry of Budget and Planning who are key gatekeepers. At the community level in Nigeria improvements in sustainability have been generated by the highest level across countries of engagement of both community members and parents in CAP processes.

Gender equality and social inclusion (GESI)

DP-2 has the potential to be transformative in the way some of its activities are targeted to challenge inequitable gender norms, in particular the CAP processes, where working are identifying barriers to education specific to girls. Girls' clubs which implement the My Better World (MBW) curriculum have increased the confidence of girls to talk openly about ‘taboo topics’ and to discuss issues which can act as a barrier to education, such as menstrual hygiene. Whilst disability is a focus of GEC-T, it is not a specific focus of DP-2 and there are not specific interventions targeted at disability. As a consequence there are relatively few girls in the evaluation sample with a disability status and as a result extreme caution should be taken in the interpretation of analysis against disability status. Nonetheless, the evaluation finds no statistically significant difference in attendance rates between girls with a disability and other girls in the evaluation sample. Regression analysis suggests that having some form of disability negatively affects learning outcomes in Ghana and Kenya, but not in Nigeria. The results in Nigeria are unlikely to be robust given that just 1% of girls are reported to have a disability status.

Intermediate outcomes (IOs)

The table below presents performance on IOs. We indicate whether targets are presented in terms of absolute change (actual values) or relative to the counterfactual (DID).

IO	IO indicator	Baseline	Midline	Target achieved?
Attendance (actual values)	% of marginalised girls' attendance in schools throughout the life of the project	Ghana: 91.8% Kenya: 96.0% Nigeria: 80.8%	Ghana: 93.7% Kenya: 96.3% Nigeria: 79.8%	Ghana: Y Kenya: Y Nigeria: N
Teaching quality (DID)	Average number of numeracy/literacy teaching approaches attempted	New indicator	Ghana: 10 Kenya: 15 Nigeria: 12.5	Ghana: Y Kenya: Y Nigeria: Y
	Increased percentage of attempted strategies that are successful relative to the comparison group	New indicator	Ghana: maths: 35.3 English: -2.8 Kenya: maths: -12.8 English: 13.0 Nigeria: maths: 11.4 English: 33.5	Ghana: maths: Y English: N Kenya: maths: N English: Y Nigeria: maths: Y English: Y
	Increased percentage of teachers observed providing a safe and inclusive space for all students	New indicator	Ghana: 20.5 Kenya: 0.8 Nigeria: 17.3	Ghana: Y Kenya: N Nigeria: Y
	Increased percentage of teachers who score 'meet to high standard' on formative assessment	New indicator	Ghana: 15.2 Kenya: -4.2 Nigeria: 21.3	Ghana: Y Kenya: N Nigeria: Y
Attitudes and perceptions (actual values)	Percentage of cohort girls that aspire to complete university (provided no constraints)	Ghana: 52% Kenya: 74% Nigeria: 41%	Ghana: 41% Kenya: 84% Nigeria: 60%	Ghana: N Kenya: Y Nigeria: Y
Life skills (LS) and self-efficacy (SE) (DID)	% of girls' club members that can report either having used or intending to use additional knowledge, skills, or talents that they have learned from MBW (measured through performance on LS and SE scales)	New indicator	Ghana: SE: 6*** LS: 1 Kenya: SE: 0 LS: 2* Nigeria: SE: 2 LS: 2*	Ghana: SE: Y LS: N Kenya: SE: N LS: Y Nigeria: SE: N LS: Y

Attendance targets were successfully met in Ghana and Kenya, but not in Nigeria. The evaluation finds that the CAP process encouraged attendance in Ghana and Nigeria by influencing communities' attitudes towards schools and the workload of girls at home. In Ghana this was realised by focusing attention on monitoring of student attendance and through sensitisation of how time spent on household chores or economic activities affects attendance. In Nigeria, this was realised by schools working closely with parents through the CAP process to ease constraints around the payment of school fees, as well as sensitisation through local mosques.

Government and NGO support was reported to support attendance in Ghana and Kenya, for example, in Kenya the qualitative research indicated that community chiefs are now officially involved in the task of improving attendance.

Poverty remains a significant barrier to poverty, a factor outside of DP-2's control that was particularly prevalent in Nigeria and may explain why the attendance target was not met.

Teaching quality targets were fully met in Nigeria, mostly met in Ghana, and only two targets were met in Kenya. In Kenya DP-2 faced a series of contextual and implementation factors that may explain why not all teaching quality targets have not been met. In particular the turnover of teachers receiving DP-2 direct training in Kenya was double rates observed in Ghana and Nigeria. In Kenya there were also implementation challenges and most notably the finding that many teachers exposed to DP-2's direct training had not attended the full complement of training. These factors

are likely to explain the more moderate progress against teaching quality targets in Kenya.

Where CAP processes are functioning, participants in all three countries are able to articulate how concrete actions have been taken to reduce drop-out rates or improve attendance of girls facing barriers to education. However, there is significant variation in success of implementation across the three countries. The best implementation is observed in Nigeria where communities report having a sense of ownership over the process to a degree not observed in other countries. This sense of ownership over the CAP process is demonstrated in Nigeria by participants being able to clearly articulate the barriers to education specific to their communities, as well as being highly engaged in their solutions including making financial contributions.

In Ghana the process is working moderately well, with the majority of schools having a CAP in place, with communities involved in the CAP process though not to the degree of Nigeria, for example involvement of community members and parents was roughly half the level observed in Nigeria. Nonetheless, where CAP processes were in place, participants reported carrying out community level activities to address education barriers. In Ghana the CAP process was reported to be particularly vulnerable to turnover of head teachers.

In Kenya the CAP process has progressed the slowest, with a third of schools not having a CAP in place and lower participation of head teachers, community members and parents in the CAP process. The lower participation of these stakeholders with the highest stakes in addressing barriers to education dilutes the potential for real impact to be achieved through the CAP process in Kenya.

Self-efficacy targets were met in Ghana and life-skills targets were met in Nigeria and Kenya. Whilst both measures are likely to be supported by a range of interventions the most direct connection is to the DP-2 supported girls' clubs and the My Better World (MBW) curriculum in particular. Qualitative research indicates that girls' clubs have contributed positively to girls' self-confidence in all countries, identifying the MBW curriculum's use of 'role models' as particularly supportive in helping girls to realise that their aspirations are real and achievable.

Reflections on the TOC

Reflecting on the three causal assumptions identified in the DP-2 TOC discussed above, this evaluation finds evidence that in the main the TOC holds, although in some cases this is undermined by implementation challenges or contextual factors.

Where well implemented teacher training improves teaching quality, which supported by remedial classes leads to improved learning outcomes. In Nigeria in particular we find that teacher training is well implemented and that DP-2 has in most cases introduced remedial classes for the first time with the evaluation finding evidence that both contribute to improved learning outcomes. In addition, qualitative research suggests that there is potential that improvements in learning outcomes will reduce grade repetition rates (and thus improve transition as measured by GEC-T), although the evaluation does not identify this quantitatively. This is contrasted with Kenya which is hampered by poorer implementation discussed above but also a context of higher teacher turnover, a contextual factor that directly threatens the DP-2 TOC in Kenya. The TOC also expects that teacher training and remedial classes will lead to improved attendance. The evaluation does not find evidence to support this assertion, albeit in a context where attendance rates were already high at baseline, particularly in Ghana

and Kenya. In relation to attendance poverty is identified as the main barrier to attendance, a contextual factor outside of the control of DP-2.

The DP-2 TOC expects that girls' clubs improve girls' self-efficacy and life skills.

The evaluation finds evidence that this assertion holds with positive impact on self-efficacy in Ghana and on life skills in Kenya and Nigeria, effects that are stronger for girls who attend girls' clubs. The evaluation finds only limited evidence to support the next link in the causal chain which links improved self-efficacy and life skills to improvements in attendance, retention, and learning outcomes. Whilst regression analysis finds that higher levels of self-efficacy contribute positively to improvements in learning outcomes in Nigeria this is not found in other countries. However, it is important to note that improving self-efficacy in particular is a long term process and it is not unreasonable to expect that it would be difficult to measure the full realisation of further gains from improved self-efficacy within just a year of DP-2 implementation particularly with the relatively recent introduction of the MBW curriculum.

The DP-2 TOC expects that community action planning (CAP) processes will lead to concrete actions to address barriers to girls' education.

Where CAP processes are well functioning – and in particular in Ghana and Nigeria – the evaluation finds evidence to support this statement finding evidence of real actions taken in schools and communities to address barriers, with evidence suggesting that concerted efforts to engage community members in identifying barriers and solutions in the two countries was critical to success. This is compared to Kenya where community involvement was lower. At this stage the evaluation does not find strong evidence to support the next link the causal chain which asserts that these actions will improve enrolment, attendance, learning and retention. It would be expected that the concrete actions taken to address barriers to girls' education would improve attendance rates, which would then subsequently lead to improved learning outcomes. At this stage we do not find that DP-2 has had an impact on attendance in any country, though this may reflect that these changes take longer to play out than afforded by the comparison between baseline and midline.

Recommendations

Teacher training

DP-2 should review the implementation of the direct training component, particularly in Kenya where the evaluation finds evidence that teachers do not receive the full complement of training expected. This is crucial given the cascade model of training, where teachers who receive direct training are expected to pass on this knowledge to others through 'step-down training'. DP-2 should also review the implementation of the step-down training, with the evaluation finding evidence that this occurs in the main over a total of one to four hours, perhaps insufficient to impart the full learning from direct training which occurs over several days. Finally, step-down training could be improved by actively identifying suitable step-down champions who would retain active responsibility for managing step-down training, important given the high observed rates of teacher turnover.

Remedial classes

DP-2 should review its remedial class offer in Kenya. In particular, and at odds with Government of Kenya policy, it is reported that the practice of charging a fee for remedial classes not supported by DP-2 this may cause teachers to prioritise these other remedial classes, which are likely to support only girls who can afford fees. DP-2

should seek strong action by MoE/TSC and head teachers to assign resource teachers to DP-2 remedial classes and to ensure that these get prioritised in practice.

Video and digital content

DP-2 should consider external threats to its learning centres, in particular access to electricity, with the evaluation finding an increase in the proportion of schools without electricity particularly in Nigeria and to some extent in Kenya. This could be resolved through funds generated through the CAP process, for example the purchase of solar panels or fuel costs for generators – which were provided to almost all schools by DP-2.

CAP process

DP-2 should learn from the positive experience of the CAP implementation in Nigeria. In particular how Nigeria has engendered high ownership among critical stakeholders including head teachers, community members, and parents, who have the biggest stakes in the success of activities supported by the CAP. DP-2 could support this engagement by more clearly insisting on a fixed membership of the CAP process. Although there are guidelines on participation, in Kenya in particular the evaluation finds significantly lower participation of head teachers and community members.

Girls' clubs

DP-2 should review how widespread the practice of charging fees for girls' club is in Kenya and Nigeria, which was observed as a common in qualitative research albeit from the small sample size visited. This may exclude the most marginalised of girls – though quantitative evidence suggests that there is no evidence of systematic exclusion of marginalised girls. There is the potential to link this to other project activities, such as the CAP process, which has the potential to provide support to the most marginalised girls if the practice of charging fees in Kenya and Nigeria remains necessary.

Table of contents

Executive summary	i
List of tables, figures, and boxes	xiii
List of abbreviations	xvii
1 Background to the project.....	1
1.1 Project TOC and beneficiaries	1
1.1.1 TOC	1
1.1.2 Key activities and their implementation status	5
1.1.3 Project outputs, IOs, and outcomes	9
1.1.4 Project beneficiaries	11
1.2 Project context	14
1.2.1 Ghana	14
1.2.2 Kenya	16
1.2.3 Nigeria	18
1.3 Key evaluation questions and role of the midline	19
1.3.1 Overview of the evaluation design	20
1.3.2 Key evaluation questions and role of the midline	21
1.3.3 Learning and transition cohort	23
1.3.4 Midline data collection	24
3 Key outcome findings	48
3.1 Learning outcomes.....	48
3.1.1 Measurement of pupil learning	48
3.1.2 Impact of DP-2 on learning outcomes	52
3.1.3 Changes over time in subtask performance	59
3.1.4 Contributors to learning outcomes	64
3.1.5 Subgroup analysis of the learning outcomes	73
Predictors of learning achievement at midline	91
3.1.6 Conclusion	97
3.2 Self-efficacy outcome	98
3.2.1 Defining self-efficacy	99
3.2.2 Impact of DP-2 on self-efficacy	100
3.2.3 Sub-group analysis	112
3.2.4 Conclusion	113
4 Transition outcome	114
4.1 Defining transition	114
4.2 Impact of DP-2 on transition and performance against targets	116
4.2.1 Transition and the CAP process	118
4.2.2 Transition and DP-2 supported remedial classes	119
4.2.3 Transition pathways at midline	121
4.3 Barriers to successful transition	123
4.3.1 Household poverty as a barrier to progression and transition	123
4.3.2 Risks of pregnancy and parents' aspirations of marriage as a barrier to progression and transition	125
4.3.3 Government policies and barriers to transition	126

4.4	Target setting for the transition outcome.....	127
4.5	Conclusion	128
5	Sustainability outcome.....	130
5.1	Background	130
5.2	Assessment approach.....	130
5.3	Data sources for assessment.....	133
5.4	How sustainable is DP-2 in Ghana?	133
5.5	How sustainable is DP-2 in Kenya?	140
5.6	How sustainable is DP-2 in Nigeria?.....	146
5.7	DP-2's response on the sustainability outcome	152
6	Key IO findings	153
6.1	Attendance	153
6.1.1	Overview of findings against the logframe indicator	154
6.1.2	Impact of DP-2 on attendance	155
6.1.3	Enablers of attendance as part of DP-2	156
6.1.4	Other enablers of increased attendance	157
6.1.5	Subgroup analysis for the attendance outcome	158
6.1.6	Quality of attendance data	163
6.1.7	Conclusion	164
6.2	Quality of teaching	164
6.2.1	Measurement of teaching quality	165
6.2.2	Overview of the findings against the logframe indicators	167
6.2.3	DP-2 training sessions and support to teachers	170
6.2.4	Implementation of DP-2 training sessions at the school level	170
6.2.5	Impact of DP-2 on teaching quality	180
6.2.6	Further differences between treatment and control lessons	190
6.2.7	Conclusion	196
6.3	Community attitudes and perceptions.....	197
6.3.1	Overview of findings against the logframe indicators	197
6.3.2	Training and development of the community action plans	200
6.3.3	Objectives of the community action plans and their implementation	206
6.3.4	Self-reported outcomes of the CAP process	214
6.3.5	Other reasons for changes in community attitudes and behaviours	217
6.3.6	Conclusion	218
6.4	Life skills.....	220
6.4.1	Overview of the findings against the logframe indicators	220
6.4.2	Implementation of the DP-2 girls' clubs	222
6.4.3	Quantitative assessment of life skills	233
6.4.4	Conclusion	235
6.5	Project checks on IO indicators.....	236
7	Conclusions and recommendations.....	237
7.1	Conclusions.....	237
7.1.1	Profile of project beneficiaries and barriers to learning and transition	237
7.1.2	Literacy and numeracy learning outcomes	238

7.1.3	Self-efficacy outcome	239
7.1.4	Transition outcome	240
7.1.5	Sustainability score	240
7.1.6	IOs	242
7.1.7	Community attitudes and perceptions	244
7.1.8	Life skills	245
7.1.9	GESI	246
7.2	Reflections on the ToC.....	247
7.3	Recommendations	250
7.3.1	Recommendations for teacher training	250
7.3.2	Recommendations for remedial classes	251
7.3.3	Recommendations for use of video and digital content	251
7.3.4	Recommendations for the CAP process	251
7.3.5	Recommendations for girls' clubs	252

List of tables, figures, and boxes

Table 1. Risks and assumptions of DP-2.....	4
Table 2. Key project activities and their implementation status	6
Table 3. Beneficiaries' grades and ages.....	13
Table 4. Beneficiaries matrix	13
Table 5. DP-2 key evaluation questions	21
Table 6. DP core questions for the evaluation.....	22
Table 7. Midline quantitative data collection tools	24
Table 8. Midline qualitative data collection tools, their purposes, and respondents	25
Table 9: Process evaluation data collection tools and purpose.....	26
Table 10. Midline sample of schools and attrition.....	28
Table 11. Midline sample of cohort girls and attrition	29
Table 12. Learning cohort by grade at midline	32
Table 13. Learning cohort by age at midline.....	32
Table 14. Proportion of girls who reported having a disability at baseline and midline	35
Table 15. Security at school at midline and baseline.....	41
Table 16. State of school facilities at midline and baseline	43
Table 17. English literacy subtask	49
Table 18. Numeracy subtasks	51
Table 19. Learning outcome targets at midline (T = 0.25 SD).....	52
Table 20. Literacy and numeracy scores at midline	52
Table 21. Literacy scores from baseline to midline.....	54
Table 22. Impact of DP-2 on literacy scores in Kenya, by sampling strata and for Wajir	54
Table 23. Literacy results compared to targets.....	56
Table 24. Numeracy scores from baseline to midline.....	56
Table 25. Impact of DP-2 on numeracy scores in Kenya, by sampling strata and in Wajir.....	56
Table 26. Numeracy results compared to targets.....	59
Table 27. Foundational literacy skills gap: Ghana	61
Table 28. Foundational literacy skills gap: Kenya.....	62
Table 29. Foundational literacy skills gap: Nigeria	62
Table 30. Foundational numeracy skills gap: Ghana.....	63
Table 31. Foundational numeracy skills gap: Kenya	63
Table 32. Foundational numeracy skills gap: Nigeria	64

Table 33. Attendance at remedial classes.....	66
Table 34. Baseline learning levels and poverty rates by attendance at remedial classes	69
Table 35. Literacy scores between baseline and midline (treatment group limited to girls attending remedial classes)	71
Table 36. Numeracy scores between baseline and midline (treatment group limited to girls attending remedial classes)	71
Table 37. Learning scores by region	74
Table 38. Learning scores of key subgroups.....	76
Table 39. Learning outcomes amongst students who experience key barriers.....	78
Table 40. GSE psychometric scale.....	100
Table 41. Impact of DP-2 on self-efficacy (full sample)	100
Table 42. GSE statements, by country and survey round for the treatment group.....	102
Table 43. Impact of DP-2 on self-efficacy (girls' club members only).....	105
Table 44 Self-efficacy scores of key subgroups	112
Table 45. Transition pathways according to the GEC-T definition.....	115
Table 46. Impact of DP-2 on girls' transition.....	116
Table 47. Transition pathways at midline in control and treatment schools	121
Table 48. Target setting for the transition outcome	128
Table 49. GEC-T sustainability scorecard guidance.....	131
Table 50. DP-2 sustainability headline indicators	132
Table 51. Ghana sustainability scores.....	133
Table 52. Kenya sustainability scores	140
Table 53. Nigeria sustainability scores	146
Table 54. Changes needed for sustainability.....	152
Table 55. IO logframe indicators on attendance.....	154
Table 56. Impact of DP-2 on attendance	155
Table 57. Attendance rates across barriers at midline for the treatment group.....	159
Table 58. IO logframe indicators on teaching quality.....	167
Table 59. Number of teachers who attended direct training and percentage of teachers who left	171
Table 60. Percentage of schools that have delivered stepdown training.....	172
Table 61. Exposure of sampled teachers to DP-2 training sessions	176
Table 62 Exposure of sampled teachers to DP-2 training sessions (Kenya).....	177
Table 63. Impact of DP-2 on number of numeracy teaching approaches attempted .	183
Table 64. Impact of DP-2 on percentage of attempted strategies that are successful	184
Table 65. Impact of DP-2 on providing a safe and inclusive space	185

Table 66. Impact of DP-2 on attempting and successfully using assessment strategies	187
Table 67. IO logframe indicators on attitudes and perceptions	198
Table 68. DP-2 impact on girls' aspirations	216
Table 69. IO logframe indicators on life skills	221
Table 70. Life skill scale statements	233
Table 71. DP-2 impact on life skills.....	234
Figure 1. DP-2 TOC	2
Figure 2: Summary of the evidence base for the three casual assumptions	3
Figure 3. DP-2 project areas in Ghana	15
Figure 4. DP-2 project areas in Kenya.....	17
Figure 5. DP-2 project areas in Nigeria: Kano state	19
Figure 6. Midline data collection timeline.....	28
Figure 7. Use of physical punishment.....	45
Figure 8. Main factors associated with change in learning outcomes (Ghana)	81
Figure 9. Main factors associated with change in learning outcomes (Kenya).....	81
Figure 10. Main factors associated with change in learning outcomes (Nigeria).....	82
Figure 11. Main factors associated with achievement (Ghana).....	92
Figure 12. Main factors associated with achievement (Kenya)	92
Figure 13. Main factors associated with achievement (Nigeria)	93
Figure 14. Data sources for assessing midline sustainability levels	133
Figure 15. Format of stepdown training	173
Figure 16. Proportion of teachers who received support visits in the last term	178
Figure 17 Proportion of teachers who received support visits in the last term (Kenya)	179
Figure 18. Activities conducted by DP-2 trainers during support visits	180
Figure 19. Classroom environment, Ghana.....	191
Figure 20. Classroom environment, Kenya	191
Figure 21. Classroom environment, Nigeria	192
Figure 22. Maths teaching and learning approaches, Ghana.....	193
Figure 23. Maths teaching and learning approaches, Nigeria	193
Figure 24. English teaching and learning approaches, Nigeria 1	194
Figure 25. English teaching and learning approaches, Nigeria 2	195
Figure 26. Assessment methods, Nigeria (midline)	196
Figure 27. Head teacher attendance at CAP-related training sessions.....	201

Figure 28. Proportion of schools that reported having and were able to show a CAP 204	
Figure 29. Involvement in the development of the CAP	205
Figure 30. Objectives stated in the community action plan	207
Figure 31. Proportion of girls who are a member of a DP-2 girls' club overall and by poverty quartiles	223
Figure 32. Frequency of girls' club meetings	224
Figure 33. Proportion of girls that report engaging in different activities as part of the girls' club.....	229
Box 1. Definition of disability.....	33
Box 2. Project's contribution: context.....	47
Box 3. Subtask proficiency score bands	60
Box 4. DP-2's design of remedial classes	65
Box 5. DP-2 girls' clubs.....	105
Box 6. DP-2's definition of transition.....	114
Box 7. DP-2's design of TPD	170
Box 8. DP-2's design of the CAP process	200
Box 9. DP-2's design of the girls' (and boys') clubs.....	222
Box 10. Project checks on intermediate outcomes.....	236
Box 11. Project contribution: response to conclusions and recommendations.....	252

List of abbreviations

ALP	Accelerated Learning Programme
BOM	Board of Management
CAMFED	Campaign for Female Education
CAP	Community Action Plan/Community Action Planning
CEM-DID	Coarsened Exact Matching Difference-in-Difference
DFID	Department for International Development
DID	Difference-in-Difference
DLA	Discovery Learning Alliance
DP	Discovery Project
DP-2	Discovery Project Phase 2
EGMA	Early Grade Maths Assessment
EGRA	Early Grade Reading Assessment
GEC	Girls' Education Challenge
GEC-T	GEC Transition Window
GES	Ghana Education Service
GESI	Gender Equality and Social Inclusion
GSE	Generalised Self-Efficacy
IO	Intermediate Outcome
JHS	Junior High School
JSS	Junior Secondary School
KNUT	Kenya National Union of Teachers
L4C	Leadership For Change

LGA	Local Government Area
LOI	Language of Instruction
LS	Life Skills
MBW	My Better World
MOE	Ministry of Education
NGO	Non-Governmental Organisation
OECD–DAC	Organisation for Economic Cooperation and Development– Development Assistance Committee
PPI	Poverty Probability Index
PTA	Parent–Teacher Association
PTR	Pupil–Teacher Ratio
SBMC	School-Based Management Committee
SD	Standard Deviation
SE	Self-Efficacy
SeGMA	Secondary Grade Maths Assessment
SeGRA	Secondary Grade Reading Assessment
SMC	School Management Committee
SUBEB	State Universal Basic Education Bureau
TBE	Theory-Based Evaluation
TOC	Theory of Change
TPD	Teacher Professional Development
TSC	Teacher Service Commission
WPM	Words-Per-Minute

1 Background to the project

DP-2 is a multi-country project implemented by the DLA with funding from DFID via the GEC-T phase window.

The first phase of this project (referred to as DP-1) ran from 2014 to 2017. The second phase (referred to as DP-2) builds on DP-1 and is being implemented from 2017 to 2020. The focus of the evaluation and report is on the second phase of the project implementation, i.e. DP-2.

DP-2 works with schools and communities in northern Ghana (Northern region), northern Nigeria (Kano state), and Kenya (Kajiado, Kiambu, Machakos, Nairobi, and Wajir counties). The project focuses mainly on primary schools, and particularly girls in the second half of primary school. It is working in primary schools that were already part of DP-1. In addition, DP-2 also works with junior secondary schools in Ghana and Nigeria, and to a limited extent with secondary schools in Kenya.

DP-2 aims to increase girls' learning outcomes in numeracy and English literacy, their self-esteem and self-efficacy, and successful completion of the primary cycle and transition into secondary school. DP-2 aims to do this through:

- extending sustainable technology, educational content, and TPD to improve the quality and gender-inclusiveness of education for girls at the junior secondary level;
- focusing primary school TPD and content for the classroom and for remedial classes on strategies for building foundational literacy and numeracy while reinforcing child-centred, gender-responsive approaches that develop critical thinking, creativity, collaboration, and communications skills;
- producing new life skills video programming created in collaboration with the Campaign for Female Education (CAMFED) and their MBW curriculum to develop a range of practical knowledge and real-world skills for girls who are part of Girls' Clubs; and
- engaging communities and supporting them to address persistent barriers to girls' learning, progression, and transition.

1.1 Project TOC and beneficiaries

1.1.1 TOC

The underlying theory behind DP-2 is that, in contexts where marginalised girls face various socioeconomic and cultural barriers (e.g. early or forced marriage, the unaffordability of school, and the perceived value of education, specifically girls' education) and where education facilities and the quality of education are lacking, the ability of girls to enrol, regularly attend, learn, and continue their schooling are greatly constrained. The DP-2 design takes a holistic approach of investing in activities that aim to improve the quality of education, the self-efficacy of girls, and the engagement of community members in schooling.

The project does this through the introduction and use of sustainable technology, quality educational content and TPD, and life skills programming for clubs, as well as by fostering more enabling environments at the school and community level to

successfully address the barriers and to achieve improvements in girls' attendance and learning (literacy, numeracy, and self-efficacy) and in their transition through primary and on to secondary school.

Figure 1 shows DP-2's TOC, which has since been updated since baseline, in particular to include a careful articulation of the assumptions underpinning causal pathways. The TOC presented in Figure 1 does not explicitly include the ALP component that was introduced after the baseline, and that specifically targets students with the poorest academic performance.

Figure 1. DP-2 TOC

The Discovery Project Theory of Change				Assumptions
Outcomes	Learning	Transition	Sustainability	With broad teacher, family, community and government support, girls' learning will improve and they will be empowered to continue their education and transition up
Intermediate Outcomes	<ol style="list-style-type: none"> Improved attendance; Improved quality of teaching and learning; Increased girls' life skills; Improved boy, family and community attitudes and behaviours. 			Girls will be more engaged in school and inspired as the perceived value of education rises and the enabling environment in the family, community and classroom improves. Visual learning motivates teachers, shows real world application and improves comprehension.
Outputs	<ol style="list-style-type: none"> Teachers gain skills, resources and confidence; Communities take action to advance girls' education and create an enabling environment; Girls gain life skills training, mentoring support and access to resources; School and government partners take the lead on integration, monitoring, and follow-up support. 			By providing training and resources to teachers, mentors and school community leaders, exposing communities to gender equality and education for all messaging through outreach and mobilising community action in response, project participants and stakeholders will have the intentions and tools to achieve the stated outputs.
Activities	<ol style="list-style-type: none"> Engage school and community leaders Train and coach teachers with MOE partners Install A/V technology and video content in JS schools; Create new life skills content (with Camfed) Support girls and boys club mentors with training and links to new school and community resources Support community action planning and execution, targeting attendance, transition and learning barriers 			Improving the quality of education (better gender responsive teaching and multi-media resources) will improve performance and encourage more girls and family to invest in school. By educating and empowering girls, their families and the community around them, the value of girls education will be clear and prioritised. In turn, decision makers will support girls' learning and transition to higher level for education.
Barriers	<p>Demand: Socio-cultural norms, costs, the perceived value is not well established – If investments in girls education 'end up in someone else's kitchen'; it is not a good investment of limited resources, limited self-advocacy.</p> <p>Supply: need to improve quality of education through teacher training, etc. to ensure the actual value of education- why go if learning is limited?</p>			

The TOC sets out a number of assumptions at various levels. For our analysis, we break down the assumptions and identify three main causal assumptions for desired learning and transition outcomes.

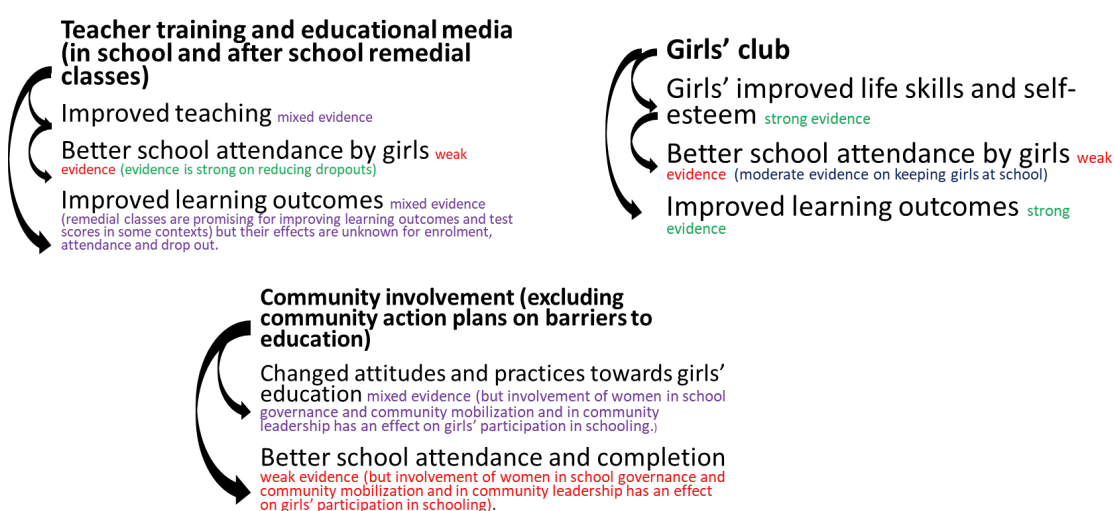
1. TPD and educational media (for both in-school teaching and for after-school remedial classes) lead to improved teaching quality, better school attendance, and better learning outcomes.
2. Girls' clubs improve girls' self-confidence, life skills, and educational and life aspirations (i.e. self-efficacy, which in turn improves their school attendance, retention, and learning outcomes).
3. Joint school leadership and community involvement in action planning to identify and address barriers to girls' learning and transition leads to changed attitudes and beliefs on the part of community members and to concrete actions in support of girls' education, which in turn increase girls' abilities to enrol, attend, learn, and continue with their schooling.

It is worth mentioning that, although these assumptions are presented as a linear process, these pathways are of course far from being so and are affected by a range of factors that hinder or promote the assumed results. Furthermore, some elements of these pathways can materialise without DP-2. Throughout our impact evaluation,

therefore, we examine the broader context within which DP-2 functions to understand its contribution according to the context in each country.

In the baseline report, we assessed the strength of each of these assumptions through a review of existing literature on the subject. Figure 2 summarises the evidence base in relation to the three main causal assumptions underpinning the DP-2 ToC. As shown, the causal links between teacher training and reduction in pupil drop-out, and between girls' clubs and improvements in girls' soft skills and learning outcomes, are supported by strong evidence. Evidence supporting the project assumption that teacher training leads to improved teaching and learning outcomes is mixed, as is the assumption that community involvement in girls' education leads to changes in attitudes and practices towards girls' education. The effect of girls' clubs on improving attendance in school and the effect of remedial classes in improving learning outcomes are promising, but the evidence is moderate, while the connection between community engagement in the education of girls and better school attendance and completion is under-researched. Attendance as an outcome of teacher training and girls' clubs is not suggested in the findings, although community-based activities could be argued to be effective in dealing with it.

Figure 2: Summary of the evidence base for the three casual assumptions



The analysis of the literature presented in the baseline report examining the main causal linkages underpinning the DP-2 project logic shows that the theory is plausible in the sense that it is supported by prior evidence suggesting that the activities (with a few exceptions highlighted as having weak evidence in Figure 2), if implemented, will lead to the desired results. DP-2, as a multi-component programme, is potentially able to improve both school participation and learning outcomes because it is capable of addressing multiple barriers to school and studying faced by marginalised households. However, the success of the project implementation at the outcome level will also depend on external factors beyond the control of DP-2. The DP-2 TOC identifies a limited number of contextual factors as mediating variables for the progress of the project implementation.

Table 1 provides a list of risks and a fuller list of contextual assumptions for the three key causal intervention packages. While assumptions, risks, and alternative explanations are subject to ongoing analysis at baseline, midline, and endline, the list has been completed with the barriers to school and learning across the DP-2 countries

according to our baseline report. Our baseline analysis allowed us to conclude that the main drivers of girls' educational marginalisation in all three countries are poverty and extreme poverty, as well as the remote and rural locations where children live. The country-specific drivers include the inadequate school infrastructure in Nigeria; overcrowded classes and a lack of teachers in Nigeria and in formal schools in Nairobi, Kenya; a lack of school space in Ghana; and a lack of qualified teachers in non-formal schools and in the semi-arid/arid regions of Kenya, as well as unsafe journeys to school. These contextual factors, which are largely outside the control of the programme, undoubtedly affect the extent to which implementation of DP-2 activities is likely to lead to change in the specified outcomes. We expect that poverty will remain a considerable barrier to achieving improvements in learning and transition.

Table 1. Risks and assumptions of DP-2

	Teacher training	Girls' clubs	Community involvement
Assumptions about implementation and context (which, if not fully in place, will limit impact)	Teachers motivated to learn and put into practice their new skills and knowledge; parents and children are convinced that girls' education is worth investing in since teaching delivers; teachers who were previously trained stayed in their original schools; teachers have the basic skills and knowledge to be able to benefit from additional skills offered through training; teacher training improved attendance and children have support inside and outside the school to perform well; marginalised communities have the necessary resources to send their children to school regularly; remedial classes are tailored to the students' learning needs, and are free of charge; parents understand the importance of remedial classes and make their children available	Girls' clubs offer a safe environment for girls to contribute and learn; parents are convinced that clubs are worth investing in; clubs function properly with relevant content and curricula; schools are able to identify a suitable mentor with required commitment to support clubs; mentors follow the MBW curriculum; schools provide needed support for use of the learning centre (for example, generator fuel)	Community members are convinced that girls' education is worth investing in; communities can hold schools accountable for the outcomes of the services they provide; schools and communities have good relationships and communications; community members have relevant skills and knowledge and bring to bear available resources to contribute to improved educational access and outcomes
Risks identified in the literature	Teacher absenteeism; ² high teacher turnover, especially in rural areas; ³ school	Clubs re-state the same classroom environment of teaching (teacher	Power relations between head teachers, teachers, and community members; poor

² N. Chaudhury, J. Hammer, M. Kremer, K. Muralidharan, and H. Rogers (2006) 'Missing in action: teacher and health worker absence in developing countries', *Journal of Economic Perspectives* 20(1), pp. 91–116.

³ P. Bennell and K. Akyempong (2007) 'Teacher motivation in sub-Saharan Africa and South Asia', *Educational Papers*, DFID, London .

	Teacher training	Girls' clubs	Community involvement
	characteristics; ⁴ marginalised communities and families struggle with poverty and do not have resources to regularly send their children to school and encourage their transition; remedial classes are not free of charge so more marginalised families cannot afford them; teachers lack skills to teach remedial classes	dominance, punishment, gender bias, etc.); girls do not regularly attend schools and subsequently clubs for a range of reasons	communities do not necessarily have relevant resources, skills, and knowledge; community attitudes to girls' education are not supportive of it; parents do not prioritise children's schooling
Additional risks identified in the baseline study	Teacher training is targeted at a level that is too difficult for teachers to implement, which results in teachers maintaining traditional teaching approaches; English teachers do not have sufficient command of English to understand training content and deliver English language instruction according to expectations of country-level MOEs; In Nigeria, multilingual training delivery and follow-up support with lesson plan samples in basic English are not able to bridge the big gap in English proficiency among teachers	Clubs ask families for financial contribution which prevents poorer girls from participating in them. Club curricula are not designed to address barriers to school and learning that girls face	Community activities are not revised and are not up-to-date. Communities do not coordinate with schools for better results
Country-specific barriers	School infrastructure, lack of teachers, overcrowded classes, lack of space, unsafe journeys to school		
Common barriers	Poverty and extreme poverty, remote and marginalised locations		
Alternative explanations	Other projects	Other projects run by development partners and/or schools	Other community engagement projects or policies

1.1.2 Key activities and their implementation status

DP-2 is implemented in primary schools across the three countries, in JHS / JSS in Ghana and Nigeria, and in secondary schools in Kenya. The types of project activities differ by the level of schooling.

Table 2 outlines the full set of project activities that are being delivered in primary schools and summarises the implementation that has taken place so far. Activities that

⁴ Bennell and Akyaempong (2007); V. Robinson, C. Lloyd, and K. Rowe (2008) 'The impact of leadership on student outcomes: an analysis of the differential effects of leadership types', *Educational Administration Quarterly* 44, pp. 635–674.

take place in JHS/JSS schools and secondary schools are summarised below the table.

Project activities in primary schools in the three countries are at different stages of implementation. Roll-out has been slowest in Kenya, where several teacher training and community workshops had only just been completed or were still in progress at the time of the midline survey. The full details of the intervention roll-out in each country are presented in Annex 2.

Table 2. Key project activities and their implementation status

Description of activity	Implementation status
<p>TPD</p> <p>Grades targeted: Teachers across all primary school grades are targeted for direct training and follow-up coaching. In larger schools English and maths teachers in Primary 4 – 6 in Ghana and Nigeria and Primary 4 – 7 in Kenya are primarily targeted; where this is the case, teachers who do not benefit from direct training are targeted through step-down training. DLA provides training for teachers focusing on strategies for teaching foundational literacy skills (two sessions; five days total) and foundational numeracy skills (two sessions; four days total)</p> <p>A group of teachers (aimed at teachers who teach literacy and numeracy in the upper primary grades) attend teacher training delivered directly by DLA staff</p> <p>Teachers who have received direct training from DLA are called ‘resource teachers’. They are tasked with stepping down the training to other teachers in their schools and receive periodic refresher training and support</p> <p>DLA staff provide ongoing support to schools and teachers through regular monitoring and support visits, including observing teachers’ application of training and coaching and mentoring them over time to put what they have learned into practice</p> <p>Through a partnership with Cell-Ed, teachers are able to access good practice reminders, tips, and training materials through their mobile phones</p>	<p>Ghana: Roll-out of the two literacy training sessions and the two numeracy training sessions was completed in November 2018. Though piloted, Cell-Ed was not yet fully rolled out at the time of the midline survey</p> <p>Kenya: Roll-out of the two literacy training sessions and the two numeracy training sessions was completed by March 2019. Cell-Ed was in the process of rolling out at the same time as the midline survey took place</p> <p>Nigeria: Roll-out of the two literacy training sessions and the two numeracy training sessions was completed in February 2019. Cell-Ed was in the process of rolling out at the same time as the midline survey took place</p> <p>Cell-Ed had not yet been fully rolled out at the time of the midline survey and was therefore not a key focus for the midline evaluation</p>
<p>Provision of educational materials</p> <p><u>Grades targeted: All grades</u></p> <p>Most schools were already provided with TV and DVD sets and educational videos during</p>	<p>Ghana: Distribution of videos was completed in November 2018</p> <p>Kenya: Distribution of videos was completed in November 2018</p>

Description of activity	Implementation status
<p>DP-1. Secondary schools added in each country received these at the beginning of DP-2.</p> <p>As part of DP-2, DLA distributed additional video and digital content with a focus on literacy and numeracy</p>	<p>Nigeria: Distribution of videos was completed in December 2018</p>
<p>Support for remedial lessons (Accelerated Learning Programme (ALP))</p> <p><u>Grades targeted: Primary 4 – 6 in Ghana and Nigeria and Primary 4 – 7 in Kenya</u></p> <p>DLA supports teachers and school communities in setting up remedial classes for literacy and numeracy, targeted at the weakest learners. Learners are identified for these classes based on performance in bespoke learning assessments implemented by DLA and based on their performance at school.</p> <p>The ALP component was added to the original DP-2 design during the start-up phase of the project and is being implemented in two phases. The component reaches around 30% of project primary schools in the first phase (up to midline) and the remaining primary schools are intended to be reached in the second phase on the basis of a review by DLA, the FM and DFID.</p>	<p>Ghana: ALP orientation completed in September 2018</p> <p>Kenya: ALP Orientation completed in June 2018</p> <p>Nigeria: ALP orientation completed in July 2018</p> <p>Schools began implementing remedial classes after the ALP orientation</p>
<p>Support to girls' clubs</p> <p><u>Grades targeted: Primary 4 - 6 in Ghana and Nigeria, Primary 4 – 7 in Kenya are prioritised but girls from lower grades are not excluded from the clubs</u></p> <p>Most schools formed girls' clubs during DP-1. Even more have done so as part of DP-2</p> <p>Club mentors receive training to create a safe space and foster life skills in their charges, including leadership, self-confidence, self-worth, etc.</p> <p>DLA also provides schools with DLA-produced MBW videos and facilitation guides, and club mentors are trained and receive follow-up support on how to use these materials to foster life skills</p> <p>The roll-out of MBW through girls' and boys' clubs has so far been on a pilot</p>	<p>Ghana: Initial club mentor training was completed in October 2017. Distribution of MBW materials and training on them took place over several months between November 2018 and June 2019. This was thus still ongoing at the time of the midline survey period in June 2019</p> <p>Kenya: MBW materials were distributed in February/March 2019. Training on MBW materials was delivered in November 2018 and February 2019 in Nairobi and surrounding counties, and in January 2019 and June 2019 in Wajir</p> <p>Nigeria: Initial club mentor training was completed in August 2018. MBW materials were distributed by January 2019</p>

Description of activity	Implementation status
<p>basis, with plans to scale up after midline following a similar review as for the ALP component.</p>	
<p>CAP</p> <p><u>Grades targeted:</u> The activity focuses on addressing barriers to girls' education generally</p> <p>DLA provides head teachers, teachers, community leaders, and community members with training on CAP, including facilitating the development of a CAP with specific objectives to address barriers to girls' learning and transition</p> <p>There are two training sessions. Community Workshop I focuses on the identification of barriers, mapping of local assets, and developing an action plan to advance attendance, learning, and transition. Community Workshop II takes stock of progress in implementing the CAP and focuses on building partnerships to strengthen CAP impact</p> <p>In addition, DP-2 has added a new workshop called Leadership for Change (L4C), which brings together formal school and local Ministry of Education (MOE) leaders along with some of the same community workshop participants. L4C focuses on assessing CAP progress to date, identifying gaps where stronger leadership could enhance results, and re-emphasising the role of leaders in evidence-based planning and accountability for results</p>	<p>Ghana: Roll-out of the two community workshops was completed in July 2018. L4C training had not been delivered at the time of the midline survey.</p> <p>Kenya: Roll-out of the first community workshop was completed in July 2018. Roll-out of the second community workshop and of the L4C training was ongoing at the time of the midline survey</p> <p>Nigeria: Roll-out of the two community workshops was completed in April 2018 and roll-out of the L4C training had been completed at the time of the midline survey</p>
<p>Integration of MOE officials in training and monitoring</p> <p><u>Grades targeted:</u> This activity is targeted at engagement with MOE generally.</p> <p>The project considers the involvement of local government partners critical to the achievement of success and sustainability. Accordingly, by including MOE officials in the training sessions and actual monitoring and coaching of teachers, the project ensures that MOE officials are not only aware of project activities and benefits, but also able to be a part of them and to continue supporting worthwhile project-driven investments and activities after the life of the project</p>	<p>Engagement with MOE officials is continuous</p>

JHS / JSS schools in Ghana and Nigeria receive a more limited set of project activities. JHS / JSS schools are provided with educational materials and are included in the girls' club and CAP components. Teachers in JHS / JSS schools receive teacher training on general teaching pedagogy with some focus on literacy and numeracy and on use of educational media. Secondary schools in Kenya receive a light touch intervention, consisting of the provision of educational materials and involvement in CAP activities. Because the set of activities implemented in secondary schools in Kenya is much more limited, secondary school pupils in Kenya are counted as indirect rather than direct beneficiaries of DP-2.

Within primary schools, some aspects of the intervention are more directly targeted at middle and upper primary students as shown in Table 2. In light of major government and partner investments in early grade literacy and numeracy in all three countries, DP-2 focuses its teaching and learning interventions particularly on the middle to upper primary grades (Primary 4 – 6 in Ghana and Nigeria, Primary 4–7 in Kenya). Remedial lessons are targeted at girls (and boys) in the middle to upper primary grades with weak learning outcomes to improve their foundational literacy and numeracy skills. Similarly, girls' clubs are aimed primarily at girls from middle to upper primary, although girls from lower primary are not excluded from participating. Direct teacher training is targeted at all teachers; for larger schools, English and maths teachers in middle to upper primary are mainly targeted with other teachers expected to be reached through step-down training.

The evaluation focuses on a cohort of girls who are in Primary 5 at baseline. Between baseline and midline, the evaluation therefore focuses on the impact of DP-2 in primary schools, and specifically at the middle/upper primary level. At endline, the majority of girls in Ghana and Nigeria are expected to have transferred to JHS / JSS, and to have been in JHS / JSS for approximately two terms by the time of the endline data collection. The endline evaluation in Ghana and Nigeria will therefore focus on girls that have been exposed to DP-2 activities at middle/upper primary level for just over a year and to DP-2 activities at JHS/JSS level for just under a year (to the extent that they transfer into DP-2 treatment JHS / JSS). The evaluation does not assess the impact of DP-2 in lower primary. Since girls in lower primary are exposed to a more limited set of project activities and a more diluted version of the teacher training (with most teachers trained only through step-down training), one might expect the intervention to have less impact on learning and transition in lower primary, but the evaluation is not able to assess this. The evaluation focuses on Primary 5 English and mathematics teachers. The expectation is that while many Primary 5 teachers would be trained by DP-2 directly, some would receive step-down training. In practice, the proportion of sampled Primary 5 teachers in treatment schools who had received step-down training was too small to assess the effectiveness of the step-down training.

1.1.3 Project outputs, IOs, and outcomes

The project outputs are directly related to the project activities described above and are listed in the TOC in Figure 1.

According to the DP-2 TOC, there are three main outcomes: learning, transition, and sustainability.

- **Learning:** the learning outcome for DP-2 is divided into three categories: *literacy, numeracy, and self-efficacy*. Through *literacy and numeracy*, the project is looking to increase the foundational knowledge and mastery of English and maths skills at the primary school level and junior high school (JHS)/junior secondary school (JSS)⁵ level for marginalised girls in the target areas. DP-2 has defined *self-efficacy* as an outcome that refers to improving the self-esteem, confidence, and life skills of marginalised girls. Learning improvements across all three categories will better position them to achieve their educational and life goals.
- **Transition:** transition as an outcome for DP-2 is defined as marginalised girls transitioning within upper primary years and from primary to secondary school, or (for those that are unable to continue their education) transitioning to other appropriate employment, vocational training, or non-formal education opportunities after completing primary school. During the baseline, grade repetition was considered to be successful transition, but the project has since revised its definition of a successful transition, and grade repetition is now no longer considered as such.
- **Sustainability:** for this evaluation, sustainability is defined as ‘whether the project can demonstrate that the changes it has brought about which increase learning and transition through education cycles are sustainable’.⁶ We assess sustainability at three levels: *community, school, and system level*.

There are four IOs: attendance, quality of teaching, life skills, and community-based attitudes and behaviour change.

- **Attendance:** attendance as an IO assesses whether girls are attending school more regularly as a result of the project, for example due to increased enthusiasm for school, greater support on the part of the community for girls’ education, etc. Drawing on the experience of DP-1, the project believes that the appeal of the media centres along with more gender-responsive and girl-friendly school environments and generally improved teaching methods will result in greater enthusiasm for school on the part of students. This will be in addition to greater support on the part of parents and communities as a result of sensitisation efforts through the CAP process to support girls’ attendance.
- **Quality of teaching:** quality of teaching as an IO will look to demonstrate the degree to which the project has improved overall teacher quality (i.e. in the utilisation of effective numeracy and literacy teaching strategies and child-centred GESI-responsive approaches, as well as the use of media in the classroom), and the degree to which improved teaching links to better outcomes in the classroom, including encouraging girls to remain in school and transition to the next level. This outcome is a major focus of the project as the TOC is largely predicated on the assumption that improved teaching and a more welcoming and supportive environment for girls directly leads to better learning outcomes and encourages girls to continue in school.
- **Life skills:** Life skills will focus primarily on those girls engaged in girls’ clubs as part of the intervention. This smaller focus will allow the project to determine whether participation in these clubs has an appreciable effect on practical skills as well as linkages to learning outcomes, including self-efficacy. While girls will be the

⁵ In Ghana, girls transition into JHS, while in Nigeria, this phase of the education system is called JSS. We use the abbreviations JHS and JSS throughout the report.

⁶ GEC-T MEL Guidance Part Document.

primary focus of these efforts, those engaged in boys' clubs will also be queried to assess the degree to which participation affects their outlook, particularly regarding the education of girls.

- **Community attitudes and perceptions:** the attitudes and perceptions of community members as an outcome will look at measuring the general views and feelings towards girls' education and overall feelings about girls in their communities transitioning to higher levels of education among different community members. Specifically, this will mean looking at the overall level of support among parents for sending their children to school, and this will be compared and contrasted with the attitudes of both boys and girls in these same communities.

1.1.4 Project beneficiaries

Girls' Education Challenge (GEC) distinguishes between direct and indirect beneficiaries. **Direct beneficiaries** are those girls targeted by a project and who have received interventions from project implementation activities. In-school direct beneficiaries must be girls who are enrolled in the grades targeted by the project at baseline. They can only be girls, but not their parents, siblings, or other community members or leaders. Direct beneficiaries are expected to improve learning and/or transition rates as a result of what the project does. Included in this definition are girls whom the project targeted and included in project activities at baseline, but who subsequently dropped out of the programme and then re-enrolled, moved to a non-target school, or successfully transitioned out.

Indirect beneficiaries are girls and boys in project schools or communities who receive the benefits of some or all of a project's interventions (usually because they happen to be in the same class as targeted beneficiaries) but who aren't directly targeted and aren't necessarily expected to improve learning or transition outcomes as a direct result of project activities. Other indirect beneficiaries may be members of the community who benefit from project interventions.⁷

The **direct beneficiaries** of DP-2 are **girls across all primary and junior secondary grades** in schools targeted by DP-2. DP-2 schools were specifically selected because they have high concentrations of marginalised girls. Most schools are located in rural or semi-rural environments, with the schools in Nairobi, Kano Municipal, and Tamale Municipal being notable exceptions.

⁷ Definitions from 'Beneficiary numbers for GECE' (April 2018)

Table 3 shows the grades and age groups of the direct beneficiaries targeted by DP-2. Given that the project targets all primary and junior secondary grades, the grades and age groups targeted remain the same at midline as they were at baseline. There are of course some changes in the actual girls targeted, as a cohort of girls who were in JHS3 (Ghana)/Primary 8 (Kenya)/JSS3 (Nigeria) at baseline moved out of the project's target group, while a new cohort of Primary 1 girls entered the project's target group at midline. The project activities that girls in DP-2 schools receive, depending on their level of schooling, have been described in Section 1.1.2.

Table 3. Beneficiaries' grades and ages

	Baseline	Midline
Grade	Ghana: Primary 1–Primary 6; JHS 1, JHS2, JHS3 Kenya: Primary 1–Primary 8 Nigeria: Primary 1–Primary 6, JSS1, JSS2, JSS3	Ghana: Primary 1–Primary 6; JHS 1, JHS2, JHS3 Kenya: Primary 1–Primary 8 Nigeria: Primary 1–Primary 6, JSS1, JSS2, JSS3
Age	Project beneficiaries who are in the targeted grades are expected to be between 6 and 17 years of age	Project beneficiaries who are in the targeted grades are expected to be between 6 and 17 years of age

In addition to the direct beneficiaries, groups of **indirect beneficiaries** benefit from some of the interventions with a broader focus. These indirect beneficiaries include:

- **boys in DP-2 schools**, who learn along with the girls in their schools. Boys benefit from the support to teaching and access to educational media content. Remedial lessons are also targeted at both girls and boys, and schools are encouraged to set up boys' clubs;
- **girls and boys in secondary schools (Forms 1 and 2) in Kenya**, who receive a subset of the full intervention. Targeted secondary schools in Kenya receive support to girls' clubs including mentor training and access to educational media content, but no teacher training or remedial support;
- **teachers in DP-2 schools**, who benefit from the teacher training and follow-up monitoring and support; and
- **community members** in the communities surrounding DP-2 schools, who may benefit from the community-based initiatives that are part of DP-2, including the CAP process.

Table 4 summarises the DP-2 project activities for the direct and indirect beneficiaries.

Table 4. Beneficiaries matrix

	Direct beneficiaries				Indirect beneficiaries		
	Phase 1 Primary Schools	Phase 2 Primary Schools	Junior Secondary Schools (Ghana & Nigeria)	Boys in DP-2 schools	Boys and girls in secondary Schools (Kenya)	Teachers in DP-2 schools	Community members
Teacher training and coaching in use of media, including student-centered approaches, GRP, etc.	✓	✓	✓	✓		✓	
Intensive LIT & NUM Teacher Training	✓	✓		✓		✓	
Follow-up LIT/NUM teacher coaching and mentoring	✓	✓		✓		✓	

Educational media via sustainable technology (including new LIT/NUM and life skills content)	✓	✓	✓	✓	✓	✓	✓
Accelerated learning / remedial classes	✓	✓					
School leadership and community engagement (action plans focused on learning and transition)	✓	✓	✓			✓	✓
Club mentor training and follow-up monitoring and support (scaled back to pilot schools for MBW rollout)	✓	✓	✓	✓	✓		
Government capacity strengthening and accompaniment	✓	✓	✓	✓	✓	✓	✓

Note: Phase II is dependent on approval from DFID and the FM.

Annex 9 presents the project's beneficiary numbers and our verification of these numbers.

1.2 Project context

In this section, we briefly describe the context in which DP-2 is being implemented across the three countries. We discuss any important changes that have happened in relation to education policy or contextual factors between baseline and midline that are likely to affect implementation and/or the achievement of project outcomes.

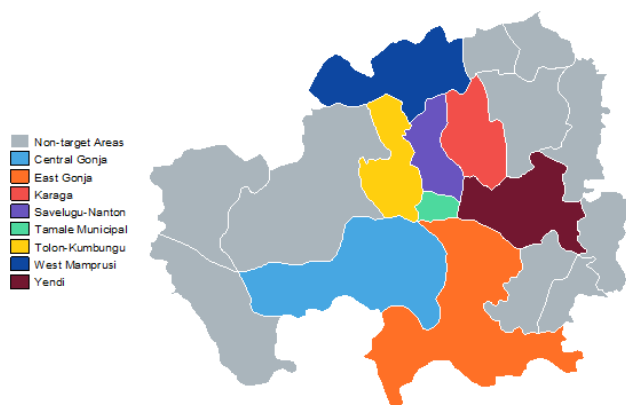
1.2.1 Ghana

Basic education in Ghana includes two years of kindergarten, six years of primary (ages 6–11), and three years of JHS (ages 12–14). The entire basic education cycle is free and compulsory. There have been very positive trends in student enrolment, retention, and transition in recent years. The 2016/17 annual education sector performance review highlighted that Ghana continues to maintain high rates of participation at all levels of basic education.

While there have been strides in improving access and quality of education across the country, marginalised regions, particularly in the north, continue to lag behind in progress. DP-2 in Ghana operates in nine districts in the Northern, Savannah, and Northeast regions (see Figure 3). The geographic area has the lowest level of school attendance for children of primary school age at just 59.4%. It also has the lowest

female literacy rate in the country, with 44.3% of young women aged 15–24 years being literate (the national average is 61.4%).⁸

Figure 3. DP-2 project areas in Ghana⁹



Source: DP-2 Ghana: Baseline Survey (2018)

Note: Tamale Municipal constitutes both Sagnarigu and Tamale Metropolitan

Gender disparities are also apparent, with girls having worse educational outcomes compared to boys. One of the efforts towards improving girls' educational outcomes is the government's pledge to end teenage pregnancy and endorsement of the National Strategic Framework on Ending Child Marriage in Ghana 2017–2026. Teenage pregnancy is both a cause and consequence of child marriage. On average, one in five girls in Ghana is married before their 18th birthday; for girls living in the three northern regions this number increases to one in three (34%).¹⁰ Girls who get married are very often forced to drop out of school as they are expected to focus on being wives and mothers. Without an education, girls in these regions have limited options for livelihoods, further increasing their vulnerability.

According to Ghana's recent policy for inclusive education (2013), 25% of children aged 6 – 14 years who are out of school are living with a disability. In the past, children with disabilities in Ghana were largely educated in special needs boarding schools. Ghana's inclusive education policy outlines key strategies for improving access to and quality of education for children with disabilities. This includes increasingly integrating children with disabilities into mainstream schools, integrating training on inclusive

⁸ Statistics are for the Northern region. The regions in Ghana were recently changed. Government of Ghana Department of Children (Ministry of Gender, Children, and Social Protection), supported by UNICEF (2014) 'Child Protection Baseline Research Report', Accra, Ghana, available at www.unicef.org/ghana/P1417_unicef_ghana_NORTHERN_WEB.pdf [accessed 18 June 2018].

⁹ The graphic shows the outline of what used to be the Northern region. Through the creation of new regions, the DP-2 target districts now fall into three regions: Northern, Savannah, and Northeast.

¹⁰ Government of Ghana Department of Children (Ministry of Gender, Children, and Social Protection), supported by UNICEF (2016) 'National Strategic Framework on Ending Child Marriage in Ghana 2017–2026', Accra, Ghana, available at www.girlsnotbrides.org/wp-content/uploads/2017/05/2017-2026-National-Strategic-Framework-on-ECM-in-Ghana.pdf [accessed 18 June 2018].

education into pre-service and in-service training for teachers, and reviewing curriculum materials and assessment procedures to ensure that they are accessible and fair for all. GES reports that the inclusive education policy has been well received and has led to increased enrolment of children with disabilities, but that system capacity to support implementation has been constrained at times.¹¹

In the past year, the Ghana Education Service (GES) seems to have taken a stronger stance against collection of levies for parent–teacher associations (PTAs) and for printing of examination papers. This would reduce costs associated with schooling, but may have other unforeseen consequences if, for example, it leaves schools without the resources to conduct certain activities, such as printing examination papers. The GES directive has reportedly had some implications on DP-2 because it has prevented CAPs from asking for contributions from parents towards CAP-related activities.

Ghana’s code of conduct for teachers has advised teachers against the use of corporal punishment since 2017, but corporal punishment continues to be allowed by law. In the past year, GES renewed its stance against corporal punishment by issuing a directive instructing all schools to adopt a Positive Discipline Toolkit that provides for alternative methods of punishment. The issuing of this directive was widely reported as a ban on corporal punishment in the news,¹² but legislation on corporal punishment remains unchanged.¹³ It is unclear to what extent schools will have reduced their use of corporal punishment as a result of this directive.

Ghana is launching a new primary school curriculum in the 2019/20 school year, with training for this already underway.¹⁴ As DP-2 focuses on foundational literacy and numeracy, strategies taught during the training will continue to be relevant. Nevertheless, teachers’ time for focusing on the use of media content and remedial classes may be more constrained while they are adapting to a new curriculum.

1.2.2 Kenya

The Free Basic Education Policy of 2003 mandates compulsory free basic primary education for every child. In Kenya’s education system, lower primary is three years (ages 6–8), followed by five years of upper primary (ages 9–13) and four years of secondary (ages 14–17, with the first two considered as JSS).

DP-2 operates in five counties in Kenya: Nairobi, Machakos, Kajiado, Kiambu, and Wajir (see Figure 4). Poverty rates across the country reveal pronounced geographic inequalities: for example, 85% of children live in poverty in Turkana County (northern Kenya) compared to 7% in Nairobi, the capital.¹⁵ In arid and semi-arid regions such as Wajir and Kajiado, the exclusion of girls from education is common and often influenced by the nomadic and pastoralist practices in the region, which see the constant movement of communities in search of pastures. A consequence of this is

¹¹ See <http://www.iiep.unesco.org/en/ghana-making-inclusive-education-reality-4564>.

¹² For example, see www.ghanaweb.com/GhanaHomePage/NewsArchive/GES-enforces-ban-on-corporal-punishment-716231 and www.pulse.com.gh/bi/strategy/ghanas-education-service-bans-caning-in-schools-and-puts-new-disciplinary-methods-in-xhdsvf4.

¹³ See the Global Initiative to End Corporal Punishment for All Children at <https://endcorporalpunishment.org/reports-on-every-state-and-territory/ghana/>.

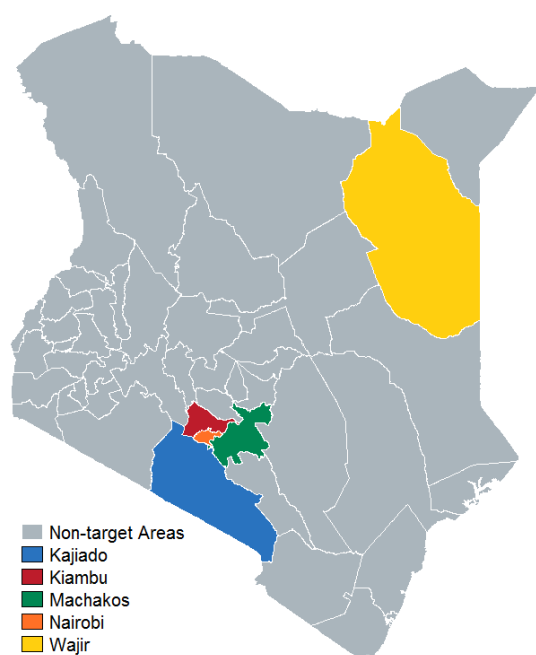
¹⁴ National Council for Curriculum and Assessment, available at <https://nacca.gov.gh/?p=9510>.

¹⁵ UNICEF (2017) ‘Annual Report—Kenya’, UNICEF Kenya, available at www.unicef.org/about/annualreport/files/Kenya_2017_COAR.pdf [accessed 16 July 2018].

non-attendance, particularly among girls who take on the responsibility of caring for younger siblings as well as household chores. Although a tuition subsidy is provided, there remain additional expenses such as uniforms, school projects, and fees for extracurricular activities. Cultural practices including child marriage and female genital mutilation also continue to affect school attendance among girls. Additionally, the stigma surrounding teenage pregnancy and the lack of a social support system in some communities contribute to school drop-out, despite a Government of Kenya policy that stipulates that pregnant girls be allowed to return to school.

As in Ghana, Kenya's National Special Needs Education Policy Framework (2008) recognises that many children with disabilities continue to be out of school. In Kenya, each district is supposed to have an educational assessment and resource center, which focuses on early identification, assessment intervention and placement of children with disabilities. Kenya's National Special Needs Education Policy Framework acknowledges that mainstreaming of special needs education has faced several challenges due to range of factors including inadequate facilities, lack of equipment, lack of capacity amongst teachers, and inadequate teaching and learning materials. The policy sets out ambitious strategies for improving this including reviews of curriculum materials and assessment procedures, provision of funding to make school facilities more accessible and provisions of forums for children with disabilities to be integrated into co-curricular activities.

Figure 4. DP-2 project areas in Kenya



Source: DP-2 Kenya: Baseline Survey (2018)

Kenya is currently undergoing a major curriculum reform, with a move towards a competency-based curriculum. The Kenya National Union of Teachers (KNUT) has criticised the implementation of the new curriculum, calling for the implementation to be

halted and for training on the curriculum to be boycotted.¹⁶ KNUT has published its own research into the curriculum, concluding that the curriculum was poorly researched, roll-out was rushed, and training inadequate.¹⁷ It is expected that 225,000 teachers will have been trained on the new curriculum by December 2019. While implementation has so far focused on the lower primary level, primary school teachers are likely to face constraints on their time as they adjust to the new curriculum. In addition, teacher motivation may be affected if implementation is perceived to be poor. The implication on DP-2 is that teachers may be less motivated to take in part in additional trainings if their time is being taken up adjusting to the new curriculum.

In Kenya, the Teacher Service Commission (TSC) issued a circular requiring that all government ministries, non-governmental organisations (NGOs), or other organisations undertaking educational tasks that take teachers away from school (such as teacher training), must schedule these on the weekends or in the school holidays. This has had an effect on DP-2 activities, as the project has had to adjust their schedule for rolling out DP-2 training sessions and fit training sessions into a tighter schedule. It also means that schools are more constrained in the time they have available to deliver step-down training. Overall both this circular and the new curriculum may have negatively affected teachers' motivation and may have placed constraints on teachers' time, which means they may have less time and energy to invest in DP-2 activities.

1.2.3 Nigeria

In Nigeria, 'basic education' includes six years of primary (children aged 6–11 years old) and three years of JSS education (ages 12–14). The Free Universal Basic Education Act of 2004 makes provisions for free and compulsory education for all school-aged children for nine full academic years of basic education.¹⁸

DP-2 operates in 15 out of the 44 local government areas (LGAs) in Kano State (see Figure 5). In Kano, many rural schools lack adequate school facilities and resources (e.g. toilets, classrooms, and libraries) relative to urban schools. Schools are also typically understaffed and classrooms overcrowded, thereby affecting the quality of teaching and education. Although primary schooling is free in Nigeria, schools sometimes charge fees for exams, for PTAs, or towards the cost of uniforms. There are, therefore, indirect schooling costs even when the direct costs of schooling are presumably minimal or even free, which places poorer students at a disadvantage. Students' nutritional status is also likely to affect their learning in school—in northern Nigeria, many students report coming to school hungry or with minimal amounts of pocket money to buy food during the day.¹⁹ There is no specific policy on pregnant girls staying in school or young mothers returning to school; both situations are allowed and centrally encouraged, but there are many cultural and economic barriers to this

¹⁶ www.nation.co.ke/news/education/Sossion-rejects-training-new-curriculum/2643604-5076180-ej16hiz/index.html.

¹⁷ KNUT (2019) 'Teacher preparedness for the implementation of the competency-based curriculum in pre-primary and lower primary grades in Kenya'.

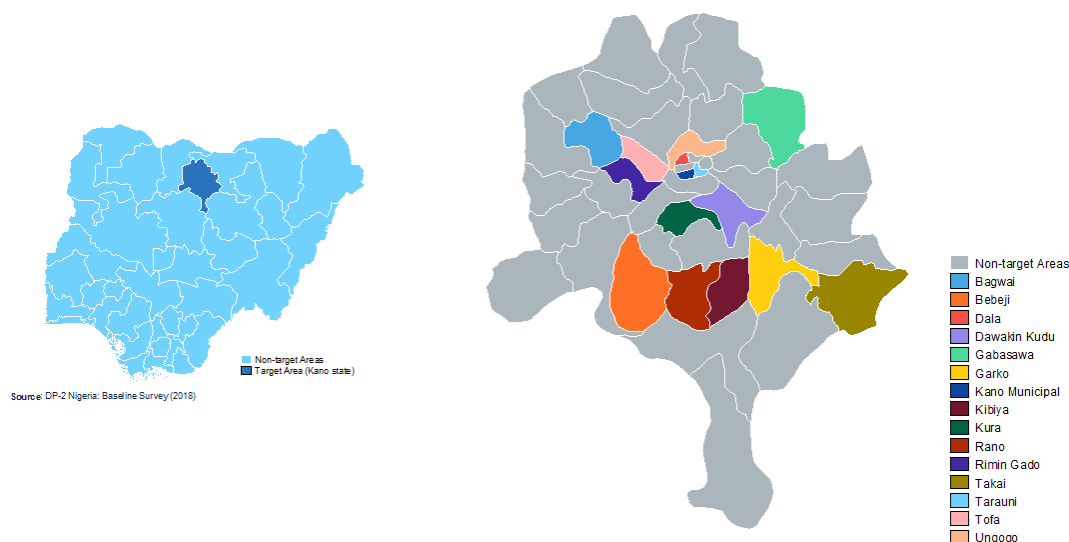
¹⁸ International Labour Organization, available at <http://nigeria-education.org/literature/compulsory-free-universal-basic-education-act-2004> [accessed 07 June 2018].

¹⁹ S. De, G. Pettersson, R. Morris, and S. Cameron (2016) 'Teacher Development Programme (TPD) Impact Evaluation of Output 1: In-Service Training, Final Baseline Technical Report, Volume I Results and Discussions', EDOREN, Abuja.

happening for most girls. There are also concerns about safety in reaching schools, which results in parents opting for their girl children dropping out of school.

Nigeria developed its first National Policy on Special Needs Education in 2015. While the policy also identifies the goal of integrating children with disabilities into mainstream schools, less concrete steps to achieving this goal are outlined.

Figure 5. DP-2 project areas in Nigeria: Kano state



In Nigeria, national elections took place in February and March 2019. This means that timelines for some DP-2 project activities had to shift, while other activities were paused for some time due to election activities and security concerns related to the election. Security concerns and disruption to normal school routines because of election activities may also affect pupil attendance. DLA country office staff in Nigeria report that some of the schools that they work with were made election centres and ran activities over the weekends, which meant that remedial classes could not be held in these schools for several weeks while election activities were ongoing.

In addition, the election in Nigeria means that new staff have been appointed to the State Universal Basic Education Bureau (SUBEB), including a new SUBEB chairman and permanent secretary, although officers at lower levels (such as school support officers and LGA education secretaries) remained in their positions at the time of the midline survey. The implication for DP-2 is that efforts to engage with government will need to be renewed and some momentum gained towards ensuring the sustainability of the intervention may be lost in the process.

1.3 Key evaluation questions and role of the midline

In this section, we briefly discuss the approach to the midline evaluation phase and outline the key evaluation questions. The full midline evaluation approach and methodology is described in Annex 3.

1.3.1 Overview of the evaluation design

The evaluation is a mixed-methods TBE of DP-2. It is designed as a longitudinal evaluation with three rounds: baseline in 2018, midline in 2019, and endline in 2020. This report presents the findings from the midline evaluation round.

Quantitative and qualitative methods are integrated to ensure robustness, depth, and improved validity in the research findings. This approach rests on the integration of methodologies for better measurement and the merging of findings for better action. In addition, the midline evaluation includes a process evaluation to further understand how, why, and under what conditions the DP-2 best functions. We briefly discuss each method in turn, with more details presented in Annex 3.

- **Quantitative impact evaluation design:** we use a quasi-experimental impact evaluation design known as CEM-DID (Coarsened Exact Matching with DID). The quantitative impact evaluation is designed to provide robust estimates of the impact that DP-2 has achieved on learning, self-efficacy, transition, attendance, quality of teaching, and life skills.
- **Qualitative impact evaluation design:** the purpose of the qualitative evaluation is to understand the contribution of the DP-2 intervention to learning and transition outcomes by explaining some of the quantitative findings and identifying factors that stakeholders perceive to be influential, and to understand how the interventions may have contributed to the observed impact.
- **Process evaluation design:** the process evaluation examines the implementation of the project (i.e. dose, uptake, reach, fidelity, and quality of implementation) and the contextual factors that affect this implementation. It helps to explain failure (if observed) and helps the evaluation to distinguish failure due to poor design from failure due to poor implementation.

At midline, each evaluation method targeted different stakeholders based on the strengths of each method to maximise the breadth of the data and enable us to answer all key research questions. To enable us to triangulate findings from the different research methodologies and contextualise the findings from the quantitative research, girls and head teachers were targeted in both the quantitative and qualitative research. The midline quantitative research focused particularly on respondents in the school setting, including girls, teachers, and head teachers. The midline qualitative research focused particularly on parents and communities, head teachers, and girls. Finally, the process evaluation focused particularly on programme staff and local government stakeholders.

We ensured that the qualitative and quantitative strands worked closely at the methodological design and analytical stages. Each chapter in the report is co-authored by a member from each of the quantitative and qualitative teams. This 'buddy' system works by members of each team sharing and commenting on iterative drafts of the chapter, thereby strengthening the analysis from each methodology. We organised a workshop to share emerging quantitative and qualitative findings early in the analysis phase to point to areas of further investigation in both datasets. In addition, the quantitative and qualitative research leads reviewed all chapters of the report and jointly developed the conclusions and recommendations. During a workshop, the draft conclusions and recommendations were shared and discussed in detail with the full team.

1.3.2 Key evaluation questions and role of the midline

Table 5 presents the key evaluation questions for DP-2, which correspond to the Organisation for Economic Cooperation and Development (OECD)–Development Assistance Committee (DAC) criteria of impact, effectiveness, efficiency, and sustainability. The research question on efficiency will be answered at endline through a value-for-money assessment. At the midline stage, we present intermediary findings on the remaining evaluation questions one year after the start of implementation. The evaluation questions have remained the same since the baseline.

Some aspects of the midline evaluation design and the evaluation context limit the extent to which we can respond to some of the research questions.

- The cohort girls we are tracking (see next section) were in Primary 5 at baseline and are now expected to be in Primary 6 if they progress as expected. At the midline stage of the evaluation, the findings on the transition outcome therefore focus on rates of in-school progression rather than on primary school completion.
- As agreed at the design stage, the quantitative survey does not include a household survey at midline. Findings on community-based attitudes and perceptions at midline are therefore limited to the findings from the qualitative research.
- As agreed at the design stage, the midline evaluation did not include any interviews with boys.

Table 5. DP-2 key evaluation questions

OECD–DAC criteria	Evaluation questions
Impact	<p>Learning: has basic literacy and numeracy for marginalised girls increased as a result (at least in part) of the project and if yes, why and how?</p> <p>Transition: has the project (and specific project activities) increased marginalised girls' rate of primary school completion and progression? Specifically, have girls been enabled to complete primary and continue school? If not, what activities do girls that drop out engage in?</p> <p>SE: do marginalised girls report a better degree of self-efficacy as a result of the project, especially as a result of attending girls' clubs, and if so why? What aspect of the clubs' activities and club types appeal most to them and why? How does the improved self-efficacy affect cohort girls' experience of schooling, if at all?</p>
Effectiveness	<p>Attendance: by the end of the project, are more marginalised girls in the project areas attending school at a greater rate? Has the project contributed to this and, if so, in what ways?</p> <p>Quality of teaching: has the teacher training and follow-up support improved classroom teaching in literacy and numeracy, and in GESI-responsive and interactive pedagogy? If so, in what ways? Has TPD contributed to improved numeracy and literacy and increased school attendance and transition to secondary school among marginalised girls? In what ways?</p> <p>Life skills: are there changes in students' (boys and girls attending DP clubs) attitudes to schooling and behaviours (school transition) as well as their self-efficacy as a result of them attending girls' and boys' clubs? In what ways?</p> <p>Community-based attitudes and perceptions: are there any changes in the attitudes, perceptions, and behaviours of parents of marginalised girls and community leaders (those who are part of CAP process) regarding the value of education for girls as a result of CAP process? In what ways?</p> <p>Process: have project activities and inputs been successfully implemented as planned at the design stage? If not, why not?</p>
Efficiency	Do the activities of the DP-2 represent value for money?

OECD–DAC criteria	Evaluation questions
Sustainability	What plans and strategies are implemented/steps taken by sampled school committees, school administrators, and MOEs to assure the continuation of project investments and results after the donor funding is over?

In addition to these key evaluation questions, together with the DLA team, we identified a series of core questions that the evaluation should seek to answer, which are presented in Table 6. **The purpose of the core questions is to further understand and identify the contribution of each of the DP-2 activities (i.e. teacher training, girls’ clubs, etc.) to achieving the outcomes.**

Table 6. DP core questions for the evaluation

Question	Core questions
DP 1	What is the role of DP-2 TPD in producing better numeracy and literacy rates and increased attendance and transition among marginalised girls in the selected schools, if any?
DP 2	What is the role of DP-2 supported girls’ clubs in the selected schools in improving the self-esteem and self-efficacy of marginalised girls, if any, and how might it contribute to their better literacy and numeracy? Does increased self efficacy in cohort girls affect their transition rates, and if so, how?
DP 3	What is the role of the CAP process in increasing school attendance among marginalised girls in the selected schools, improving their numeracy and literacy rates, and increasing their transition through primary and on to secondary school, if any?
DP 4	What aspects of the DP-2 TPD are most useful for teachers to improve classroom teaching and learning, if any?
DP 5	What aspects of girls’ clubs are most useful to their education and self-efficacy, if any?
DP 6	What aspects of the CAP process are most useful to communities to encourage their engagement in school activities, if any?

The role of the midline evaluation is:

- to establish whether, after a year of implementation, the project has had an impact on key outcome (i.e. learning, self-efficacy and transition) indicators;
- to establish whether the project has made a contribution towards changes in the IO indicators (i.e. attendance, quality of teaching, life skills and community attitudes and behaviours);
- to estimate the level of impact that the project has had on the outcome and IO indicators and to compare this against the targets set for these indicators;
- to describe changes to the profile of the project’s direct beneficiaries and the context of the project;
- to attempt to understand what aspects of the intervention have contributed in what ways to the observed impact, or to explain why no or limited impact was observed—in other words, to investigate the linkages between outputs, IOs, and outcomes;
- to assess the validity of the project’s TOC, including testing its assumptions and how interventions are designed to overcome barriers and lead to outcomes;
- to establish an interim sustainability score of the project at the community, school, and system level, and to outline factors likely to hinder or support the sustainability of project activities going forward; and

- to provide opportunities for the project to reflect on its design, implementation, and sustainability to date, including identifying aspects of the intervention that are working well and should be sustained in the next phase, as well as those where improvements can be made.

1.3.3 Learning and transition cohort

Description of the learning and transition cohort

The evaluation is tracking a joint sample for both learning and transition. At baseline, girls were randomly sampled from among all girls from Primary 5 who were present on the day of the visit in treatment and control schools. These girls were interviewed at school and were administered the learning assessment. In addition, the girls' households were tracked, and their caregivers were interviewed. These girls made up the learning and transition cohort at baseline. Given that DP-2 works with in-school children, these cohorts consisted only of in-school girls at baseline.

At midline, we aimed to track all girls who were interviewed at baseline. **At midline, the learning cohort consists of all girls who could be successfully tracked to a school that is part of the evaluation sample.** In Nigeria and Ghana, it was expected that some girls would have already transitioned into JHS/JSS by midline. Whenever a girl had transitioned into a JSS that was in the same locality as the primary school (LGA in Nigeria; district in Ghana), we attempted to track the cohort girl to the JSS and administered the interview and learning assessment at this school.

The transition cohort consists of all girls who are part of the learning cohort. In addition, the transition cohort also includes girls who are no longer enrolled in a school that is part of the evaluation sample, but whose caregivers could be tracked through a telephone interview. For these girls, we collected information on their transition status but did not conduct any interviews or learning assessments with the girls directly.

Therefore, while the evaluation is based on a joint sample approach, the sample for the learning cohort at midline is smaller than that for the transition cohort.

Exposure of the cohort to project activities

Types of schools in the midline sample

In Kenya and in Nigeria, all treatment schools in the evaluation sample receive the full intervention package including the ALP and MBW components. In these countries, the impact estimates presented in this report therefore represent the impact of DP-2 when the full set of project activities outlined above is being delivered.

In Ghana, there is more variability, with some schools in the sample receiving the full set of project activities, while others receive more limited activities. Of the treatment schools, 38 receive the full intervention package, 12 are not part of the MBW pilot, and a further 12 are neither part of the MBW pilot nor part of the ALP component. This is discussed further in Annex 3 and in the respective chapters where we describe how this variability was taken into account in the analysis.

Uptake and implementation of the project activities

While the treatment schools are targeted to receive the intervention as described above, there is some variability in uptake or implementation of some of these activities. For example, the evaluation finds that a small number of schools reported not currently implementing DP-2 remedial classes although these may have been implemented in the past.

Activities targeted at subgroups of students

Girls' clubs and remedial lessons are targeted at a subset of DP-2 beneficiaries. At the time of the midline survey, 85% of sampled cohort girls in Ghana reported currently attending remedial classes, compared to 52% of girls in Kenya and 70% of girls in Nigeria. In addition, it is likely that some girls may have attended remedial classes in the past but are not attending them now. Girls' club membership is particularly high in Ghana where 79% of sampled cohort girls interviewed during the quantitative survey reported that they were a member of a girls' club. Membership of DP-2 girls' clubs was lower in Kenya and Nigeria, though still substantial with 60% and 61% of girls respectively reporting that they were a member of a girls' club.

This means that exposure to the project intervention differs between girls in the sample. The overall impact estimates presented in the report present the impact of the intervention on the full sample of schools, irrespective of the type of school or the school's uptake or implementation of the intervention. The analysis therefore shows the impact of the DP-2 intervention package as a whole and as it is currently delivered.

To attempt to understand the contribution of different project activities to the overall impact, we conduct subgroup analyses. In particular, we examine the impact of DP-2 on learning outcomes focusing specifically on girls that attend remedial classes. We also examine the impact of DP-2 on self-efficacy and on life skills focusing specifically on girls that attend girls' clubs.

1.3.4 Midline data collection

Quantitative instruments

The following quantitative instruments were administered at midline.

Table 7. Midline quantitative data collection tools

Tools	Description	Respondent
School survey	Adapted from the previous GEC-1, the purpose of this instrument is to gather data on school-level characteristics including (but not limited to) school demographic characteristics, enrolment, cohort attendance, cohort transition of students, teacher characteristics, training and support received, etc.	Head or deputy head teacher
Headcount	Adapted from the previous GEC-1, the purpose of the headcount tool is to measure and monitor the attendance-keeping practices of teachers including actual headcount of	One class each in Primary 5–7/JSS-1

Tools	Description	Respondent
	students (girls and boys) present in the class for the day of the school visit compared to the attendance recorded by the teacher for that day. It also captures previous day attendance rate and whether attendance was recorded for the past five days prior to survey.	
Classroom observation + teacher assessment	Designed by OPM's education team to capture information about key foci of the programme: GESI-responsive and interactive pedagogy, use of formative assessment strategies, and use of numeracy and literacy pedagogy. The teacher assessment module included in the classroom observation tool will be used to test teachers' understandings of the different pedagogical methods and approaches covered by DP-2.	One English or maths class in Primary 5
Learning assessments	Designed by OPM's education specialist and local education experts following the guidelines provided by RTI and FM. Both Early Grade Reading Assessment (EGRA)/Early Grade Maths Assessment (EGMA) and Secondary Grade Reading Assessment (SEGRA)/Secondary Grade Maths Assessment (SeGMA) tools have been designed and adapted in line with the curriculum for each country and the DP-2 Numeracy I and Literacy I training modules. The tools will capture students (i.e. cohort girls) proficiency in reading and maths skills.	Cohort girls
Girl survey	GEC-T tool adapted for this evaluation. A 10-point self-efficacy scale drawing from Schwarzer and Jerusalem. ²⁰ Other questions relating to self-efficacy, life skills, decision making, and feelings and attitudes (that comprised the girl module) were adapted from the DP-1 evaluation and from the 2013/14 Young Lives Child Questionnaire for the younger cohort in Ethiopia. The main purpose of the tool is to measure the cohort girl's education and future aspiration, confidence, motivation, etc.	Cohort girls
Transition tracking survey	Integrated into the girl survey, this tool was administered telephonically to caregivers of cohort girls who could not be tracked at school to establish the girl's transition status.	Caregivers of cohort girls

Qualitative instruments

Table 8 below summarises the key respondents for the qualitative data collection and purposes of each tool.

Table 8. Midline qualitative data collection tools, their purposes, and respondents

Target group	Purpose/remarks
Interviews with head teachers (with resource teachers)	<ul style="list-style-type: none"> To collect data in relation to sustainability of DP-2 To understand the progress of DP-2 implementation at school (teacher training, stepdown training, remedial classes, CAP-related activities, girls' clubs, etc.) since the baseline and its results, if any To explore any changes to the beliefs, attitudes and behaviours towards girls' education among their peers, community members, and parents, as well as any changes to barriers to girls' education
Interviews with members who are part of the CAP process	<ul style="list-style-type: none"> To understand the progress of the CAP since the baseline and any barriers to progress/changes to attitudes towards girls' education, and to collect data on sustainability of DP-2

²⁰ M. Jerusalem and R. Schwarzer (1981) *General Self-Efficacy (GSE) Scale*.

Target group	Purpose/remarks
Interviews with parents of girls and girls who are still at school	<ul style="list-style-type: none"> To understand girls' experience in school and girls' clubs To learn about girls' experience of transition, identify any issues girls have been facing since the baseline, and assess whether these issues have been overcome with the help of the interventions To explore any changes in girls' attitudes to schooling, behaviour, and self-efficacy as result of them attending girls' clubs To explore any changes in parents' attitudes to girls' education, and changes in the perceptions of parents and girls regarding barriers to education To explore barriers to girls' education and any changes to them as girls get older
Interviews with parents of girls and girls who have dropped out of school	<ul style="list-style-type: none"> To explore the reasons for not transiting and to understand whether and how these reasons are relevant to the intervention activities To explore any changes (if any) in the attitudes of girls and parents to education and the barriers to education To understand whether and to what extent girls are using the skills/knowledge gained from the girls' clubs and schooling in their current context, and to examine what activities these girls are engaged in

Process evaluation

Table 9 below provides an overview of respondents for the process evaluation and purpose of the data collection.

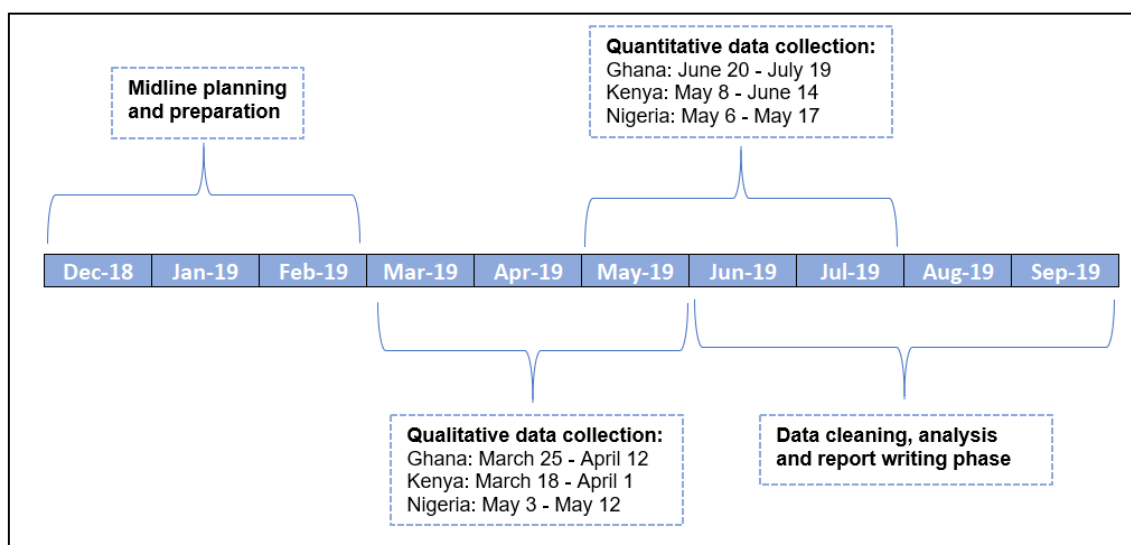
Table 9: Process evaluation data collection tools and purpose

Group	Position	Purpose
Main Management	<ul style="list-style-type: none"> Kenya <ul style="list-style-type: none"> Director Training and Outreach Manager Nigeria <ul style="list-style-type: none"> Country Director D. Director, Training D. Directors, Operation Ghana <ul style="list-style-type: none"> Country Director D. Director for Teaching and Learning D. Director for Club Support and Community Outreach 	<ul style="list-style-type: none"> MANAGEMENT ONLY - to get an overview of how the programme is being implemented and main success and challenges to understand how (the process by which) DP2 is implemented to understand how different parts of the intervention interact
Teaching and Learning Coordinators	<ul style="list-style-type: none"> Kenya <ul style="list-style-type: none"> Lead Teacher Trainer Teacher Trainers Nigeria <ul style="list-style-type: none"> Training Coordinators Literacy-Numeracy Coordinator Ghana <ul style="list-style-type: none"> Teaching and Learning Coordinators Remedial Coordinator 	<ul style="list-style-type: none"> to understand whether the programme and its components were implemented as intended to understand whether changes in design were made and why to understand what contextual factors impact on the implementation of the overall programme to explore how many of the intended activities were delivered and received by beneficiaries
Club and Community Action Coordinators	<ul style="list-style-type: none"> Kenya <ul style="list-style-type: none"> Club and Community Action Coordinator Nigeria <ul style="list-style-type: none"> Association and Community Action Coordinator Ghana <ul style="list-style-type: none"> Club and Community Action Coordinator 	<ul style="list-style-type: none"> to explore whether specific outcomes observed in the quantitative and qualitative data can be explained due to implementation processes

Group	Position	Purpose
Senior Technical Lead	<ul style="list-style-type: none"> • Kenya, Ghana, Nigeria <ul style="list-style-type: none"> ○ Senior Technical Lead 	<ul style="list-style-type: none"> • to understand the intention behind creating the role and the likely impact on the implementation of DP2 going forward • to understand their view of the current programme design and implementation modalities and material • to understand if any changes in design or implementation are being planned • NOTE: This is a recently created post
Monitoring, Evaluation & Learning officer (MEL)	<ul style="list-style-type: none"> • Kenya, Ghana, Nigeria <ul style="list-style-type: none"> ○ MEL officer 	<ul style="list-style-type: none"> • to understand how the programme monitors dose, uptake and reach • to understand what progress the programme has made vis-a-vis its targets • to understand how and whether and for what the programme uses its monitoring data • to understand how and whether and for what the cross-country programme uses the monitoring data
Teaching and Learning Field-staff	<ul style="list-style-type: none"> • Kenya, Ghana, Nigeria <ul style="list-style-type: none"> ○ Teacher Trainers 	<ul style="list-style-type: none"> • to understand how the different programme activities are implemented in schools • to understand whether activities are implemented as intended by the programme • to understand how, when and why changes to the approach of delivering programme activities are made • to understand what contextual factors affect implementation • to better understand the amount of time spent on the implementation of different activities • to understand whether and how monitoring data is used to guide daily implementation activities
Club and Community Action Field-staff	<ul style="list-style-type: none"> • Kenya, Ghana <ul style="list-style-type: none"> ○ Club and Community Action Mobiliser • Nigeria <ul style="list-style-type: none"> ○ Association and Community Action Mobiliser 	
Ministry of Education Official	<ul style="list-style-type: none"> • Kenya <ul style="list-style-type: none"> ○ Sub-county Director, Kasarani • Nigeria <ul style="list-style-type: none"> ○ Director for Nomadic Schools, SUBEB • Ghana <ul style="list-style-type: none"> ○ NGO Desk Officer, Savelugu Municipality 	<ul style="list-style-type: none"> • to understand how the different levels of the government interact with DP2 • to understand whether and what value add the government sees DP2 as having • to explore sustainability of the different interventions post DP2 and what would be needed to strengthen this

Midline data collection process

The midline data collection was planned in line with school holidays and taking into account the national election in Nigeria, the timing of Ramadan, and the particular farming seasons in each country, during which absenteeism rates are likely to be higher. The qualitative data collection occurred before the quantitative data collection in Ghana and Kenya. The timing of the election in Nigeria and other constraints as mentioned above meant that the quantitative and qualitative data collection happened at the same time in Nigeria. Figure 6 shows the data collection timeline.

Figure 6. Midline data collection timeline

Before the data collection, all fieldworkers received intensive training to prepare them for the data collection. Separate training sessions were held for the quantitative and qualitative fieldwork. The training sessions were led by Oxford Policy Management staff and supported by the staff from the data collection partners in each country. Training was classroom-based with presentations and interactive exercises, and emphasis was placed on the team understanding the project and the research tools. Each training included at least one full day of in-field practice followed by a debrief.

Sample size achieved at midline

At midline, for the quantitative survey, the same schools as visited for the baseline survey were revisited. Table 10 shows the number of treatment and control schools visited in each country. We surveyed a total of 120 schools in Ghana, 119 schools in Kenya, and 127 schools in Nigeria. In Ghana and Nigeria, all schools from baseline were successfully revisited. In Kenya, one treatment school dropped out of the sample because the school was no longer part of the DP-2 project, and one control school dropped out of the sample because the school had relocated.

Table 10. Midline sample of schools and attrition

Cohort group	Baseline sample (treatment)	Recontacted (treatment)	Attrition (treatment)	Baseline sample (control)	Recontacted (control)	Attrition (control)
Ghana	62	62	0%	58	58	0%
Kenya	60	59	1.7%	61	60	1.6%
Nigeria	65	65	0%	62	62	0%

Table 11 shows the final sample size and attrition levels for the girl learning cohort and the transition cohort at midline. Attrition levels are in line with expectations in Nigeria. In Kenya, attrition from the learning cohort is slightly higher than expected at about 22% compared to the inflation of the sample of 20%. Similarly in Ghana, attrition levels are slightly higher than the 15% expected attrition rate. As described above, additional girls were sampled in all countries to top up the sample and ensure the sample size for the midline to endline comparison is sufficient. Additional power calculations shown in

Annex 3 show that, while attrition levels are in some cases slightly higher than expected, the sample is adequately powered for the analysis.

Table 11. Midline sample of cohort girls and attrition

Cohort group	Baseline sample (treatment)	Recontacted (treatment)	Attrition (treatment)	Baseline sample (control)	Recontacted (control)	Attrition (control)
Learning cohort						
Ghana	1,051	888	15.5%	914	726	20.6%
Kenya	1,264	981	22.4%	1,128	880	22.0%
Nigeria	1,182	1,089	7.9%	1,107	1,028	7.1%
Transition cohort						
Ghana	1,051	1,006	4.3%	914	838	8.3%
Kenya	1,264	1,171	7.4%	1,128	1,075	4.7%
Nigeria	1,182	1,140	3.6%	1,107	1,068	3.5%

For the qualitative research, the same six schools and communities in each country were revisited. Six girls from each school had been interviewed at baseline; these girls were tracked at midline. The girls' parents or caregivers were also tracked.

The full methodology is presented in Annex 3.

2 Context, marginalisation, barriers, and characteristics

DP-2 operates in a range of marginalised areas with a long history of exclusion and in varying contexts across the three countries. All schools selected for the project are located within areas with low local economic development, limited educational resources, and low educational capacity. The project has factored these characteristics into the design and implementation approach in each country as discussed in our baseline report. Although there are contextual differences between the countries, some commonalities are notable; for example, economic barriers relating to poverty are especially pronounced in the most marginalised communities.

In this section, we present both quantitative and qualitative findings on the key characteristics of our respondents in the survey. Quantitative data are drawn from the girl survey, household survey, and school survey at baseline and midline. The girl survey and school survey were administered at baseline and midline and, where relevant, we compare differences over time based on the matched sample of respondents for the learning cohort. The household survey was only administered at baseline. We therefore summarise some of the key findings from the baseline report as a reminder of the household characteristics of the girls in our baseline sample.

Qualitative data are drawn from team debriefs, summary notes, and notes for each data collection tool conducted in all three countries in six schools per country. Interviews with the head teacher, parents, and communities were also used to triangulate and present some of the data below in this section.

2.1 Girls' characteristics at midline

Cohort girls for the quantitative survey were selected randomly from among all girls in Primary 5 in their school, and were therefore all in Primary 5 at baseline.

Table 12 shows the grade of the girls in the learning cohort at midline. As expected, the majority of girls have progressed to Primary 6. Some girls were found to be repeating Primary 5, and in the case of Nigeria, there were a few girls who were demoted to a grade lower than Primary 5. Grade repetition rates were highest in Nigeria, particularly in the control group.

In addition, in Nigeria, 13% of girls in the control group and 11% of girls in the treatment group were in JSS1, meaning that they transferred to JSS1 after the end of their Primary 5 year without completing Primary 6. In Ghana, a much smaller proportion of girls (1.5% in the control group, 2.0% in the treatment group) had transferred to JHS1 after the end of their Primary 5 year.

Table 12. Learning cohort by grade at midline

Grade	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Primary 3	0.0	0.0	0.0	0.0	0.2	0.1
Primary 4	0.0	0.1	0.0	0.1	0.3	0.3
Primary 5	2.0	1.9	1.8	0.7	9.0	3.1
Primary 6	96.5	95.9	97.5	98.7	77.3	85.3
Primary 7/JSS1/JHS1	1.5	2.0	0.5	0.1	13.2	11.1
Primary 8/JSS2/JHS2	0.0	0.0	0.0	0.0	0.0	0.0
Missing	0.1	0.0	0.2	0.4	0.0	0.1
N	640	687	817	893	914	930

Source: DP-2 girls' survey (2019)

At midline, the girls in the learning cohort are a year older than at baseline. The majority of respondents in Kenya and Nigeria were 9–13 years of age, although approximately a fifth of girls were older than this (Table 13). In Ghana, there was a larger proportion of older girls, with most girls being 12–15 years of age at midline.

Table 13. Learning cohort by age at midline

Age (years)	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
6–8	0.2	0.0	0.0	0.0	0.4	1.2
9–11	16.6	11.8	32.9	38.3	37.1	34.7
12–13	39.7	42.9	50.2	43.4	38.9	43.1
14–15	35.6	37.6	16.0	16.2	17.5	17.3
16–17	7.1	5.7	0.9	2.0	4.9	3.2
18–19	0.1	1.7	0.0	0.0	1.1	0.3
Missing	0.2	0.0	0.0	0.0	0.1	0.1
N	640	687	817	893	914	930

Source: DP-2 girls' survey and household survey (2018; 2019)

Notes: Age is self-reported by the girl, except in cases where the girl did not know her age. In those cases, age is reported by the caregiver. Age is taken to be the girl's age at baseline plus one year where age was reported at baseline. Where age was not reported at baseline, the midline age was used.

At baseline, the girls who participated in the qualitative research were between the ages of 10 and 14 in Kenya and Ghana and 8 and 13 in Nigeria. The girls who participated in the research in Wajir were older than those in the other counties in Kenya. At midline, the sampled girls are a year older.

In the quantitative survey, girls reported on whether they have a disability, defined as having difficulties in functioning in at least one of six core functional domains (see Box 1).

Box 1. Definition of disability

The disability classification used in this survey is based on a typology of ‘functioning’ provided by the Washington Group on Disability Statistics, using the World Health Organization’s International Classification of Functioning, Disability, and Health as a conceptual framework (Washington Group, 2017). We asked about difficulties in functioning due to a health problem across six core functional domains: seeing, hearing, walking, cognition (remembering and concentrating), self-care (e.g. washing and getting dressed), and communication. Each question had four response categories, which were read after each question:

- (1) no, no difficulty;
- (2) yes, some difficulty;
- (3) yes, a lot of difficulty; or
- (4) cannot do it at all.

All interviewed students were administered the Washington Group disability questionnaire (short version). A pupil was considered to have a disability in a domain if they described their level of functioning in that domain as a (3) or (4) using the scale above.

Table 14 shows the proportion of girls in the sample that reported having a disability at baseline and midline based on the definition shown above. Disability rates have remained similar to baseline and most of the differences observed at midline are not statistically significant. In Kenya, however, girls were more likely to report having difficulties with communication compared to the baseline. This difference was of a similar magnitude in treatment and control groups but reached statistical significance only in the control group. The difference, however, was small and did not result in the overall disability rate being significantly different at midline compared to baseline. It is possible that children who have communication difficulties are more likely to identify and express their difficulties as they become older. In Ghana, girls in the control group reported slightly higher rates of difficulties with mobility, a difference that was statistically significant but small in magnitude. Girls in the treatment group reported slightly higher rates of difficulties in seeing compared to the baseline, a difference that was marginally significant at the 10% level. However, there were no differences in the overall disability rate in Ghana.

Table 14. Proportion of girls who reported having a disability at baseline and midline

Disability (%)	Ghana		Kenya		Nigeria	
	Control midline (baseline)	Treatment midline (baseline)	Control midline (baseline)	Treatment midline (baseline)	Control midline (baseline)	Treatment midline (baseline)
Has at least one type of disability	8.1 (6.1)	10.2 (8.7)	4.5 (4.1)	7.5 (5.9)	3.2 (2.8)	1.6 (2.6)
Visual impairment	0.2 (0.5)	1.7 (0.7)*	1 (1.4)	3.2 (2.5)	0.4 (0.4)	0.5 (1.1)
Hearing impairment	0.7 (0.3)	0.7 (0.9)	0.3 (0.5)	1 (0.9)	0.2 (0.3)	0 (0.2)
Mobility impairment	0.5 (0)**	0.9 (0.7)	0.5 (0)*	0.7 (0.3)	0.7 (0.8)	0.3 (0.6)
Cognitive impairment	6.1 (5)	7.9 (6.4)	1.1 (1.3)	2 (1.7)	1.4 (0.7)	0.4 (0.8)
Self-care impairment	0.1 (0.2)	0 (0)	0.1 (0.2)	0.6 (0.4)	0.8 (0.7)	0.2 (0.9)*
Communication impairment	0.9 (0.4)	0.7 (0.4)	1.7 (0.7)	2 (0.8)**	0.7 (0)*	0.2 (0.2)
N	640	687	817	893	914	930

Source: DP-2 girls' survey (2018) (baseline) and (2019) (midline)

Notes: Respondents identified as having a disability include those with difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all'. Asterisks indicate that means between baseline and midline differ significantly from one another at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$.

2.2 Educational marginalisation

2.2.1 Contextual characteristics

In this section, we present findings on girls' contextual characteristics. These are characteristics that are considered to be changeable and complex; for example, languages can be acquired or households can move in and out of poverty.²¹

As mentioned above, no household information is available for the cohort girls at midline, and we are therefore not able to quantitatively assess changes between baseline and midline on household factors such as poverty, education of the household head, and school affordability. Over the course of one year, we might expect that some girls experience changes in these factors because of idiosyncratic shocks, such as the loss of a caregiver or changes in the employment status of their parents/caregivers. For the sample as a whole, however, we expect change in most of these characteristics to happen relatively slowly in the absence of any large-scale contextual changes, such as natural disasters.

In this section, we summarise findings of the contextual characteristics at baseline as a reminder of the levels of educational marginalisation faced by the cohort girls. We supplement this with additional information from the qualitative midline study and

²¹ See the GESI addendum of December 2018.

quantitative midline data on girls and schools, and report on where we observe differences compared to the baseline.

Living arrangements

At baseline, the majority of girls in the sample lived with at least one of their parents. Living arrangements in Kenya tended to be more diverse, with a third of girls living in female-headed households and around a quarter of girls living with only one parent. According to the baseline qualitative study, in some cases in Kenya girls lived with their aunt or uncle so as to be able to enrol in school, for economic reasons, or where their parents needed support. In other cases, their parents informally 'adopted' cousins to live with them. The qualitative midline analysis found that children in Kenya live in small houses, especially in urban areas in Nairobi and Kiambu. Families usually live in houses 10 feet square, which does not give a child enough space to read, play, or sleep when there may be discord at home. This in turn affects both the attendance of girls as well as their concentration in the classroom, according to both the girls themselves and their teachers. Children and parents in Nairobi also mentioned that the slums and neighbourhoods they live in feel unsafe. Frequent fires in slums result in families losing all their property, clothes, books, and savings. Setbacks such as thefts and the constant concerns of insecurity affect attendance and the children's sense of wellbeing. Further, in Kajiado and Nairobi, the community suggested that some children have parents who struggle with alcohol abuse and the resulting discord in the family affects their sense of wellbeing as well as their ability to get adequate sleep when their parents quarrel until late.

In Ghana, the quantitative survey at baseline found that almost a fifth of the sampled girls live without both parents. Further qualitative analysis at midline found that it was quite common to have cases where the parents migrated to urban centres and the children are staying with their grandparents or other relatives. There were also a couple of cases where children were living with their step-parents. In Nigeria, most girls reported that their fathers have multiple wives, and that they live together with their half-siblings in the same household.

Parental education

The quantitative survey at baseline found a disparity in the proportion of household heads and primary caregivers with no education in the three countries. Approximately three-quarters of primary caregivers in Ghana do not have any level of education, compared to approximately 40% of caregivers in Nigeria and one-quarter of caregivers in Kenya. This is supported by the qualitative midline analysis, which found that most of the parents interviewed in both Nigeria and Ghana were not formally educated. However, a handful of parents in the sample were either civil servants (especially in the urban centres) or community leaders, and who were also engaged with the PTA and School Management Committee (SMC)/School-Based Management Committee (SBMC). The lack of parental education was described by parents and community members as a barrier to their effective engagement with the academic performance of their children, as well as in helping them with their studies.

2.2.2 Barriers to education

This section focuses on barriers to learning and transition. The project design focuses on poor attendance, poor teaching quality, lack of LS, and lack of parental and

community support as key barriers to improved learning and transition (these factors are discussed in detail as IOs in Chapter 6). In this section, we focus instead on additional barriers to education that contribute to the educational marginalisation of the girls targeted by DP-2, specifically early marriage and pregnancy, poverty, household chores, safety and security, distance to school, weather conditions, inadequate school facilities, and experiences of physical punishment.

Of these factors that form the context within which the programme operates, some are much more directly under the purview of DP-2 and might be affected by the programme. Others are more structural in nature, and the degree of influence the programme could have on these is much smaller. Of the latter, poverty *per se* emerges as a prime example of a barrier that acts as a hindrance to the programme impact and is not directly influenced by DP-2, but there is evidence to suggest that some community-related activities are trying to engage with this through their outreach activities.

Early marriage and pregnancy

At baseline, the proportion of girls in our sample who were married or who were mothers was very low across the three countries. According to the qualitative midline analysis, sampled parents across all the countries are aware of these issues and consider them as potentially risky for girls' education in general, though these vary by country. In Kenya, especially in Nairobi but also in Kiambu, community members reported that girls are particularly vulnerable to early pregnancy. Community members discussed underage girls being vulnerable to having sex with young and older men, but this was often too sensitive to discuss openly. In Wajir, as cohort girls enrol in school at an older age, they are more vulnerable than the girls in other areas of Kenya regarding getting married while still at school, as a result increasing their vulnerability to dropping out of school.

In Nigeria, we found that (compared to the baseline) parents seemed more aware now of the importance of girl child education and expressed a desire to see their daughters transition through secondary school. At this point, however, and consistently with the baseline findings, they tended to relinquish the decision for their daughters to continue beyond secondary school to their future husbands. In comparison, parents in Kenya and Ghana usually expressed that they want their daughters to go to university.

In Ghana, early marriage was not mentioned explicitly (as was also the case at baseline). However, in two communities, notably Sagnarigu and Savelugu (but also some other communities to a lesser degree), community members and parents also reported the perceived influence of a 'bad' peer group on young girls, and how these could often lead girls into situations where they became pregnant at an early age and had to drop out of school. Two of the cohort girls who were interviewed at baseline had dropped out of school by the time the midline was conducted. One girl dropped out as she became pregnant and moved to another community, while the other girl was reported to have run away from home with friends and moved to a larger urban centre.

Poverty

The baseline analysis suggested that poverty is one of the main drivers of marginalisation, particularly for households who are considered to be extremely poor.²² Around a quarter of households in both Nigeria and Kenya are considered to be extremely poor, with a further 30% of households in Nigeria and a further 20% of households in Kenya considered poor. In Kenya, there are large regional differences in this regard: over half the households surveyed in the semi-arid/arid regions (Kajiado and Wajir) are extremely poor, compared to about a tenth of households in the other counties. The poverty rate for the sample in Ghana is lower, with about a tenth of households considered to be extremely poor and a quarter considered to be poor.

The baseline analysis showed that, while primary education is technically free in all three countries, most caregivers pay schooling-related expenses such as informal fees, examination fees, or PTA levies. Caregivers reported that these expenses made it difficult for caregivers to afford sending their children to school, particularly in Nigeria and Kenya. Caregivers also frequently reported paying for school supplies and school meals. However, the qualitative fieldwork at midline found that GES seems to have recently issued a directive prohibiting schools from asking for any money from parents and communities as contributions towards their children's schooling. Nevertheless, the details regarding the implementation of the directive need further exploration during the endline round of the evaluation.

The qualitative midline study further revealed that, across all three countries, parents and students interviewed at midline all stated the lack of financial means (or inconsistent access to it) as a barrier to education. In terms of magnitude, this reason was more prominent in Kenya and Ghana, while early marriage emerged as a relatively bigger concern in Nigeria.

Poverty influences various aspects of the girls' lives. Respondents explained that financial constraints are related to poor attendance and lack of access to learning materials. Regarding attendance, the challenge of being able to pay the fees on time and being sent home until the parents could afford to pay the fees were prominent concerns. These financial constraints also implied that children faced challenges in procuring a lot of reading/teaching materials such as story-books, model exam papers, and reference books, as well as school supplies. In Kenya, specifically, the financial barriers also exclude those children who are not in a position to contribute towards extracurricular classes and clubs. In Kenya, the lack of money for sanitary and hygiene products such as soap and napkins affects girls' attendance as well.

In Nigeria and Ghana, another key poverty-related challenge related to children having to hawk for their parents/caregivers before or after school to support their households economically. This practice was, however, relatively more prominent in Ghana. For instance, in Ghana there were examples of high absenteeism during market days and farming seasons, when many girls also do the work of *kayeye* (head porter). The reasons for carrying out these activities were for girls to earn money for food or to purchase schooling supplies. Given the socioeconomic background of most of the girls,

²² Household poverty is measured based on the PPI scorecard, which assigns each household a likelihood of being poor based on a set of 10 country-specific indicators (see www.povertyindex.org/). The poverty rates presented here are the proportion of households that live in extreme poverty according to the International Poverty Line set at US \$1.90/day at purchasing power parity at 2011 prices, and the proportion of households that live in poverty according to the International Poverty Line of US \$3.10/day.

their role in generating income for their households was a prominent one and is unlikely to change in the short term.

Another poverty-related barrier to schooling that came up prominently in all three countries was that children often came to school without having eaten at home or were sometimes not provided with lunch money. This had a bearing on girls' concentration levels until they had something to eat during the school feeding programme in schools which had this facility, and until break-time in schools that did not have the school feeding programme. In addition, in Nigeria, a few children who had to go back home during break-time to eat rarely returned back to school afterwards for the day. A chairman of the CAP process also noted that some parents preferred to have their children stay home when they cannot afford to give them breakfast to take to school. In Ghana, since most of the schools visited did not have a school feeding programme, the implication of not having lunch money was further exacerbated. These examples signal that poor and extremely poor children who do not have access to meals before and during schooltime face barriers that limit their ability to perform well at school.

Household chores

The baseline analysis in all countries, but particularly in Nigeria and Ghana, found that a large proportion of girls spent a quarter of the day or more on household chores on a regular day. In addition, many children, particularly in Ghana and Nigeria, were faced with labour demands in the form of agricultural work or work outside the home. The vast majority of girls in all countries helped with caring for family members, fetching water, and doing housework.

Similar to findings at baseline, qualitative data at midline showed that girls continue to perform several chores at home across the three countries. This includes but is not limited to fetching water, lighting a fire, preparing meals, and washing dishes and clothes for themselves and their younger siblings (and in some cases their family members). Some parents and girls suggested that girls have started to undertake some new tasks this year, such as washing their own clothing—which they did not do before.

At midline, we inquired in more detail about girls' daily routines. We found that most girls in our sample usually wake up at around 4.00 am–5:00 am in all three countries to start their day with the *Fajr* prayers if they followed Islam, and thereafter to begin their chores so as to make it to school on time. In non-Islamic households, they still usually wake up around the same time and start their chores earlier. In general, most girls leave their homes around 7:00 am–7:30 am to go to school. Given that most of the girls belong to relatively poor families with large family sizes, doing household chores is a major part of their daily routine. However, the presence of household chores is also an accepted reality by both parents and children in all three countries, and not seen specifically as a burden by them. In Kenya, similar to the baseline analysis, with the exception of Wajir, girls and their parents suggested that these household chores do not affect the girls' studies and homework because all the tasks have their own time and are performed before or after doing homework. In Wajir, however, where the majority of the cohort girls interviewed at midline were also older than girls in other counties, they often felt tired and found themselves unable to concentrate in class or on homework because they have too many chores. In Nigeria, none of the parents interviewed saw household chores as posing barriers to learning and school attendance, but a majority attested that over the years, as their girls grow older, their chores increase as they become able to take on more responsibilities.

Almost a quarter of the girls in Nigeria and Ghana also reported going to school late as a result of household chores that needed completing before setting off. In addition, given that many children reach their school without eating breakfast at home and only eat something in their break, it was quite common for children to feel tired and hungry.

In Nigeria and Ghana, there was a prominent distinction in the type of work across genders. In Nigeria, some of the cohort girls were made to cook at home and not the boys, and the girls themselves felt it was their duty to carry out such tasks. Similarly, in Ghana, a lot of the tasks involving kitchen-related work and washing were limited to girls. A few girls interviewed also stated in quite a matter-of-fact way that these chores were not given to boys because boys did not usually do this work. The qualitative data at baseline also showed that girls usually perform household chores such as cooking, cleaning, washing, caretaking, and economic activities such as hawking, while boys usually support with farming-related tasks. This emerged from interviews with parents, girls, boys, and school-level stakeholders. At midline, we found that the interviews with parents, girls, and head teachers also shows as expected that these chores are still being done by the girls. Thus, while it is difficult to comment on the exact burden of chores performed respectively by girls and boys, it is evident that the type of chores being performed by them varies.

In Ghana, the extent of household chores performed by girls grows in specific cases, increasing their vulnerability. This included children who are part of large families (which are common in Ghana) or who live with relatives, particularly with grandparents. Furthermore, if a girl happened to be the eldest, she was often given the extra burden of care for her siblings. This increase in the burden of chores further adds to the time and energy these girls spend as part of their duties at home.

In addition, in all three countries, girls from most schools reported sweeping classrooms, staff-rooms, and cleaning toilets. In Kenya, these tasks are divided between the boys and the girls. In comparison, in Ghana and Nigeria, these tasks are often the sole responsibility of the girls, while the boys are given less strenuous tasks such as picking up litter or monitoring the school gates to catch late-comers.

Global research suggests that performing household chores for more than 21 hours each week (or three hours a day spread across seven days) is likely to have a negative effect on school attendance and learning.²³ According to our interviews with girls, it is safe to suggest that many girls perform more than three hours of household chores a day across all the countries on average. It is also important to note that these chores are considered a very central part of the daily routine of these children.

While children's involvement in household chores is not always considered harmful, the cumulative effect of marginalisation could have a serious effect on girls' school attendance and performance. In particular, girls who tend to wake up early to perform a range of chores (some of which are physically demanding) and then go to school without a meal are likely to perform more poorly than their counterparts who have their breakfast on time and have a less busy start to the day. Moreover, if these girls are also the ones who are likely to be excluded from extracurricular activities and cannot afford additional learning aids, then they will be even more excluded and not benefit from the DP-2 project.

²³ International Labour Organization (2017) 'Global estimates of child labour: results and trends, 2012–2016', ILO, Geneva.

Distance from school and insecurity

Distance from school emerged as a key barrier across all three countries, and children attending rural schools in the qualitative sample usually live further away from the school than those in urban areas and have to walk a greater distance to attend school. In these cases, children may have to leave early (before school hours end) to return home before dark and miss the extracurricular activities available at their school.

In terms of security, in Ghana, the proportion of girls who feel unsafe travelling to school was significantly higher at midline in both treatment and control groups compared to baseline. In addition, the proportion of girls who feel unsafe while at school increased significantly in the treatment group compared to baseline. While safety may have deteriorated over the last year, it is also possible that the girls' awareness of potentially unsafe situations has increased. It may also be that girls tend to stay at school later as they get older for after-school activities, and that travel later in the afternoon may be less safe.

In Kenya, a significantly smaller proportion of girls reported feeling unsafe travelling to school and while at school at midline compared to baseline. This trend is the same across both treatment and control schools, suggesting that there has been some general improvement in security. However, the findings from the qualitative study suggest that travelling in the evening or on the weekend remains unsafe in certain communities, particularly in Nairobi. Analysis by the sampling strata shows that safety travelling to schools has improved particularly in non-formal treatment schools and in control schools in the arid and semi-arid regions. Safety at school has improved particularly in non-formal treatment schools, and in control and treatment schools in the arid and semi-arid regions.

In Nigeria, the proportion of girls who feel unsafe while travelling to school remained unchanged, but significantly fewer girls feel unsafe while at school. Once again, this trend is similar in both treatment and control schools.

Table 15. Security at school at midline and baseline

	Ghana		Kenya		Nigeria	
	Control midline (baseline)	Treatment midline (baseline)	Control midline (baseline)	Treatment midline (baseline)	Control midline (baseline)	Treatment midline (baseline)
Girl doesn't feel safe travelling to or from school	10.2 (6.0)*	10.6 (7.1)**	5.3 (8.5)**	5.7 (8.3)**	5.2 (5.5)	7.2 (7.5)
Does not feel safe at school	3.5 (3.3)	6.8 (3.5)***	1.2 (3.8)**	1 (3.4)***	1.8 (4.7)***	1.9 (6.9)***
N	640	687	817	893	914	930

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that means between midline and baseline differ significantly from one another at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$

In the qualitative study, the concern about unsafe travel to school emerged both at baseline and midline, and relatively to same degree since this insecurity was usually driven by how far the school was from the community. Unsafe travel to school was a concern echoed from all three countries, albeit to different degrees. In Nairobi, parents felt unsafe sending their girls to school on weekends or having them stay back for

extracurricular or co-curricular activities due to lack of safety, both when children were on school premises or on their way back. In Kajiado, girls reported walking long distances to school and back home and were afraid of encountering wild animals on their way back in the dark. Parents suggested that the lack of security was an important deterrent to students' education. This concern was also echoed in some communities in Nigeria and Ghana, where parents expressed their concern about what time the girls would reach home. In some cases, in Ghana, there were examples of parents giving their children bicycles or picking them up on their own bicycles to mitigate this concern.

The challenges associated with long and unsafe distances to school are likely to exclude certain girls from participating in some of the activities of the DP-2 project, such as remedial classes. An important link here is that in Nigeria and Ghana, remedial classes are conducted before or after school or on the weekends, and many girls who live far away find it difficult to attend these regularly. In Kenya, remedial/tuitions take place during school hours, but before or after classes.

Weather conditions

Weather emerged as an important barrier, particularly in Kajiado in Kenya, which is subject to severe weather conditions, affecting girls' attendance and learning. One school, which was close to a river, was rendered inaccessible when it rained and the river started flooding. During the rains, sewage water might seep into the school, or rainwater might seep through the roof and windows to create an unclean and uncomfortable environment for students in other counties. In addition, Kajiado also experiences frequently-recurring droughts and famines, with associated challenges for going to school, as children and parents both go out to seek work and food. During a drought, a family has to travel further with their cattle to find water. In this case, children (usually boys) help with cattle herding and have to skip school altogether. Sometimes the school is provided with relief from the government, or given funds for a feeding programme. In Wajir in Kenya, the heat makes it unbearable for students to sit in the classroom and concentrate on their studies. Often when they go home for lunch, they do not return to the school due to the heat. In Nigeria and Ghana, also, some communities face the challenge of the school being inaccessible when it rains. This was especially the case where the school is far from the community. Given these challenges, children are often exposed to either dangerous physical conditions to reach school or absent themselves when they are unable to reach it, thereby influencing the regularity of their attendance during such seasons.

Insufficient school facilities

The baseline analysis suggested that most of the sampled schools in Nigeria had inadequate infrastructure and overcrowded classrooms; schools in Ghana had inadequate infrastructure; and schools in Kenya had substantially better facilities. At midline, levels of school infrastructure had not changed significantly since baseline. The exception is that electricity access appears to have deteriorated substantially in Nigeria, in treatment schools and even more so in control schools. At midline, 31% of treatment schools and 57% of control schools reported that they did not have access to electricity. Not having access to electricity would greatly limit the extent to which treatment schools are able to use their learning centres. Electricity access has also worsened in Kenya: whereas all schools had access to electricity at baseline, there are now some schools that report not having access to electricity. This is the case particularly for schools in Wajir and to for a small number of non-formal schools.

The proportion of schools with a pupil–teacher ratio (PTR) of over 40 was higher at midline in Ghana in both treatment and control schools. This is being driven by schools having fewer teachers at midline compared to baseline, rather than by an increase in pupil enrolment. In addition, we also observe a decrease in the proportion of teachers who lack basic teaching qualifications, suggesting that some teachers without qualifications may have left the schools since baseline. The proportion of schools with PTRs over 40 and the proportion of schools with no female teachers continues to remain very high in Nigeria.

Table 16. State of school facilities at midline and baseline

School-level variables (%)	Ghana		Kenya		Nigeria	
	Control midline (baseline)	Treatment midline (baseline)	Control midline (baseline)	Treatment midline (baseline)	Control midline (baseline)	Treatment midline (baseline)
No separate toilets for girls	30.8 (21.2)	17.5 (14)	3.9 (0.8)	2.1 (0)	34.7 (55.3)	37.5 (27.1)
No access to water	16.2 (8.8)	12.3 (8.8)	0 (0)	2.1 (0)	13.8 (6.2)	14.6 (6.3)
No access to electricity	17.4 (12.3)	7.0 (12.3)	11.7 (0)*	6.4 (0)*	56.7 (14.6)***	31.3 (14.6)*
PTR over 40	40.5 (20.7)	38.6 (21.4)**	29.3 (32.2)	37 (34)	79.8 (72.0)	57.8 (68.9)
School has no female teachers	19.0 (16.4)	17.5 (7)*	1.0 (2.1)	2.1 (2.1)	44.1 (47.2)	39.6 (43.8)
Proportion of teachers lacking basic teaching qualification	1.7 (7.7)***	2.1 (5.5)**	8. (8.8%)	7.4 (9.3)	8.7 (11.1)	7.3 (8.7)
N	45	57	55	53	51	48

Source: DP-2 midline school survey (2019) and DP-2 baseline school survey (2018)

Notes: Asterisks indicate that means between midline and baseline differ significantly from one another at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$

Qualitative research also highlighted that infrastructure remains a key barrier, mostly in Nigeria and Ghana, and to a much lesser degree in Kenya (with the exception of two schools there). Only one school in Nigeria located in an urban LGA had adequate space for extracurricular activities for students and a constant water supply from a motorised borehole. In Ghana, about half the schools were sharing either their boundary, their office buildings, or their playground with one or two other schools in the area, while about half the schools did not have any playgrounds. Some schools had segmented and shared areas, as a result of which some classes were in the compound of the nearby JHS and some were in a separate area.

Although there were also reported cases where renovations to existing buildings and furniture had occurred at other schools across the three countries, there still appeared to be inadequate infrastructure in Nigeria and Ghana. For instance, the lack of a library and adequate classrooms and furniture were reported by head teachers, members of the CAP process, and cohort girls in both Nigeria and Ghana. In Ghana, for instance, when girls were asked what they would change about their school, most of them wanted more classrooms and better furniture to sit on, as the current furniture was not in a good state and they were sometimes asked to sit on the floor on mats during lessons.

In Nigeria, the different stakeholders raised sanitation-related infrastructure much more explicitly as an issue. Complaints were around poor hygiene condition and inadequacy for staff and students. At one of the schools, staff and students had to go to neighbouring houses or nearby bush because toilet facilities were lacking at the school. In Ghana as well, the shortage of clean toilet facilities in the school was raised as a concern both by the students and head teachers.

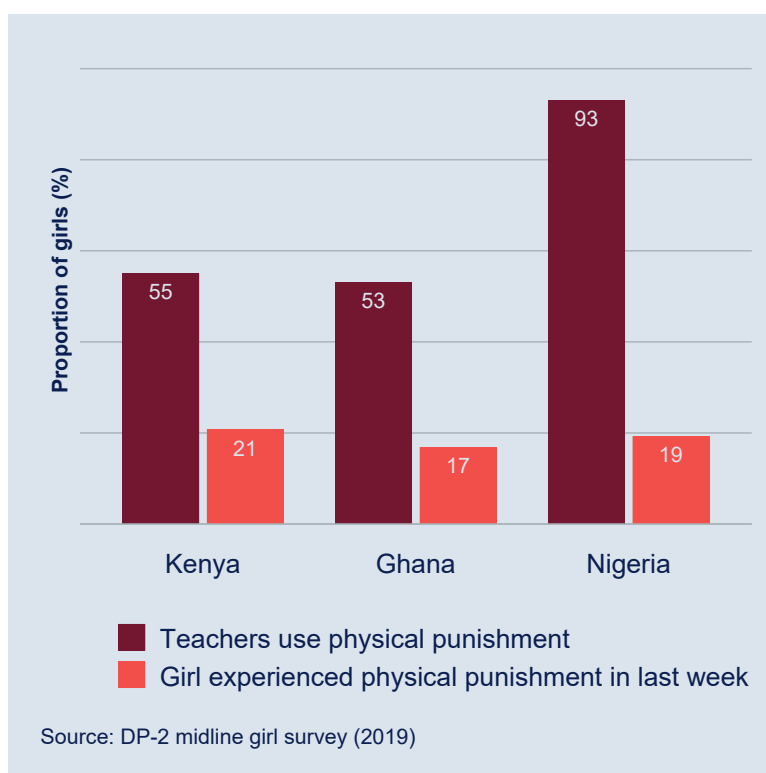
The challenges related to school infrastructures are similar to the ones that emerged at baseline. Some of these may not necessarily pose a serious barrier to girls' schooling while others might have varying effects on their health, personal wellbeing and confidence which could affect their school attendance and academic performance.

Physical punishment

Analysis of quantitative midline data found that physical punishment is widely used by teachers in all countries, with over 90% of girls in Nigeria and over 50% of girls in Ghana and Kenya reporting that their teachers use physical punishment as a form of discipline. Around 20% of girls in each country reported that they had experienced physical punishment from teachers in the last week. The proportion of girls reporting having experienced physical punishment in the last week was similar across the three countries despite physical punishment having a different legal status in each country. In Nigeria, physical punishment is legal, while Kenya has enacted legislation to prohibit the use of physical punishment. In Ghana, physical punishment remains legal, although a policy against the use of physical punishment in schools has been issued.

In addition to physical punishment, about a quarter of girls in Ghana and Nigeria also reported that teachers make students stand or kneel in a way that hurts as a form of punishment. A quarter of girls in Nigeria also reported that teachers shout at students to punish or discipline them, while the proportion of girls reporting this form of punishment was low in Ghana and Kenya. In addition, approximately 15% of girls in Kenya, 10% in Nigeria, and 5% in Ghana reported that teachers asked students to perform manual chores as a form of punishment, including cleaning classrooms or the school compound, washing clothes, and weeding or digging.²⁴

²⁴ This form of punishment is not listed as a response category in the FM template. Girls' descriptions of other forms of punishment that teachers used were reviewed, and almost all responses recorded under 'other' referred to doing manual chores as a form of punishment.

Figure 7. Use of physical punishment

Note: The figure represents the full sample at midline. Rates of physical punishment were similar across treatment and control groups.

Instances of physical punishment were also reported by girls in the qualitative midline study. Similar to the baseline findings, the midline study found a few instances in Kenya where children reported being hit by their teachers for being late or for not being able to complete their homework or schoolwork on time. The parent of one child who was being beaten in school was aware of it and claimed it made her daughter more reluctant about engaging with the subject taught by the teacher.

In Nigeria, students who came late to school were either flogged, tasked to wash toilets, or made to serve some other form of punishment, which acted as a deterrent to a child coming to school if they knew they were going to be late.

The mention of physical punishment in Ghana was less prominent in comparison to the other two countries, but children reported that they were physically punished by their parents for not doing their housework properly. In cases where the girls reported being caned by their teachers, they also mentioned that they tried their best to reach the school on time to avoid being caned.

Across all countries, therefore, girls reported experiencing physical punishment as a result of arriving at school late or not having completed their schoolwork. This is related to the discussion above on household chores that shows that a reason why children may arrive at school late or fail to complete their schoolwork is due to the amount of household chores that they are expected to perform. In some cases, the threat of physical punishment may prevent children from going to school at all.

2.3 Intersection between key characteristics and barriers

At baseline, we examined the intersection between several characteristics of girls and barriers to education. Since no further household data was collected at midline, it is not possible to update this analysis at this stage, but we summarise the baseline analysis here.

The baseline analysis showed that poverty is the primary factor affecting the project population where there are specific groups of children who are at greater risk of not having equal chances to stay and succeed at school. These 'at-risk' groups are those who have multiple characteristics of marginalisation since most of the DP-2 child population manage to attend and transition despite their relatively poor standards of living.

- In Nigeria, girls living in extreme poverty and girls living in rural locations are more likely to attend schools with inadequate facilities, learn in overcrowded classrooms, and live further from secondary schools. They are also more likely to be helping with agricultural work, a family business, or other work outside the home.
- In Kenya, girls from poor households and living in semi-arid/arid regions are more likely to learn in overcrowded classrooms, and live further from the nearest secondary school. Moreover, girls attending non-formal schools are more likely to have large numbers of un- or underqualified teachers.
- In Ghana, girls living in extreme poverty are more likely to learn in overcrowded classrooms, live further from secondary schools, and are more likely to be helping with agricultural work, a family business, or other work outside the home.

While there are differences between the three countries, when households are poor and located in rural or remote areas then access to schools becomes more challenging and children may be required to support income-generating activities for the household. Also, the schools that are available in poor, rural, and remote areas tend to have poorer infrastructure and are more likely to be understaffed.

2.4 Conclusion

This chapter has reviewed the major drivers of marginalisation and barriers to education. These drivers are deeply interlinked, and often interact in a way that exacerbates their effect, thereby increasing the impact on vulnerable girls.

In general, the findings strongly show that the key factors for the educational marginalisation as well as the barriers identified in the baseline report continue to be important barriers to education at midline. Poverty remains by far the most important driver of marginalisation overall, affecting children's ability to go to school, stay in school, and perform well. Poverty is directly related to parents' ability to afford school-related expenses, as well as other extracurricular contributions for them. Poverty also affects girls' concentration levels at school, as many girls arrive hungry and tired, and in the absence of school feeding programmes often have limited money to purchase food. Poverty is also related to girls' attendance and study time where girls contribute to the income of the household by working before or after school, especially on market days or during the farming season. Therefore, girls who are poor (and particularly

those who are extremely poor) are likely to face several barriers to learning and transition.

At baseline, household chores were identified as a key barrier to education. The midline study also found that household chores are a major part of girls' daily routine. Most girls get up early in the morning to perform several tasks before going to school, sometimes resulting in them arriving at school late, and often tired and hungry. Arriving at school late was reported as a common reason for being physically punished by a teacher, which further marginalises these girls and, in some cases, results in girls missing school completely if they knew they will be late. However, the presence of household chores was also an accepted reality by both parents and children in all three countries, and not seen specifically as a burden. While household chores are not always harmful, they are likely to contribute to girls' marginalisation when the amount of time girls spend on chores results in them missing school or lacking time to study, or is interlinked with other barriers, such as going to school without having eaten.

Distance to school emerged as a key barrier across all three countries, and children attending rural schools in the qualitative sample usually lived further away from the school and had to walk a greater distance to attend. In these cases, some children usually had to leave early (before school hours end) to return home before dark and miss the extracurricular activities available at their schools. The challenge of the long journey to school was exacerbated during the monsoons, since in each country a few schools were rendered inaccessible due to flooding after heavy rain.

In both Nigeria and Ghana, schools also reported limitations in access to electricity, toilets, and water, as well as inadequate classrooms for the number of children enrolled.

Poverty is a structural factor that cannot be comprehensively addressed by an intervention like DP-2 in isolation. It is therefore likely to present a continuing risk to the likelihood of DP-2 achieving impact. It is possible that the most marginalised girls may also find it more difficult to participate in some of DP-2's activities, particularly where they take place outside regular school hours. For example, girls who cannot travel to school safely or who have to contribute to the household's income or care for siblings may not be able to attend remedial classes that take place at the weekend. Activities implemented through the CAP process may be particularly important to identify girls who are more vulnerable, and to identify strategies to enable them to participate in all DP-2 activities to the same extent as other girls.

Box 2. Project's contribution: context

The project should respond to the External Evaluator's comments on the above questions. In particular, the project should respond to:

- whether activities are still appropriate for subgroups and barriers;
- External Evaluator analysis of whether barriers have changed for key subgroups;
- whether contextual changes have an impact on barriers or subgroup; and
- whether the project plans to review their TOC in light of these findings.

3 Key outcome findings

3.1 Learning outcomes

One of the overall goals of DP-2 is to improve learning outcomes in literacy and numeracy. Through training and coaching teachers to gain confidence and skills and by providing schools with media equipment and a library of educational video and digital content, the quality of teaching is expected to improve, which in turn is expected to lead to improvements in learning outcomes. In addition, students who lag the furthest behind in their learning receive targeted support through remedial classes to bridge gaps in foundational literacy and numeracy skills. It is also expected that girls' clubs will contribute to improvements in learning outcomes through teaching girls important life skills, including study skills, increasing their self-esteem and self-efficacy, and providing them with a range of inspirational role models. Similarly, CAP should also contribute to improvements in learning outcomes through removing barriers to girls attending school and supporting their learning and transition. Overall, the full comprehensive intervention package is expected to lead to improvements in learning outcomes through various, interacting pathways.

In this section, we present findings from the quantitative and qualitative research on girls' learning outcomes in literacy and numeracy. The first section describes the learning assessments that were administered to the learning cohort girls. Next, we present findings on the impact that DP-2 has had on literacy and numeracy outcomes at midline and compare these to the targets that were set at baseline. We then look in more detail at how girls' performance is changing on the specific literacy and numeracy skill areas. In the following section, we look at factors that may be contributing to improvements in learning outcomes. In the final section, we look at barriers to learning and whether these barriers have changed since the baseline.

3.1.1 Measurement of pupil learning

This section describes how we measured pupil learning outcomes. All students in the learning cohort are assessed on English literacy and numeracy.

English literacy assessment

At baseline, literacy outcomes were measured through five subtasks from EGRA. At midline, we administered the same five subtasks of the EGRA assessment using a different version of the test.²⁵ The two versions of the test were pilot tested to ensure that they were of equal difficulty.

Table 17 describes the five subtasks of the literacy assessment. For each task, the table includes the skill area assessed, a description of the subtask, and how the subtask was scored. Subtasks that assess reading were scored by creating a words-per-minute (WPM) score of the number of letters or words that the pupil reads correctly per minute. Other subtasks were scored as the percentage of questions answered

²⁵ In addition, we administered SeGRA subtask 1 in Ghana and Kenya and SeGRA subtask 3 in Kenya. These subtasks will be used for the midline–endline comparison and are not described further here.

correctly. Using these subtasks, an overall aggregate literacy score has been created from the average of the five subtask scores, with all subtasks being equally weighted. Aggregate scores range from 0 to 100 and can be interpreted as the overall percentage of questions that the pupil has answered correctly.

Table 17. English literacy subtask

Number	Skill area	Description of task	Scoring
English literacy			
EGRA Subtask 1	Letter sound/name identification	Students were shown 100 upper case and lower case letters and were instructed to sound out/name as many as they could in one minute	Correct letter sounds/names per minute
EGRA Subtask 2	Familiar word reading	Students were shown 50 common, familiar words and were instructed to read as many as they could in one minute	Correct WPM
EGRA Subtask 3	Invented word reading	Students were shown 50 one- and two-syllable invented words and were instructed to read as many as they could in one minute	Correct WPM
EGRA Subtask 4	Oral reading fluency	Students were instructed to read a short passage (approx. 240 words) with a time limit of four minutes	Correct WPM
EGRA Subtask 5	Comprehension	Students were orally asked five comprehension questions about the passage, including simple recall and at least one inferential question	% correct

Notes: (1) EGRA subtask 1 was a letter *sound* identification subtask in Nigeria and Ghana, but a letter *name* identification subtask in Kenya. The task was changed in Kenya after the piloting because it was observed that the cohort students had not been taught letter sounds. (2) As per the GEC-T guidance, WPM scores are capped at 100.

Numeracy assessment

In Nigeria, at baseline, numeracy outcomes were measured through six subtasks from the EGMA. At midline, we administered the same six subtasks, using a different version of the assessment. The two versions of the test were pilot tested to ensure that they are of equal difficulty.

In Ghana and Kenya, at baseline, we measured numeracy outcomes through six subtasks from the EGMA assessment as well as one subtask from the SeGMA assessment. At midline, we administered a subset of the subtasks that we used at baseline.²⁶ For the analysis of change in learning outcomes between baseline and midline, we focused only on the subset of subtasks administered in both rounds. This means that the average aggregate scores at baseline and midline are based on the same subtasks and are comparable.

²⁶ Subtasks that showed ceiling effects at baseline were not administered at midline. This is because performance on these subtasks was already very high at baseline, which meant limited room for improvement as girls got older. The decision not to administer these subtasks at midline was taken together with the project and the Fund Manager.

Table 18 describes the numeracy subtasks that were administered at midline. For each task, the table includes the skill area assessed, a description of the subtask, and how the subtask was scored.

Table 18. Numeracy subtasks

Number	Skill area	Description of task	Scoring
Numeracy			
EGMA subtask 1	Number identification	Students were asked to orally identify 20 one-, two-, and three-digit numbers	% correct
EGMA subtask 2	Number discrimination	Students were shown 10 sets of two numbers and asked to name the bigger of the two	% correct
EGMA subtask 3	Number pattern recognition	Students were shown 10 patterns of four numbers, one of which is missing, and are asked to identify the missing number	% correct
EGMA subtask 4	Addition	Students are asked to complete 25 addition problems	% correct
EGMA subtask 5	Subtraction	Students are asked to complete 25 subtraction problems	% correct
EGMA subtask 6	Word problems	Students are asked to answer five word problems that are read out orally to the pupil	% correct
SeGMA subtask 1	Advanced number operations (multiplication, division, etc.)	Procedural questions on multiplication and division, fractions and proportions, and geometry and measurement	% correct

The following subtasks are used for the baseline–midline comparison in each country:

- **Ghana:** EGMA subtasks 2–6 + SeGMA subtask 1 (six subtasks, equally weighted);
- **Kenya:** EGMA subtasks 3, 5, 6 + SeGMA subtask 1 (four subtasks, equally weighted); and
- **Nigeria:** EGMA subtasks 1–6 (six subtasks, equally weighted).

Aggregate numeracy scores are the averages of the subtask scores, with equal weighting of all subtasks. Aggregate scores range from 0 to 100 and can be interpreted as the overall percentage of questions that the pupil has answered correctly.

It is important to note that, because the numeracy assessments consist of different subtasks in each country, overall aggregate scores are not comparable between the countries.

Seasonal effects are likely to influence learning outcomes. For example, there may be particular times of the year where food supplies are low and students tend to go to school hungrier, finding it more difficult to concentrate. It is therefore important that students are assessed at a similar time of the year compared to the baseline. Data collection in each country was conducted as close as possible to one year after the baseline survey, with small differences in timing due to school holidays and other contextual factors.

The midline survey was conducted between May and July 2019. At this time, students in Kenya were in the second (of three) terms of their school year, and students in Ghana and Nigeria were in the third (of three) terms of their school year.

Further details on the construction and scoring of the learning assessments are provided in Annex 14.

3.1.2 Impact of DP-2 on learning outcomes

Learning outcome targets

At baseline, we calculated targets for impact of DP-2 on learning outcomes for the midline and endline evaluation points. These targets were based on the performance of a benchmarking group from Primary 6 (for the midline target) and Primary 7/JHS1/JSS1 (for the endline target), who were assessed at baseline. The target was calculated to represent an effect size of 0.25 standard deviations (SD) for each year of intervention, which is the target that GEC sets for all its projects.

Table 19 summarises the targets for English literacy and numeracy at midline. To meet the target, the average aggregate score in the treatment group would need to be higher than the average score in the control group by the percentage points indicated in the table. Further information on the calculation of the targets is presented in Annex 14.

Table 19. Learning outcome targets at midline (T = 0.25 SD)

	Literacy	Numeracy
Ghana	6.0	3.7
Kenya	4.4	4.2
Nigeria	2.0	6.2

Literacy and numeracy scores at midline

Table 20 presents literacy and numeracy scores at midline before the impact estimation models are applied.²⁷

Table 20. Literacy and numeracy scores at midline

Grade	Intervention Group Mean	Control Group Mean	Standard Deviation in the intervention group
Literacy			
Ghana	32.41	31.35	22.72
Kenya	61.07	60.44	18.61
Nigeria	7.75	5.11	10.40
Numeracy			
Ghana	62.41	61.11	13.27
Kenya	58.83	57.03	16.71
Nigeria	46.95	38.69	25.79

Impact of DP-2 on learning outcomes and performance against targets

In this section, we present average aggregate literacy and numeracy scores at baseline and midline for the treatment and the control group. Since the evaluation is tracking a cohort of girls who are getting older each year and are progressing through

²⁷ Mean scores presented in these tables are slightly different from the mean scores presented in the next section because the impact estimation models are applied in the next section.

the school system, it is expected that the cohort girls' scores on an assessment of the same level of difficulty will improve over time. What is of greater interest is whether scores in the treatment group increase more than scores in the control group, everything else being equal. To examine this, we estimate the impact that DP-2 has had on literacy and numeracy scores using DID estimation techniques and indicate whether the impact represents a statistically significant improvement over the control group. Lastly, we compare the size of the impact estimate against the target.

Details of the impact estimation models and robustness checks are presented in Annex 3.

English literacy

Table 21 shows average aggregate English literacy scores at baseline and midline in the treatment and control groups, the differences between baseline and midline, and the DID impact estimate. We discuss each country's results in turn below.

Table 21. Literacy scores from baseline to midline

Cohort	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline treatment	Baseline literacy control	Midline literacy control	Difference baseline to midline control	DID (treatment – control difference)
Ghana							
Grade 5	23.9	31.9	9.1***	24.4	31.4	10.7***	-1.1
Kenya							
Grade 5	56.3	61.0	5.5***	55.9	60.4	3.2***	0.7
Nigeria							
Grade 5	2.1	7.8	6.4***	2.6	5.1	3.0***	3.8***

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** p<.001, ** p<.05, * p<.01. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Table 22. Impact of DP-2 on literacy scores in Kenya, by sampling strata and for Wajir

Cohort	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline treatment	Baseline literacy control	Midline literacy control	Difference baseline to midline control	DID (treatment – control difference)
Kenya – formal schools in Nairobi and surrounding counties							
Grade 5	60.5	65.6	7.1***	62.3	67.3	5.3***	0.4
Kenya – non-formal schools							
Grade 5	62.4	68.3	5.9***	61.8	66.9	5.6***	-0.2
Kenya – arid and semi-arid regions							
Grade 5	47.1	50.3	3.5**	44.6	48.2	-1.0	1.9
Kenya – Wajir only							
Grade 5	42.7	45.2	3.0	40.5	43.9	-4.8	3.5

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** p<.001, ** p<.05, * p<.01. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Ghana

In Ghana, literacy levels at baseline were fairly low, with cohort girls scoring on average 23.9 on the literacy assessment in the treatment group. At midline, the average literacy scores in the treatment and control groups improved significantly, and

the increase over time is fairly large in magnitude, with a 9.1 percentage point improvement in the treatment group. Improvements over time were of a similar magnitude in the treatment and control groups and, as a result, the results from the impact estimation did not find any evidence that DP-2 has had an impact on literacy outcomes in Ghana at midline.

Given that the impact estimate is negative, the result suggests that 0% of the target has been met.

Kenya

In Kenya, literacy levels at baseline were moderate, with cohort girls scoring 56.3 on average in the treatment group literacy assessment. At midline, the average literacy scores in the treatment and control groups improved significantly, although the increase is moderate in magnitude, with a 5.5 percentage point improvement in the treatment group. Improvements over time were of a similar magnitude in the treatment and control groups and, as a result, the results from the impact estimation show that literacy scores in the treatment group have increased by only 0.7 over and above the control group as a result of the DP-2 intervention. This result does not reach statistical significance, and we therefore did not find any evidence that DP-2 has had an impact on literacy outcomes in Kenya at midline.

Analysis of the impact of DP-2 on literacy scores for the three sampling strata in Kenya also does not find any evidence of a statistically significant impact of DP-2 in any of the strata. The impact analysis was also conducted specifically for Wajir county because the findings from the qualitative research and process evaluation suggest that Wajir presents a context for implementation that may be different to Kajiado (Wajir and Kajiado together make up the 'arid and semi-arid region' strata). This was also supported by DLA's own monitoring data. When looking at the findings for Wajir county only, the size of the impact is larger (3.5 percentage points) but does not reach statistical significance. It is important to note that the original sample design was not intended to provide adequate sample power for the Wajir sample by itself. The analysis may therefore be underpowered to detect an effect.

Comparing this estimate to the target set at baseline, the result suggests that only 16% of the target has been met.

Nigeria

In Nigeria, literacy levels at baseline were very low, with cohort girls scoring on average 2.1 on the literacy assessment in the treatment group. At midline, average literacy scores remained very low, but had improved significantly following the baseline. The average literacy score in the treatment group at midline was 7.8. Average literacy scores in the control group also increased significantly to 5.1, but the increase is smaller in magnitude.

Results from the impact estimation show that literacy scores in the treatment group have increased by 3.8 percentage points over and above the control group as a result of the DP-2 intervention. This represents a statistically significant impact of DP-2 on literacy outcomes in Nigeria at midline.

A comparison against the target set at baseline shows that the target has been met and exceeded. The performance against the target is 190%, or in other words almost a 0.5 SD impact based on the SD in the benchmarking group. This represents a large impact to have achieved over the course of only one year of project implementation.

Table 23. Literacy results compared to targets

Result	Details
Ghana Literacy baseline: midline	Beta = -1.1 p-value > .1 (two-tailed) Target = 6.0 Performance against target = 0%
Kenya Literacy baseline: midline	Beta = 0.7 p-value > .1 (two-tailed) Target = 4.4 Performance against target = 16%
Nigeria Literacy baseline: midline	Beta = 3.8 p-value < .001 (two-tailed) Target = 2.0 Performance against target = 190%

Numeracy

Table 24 shows average aggregate numeracy scores at baseline and midline in the treatment and control groups, the differences between baseline and midline, and the DID impact estimate. We discuss each country's results in turn below.

Table 24. Numeracy scores from baseline to midline

Cohort	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline	Baseline literacy control	Midline literacy control	Difference baseline to midline	DID (treatment-control difference)
Ghana							
Grade 5	57.1	62.2	5.7***	57.2	61.2	6.2***	0.3
Kenya							
Grade 5	51.9	58.9	6.9***	50.8	57.0	5.1***	1.1
Nigeria							
Grade 5	33.3	47.0	15***	33.8	38.7	5.7***	9.3***

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** p<.001, ** p<.05, * p<.01. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Table 25. Impact of DP-2 on numeracy scores in Kenya, by sampling strata and in Wajir

Cohort	Baseline numeracy treatment	Midline numeracy treatment	Difference baseline to midline treatment	Baseline numeracy control	Midline numeracy control	Difference baseline to midline control	DID (treatment-control difference)
Kenya – formal schools in Nairobi and surrounding counties							
Grade 5	54.1	61.7	8.4***	54.7	62.6	7.2***	-0.1
Kenya – non-formal schools							
Grade 5	54.7	62.8	7.0***	52.7	59.1	6.9***	0.5
Kenya – arid and semi-arid regions							

Cohort	Baseline numeracy treatment	Midline numeracy treatment	Difference baseline to midline treatment	Baseline numeracy control	Midline numeracy control	Difference baseline to midline control	DID (treatment – control difference)
Grade 5	47.2	52.7	5.1***	45.3	49.6	1.0	2.8
Kenya – Wajir only							
Grade 5	45.3	50.5	4.4**	44.3	47.1	-3.3	5.5*

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Ghana

In Ghana, numeracy levels at baseline were moderate, with cohort girls scoring on average 57.1 on the numeracy assessment in the treatment group. At midline, the average numeracy scores in the treatment and control groups improved significantly. Improvements over time were of a similar magnitude in the treatment and control groups. As a result, the results from the impact estimation show that numeracy scores in the treatment group have increased by only 0.3 over and above the control group as a result of the DP-2 intervention. This result does not reach statistical significance, and we therefore did not find any evidence that DP-2 has had an impact on numeracy outcomes in Ghana at midline.

Comparing this estimate to the target set at baseline, the result suggests that only 8% of the target has been met.

Kenya

In Kenya, numeracy levels at baseline were moderate, with cohort girls scoring on average 51.8 on the numeracy assessment in the treatment group. At midline, the average numeracy scores in the treatment and control groups improved significantly. Improvements over time were of a similar magnitude in the treatment and control groups. As a result, the results from the impact estimation show that numeracy scores in the treatment group have increased by only 1.1 over and above the control group as a result of the DP-2 intervention. This result does not reach statistical significance, and we therefore did not find any evidence that DP-2 has had an impact on numeracy outcomes in Kenya at midline.

Analysis of the impact of DP-2 on numeracy scores for the three sampling strata in Kenya also does not find any evidence of a statistically significant impact of DP-2 in any of the strata. When looking at the findings for Wajir county only however, we do detect an impact of DP-2 on numeracy outcomes with an effect size of 5.5 percentage points, which is statistically significant at the 10% level.

Comparing this estimate to the target set at baseline, the result suggests that only 26% of the target has been met.

Nigeria

In Nigeria, numeracy levels at baseline were fairly low, with cohort girls scoring on average 33.3 on the numeracy assessment in the treatment group. At midline, the average numeracy score in the treatment group was 47.0, which is a large and statistically significant increase from baseline. Average numeracy scores in the control group also increased significantly to 38.7, but the increase was smaller in magnitude.

Results from the impact estimation show that literacy scores in the treatment group have increased by 9.3 points over and above the control group as a result of the DP-2 intervention. This represents a large and statistically significant impact.

A comparison against the target set at baseline shows that the target has been met and exceeded. The performance against the target is 150%. This represents a large impact to have achieved over the course of only one year of project implementation.

Table 26. Numeracy results compared to targets

Result	Details
Ghana Numeracy baseline: midline	Beta = 0.3 p-value > .1 (two-tailed) Target = 3.7 Performance against target = 8%
Kenya Numeracy baseline: midline	Beta = 1.1 p-value > .1 (two-tailed) Target = 4.2 Performance against target = 26%
Nigeria Numeracy baseline: midline	Beta = 9.6 p-value < .001 (two-tailed) Target = 6.2 Performance against target = 150%

In summary, DP-2 has had a large and statistically significant impact on literacy and numeracy outcomes for cohort girls in Nigeria. The targets in Nigeria have been met and exceeded, and the size of the impact is large. On the other hand, we do not detect any impact of DP-2 on literacy and numeracy outcomes in Kenya or Ghana, and the targets have not been met.

3.1.3 Changes over time in subtask performance

In this section, we examine in more detail how learning outcomes of treatment girls have changed since baseline by looking at the performance on each of the subtasks in the learning assessments. As discussed above, each learning assessment consists of several subtasks that measure different underlying literacy and numeracy skills. The analysis in this section therefore examines in which skill areas girls have improved and where there continue to be skill gaps. As girls' learning outcomes will improve as they get older, the changes in the skills gaps that we observe are not necessarily caused by DP-2.

For each subtask, girls are grouped into one of four categories (referred to as proficiency bands) based on how they performed on that subtask. Non-learners are girls who score 0% on the subtask, meaning that they have not yet acquired the underlying skill assessed by the subtask. On the other hand, a proficient learner is a girl who performs very well on the subtask, scoring between 80%–100%. As per GEC-T guidance, proficiency levels were created for each subtask (as described in Box 3). It should be noted that the short nature of the subtasks and the granularity of the scoring can make it difficult to interpret the proficiency bands. For example, on the word problems subtask for EGMA, there are only five possible scores a pupil can achieve (0%, 20%, 40%, 60%, 80%, and 100%). This is problematic because it means, for example, that only a student who answers all questions correctly is classified as proficient.

Box 3. Subtask proficiency score bands

As per the GEC-T guidance provided, students were classified into one of four proficiency score bands for each subtask on the literacy and numeracy assessments based on the classification of score bands provided in the table below. Reading fluency subtasks are the letter sound/name identification subtask, reading familiar words subtask, reading invented words subtask, and oral reading fluency subtasks. For all other subtasks (reading comprehension in EGRA and all subtasks in EGMA/SeGMA), the percentage score was used to classify learners into score bands.

	Reading fluency subtasks	Other subtasks
Non-learner	0–5 WPM	0%
Emergent learner	6–44 WPM	1%–40%
Established learner	45–80 WPM	41%–80%
Proficient learner	81–100 WPM*	81%–100%

* As per the GEC-T guidance provided and as discussed in Annex 14, reading fluency subtasks are capped at 100 WPM.

The tables below show the proportion of girls in treatment schools that fall into each proficiency band for each subtask at midline. In brackets, we present the change in the proportion of girls that fall into each band since the baseline. The stars indicate whether the difference between baseline and midline is statistically significant.

English literacy

Ghana

In the previous section, we showed that girls' literacy scores improved significantly between baseline and midline, as would be expected from a cohort of girls who are getting older. Interestingly, a higher proportion of girls in Ghana were proficient at reading a story and reading with comprehension compared to the proportion that were proficient at reading letter sounds or reading invented words—both of which are tasks that rely on knowledge of phonics. This indicates that girls in Ghana who have achieved the ability to read with comprehension are often doing so without significant exposure to instruction on phonics. Looking at the individual subtasks, we found some improvements across all of the subtasks. There is however very limited improvement in the proportion of students that can read with comprehension, with over half the students still scoring zero on the comprehension questions.

Kenya

In Kenya, we see that the proportion of girls who were proficient in reading letter names and familiar words increased significantly following the baseline. Almost no girls were proficient in reading invented words, but a significantly larger proportion of girls were established in this domain compared to the baseline. There were only minor changes in the proportion of girls falling into each proficiency band for oral reading fluency and comprehension. Therefore, girls in Kenya have improved most in their ability to read letter names and words, but most girls are still unable to read and understand a short story.

Nigeria

In the previous section, we showed that literacy scores in Nigeria improved significantly over time. However, it is also clear that literacy scores in Nigeria remain very low, with girls in the treatment group scoring on average 7.8 out of 100 points on the literacy assessment. When looking at the change in performance on the individual subtasks, we found that the proportion of girls who are emergent learners increased significantly across all of the literacy subtasks, and the proportion of girls who were established learners increased significantly across the first four subtasks. This suggests that girls across various ability levels have improved significantly over time. However, the majority of girls continue to be non-learners in all subtasks except the first subtask, indicating that the majority of girls in Nigeria are not yet able to read simple words in English.

Numeracy

Ghana

In Ghana, there were some improvements on all subtasks. The biggest change is in the proportion of girls who were proficient on the word problem subtask. The vast majority of girls continue to be emergent learners in the SeGMA subtask.

Kenya

In Kenya, the proportion of girls who were established learners and proficient learners increased significantly for the missing numbers and word problem subtasks. There were no significant changes in the subtraction subtask, and a small increase in the proportion of girls who are established learners in the SeGMA subtask.

Nigeria

In Nigeria, there were significant improvements across all subtasks, with a larger proportion of girls who were proficient learners significantly increasing for each subtask. There continue to be a large proportion of girls in Nigeria who are not yet able to identify numbers.

Table 27. Foundational literacy skills gap: Ghana

Proficiency level	Subtask 1 Letter sound identification midline (change from baseline)	Subtask 2 Familiar word midline (change from baseline)	Subtask 3 Invented word midline (change from baseline)	Subtask 4 Oral reading fluency midline (change from baseline)	Subtask 5 Comprehension midline (change from baseline)
Non-learner 0%	9 (-6.4***)	20.2 (-14.3***)	44.7 (-13.2***)	17.9 (-8.7***)	53.7 (-7.7***)
Emergent learner 1%–40%	41.2 (-18.6***)	46.4 (1.3)	47.5 (9.9***)	31 (-5.4**)	19.9 (3.6*)
Established learner 41%–80%	44.4 (21.0***)	30.4 (11.0***)	7.7 (3.2**)	31.4 (7.4***)	14.7 (2.3)
Proficient learner 81%–100%	5.4 (4.1***)	2.9 (1.9**)	0.1 (0.1)	19.7 (6.7***)	11.6 (1.7)
	100%	100%	100%	100%	100%

Notes: (1) The table shows the proportion of treatment girls that fall into each category for each of the literacy subtasks. Numbers in brackets show the change in the proportion of girls in the category since baseline. (2) Asterisks indicate that the difference between baseline and midline is statistically significant: *** $p < .001$, ** $p < .05$, * $p < .01$.

Table 28. Foundational literacy skills gap: Kenya

Proficiency level	Subtask 1 Letter name identification midline (change from baseline)	Subtask 2 Familiar word midline (change from baseline)	Subtask 3 Invented word midline (change from baseline)	Subtask 4 Oral reading fluency midline (change from baseline)	Subtask 5 Comprehension midline (change from baseline)
Non-learner 0%	0.1 (-0.2)	4.7 (-0.6)	5.8 (-0.9)	6.6 (-0.2)	18.3 (-4.4**)
Emergent learner 1%–40%	3.5 (-2.9***)	12.8 (-11.2***)	57 (-13.1***)	4 (-1.9*)	35.5 (9.3***)
Established learner 41%–80%	32.5 (-9.9***)	52.3 (-4.6*)	36.5 (13.7***)	25.8 (-2.3)	37.4 (-5.6**)
Proficient learner 81%–100%	63.9 (13.1***)	30.2 (16.3***)	0.7 (0.4)	63.6 (4.5*)	8.8 (0.7)
	100%	100%	100%	100%	100%

Notes: (1) The table shows the proportion of treatment girls that fall into each category for each of the literacy subtasks. Numbers in brackets show the change in the proportion of girls in the category since baseline. (2) Asterisks indicate that the difference between baseline and midline is statistically significant: *** $p < .001$, ** $p < .05$, * $p < .01$.

Table 29. Foundational literacy skills gap: Nigeria

Proficiency level	Subtask 1 Letter sound identification midline (change from baseline)	Subtask 2 Familiar word midline (change from baseline)	Subtask 3 Invented word midline (change from baseline)	Subtask 4 Oral reading fluency midline (change from baseline)	Subtask 5 Comprehension midline (change from baseline)
Non-learner 0%	35.5 (-49.2***)	71 (-19.1***)	67.2 (-20.1***)	67.5 (-17.0***)	94.4 (-2.7***)
Emergent learner 1%–40%	56.5 (41.6***)	27.6 (17.8***)	31.9 (19.3***)	27.6 (14.3***)	4.6 (2.0**)
Established learner 41%–80%	7.8 (7.6***)	1.4 (1.3***)	0.9 (0.8**)	3.9 (1.9**)	0.9 (0.7*)
Proficient learner 81%–100%	0.2 (0.1)	0 (0)	0 (0)	1 (0.9**)	0.1 (0)
	100%	100%	100%	100%	100%

Notes: (1) The table shows the proportion of treatment girls that fall into each category for each of the literacy subtasks. Numbers in brackets show the change in the proportion of girls in the category since baseline. (2) Asterisks indicate that the difference between baseline and midline is statistically significant: *** $p < .001$, ** $p < .05$, * $p < .01$.

Table 30. Foundational numeracy skills gap: Ghana

Proficiency level	Subtask 2 Quantity discrimination midline (change from baseline)	Subtask 3 Missing numbers midline (change from baseline)	Subtask 4 Addition midline (change from baseline)	Subtask 5 Subtraction midline (change from baseline)	Subtask 6 Word problems midline (change from baseline)	Subtask 7 SeGMA (advanced multiplication, division, etc.) midline (change from baseline)
Non-learner 0%	0 (-1.0 ^{***})	7.6 (-9.4 ^{***})	0.3 (-1.3 ^{**})	4.7 (-4.8 ^{***})	1.5 (-5.2 ^{***})	2.6 (-1.8 [*])
Emergent learner 1%– 40%	2 (-1.1)	69.4 (1.7)	2 (-1.9 ^{**})	7 (-4.6 ^{***})	18.3 (- 7.2 ^{***})	97.4 (3.2 ^{***})
Established learner 41%– 80%	23 (4.4 ^{**})	18.5 (4.7 ^{**})	19.8 (-2)	28.5 (1)	43.1 (-6.8 ^{**})	0 (-1.5 ^{***})
Proficient learner 81%– 100%	75 (-2.3)	4.5 (3.0 ^{***})	77.9 (5.3 ^{**})	59.8 (8.4 ^{***})	37.1 (19.2 ^{***})	0 (0)
	100%	100%	100%	100%	100%	

Notes: (1) The table shows the proportion of treatment girls that fall into each category for each of the literacy subtasks. Numbers in brackets show the change in the proportion of girls in the category since baseline. (2) Asterisks indicate that the difference between baseline and midline is statistically significant: ^{***} $p < .001$, ^{**} $p < .05$, ^{*} $p < .01$.

Table 31. Foundational numeracy skills gap: Kenya

Proficiency level	Subtask 3 Missing numbers midline (change from baseline)	Subtask 5 Subtraction midline (change from baseline)	Subtask 6 Word problems midline (change from baseline)	Subtask 7 SeGMA (advanced multiplication, division, etc.) midline (change from baseline)
Non-learner 0%	3.4 (-1.6 [*])	1 (-0.8)	3.2 (-0.3)	1.1 (-1.9 ^{***})
Emergent learner 1%–40%	24.7 (-19.2 ^{***})	4.1 (-1.4)	22.4 (-6.3 ^{***})	95.5 (-1.4)
Established learner 41%–80%	46.5 (6.4 ^{***})	18.1 (2.2)	52.7 (-5.8 ^{**})	3.4 (3.3 ^{***})
Proficient learner 81%–100%	25.4 (14.4 ^{***})	76.7 (-0.1)	21.6 (12.2 ^{***})	0 (0)
	100%	100%	100%	100%

Notes: (1) The table shows the proportion of treatment girls that fall into each category for each of the literacy subtasks. Numbers in brackets show the change in the proportion of girls in the category since baseline. (2) Asterisks indicate that the difference between baseline and midline is statistically significant: ^{***} $p < .001$, ^{**} $p < .05$, ^{*} $p < .01$.

Table 32. Foundational numeracy skills gap: Nigeria

Proficiency level	Subtask 1 Number identification midline (change from baseline)	Subtask 2 Quantity discrimination midline (change from baseline)	Subtask 3 Missing numbers midline (change from baseline)	Subtask 4 Addition midline (change from baseline)	Subtask 5 Subtraction midline (change from baseline)	Subtask 6 Word problems midline (change from baseline)
Non-learner 0%	4.9 (-13.7***)	8.6 (-18.4***)	46.2 (-25.5***)	10.3 (-23.7***)	24.7 (-24.4***)	5.6 (-4.4***)
Emergent learner 1%–40%	30.8 (-6.4***)	33.5 (6.0***)	50.6 (24.1***)	13.8 (-4.5***)	21 (-0.6)	45.1 (5.9**)
Established learner 41%–80%	27.6 (-0.2)	29.7 (1.7)	2.8 (1.1)	44.6 (11.6***)	33.2 (12.6***)	35.2 (-10.0***)
Proficient learner 81%–100%	36.7 (20.4***)	28.2 (10.7***)	0.3 (0.2)	31.3 (16.6***)	21.1 (12.5***)	14.2 (8.6***)
	100%	100%	100%	100%	100%	100%

Notes: (1) The table shows the proportion of treatment girls that fall into each category for each of the literacy subtasks. Numbers in brackets show the change in the proportion of girls in the category since baseline. (2) Asterisks indicate that the difference between baseline and midline is statistically significant: *** $p < .001$, ** $p < .05$, * $p < .01$.

In summary, the findings show that in Ghana, we see improvements over time in girls' ability to read a short story, but not in their ability to understand that story. In numeracy, the largest improvements are in the addition, subtraction, and word problem subtasks, while performance on the SeGMA subtask remains very low. In Kenya, improvements in literacy and numeracy tend to be limited to some of the subtasks, and we see fewer improvements on what are likely to be the more difficult subtasks (such as reading and understanding a short story) and advanced maths problems from the SeGMA subtask. In Nigeria, we see improvements over time across all of the subtasks. This indicates that girls with low literacy and numeracy levels at baseline, as well as girls with higher literacy and numeracy levels at baseline, have been improving over time.

The majority of girls in all countries are also not yet able to read and understand a short story in English at midline. In Nigeria, most girls are not yet able to read simple words in English. Therefore, while there have been improvements since the baseline, literacy levels remain extremely low in Nigeria.

3.1.4 Contributors to learning outcomes

So far, we have seen that learning outcomes have improved significantly over time across the three countries in both treatment and control groups, which is to be expected as girls are getting older. We also found that DP-2 has had a large impact on learning outcomes in Nigeria, but there is no evidence of an impact in Kenya and Ghana. In this section, we explore some of the factors that may be contributing to improvements in learning outcomes, and we consider to what extent these contributors are likely to be linked to the DP-2 intervention. We start by looking at the impact of remedial classes on learning outcomes, relying on both quantitative and qualitative findings. We then examine how other factors are contributing to improvements in learning outcomes based on quantitative and qualitative data.

Contribution of DP-2 remedial classes to changes in learning outcomes

Remedial classes are an important component of the DP-2 project, intended to target students with weaker learning outcomes to bridge the gap in learning outcomes between these students and their classmates. As a result, it is of particular interest to understand whether learning outcomes are improving for students who attend remedial classes. We conducted a separate impact analysis focusing only on students who attend remedial classes and present the findings of that analysis in this section. Before presenting the findings from this analysis, we review the findings on the implementation of remedial classes.

Box 4. DP-2's design of remedial classes

Students are selected for remedial classes on the basis of two criteria: their performance on a diagnostic tool developed by DLA, and their general performance at school as judged by the teacher. Based on these criteria, the weakest academic performers are selected to take part in remedial classes.

Students who are selected into remedial classes are further separated into three levels based on their performance, with Level 1 for the poorest performing students and Level 3 for relatively better performing students. In Kenya, these learners are put together through use of differentiated instructions; in Nigeria, the project uses a one level-based performance in remedial classes. Remedial classes were limited to 25 students per class in all countries.

There is no specific limitation on how many remedial classes each school may have—depending on school size, teacher availability, and need for remedial classes, some schools may offer more remedial classes than others.

Students are taught by teachers trained and supported by DLA, both in terms of ongoing coaching and mentoring related to literacy and numeracy pedagogy as well as with video and digital content, other teaching and learning materials, and simple supplies. Teachers follow schemes of work that are linked to the curriculum but concentrate on foundational reading and maths skills.

One cycle of remedial classes lasts approximately 12 weeks, although teachers are given some flexibility in the implementation of these cycles to adapt to the students' performance. After one cycle of remedial classes, students are reassessed, which results in them remaining in the same remedial class, moving to a different level of remedial classes (Ghana and Kenya only), or no longer taking part in remedial classes.

Participation in remedial classes in treatment and control schools

In this section, we look at what proportion of the girls in our sample currently attend remedial classes in both treatment and control schools. If remedial classes are common across both treatment and control groups, this would make it more difficult for DP-2's remedial classes to have an effect on learning outcomes, since the classes would have to provide an additional benefit over and above similar support that is already being offered in the project areas generally. In addition, if a relatively low number of the girls in treatment schools attend remedial classes, then it would be difficult for the evaluation to establish how remedial classes may be contributing to changes in learning outcomes.

Table 33 shows that a small proportion of treatment schools in Kenya and Nigeria reported that they do not offer any remedial classes supported by DP-2. It may be that these schools were not targeted as part of the ALP roll-out, or that the schools are not implementing remedial classes despite being targeted. From the qualitative research findings in Kenya, remedial classes were not held across all six schools, and few girls

reported attending paid remedial classes (separate from the ALP roll-out). DLA staff and government officials reported that teachers at formal schools risk being dismissed if they run paid remedial classes. However, DLA staff also acknowledged that paid remedial classes are still taking place unofficially. In their experience these are often run by older teachers in formal schools who rely on this source of income and are unlikely to change their way of working to align with new government directives.

Girls' attendance at DP-2 remedial classes in treatment schools differed by country. In Ghana, 85% of girls attend DP-2 remedial classes, compared to 70% in Nigeria and 52% in Kenya. These differences are likely to be due both to differences in selection of girls into remedial classes (see below) and to school characteristics. Since Kenya has the highest levels of learning outcomes, it may be that fewer students in Kenya are identified as needing remedial support. Schools in Kenya also tend to be larger, which means that a smaller proportion of the overall student population may be targeted by remedial classes.

In Nigeria, remedial classes are very uncommon in control schools, and only 2.9% of girls in control schools attend them. In Ghana, remedial classes are fairly common in control schools, with almost half the control schools reporting that they provide remedial classes, although only 18% of girls in control schools report attending them. In Kenya, three-quarters of control schools (76%) offer remedial classes and 36% of girls attend them.

Table 33. Attendance at remedial classes

	Ghana		Kenya		Nigeria	
	Treatment	Control	Treatment	Control	Treatment	Control
School offers remedial classes (%)	100	45.7	97.9	75.9	93.8	1.0
Girl currently attends remedial classes (%)	87.5	18.4	64.3	36.3	70.0	2.9
Girl currently attends DP-2 supported remedial classes (%)	84.6		52.1	-	70.0 [^]	-

Note: (1) [^] In Nigeria, we did not differentiate between attendance at DP-2 supported remedial classes and other remedial classes in treatment schools. As can be seen from the presence of remedial classes in control schools, however, it is unlikely that girls in treatment schools in Nigeria were exposed to remedial classes other than those offered by DP-2. (2) In Ghana, analysis is limited to treatment schools that are part of the ALP roll-out.

Of the girls that reported attending DP-2 supported remedial classes in treatment schools in Ghana, about half the girls reported that they started attending remedial classes between May 2018 and December 2018, while a third reported starting to attend classes after December 2018. Finally, 15% of girls reported starting to attend remedial classes before May 2018, before the start of DP-2 supported remedial classes. This is similar to the proportion of girls in control schools who attend remedial classes, suggesting that a small proportion of girls in Ghana were receiving remedial support before DP-2. For these girls, it may be difficult to distinguish whether they are

attending remedial classes that receive support from DP-2 as opposed to other remedial classes.²⁸

In Nigeria, about two-thirds of girls reported that they started attending remedial classes between May 2018 and December 2018, while one-third reported starting to attend classes after December 2018.

In Kenya, approximately a third of girls started attending DP-2 remedial classes after December 2018, a third started attending between May 2018 and December 2018, and a third started attending before May 2018, before the start of DP-2's support to remedial classes. The fact that many girls in Kenya reported attending remedial classes before this time speaks to the widespread nature of remedial support in Kenyan schools. This means that, as in Ghana, it may be difficult for girls to distinguish between attending remedial classes receiving support from DP-2 and other remedial classes. In addition to schools offering remedial classes in Kenya, the practice of extra paid tuition classes in Kenya also appears to be widespread, despite a government ban on the practice. In 2011, Uwezo reported that 57% of students in Primary 6 in public schools in Kenya were receiving paid extra tuition, with this proportion rising to 73% of students in Primary 8.²⁹ Similarly, findings from the 2007 SACMEQ study showed that 46% of Primary 6 students in Kenya were receiving paid tuition.³⁰

Only 23% of schools in Ghana, 22% of schools in Kenya, and 12% of schools in Nigeria were able to show attendance registers for remedial lessons. This meant that we were not able to capture attendance rates at remedial classes for large proportions of the sample, and that we could not reliably identify attendance at remedial classes from the registers. We have therefore relied on self-reported attendance at remedial classes for the analysis presented in the next section.

DLA staff reported that in all countries remedial classes were typically conducted outside of school hours i.e. before school, after school, during breaks, and over the weekends. A number of contextual factors were cited as affecting attendance and influencing the way remedial classes are being organised. In Ghana, DLA staff reported facing different challenges in urban versus rural areas. The remedial coordinator and teacher trainers reported that in urban areas, students were less enthusiastic about attending additional classes. In addition, the media-based content was less effective as an excitement factor. The remedial coordinator also reported that if remedial classes are run over the weekend, girls struggle to attend as they are expected to help in the house and attend to family matters. While the situation in rural areas was similar, DLA staff felt that it was easier to convince parents of the usefulness of remedial classes – something which they partly attributed to the novelty of media content in the learning centres. In Kenya, especially in the greater Nairobi area, DLA staff reported that parents were reluctant to allow their children to stay at school late given the high rates of sexual violence. This means that if remedial classes are run after school hours, the programme struggles convincing parents and learners to attend. In Nigeria, market days, harvest, and the rainy season were reported to affect attendance during certain periods of time.

²⁸ As we mention below, few schools had remedial attendance registers, which meant we could not reliably identify attendance at remedial classes from a register.

²⁹ Uwezo Kenya (2011) 'Are your children learning? Annual learning assessment report'.

³⁰ L. Paviot (2010) 'How widespread is the provision of paid tuition in school subjects?', SACMEQ III, Policy Issue Series.

Given the challenges experienced with holding remedial classes outside of official school hours, DLA staff in Nigeria and Ghana were strongly of the opinion that integrating these classes into the regular timetable would greatly improve attendance and reduce pressure on teachers and students. In Nigeria, DLA is in discussions with SUBEB around integrating remedial classes into the school timetable. In Ghana, the new curriculum proposed by GES already includes integrated remedial classes. DLA staff also reported that an NGO-run remedial classes programme called STAR (supported by UNICEF and IPA) provides remedial classes as part of the regular school day. At least in Ghana and Nigeria there seems to therefore be additional scope for adjusting the way remedial classes are scheduled and address some of the factors identified as negatively affecting attendance.

Selection of girls into DP-2 remedial classes in treatment schools

In this section, we look at baseline learning levels of girls who attend remedial classes and compare them to baseline learning levels of girls who do not attend remedial classes. This analysis intends to look at whether more poorly performing learners are taking part in the remedial classes. In addition, because we know that poverty is a key driver of marginalisation, we also compare the likelihood of being extremely poor for girls who attend remedial classes and those who do not to see whether poorer girls are being excluded from attending remedial classes.

Across the three countries, girls who currently attend remedial classes performed more poorly at baseline on the literacy assessment. For numeracy, however, girls who attend remedial classes performed more poorly only in Nigeria, but not in the other two countries.

The findings also show that, across all three countries, girls who attend remedial classes are more likely to be living in extreme poverty than girls who do not attend remedial classes. This would be expected if the targeting of the remedial classes works as expected, given that poverty is associated with poorer learning outcomes. Therefore, we did not find any evidence to suggest that poorer girls are being excluded from remedial classes.

Table 34. Baseline learning levels and poverty rates by attendance at remedial classes

	Literacy score		Numeracy score		Likelihood of living in extreme poverty	
	Attends remedial	Does not attend remedial	Attends remedial	Does not attend remedial	Attends remedial	Does not attend remedial
Ghana	22.8	27.2**	57.1	56.4	9.9	6.1***
Kenya	54.4	58.9***	51.3	52.5	28.1	24.1*
Nigeria	1.7	3.2***	31.9	36.8***	24.8	21.6**

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$

Head teachers and resource teachers were asked how the selection for remedial classes is carried out. We expect that students are selected based on diagnostic tests developed by DLA, and their general performance at school as judged by the teacher.

In Kenya and Ghana, most head teachers confirmed that students are selected on the basis of standardised tests and assessments from their teachers. In line with this, findings from the qualitative study in Ghana refer to DP-2's diagnostic test: when asked how they were selected for remedial classes, girls mentioned they were given an examination and were segregated based on their performance (Level 1, 2, or 3). However, about half of the girls in the qualitative sample reported being selected for remedial classes despite performing well in school and being among the best in their class. In addition, in three to four schools in Ghana, about two to three girls in each school out of seven reported receiving guidance on topics in the remedial classes that they were not taught in their regular classes. These girls perceived these topics taught in remedial classes to be more advanced than the content of their regular classes, but it is possible that the content was simply new and unfamiliar to the girls rather than being advanced.

According to the qualitative study, in Kenya, while a few girls and their parents reported not paying for remedial classes, most girls and their parents said they paid for tuition or remedial classes. It is not evident whether these classes were provided by DP-2 or by the school. In some cases, it was reported that these classes have been run before the programme, and it is likely that these are not DP-2 classes.

In Nigeria, the quantitative survey found that selection methods for remedial classes were more diverse than in the other countries as reported by head teachers: while approximately half the head teachers reported the use of tests for the selection of students, 29% reported that DLA country office staff decide on the selection (which may refer to the use of diagnostic tests developed by DP-2), 22% reported that all students in a grade receive remedial support, and 18% reported using no specific method. This was echoed in the qualitative findings, where girls reported that all class members attended remedial classes. At one school in Nigeria, members of the CAP process reported that community members were not happy that only a small number of students were being selected to attend the classes. It was therefore decided that every child in the school should attend remedial classes. This is likely to reflect the near-universal need to strengthen foundational skills in Nigeria.

Remedial class sizes are supposed to be capped at a maximum of 25 students per class. We asked the sampled teachers who taught remedial classes how large their remedial classes usually are. In Ghana, 9% of remedial teachers reported having class sizes of more than 25 students, compared to 34% of remedial teachers in Kenya and 73% of remedial teachers in Nigeria. This suggests that there exists a high demand for remedial classes in Nigeria, which is to be expected given the low levels of learning outcomes. Teachers will however be able to spend less time focusing on particular students when remedial class sizes exceed the maximum number of students set by DP-2. DLA staff reported that remedial classes were limited to 25 students per class. Class sizes exceeded that in Nigeria given the high demand for additional support linked to widespread learning gaps. However, at times remedial classes were reported to exceed even 35 learners. The large number of pupils per remedial class raises questions around the effectiveness with which remedial classes can be delivered and the extent to which individual pupils' needs can be affectively addressed

Challenges and lessons learned

In addition to some of the challenges related to implementing the remedial classes already discussed above, the process evaluation found that DLA staff face a number of additional challenges that if not carefully managed can impact on the effectiveness with which this component of the programme is delivered.

The programme works on the assumption that typically remedial teachers are selected from amongst the trained resource teachers who have already established a level of competence in literacy and numeracy and undergone the direct training. However, as is explained in more detail in a later section in the report, DLA struggles to find the required number of teachers to attend their trainings, especially in rural areas in Nigeria and Ghana. In addition, high staff turnover especially in rural areas and in non-formal schools in Kenya means that the pool of available and already DLA trained teachers is further diminished. In Nigeria, the scarcity of teachers who are skilled in numeracy, literacy and English at Islamiyah schools means that the programme either has to rely on teachers from neighbouring schools or on members of the community which poses additional challenges on how to improve the skills and capacity of the person in charge of leading the remedial class.

In Ghana and Nigeria, DLA pays a stipend for the delivery of remedial classes in order to encourage teachers to lead remedial classes. However, given that many teachers in rural areas have to commute from nearby urban centres these stipends in themselves are reported to not have much of an impact in motivating teachers to return to schools over the weekend. In Ghana, the remedial coordinator and trainers also mentioned that finding female teachers to lead remedial support was a challenge given that there are few and they typically have additional responsibilities at home that prevent them from working outside of school hours. In Kenya, DLA is not permitted to provide stipends. DLA and government officials reported relying on TSC and the MoE to actively encourage teachers to deliver remedial classes. DLA staff felt that in general they were more successful at persuading younger teachers in formal schools to take up delivering remedial classes. In non-formal schools, DLA staff reported facing less hurdles in convincing teachers to deliver remedial classes. This was attributed to less pressures on teachers' time and a higher personal stake of teachers in the learning outcomes of their pupils which directly impacted whether they continued to have a job as a teacher at the school. However, in both types of schools, DLA staff in Kenya has to rely on persuasion to generate buy in from teachers.

In Kenya, DLA staff have to work with government officials from TSC and the MoE when implementing the programme. Whilst both DLA and government officials report being very supportive of programme activities, engaging and coordinating with two separate entities who reportedly do not always have exactly aligned priorities poses an additional burden on the programme. However, from interviews with DLA staff it seems that this is mostly outweighed by the fact that if support of TSC staff is provided this can be instrumental in mobilising teachers in formal schools to attend training and convince them to deliver remedial classes.

Impact of DP-2 on learning outcomes for girls attending DP-2 remedial classes

In this section, we present the impact of DP-2 on learning outcomes, specifically for the group of cohort girls who attend DP-2 remedial classes.³¹ Table 35 and Table 36 show the impact of DP-2 on literacy and numeracy outcomes for girls who attend DP-2 supported remedial classes. We discuss each country's findings in turn.

Table 35. Literacy scores between baseline and midline (treatment group limited to girls attending remedial classes)

Cohort	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline	Baseline literacy control	Midline literacy control	Difference baseline to midline	DID (treatment-control difference)
Ghana							
Grade 5	23.3	31.9	8.9***	23.8	30.8	10.5***	-0.7
Kenya							
Grade 5	54.1	60.1	7.1***	54.5	59.2	3.6***	1.6
Nigeria							
Grade 5	1.6	7.3	6.1***	1.9	4.3	2.8***	3.7***

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** p<.001, ** p<.05, * p<.01. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Table 36. Numeracy scores between baseline and midline (treatment group limited to girls attending remedial classes)

Cohort	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline	Baseline literacy control	Midline literacy control	Difference baseline to midline	DID (treatment-control difference)
Ghana							
Grade 5	57.8	63.7	6.7***	57.2	61.2	6.0***	0.9
Kenya							
Grade 5	51.2	57.9	6.2***	50.0	56.1	5.0***	0.4
Nigeria							

³¹ For this analysis, we limited the treatment sample to girls who reported attending DP-2 supported remedial classes. We then matched these girls to comparable girls in control schools. In Ghana, the analysis is limited to treatment schools that are part of the ALP roll-out and to girls who attend DP-2 supported remedial classes in these schools.

Cohort	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline	Baseline literacy control	Midline literacy control	Difference baseline to midline	DID (treatment-control difference)
Grade 5	31.3	46.6	15.5***	32.3	37.8	6.1***	9.8***

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that differences are statistically significant at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Ghana

In Ghana, in line with the findings for the sample as a whole, we found no impact of DP-2 on the learning outcomes of girls who currently attend DP-2 remedial classes. Given that a large proportion of the cohort girls in treatment schools reported attending DP-2 supported remedial classes, it is not surprising that these findings are similar to the findings for our sample as a whole. It is difficult to disentangle the impact of DP-2 supported remedial classes in Ghana, because some girls receive remedial support that is not provided by DP-2. This means that the effect of DP-2 would be over and above other remedial support that girls may receive, and that it may be difficult for girls to differentiate whether the remedial support that they are receiving comes from DP-2.

Kenya

In Kenya, similarly, we found no impact of DP-2 on the learning outcomes of girls who currently attend remedial classes. As mentioned above for Ghana, it is difficult to disentangle the impact of DP-2 remedial classes in Kenya to an even greater extent than in Ghana given that many girls in both treatment and control schools are likely to receive paid tuition and remedial support from sources other than DP-2.

Nigeria

DP-2 has had an impact of 3.7 points on the literacy outcomes of girls in DP-2 schools who currently attend remedial classes compared to matched girls in control schools. This impact is statistically significant, and of a similar magnitude to the impact observed for the sample as a whole.

For numeracy, DP-2 has had an impact of 9.8 points on girls in DP-2 who currently attend remedial classes compared to matched girls in control schools. This impact is statistically significant and is slightly larger than the impact of DP-2 on numeracy outcomes as a whole (9.3 points). This suggests there is an additional benefit to girls attending DP-2 remedial classes, particularly for numeracy outcomes. It is also possible that DP-2 remedial classes are contributing to the impact on literacy outcomes, but this may be difficult to detect given the majority of girls in the sample are currently attending remedial classes.

Summary

In summary, girls in treatment schools in Nigeria are much more likely to receive remedial support compared to girls in control schools, and the impact of DP-2 on girls who attend remedial classes is slightly larger in magnitude than for the overall sample (for numeracy). This means that it is likely remedial support is contributing to the impact of DP-2 on learning outcomes that we observe in Nigeria.

In Ghana and Kenya, there is no statistically significant impact of DP-2 on girls who attend DP-2 supported remedial classes in line with the findings for the sample as a whole. In Kenya, and in Ghana to a lesser extent, girls in control schools also receive remedial support, and girls in treatment schools may have received remedial support before the start of DP-2. For remedial classes to have an impact, they would have to contribute something over and above the current remedial support being offered. At present, the lack of impact on learning outcomes for the sample as a whole and for the girls who attend remedial classes suggests that this is currently not taking place. In addition to the analysis presented in this section, we further explore the relationship between DP-2 remedial classes and learning outcomes through the use of regression analyses in the next section.

3.1.5 Subgroup analysis of the learning outcomes

Table 37 shows the average literacy and numeracy learning scores at midline across the different regions in each of the three countries. The table also show the change in literacy and numeracy scores since the baseline. Similarly,

Table 38 shows the learning scores of girls across key subgroups while Table 39 shows the learning scores of girls who face various barriers. Asterisks indicate whether the change since baseline is statistically significant. While this breakdown is informative, the findings need to be interpreted with caution. Correlations between characteristics/barriers and learning outcomes (or change in learning outcomes) may be reflective of other structural factors. For example, in our sample in Nigeria, orphans appear to have higher learning outcomes than the average girl. However, it may be that many orphans are not in school in the first place and that those in our sample thus represent the relatively advantaged few. We show in the full multivariate regression models in following sections that once we control for other factors such as the household's poverty status, being an orphan is no longer associated with better learning outcomes. We would therefore suggest focusing on the main influencing factors presented in the sections below based on the multivariate regression models.

Table 37. Learning scores by region

	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline
Ghana				
Central Gonja	21.9	10.9***	61.3	15.0***
East Gonja	28.4	9.4**	61.5	9.4***
Karaga	16.7	4.8*	59.3	-1.7
Sagnarigu	41.4	9.2***	66.2	5.3***
Savelugu	30.3	9.3***	61.9	-0.8
Tamale Metro	44.9	5.8**	61.1	5.2***
Tolon	34.7	10.1***	63.2	2.8
West Mamprusi	24.7	10.8***	61.4	5.3**
Yendi	25.6	8.9**	66	7.7***
Kenya				
Kajiado	62	7.3***	56.4	6.6**
Kiambu	64.7	8.9***	61.3	4.6
Machakos	63.3	2.6	65.5	9.7***
Nairobi (formal)	66.5	5.2***	60.9	7.6***
Nairobi (non-formal)	68.4	5.4***	63	8.2***
Wajir	47.5	2.2	51.8	5.2***
Nigeria				
Bagwai	1.9	1.8***	31.4	15.0***
Bebeji	2	1.8***	31.2	13.1***
Dala	13.9	8.4***	61.9	9.4***
Dawakin Kudu	8.1	6.7***	55.1	15.9***
Gabasawa	1.5	1.4***	25.2	8.4**
Garko	3	2.2*	33.4	14.6***
Kano Municipal	16.7	10.8***	64.2	13.7***

	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline
Kibiya	4.4	3.8***	40.6	17.5***
Kura	3.4	2.7***	39.6	13.9**
Rano	8.4	7.5***	46.9	21.8***
Rimin Gado	9.1	6.1***	47.1	14.2***
Takai	4.3	4.0***	35.4	20.6***
Tarauni	6.6	5.2***	56	4.2
Tofa	4.9	3.9***	35.4	12.7***
Ungogo	7.7	6.0***	51.5	12.2***

Table 38. Learning scores of key subgroups

	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline
	Ghana				Kenya				Nigeria			
All girls	32.4	8.5***	62.4	5.4***	61.1	4.7***	58.8	6.9***	7.7	5.6***	46.9	13.6***
Age 6 - 11	29	6.8*	62	5.0**	67.7	5.6***	61.8	6.6***	4.7	4.2***	38	16.1***
Age 12 - 13	35.6	8.4***	63.7	6.5***	60.2	4.5***	59.1	7.6***	8.8	6.3***	51.6	13.4***
Age 14+	30.3	9.1***	61.5	4.5***	48.5	3.1	51.5	5.9***	10.9	6.8***	52.9	9.7***
Has disability ^a	19.4	4.3	57.8	3	54.8	6.6*	52.9	7.2***	13.3	7.9	47.8	8
Single orphan	35	9.7**	64.7	5.1**	58.3	4.5	56.4	8.1***	8.3	5.8***	50.5	11.8***
Living without both parents	36.4	10.1***	64.3	5.2***	58.6	5.1	57.9	8.7***	9.9	6.5***	45.7	9.6*
Living in female-headed household	38.8	9.4**	64.3	5.7**	59.8	5.4***	57.5	6.9***	8.8	6.8***	51.5	13.0**
Difficult to afford for girl to go to school	30.6	8.7***	62.5	5.1***	60.8	4.7***	58.5	9.8*	6.4	5.1***	46	15.0***
Household does not own land for themselves	30.3	7.7***	62.5	4.7***	62.5	4.7***	59.8	7.8***	8.2	6.0***	48.3	12.8***
Likely to be extremely poor (based on extreme poverty rate of \$1.90/day)	18.8	7.0***	59.4	3.9	48.4	3.1	52	5.6***	4.6	3.7***	42.2	15.4***

	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline
	Ghana				Kenya				Nigeria			
LOI is different from mother tongue	32.8	8.6***	62.7	5.3***	60.3	4.4***	58.5	6.6***	12.9	8.0***	60.2	13.2***
Girl does not speak LOI	21.1	7.3**	56.7	3.3	40.5	2.2	46.8	4.1				
Head of household has no education	29	8.1***	61.5	5.0***	47.4	2.4	51.4	6.1***	6.2	4.6***	42.1	13.0***
Primary caregiver has no education	29.7	8.2***	62.2	5.0***	47.9	2.3	51.7	5.4***	5.8	4.5***	41	13.5***
Living with one parent only	33.2	8.9***	63.9	4.8**	60.6	5.2***	58.1	7.4***	8	5.4***	47	11.3***
Rural location									5.4	4.4***	40.3	14.7***

Source: DP-2 girl survey 2018, 2019; DP-2 household survey 2018.

Note: (1) Subgroups with fewer than 60 observations are not shown in the table due to the small number of observations. (2) Asterisks indicate whether the midline learning score is significantly different from the baseline learning score for the subgroup at the following levels: *** p<.001, ** p<.05, * p<.01.

^a In Nigeria, the observations are based on only 15 girls.

Table 39. Learning outcomes amongst students who experience key barriers

	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline
	Ghana				Kenya				Nigeria			
All girls	32.4	8.5***	62.4	5.4***	61.1	4.7***	58.8	6.9***	7.7	5.6***	46.9	13.6***
Fairly or very unsafe travel to schools in the area (caregiver report) [^]	33.7	4.8	60.8	-0.3	63.9	5.9***	61.1	8.4***	4.3	4.2***	40.2	13.8
Doesn't feel safe travelling to/from school (girl report)	35	11.3***	62.2	8.0***					8.5	6.6***	49.2	17.2***
Closest primary school is further than a 30-minute walk away [^]					58.3	6.2**	56.2	5.4**	6.8	5.7***	45.8	14.7***
Closest secondary school is further than a 30-minute walk away [^]	29.8	8.3***	62.3	6.0***	55.3	4.0**	57	5.6***	5.9	4.7***	41.6	14.4***
High chore burden (spends a quarter of the day / a few hours or more on chores) [^]	35.3	9.6***	63.6	6.8***	57.3	3	58.6	7.3***	6.3	5.0***	44.4	12.8***

	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline	Average literacy score (aggregate)	Change in average literacy score since baseline	Average numeracy score (aggregate)	Change in average numeracy score since baseline
	Ghana				Kenya				Nigeria			
Helps with agricultural work, family business or work outside the home [^]	29.6	8.9***	61.9	5.2***	56.1	5.2**	55.2	5.4***	6	4.6***	42.3	14.3***
PTR over 40	31.8	8.3***	61.8	7.3***	59.2	4.9***	58.5	7.4***	5.6	4.5***	41	14.5***
School has no female teachers	16.6	6.5***	56.5	5.5**					3.3	2.8***	33.9	13.3***
School does not have separate toilets for girls	27.7	8.1**	61.5	5.9**					5.7	4.6***	41.1	16.8***
School does not have access to electricity									3.7	3.2***	35.7	11.5***

Source: DP-2 girl survey 2018, 2019; DP-2 household survey 2018.

Note: (1) Subgroups with fewer than 60 observations are not shown in the table due to the small number of observations. (2) Asterisks indicate whether the midline learning score is significantly different from the baseline learning score for the subgroup at the following levels: *** p<.001, ** p<.05, * p<.01.

Other contributors to changes in learning outcomes

We have so far discussed the impact that DP-2 has had on literacy and numeracy outcomes at midline and the impact of DP-2 remedial classes in particular. In this section, we further explore factors contributing to the **change or improvement** in learning outcomes between the baseline and midline. To do this, we run a multiple regression analysis with the **change** in learning outcomes between baseline and midline as the dependent variable.³² We examine how a range of factors are contributing to this change in learning outcomes, including girl and household characteristics,³³ school and location-related factors, and factors related to the DP-2 intervention.

Regarding factors related to the DP-2 intervention, we include the following variables in the model:

- girl attends remedial classes;
- girl attends a girls' club;
- girl watched a video during regular classes this year; or
- proportion of Primary 5 maths and English teachers who have received training directly from DP-2.

While the model includes a variable for exposure of teachers to DP-2 training (using Primary 5 maths and English teachers as a proxy), the inclusion of variables that measure teaching quality is limited because of the small sample size of teachers, and because teachers are not linked with students (we do not know which sampled students, if any, are taught by the sampled teacher). We also did not include a variable to measure attendance. As discussed in Chapter 6, attendance data are available only from schools where teachers keep attendance registers. This is more likely to be the case for better-managed schools, so we would risk biasing our model by including this variable.

Figure 8, Figure 9, and Figure 10 present the main factors associated with the **change** in learning outcomes between baseline and midline for Nigeria, Ghana, and Kenya respectively. The graphs show point estimates (the dots) and 95% confidence intervals (the lines). When the confidence interval does not overlap with the zero line, this is an indication that a statistically significant relationship exists between the factor and the learning outcome. **If a factor is on the right-hand side of the zero line, this means that higher values of the factor are associated with greater change/more improvement in the learning outcome, and vice versa.**³⁴ Full regression models are presented in Annex 18.

³² The change in learning outcomes is calculated by subtracting the girl's baseline score from her midline score. Regression analyses are run for girls in treatment schools.

³³ Because the midline evaluation did not involve a household survey, baseline household characteristics for the girls are used in the regression model as lagged variables.

³⁴ The graphs show the SD difference in the change in learning outcome that would result from a one-SD difference in the factor. Coefficients have been standardised so they can be more easily compared against each other.

Figure 8. Main factors associated with change in learning outcomes (Ghana)

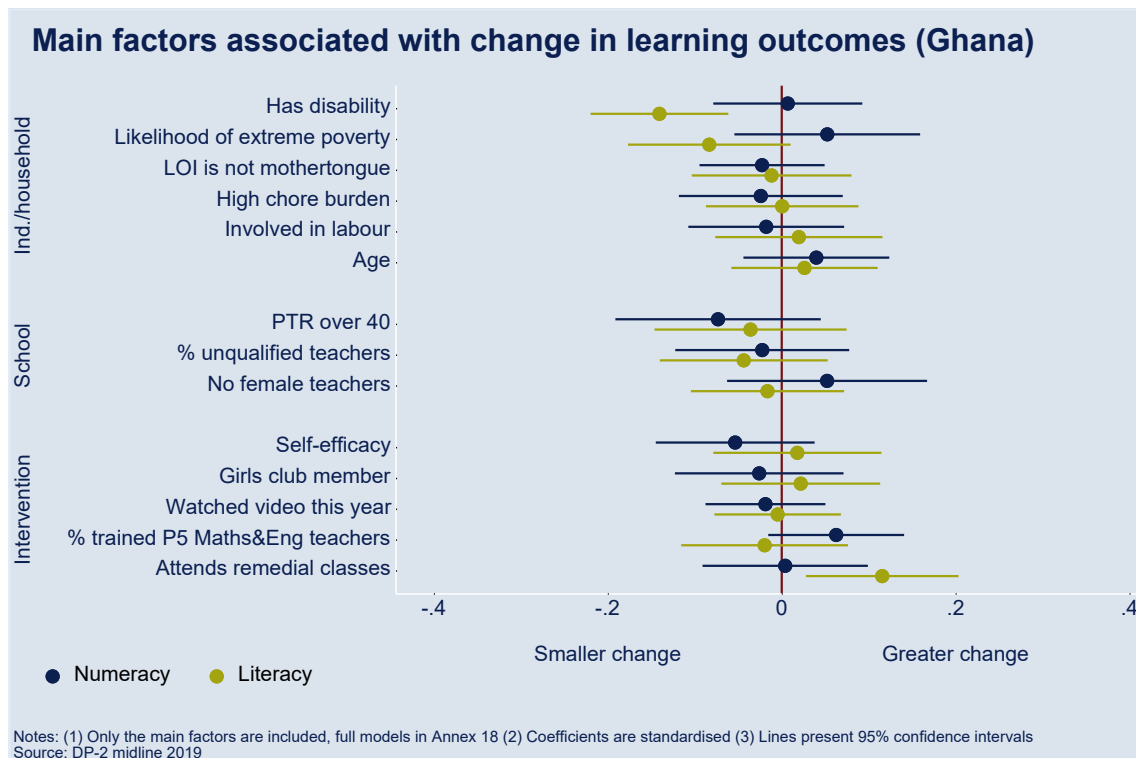


Figure 9. Main factors associated with change in learning outcomes (Kenya)

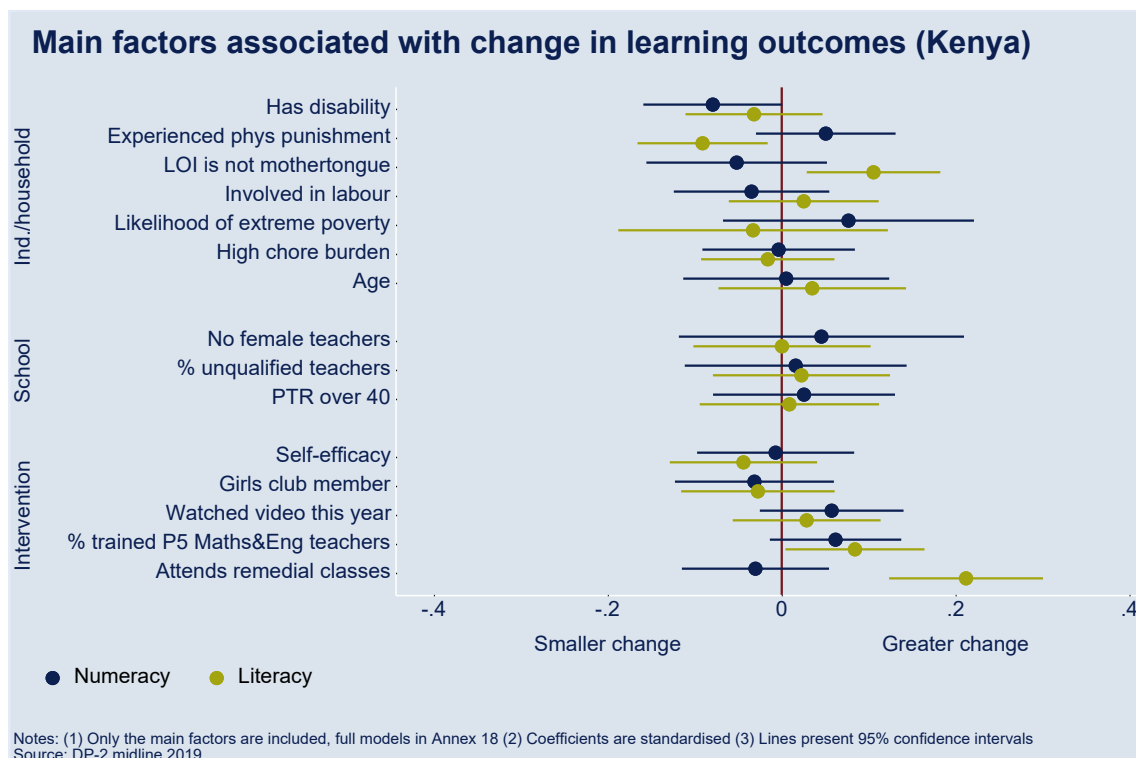
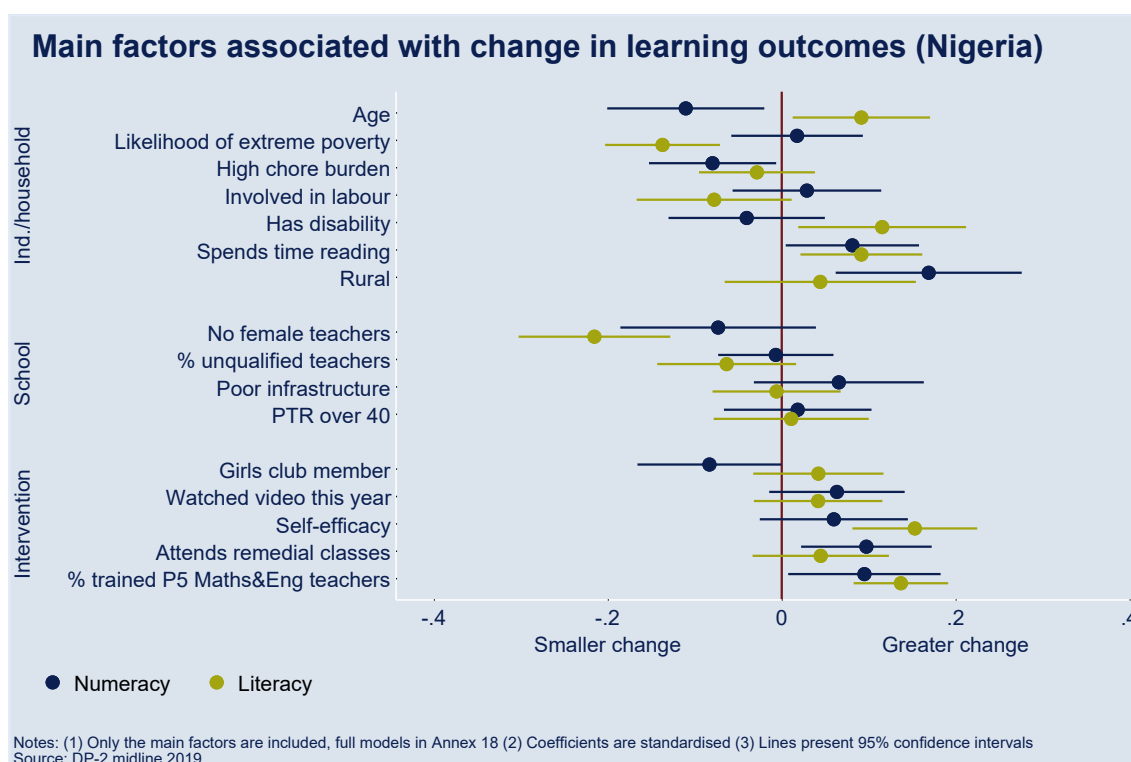


Figure 10. Main factors associated with change in learning outcomes (Nigeria)

Girl and household characteristics

If individual and household characteristics are not related to the extent to which girls' learning outcomes have changed in the last year, this would suggest that girls have been improving at a similar pace over the last year irrespective of their background characteristics. On the other hand, we may also see that certain groups of girls are improving particularly quickly, while others have shown less improvement over the past year. The relationship between individual and household characteristics and change in learning outcomes over the past year is not straightforward because these characteristics are likely to have influenced girls' learning outcomes over many years in different ways. In particular, girls who have lower learning levels to start with may find it more difficult to improve at the same pace as other girls because they have already fallen behind the curriculum and because the same characteristics could influence the rate at which they improve in the present.

In Kenya and Ghana, girl and household characteristics have little relationship with the change in learning outcomes over the past year. However, girls with a disability improved significantly less in numeracy in Kenya and literacy in Ghana. In Kenya, girls who reported having experienced physical punishment in the last week improved significantly less in literacy, while girls whose mother tongue was not the language of instruction (LOI) improved significantly more. In Ghana, there was a tendency for girls who were more likely to be extremely poor to have improved significantly less in literacy.

In Nigeria, girls who were more likely to be extremely poor improved significantly less in literacy, while girls who had a high chore burden at baseline improved significantly less in numeracy. On a more positive note, having a disability was associated with greater improvement in literacy. Spending time reading in their spare time was associated with greater improvements in both literacy and numeracy.

These findings show that some of the barriers identified at baseline are not only likely to be associated with low levels of learning outcomes, but also with slow rates of improvement in the past year. From the perspective of inclusivity, it is therefore particularly important that DP-2 ensures that girls who are improving more slowly than their classmates are reached by the intervention, and (where possible) are provided with additional support to catch up with those girls who may face fewer barriers to learning. Our analysis suggests that this includes focusing particularly on extremely poor girls in Nigeria and Ghana and girls with disabilities.

Further findings on experience of physical punishment

As discussed earlier, economic constraints and family circumstances mean that girls spend their mornings on household chores and at times participate in income-generating activities, which leads to them come to school late or not managing to do their homework at times. These are reported as reasons for children being physically punished at schools. In the quantitative analysis, experience of physical punishment was associated with poorer literacy outcomes in Kenya, but had no relationship to changes in learning outcomes in Nigeria or Ghana. The qualitative findings shed further light on how physical punishment may act as a barrier to attending school and learning.

In the qualitative study, girls reported that corporal punishment made learning less enjoyable because they were frightened by the punishment they might receive from the teachers. This resulted in absenteeism, as students would rather skip school than risk being hit. In Kenya and Nigeria, girls reported that they did not enjoy learning or were afraid to go to school when they are hit by their teacher. This was also corroborated by the parents. This fear often drives the girls to complete their homework on time.

Specifically, in Kenya, some respondents rationalised being hit or claimed that they got used to it over time, but also admitted that they did not enjoy the classes where they were hit.

‘Yes, they [maths and English teachers] are good, especially Teacher 2. She is good, because if she is beating you, it doesn’t mean she hates you. She corrects you. If you haven’t finished her work, she comes and beats you. Even me, I am used to it because I know the teacher is not beating me in bad faith. She beats me to correct me even if I haven’t done something; then I know she has seen that there is something bad I have done and me, I don’t know what it is and instead of her correcting me she beats me, you see.’

Interview with cohort girl, Nairobi, Kenya

‘If she looks at the timetable and sees it’s a maths lesson next, when she sees that teacher coming, she hides under the desk and gets out of class [laughs]. I had to come to school and discuss it with the teacher. Since she was a baby she has always feared being beaten.’

Interview with cohort girl’s parent, Kajiado, Kenya

In Nigeria, students who come late to school are either flogged, tasked to wash toilets, or given another form of punishment as a disciplinary measure. Students reported that they would rather skip class than reach school late. A pupil reported that, if given an

opportunity to change something in her school, it would be the flogging of students by teachers and school prefects:

'I become unhappy when they beat my friend in school because she can't read or [is] late to school.'

Interview with cohort girl, Nigeria

It is difficult to measure experiences of physical punishment quantitatively, and it is possible that some girls in the quantitative survey may not have wanted to report experiences of physical punishment when they were interviewed in a school setting. The findings from the qualitative study, however, show that (at least for some girls, and particularly in Nigeria and Kenya) physical punishment can act as a deterrent to learning. While in some cases physical punishment may also drive girls to complete their homework on time, they report being driven by fear and not enjoying their classes as a result.

Girls' motivation

Another individual factor identified by the qualitative research as being linked to improvements in learning outcomes was a girl's motivation to succeed. The qualitative research at midline found that children across the three countries were motivated to succeed academically and saw academic success as important for achieving their goals.

In Kenya, girls reported working hard in class, completing their homework on time, studying daily, and revising before their tests to improve their grades in maths, Swahili, and English. Across all schools in Kenya, girls set goals for themselves—they wanted to improve their scores to take the first or second highest position in class. To achieve this, they reflected on their scores from their previous assessments in class and came up with strategies to perform better in their next assessment. With an aspiration to become successful professionals in the future such as doctors, pilots, or neurosurgeons, they recognised that they had to work hard in school and make time to revise at home.

'To improve in maths, anything I don't understand I go home and start practising and I revise for English.'

Interview with cohort girl, Nairobi, Kenya

In Nigeria, also, most girls recognised that turning their assignments in early, paying attention in class, studying after school, and attending school was required of them. Some of them set targets for the position they wished to attain in class. They also identified areas where they struggled and needed improvement with a view to being able to accomplish their dreams.

'I will be concentrating more on my studies; I would take the first position in our class and I would move to JSS2.'

Interview with cohort girl (transitioned to JSS), Nigeria

In Ghana, most girls reported that they wanted to perform well in their exams and answer questions in class, which is similar to their aspirations at baseline. Girls took

responsibility for their performance and said they needed to study hard and pay attention in class so they could do well in school. Girls also spoke about how they asked questions in class and studied on their own to do well.

‘I perform excellently, very well in mathematics and English language, because when I get home, I do revise on what we were taught in school. This year, I understand most of the topics that we are taught. Those that I don’t understand I meet with the teacher to explain further to me.’

Interview with cohort girl, East Gonja, Ghana

Being motivated to succeed in school is likely to affect children’s learning outcomes positively, but also to be constrained and promoted by other factors.

Parental support

Along with girls’ own motivation, parental support emerged in the qualitative study as an important factor that both motivated and enabled girls to study and perform well. Previous research³⁵ suggests that parents’ academic involvement is associated with better academic outcomes. The qualitative findings showed that, across all three countries, girls seek and receive assistance from parents or other family members regardless of the education level of their parents. In Kenya, girls reported seeking assistance from their parents or extended family when they did not understand what they were taught in class.

The qualitative research also found that parents across all three countries support their girls’ schooling and monitor their progress in other ways, even when they are not able to provide direct support on the subject content. Parents who were not educated reported looking at their children’s books to see if they had written something in it or if it had been checked to assess whether the child had worked in school that day. They tried to support their children in whatever way they could, buying furniture or an oil lamp so that they could study and ensuring that their savings are spent on fees, books, soap, and uniforms so that their children did not hesitate to go to school. Unfortunately, head teachers and teachers in schools interviewed in Kenya continued to think that parents who are illiterate do not support their children.

‘The negative thing about this school is that most parents don’t support education because of the way they are brought up. Most of them are illiterate and do not value education. You see if you’ve not gone to school, you’ll not be able to support education so much because sometimes you see that I’ve been earning a living, but I’ve not gone to school.’

Interview with head teacher, Kajiado, Kenya

Our qualitative research at midline across all schools shows that parents who are illiterate hesitate to engage with the school and the school’s attitude is likely to hold them back. However, they are aware of the importance of schooling and are engaged in their child’s education in whatever way they can afford to be. Children also notice

³⁵ J.L. Epstein (1996) ‘Perspectives and previews on research and policy for school, family, and community partnerships’, in A. Booth and J.F. Dunn (eds.) *Family–School Links: How Do They Affect Educational Outcomes?*, Mahwah, NJ, Erlbaum, pp. 209–246.

their parents' engagement and support and are motivated to work harder as a result of it.

In Nigeria, all parents reported providing support to their children to the best of their capacity. A few stated that they make sure their children go to school early every day. Others suggested that they even stopped their children from helping with some household chores in the morning so they could go to school on time. Parents also found additional means to ensure that children are at school early, for example by asking neighbours to take children to school on their bikes. Parents are now discouraged from giving the girls too many household chores. They are also encouraged to discontinue the practice of making young girls hawk to earn a living. There is a general shift in the communities respecting the education of girl children and more value is now placed on girls being educated than before.

In Ghana, parents' attitudes to the education of girls were generally positive at both baseline and midline. At midline, there were some reported examples across different districts to show that parents had either tried to restrict the time spent on household chores to weekends or had put a stop to their daughters working in other people's homes, because they realised it was challenging for them to do so given the extra classes the girls were attending.

'I used to assist in *kenkey* preparation every night, but now she asks me to go and study instead of assisting her. Because she wants me to become someone in future. Besides, now, if I request anything, she gives it to me.'

Interview with cohort girl, Yendi, Ghana

Despite the challenges hindering them from achieving high levels of learning outcomes, girls in all DP-2 countries were generally positive about their performance. Their personal aspirations were a strong driving force behind achieving improved learning outcomes. Girls also acknowledged that their parents were supportive—providing money for lunch, paying for school levies, and providing money to buy materials for the girls' clubs. Girls across all DP-2 countries perceived academic excellence to be linked to successful employment and the betterment of their own lives and those of others. In their understanding, there was a clear link between those two goals, a view which is also shared by their parents.

The findings presented in the remainder of the report, particularly in Sections 4 and 6.3, suggest that community sensitisation activities across the three countries seem to be contributing to changes in parents' attitudes towards girls' education, and in some instances are leading to changes in parents' behaviours. In Nigeria, respondents clearly attribute these community sensitisation activities to the CAP process, while in Ghana and Kenya, these activities seem to be a result of the CAP process as well as efforts from other groups such as NGOs, PTAs, SMCs, and community chiefs. It is therefore likely that the increased levels of parental support that girls experience at midline are in part a result of these community sensitisation activities.

School characteristics

In all three countries, school characteristics have little relationship with change in learning outcomes between baseline and midline. The exception is that being in a school with no female teachers was associated with a significantly smaller improvement in learning outcomes in Nigeria.

This is in some ways encouraging as it may suggest that there is room for improvement in girls' learning outcomes, even in relatively resource-poor learning environments. At the same time, it is important to note that the regression models are able to explain only a small proportion of the variation in the change in learning outcomes.³⁶ What this means is that some factors are not captured by the models (because no information was collected on them) that are likely to be important predictors of change in learning outcomes. It is likely that teaching quality is one of these factors.

Intervention-related predictors

Attendance at remedial classes

Our analyses presented above were not able to detect an impact of DP-2 on learning outcomes in Kenya and Ghana among girls who attend DP-2 supported remedial classes. The regression analyses presented here, however, show that attendance at DP-2 remedial classes is the strongest predictor of change in literacy outcomes for girls in treatment schools in both Kenya and Ghana. In Kenya, a possible explanation for this is that remedial classes play an important role in improving literacy outcomes, but that the remedial support provided by DP-2 has so far not been sufficient to differentiate its impact from that of other remedial support that girls in Kenya receive across both treatment and control schools. Similarly, in Ghana, about a fifth of girls attend remedial classes in control schools. These may be reasons why (once balanced against an appropriate counterfactual) this effect of DP-2 remedial classes is not yet strong enough in combination with other factors to find an attributable impact to DP-2 in Kenya and Ghana.

In Nigeria, we also found a positive relationship between attendance at remedial classes and change in learning outcomes, in this case for numeracy outcomes. This is in line with the findings from the impact analysis for students attending remedial classes presented above, and the findings therefore point strongly towards DP-2 remedial classes playing a role in particularly improving numeracy outcomes for the cohort girls.

In the qualitative study, a lot of the girls and parents interviewed in Ghana and Nigeria mentioned that learning improved through taking the remedial classes, as teachers took their time to explain subjects and there was better engagement than in regular lessons. In Kenya, students and parents both reported that girls attended remedial classes and, in some cases, consider these classes to be the biggest contribution to improved learning outcomes. Some girls across all three countries said the remedial classes gave them a chance to go over complex concepts they found difficult in the classroom, or to clarify any doubts they may have.

Qualitative interviews with head teachers in Nigeria also reported that, as students improved through the remedial classes, they were better positioned to transition within school and to do well in the qualifying exams for secondary schools. Following directives from the CAP participants, the lesson hours for the remedial classes in two schools were increased to maximise coverage on topics within the curriculum ahead of exams.

³⁶ Particularly in Kenya, the models explain only between 5%–7% of the variation in change in learning outcomes.

Teacher training and teaching quality

In Kenya and Nigeria, attending a school with a larger proportion of Primary 5 maths and English teachers who had received direct training from DP-2 was associated with greater improvement on at least one of the learning outcomes. In Ghana, there was a tendency for training to be associated with better outcomes in numeracy, although the result did not quite reach statistical significance.

In line with this, the findings from the qualitative study reported a general perception of improvements in teaching quality since the baseline. Girls reported observing an improvement in their teachers' teaching style and in their engagement with students since the baseline. They reported being able to engage better with their teachers and being able to ask their teachers questions during and after lessons, particularly in Ghana. In Kenya, students claimed they received greater attention from their teachers compared to previous terms. More than half of the girls in our sample in Nigeria asserted that teachers now know how to make class discussions lively and that they now also group students and give them tasks to do. These activities helped students to interact and learn from each other by sharing ideas and brainstorming. The impact of DP-2 on teaching quality is explored further in Section 6.1.

This is a positive indication that DP-2 training may contribute to improved learning outcomes. In Kenya, again, it is possible that teacher training contributes to improved learning outcomes, but the DP-2 training provided so far has not been sufficient to differentiate its impact from other in-service training that teachers may be receiving.

Girls' clubs and self-efficacy

We did not find any association between being a girls' club member and changes in learning outcomes at midline. If girls' clubs have any impact on learning outcomes, however, this might be expected to be a secondary or longer-term effect, as the girls' clubs are primarily aimed at improving life skills and self-efficacy. In addition, the MBW content was only rolled out shortly before the midline, so there has been little time to impact for the project's primary investment in promoting girls' self-efficacy.

In terms of self-efficacy in itself, higher levels of it are associated with greater improvements in literacy outcomes in Nigeria. A link between self-efficacy and changes in learning outcomes is not, however, supported in Kenya or Ghana.

Exposure to DLA's educational content

Having watched a video during regular classes in school this year is not associated with changes in learning outcomes. However, respondents in the qualitative study perceived the learning centre to be associated with improvements in learning outcomes, particularly in Ghana and Nigeria.

In Ghana and Nigeria, based on our qualitative sample, teachers found that teaching and understanding complex concepts such as fractions had become easier due to the media centre. They attributed the improvement in learning outcomes explicitly to DP-2. However, in Kenyan counties (except in Kajiado), parents did not explicitly mention DP-2's role in improving learning outcomes, but did say that the library, story-books, and computer lab or videos provided by the schools helped their children learn. Teachers also said they had been encouraging children to read and buy story-books, which has improved their reading and speaking skills. In Kajiado, Kenya, parents attributed the positive change to DP-2, and said the television and girls' clubs were the reason why their children learned better and felt more confident to go to school.

‘For the last one year, I have seen development in their school. They have [a] library and computer lab.’

Interview with cohort girl’s parent, Kiambu, Kenya

‘You see they say when you hear you forget, but when you see you remember. So, I should say that DLA has helped us a lot in teaching; the teachers don’t take much time drawing [diagrams] because they already have it on the TV. It has also spared time, and now the teachers have more time to prepare. To add to that, we also have the remedial class, which helps us in improving the time takers, and the clubs help in building confidence when you train in the life skills.’

Interview with head teacher and resource teacher, Machakos, Kenya

Similarly, in Nigeria, students reported being better able to recall what they are taught from lessons using the media centre compared to lessons using other types of teaching aids. They reported that the media centre helped them connect learning with real-life experiences. Girls also reported watching videos during their media class sessions that stressed the importance of being serious with their studies, the need to create time to study at home, and the importance of encouraging friends who were finding it difficult to remain in school and learn.

‘Through the equipment in the learning centre, the students visualise what they are being taught, and hence ideas are no longer seen in abstract form.’

Interview with head teachers, Nigeria

In Ghana, head teachers and teachers clearly attributed improvements in learning outcomes to the use of video lessons. This was also the situation at baseline, where school-level stakeholders mentioned the benefits of using videos explicitly. However, an important change between baseline and midline was that girls also mentioned the use of videos. About half of the girls in the sample reported clearly that, on some days of the week, they were taken to the centre/library and shown videos about the different issues they learned about in class. According to them, visualising helped them interpret information better, as they were able to see things more tangibly.

‘The difference to teaching since DLA is using the video to teach, because there is a saying that you see, you hear is better than someone just talking, and then even if you have seen the thing you will not be able to know that oh, this is the thing that the person is talking about. More especially some animals are there, you just mention the name. ... For me animals, if not because of the film, I will not see them so when the children see the animals then they see that this is what we are talking about. DLA equipment, too, we see as TLMs [teaching and learning materials]. When DLA was not there, you see this thing was difficult for me, and so you just leave it and teach it abstract.’

Interview with head teacher and resource teacher, East Gonja, Ghana

‘They started sending us to the library this year. We watch maths films, where mathematics is being taught in the video. It helps me a lot. You may not understand what your teacher has taught in class, but watching it in the video makes me understand it.’

Interview with cohort girl, Yendi, Ghana

‘Ooh okay. When a topic is being taught, we are brought here so it can be shown on television what is being taught in class that we didn’t understand. This enables us to understand.’

Interview with cohort girl, Sagnarigu, Ghana

It is therefore likely that the quantitative indicator underestimates the contribution of the learning centre to improvements in learning outcomes. One possible reason may be that it is not so much watching a video that contributes to improvements in learning outcomes, but how the teacher uses the video to support the lesson content. This is difficult to measure through a quantitative indicator.

In addition, the proportion of girls who reported watching videos during regular classes in the current school year remained relatively low in Kenya and Nigeria, and we may therefore not find a relationship between having watched a video and learning outcomes because many students might have had relatively little exposure to the learning centre. In Kenya, the proportion of girls in treatment schools who reported watching videos during regular classes³⁷ in the current school year increased compared to baseline, but remained low, with 61% of girls reporting watching a video in the current school year at midline compared to 47% of girls at baseline. In Nigeria, the opposite trend was observed: 67% of girls in treatment schools reported watching a video in the current school year at midline compared to 77% of girls at baseline. It is possible that the lack of electricity access reported by schools has played a role in this reduction.

In Ghana, on the other hand, the proportion of girls who reported watching a video in the current school year is high at 91%, increased from 83% last year.

Summary

This section examined the factors associated with changes in learning outcomes over the last year. Some characteristics—particularly poverty, disability, and experiences of physical punishment—were associated with slower rates of improvement. Girls in the qualitative study also reported that academic success and the potential to fulfil future goals by performing well academically were important motivators influencing them to study, revise, and take responsibility for their academic performance. When parents were supportive of their daughters’ education, this motivated girls to attend school and work hard.

In terms of the DP-2 intervention, we found supporting evidence that attendance at remedial classes and teacher training are associated with improvements in learning outcomes over time for girls in the treatment group. It is difficult to establish the association between exposure to DP-2’s educational content and learning outcomes quantitatively, but the qualitative research suggests that respondents see value in the educational content and attribute improvements in learning outcomes to the learning centre in Ghana and Nigeria.

³⁷ The reference to watching a video in this section refers to watching a video during regular classes. This does not include videos that girls may have watched as part of a girls’ club. This is reported on separately in Section 6.4.

Predictors of learning achievement at midline

We have previously presented the findings from the quantitative and qualitative research on the impact of DP-2 on girls' learning outcomes in literacy and numeracy. We have also explored what factors contribute to changes in learning outcomes over time, looking at factors related to characteristics of the cohort girls and their households as well as factors related to the intervention. In this last section of the chapter, we examine the **barriers leading to low learning achievement in the first place**. Therefore, while the previous sections have focused on how learning outcomes have been changing between baseline and midline, this section focuses on the factors associated with low learning outcomes overall.

For example, we showed in the baseline report that girls from poorer households have lower levels of learning outcomes. This barrier is likely to persist with time. While poor girls might be improving at the same pace as other girls, the historical disadvantage in their learning outcomes means they continue to be likely to perform more poorly. These barriers to achievement therefore continue to be important for the project to bear in mind in the design of their interventions.

We begin this section by looking at findings from the qualitative study on gendered biases with regard to academic abilities. We then look at other barriers as identified by regression analyses and the qualitative study including girls' individual and household characteristics, their learning environment, and school characteristics.

Gendered perceptions towards girls' academic abilities

The qualitative study uncovered widely held perceptions among parents and teachers of girls in Kenya and Ghana being better at English, while maths is a 'male' subject or one that boys do better at. Such a notion is likely to limit girls' trust in their own ability to excel in maths, and (in line with this) girls report struggling more with maths than with English.

'Girls perform well, once they are interested in learning the subject [English], and also you find that they find other subjects to be difficult compared to English. So, they find English to be easier and they develop an interest in doing English. Something like mathematics they take to be a male subject, so they don't put a lot of effort in, so boys excel there.'

Interview with head teacher, Nairobi, Kenya

In Ghana, most girls spoke about being comfortable with both English and mathematics but found English easier.

Contrary to findings in Kenya and Ghana, head teachers and participants in the CAP process reported that girls in Nigeria performed better than boys in both maths and English, because girls seemed interested in learning, whereas boys appeared to spend their free time playing. They assumed that if the lack of interest in education continues, boys are more likely to drop out than girls.

Barriers to achievement

Figure 11, Figure 12, and Figure 13 present the main factors associated with high or low learning outcomes at midline for Ghana, Kenya, and Nigeria respectively.³⁸ The graphs show point estimates (the dots) and 95% confidence intervals (the lines). When the confidence interval does not overlap with the zero line, this is an indication that a statistically significant relationship exists between the factor and the learning outcome. **If a factor is on the right-hand side of the zero line, this means that higher values of the factor are associated with higher learning outcomes, and vice versa.**³⁹ Full regression models are presented in Annex 18.

Figure 11. Main factors associated with achievement (Ghana)

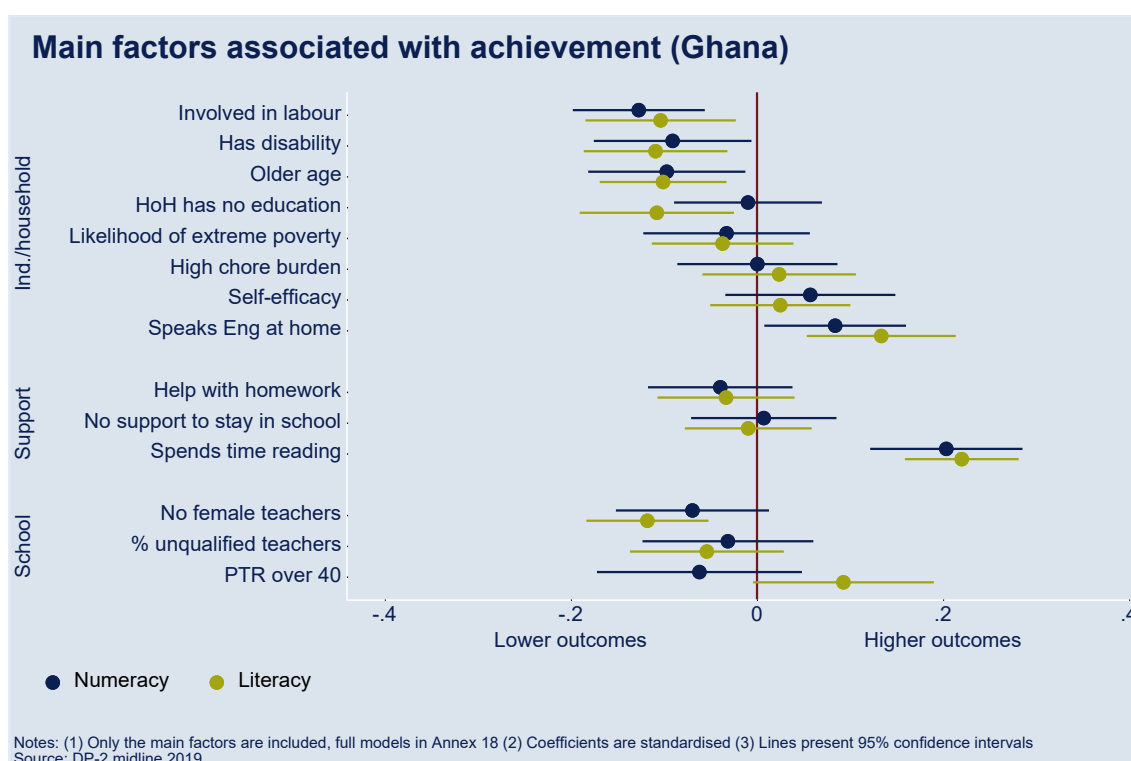


Figure 12. Main factors associated with achievement (Kenya)

³⁸ Regression analyses are run for girls in treatment schools at midline. Because the midline evaluation did not involve a household survey, baseline household characteristics for the girls are used in the regression model as lagged variables.

³⁹ The graphs show the SD difference in the change in learning outcome that would result from a one SD difference in the factor. Coefficients have been standardised so that they can be more easily compared against each other.

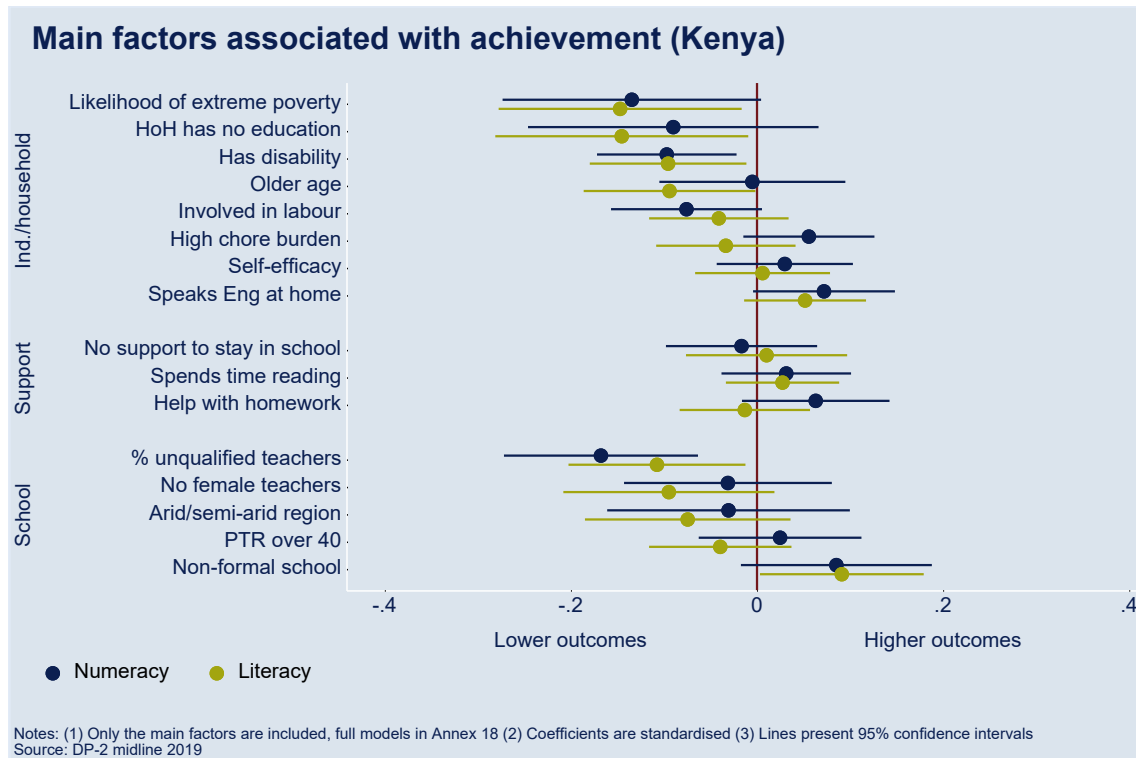
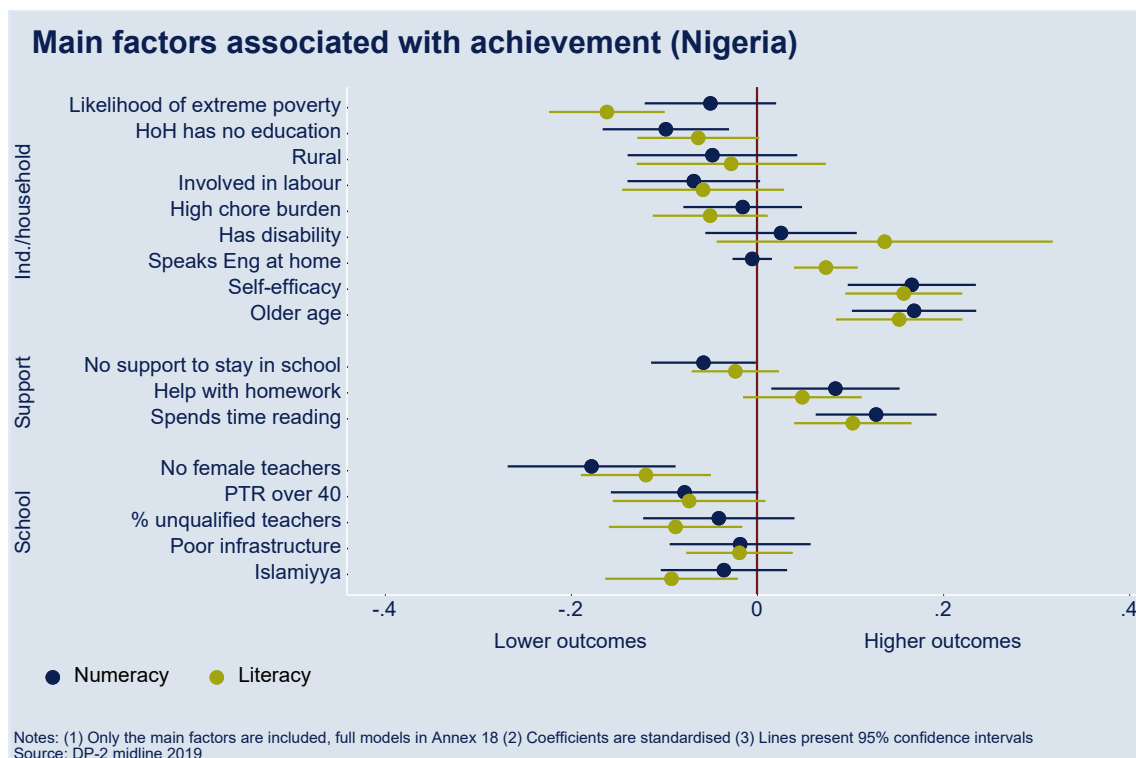


Figure 13. Main factors associated with achievement (Nigeria)



Girls' age

In Nigeria, students who are relatively older than the average pupil have higher literacy and numeracy outcomes, while in Ghana older students have lower literacy and numeracy outcomes and in Kenya older students have lower literacy outcomes. The relationship between pupil age and learning outcomes is similar to baseline.

Girls' disability status

In Ghana and Kenya, having a disability is associated with poorer learning outcomes. This is not the case in Nigeria, although this should not imply that children with disabilities do not face disadvantages when it comes to their schooling. For example, one possibility is that many children with disabilities in Nigeria might be excluded from going to a (mainstream) school completely, and only those who are able to perform at the same level as other students attend the schools in our sample.

Speaking English at home

As at baseline, in Ghana, speaking English at home is associated with better achievement. At baseline, speaking English at home was also associated with better achievement in Kenya, but this association is only marginally significant at midline. In Nigeria, at baseline, speaking English at home was associated with better numeracy outcomes but not with better literacy outcomes. At midline, this trend has reversed and speaking English at home is associated with better literacy outcomes. As noted at baseline, the very small proportion of children who speak English at home in Nigeria mean that these results may not be robust; however, the trends presented across both baseline and midline suggest that there is likely to be some advantage associated with speaking English at home.

Overall, not speaking English at home remains a barrier to achievement. The findings suggest that any disadvantage associated with not speaking English at home may reduce in Kenya as the girls become older and progress in school.

Poverty and economic disadvantage

As discussed in Chapter 2, poverty and geography/location are the most prevalent barriers faced by large proportions of the sample. Our regression results show that, in Kenya and Nigeria, students from households that are more likely to be extremely poor have lower levels of learning outcomes, particularly for literacy. In Ghana, the likelihood of living in extreme poverty is not associated with poorer learning outcomes at midline. Across all three countries, living with a household head who has no education is also associated with poorer learning outcomes.

The baseline analysis suggests that poverty is the key driver of marginalisation, particularly for households who are considered to be extremely poor. Most caregivers pay schooling-related expenses such as informal fees, examination fees or PTA levies. Caregivers also report frequently paying for school supplies and school meals. These expenses made it difficult for them to afford providing all the necessary support for learning, particularly in Nigeria and Kenya.

However, the effect of household income on educational outcomes is more nuanced with the incidence, depth, duration and timing of poverty all influencing a child's educational attainment, along with other factors. Moreover, poverty decreases a child's learning outcomes through aspects of health and home life as well as her school readiness which is important for her later learning achievements. All these effects combined produce a direct impact on children's ability to learn, starting from poor

school readiness, irregular attendance, poor classroom performance, and low exam results.

Household chores and involvement in labour

At baseline, we found some support for a relationship between children's involvement in labour and poorer learning outcomes. Similarly, at midline, children who were involved in agricultural work, a family business, or work outside the home had poorer numeracy outcomes across the three countries and poorer literacy outcomes in Ghana. On the other hand, there was no clear association between spending a quarter of a day on household chores and having poorer learning outcomes, except for a weak association in Nigeria between a high chore burden and poorer literacy outcomes. These findings are largely in line with what we found at baseline.

The findings from the qualitative study showed that household chores play an important role in girls' daily routines and at times prevent them from studying or arriving at school on time. When asked what they would do if they did not have housework, girls said they would try studying more or doing their homework on time. Only a minority of girls said they would play, sleep more, or pursue other hobbies if they had more time.

'If I was not allowed to do any work at home, I would use the time to study my mathematics and English books because it would help me in the future.'

Interview with cohort girl, Nigeria

In line with the findings at baseline for all countries, over and above the support provided by the children on chores inside the household, some children reported that they were supporting their parents economically in their livelihoods or undertaking small-scale petty jobs to increase the income of the household. This burden left them with little time to study. At midline, we found that as girls continued to age, the level of support they provided increased.

'The only challenge is the money issue. There have been some challenges in that aspect of which some of the parents tell their children to go and hustle to pay school fees on their own.'

Interview with the CAP chairman, Nigeria

'Selling things at the market sometimes it brings about tiredness it does not worry me because we get money from the sales. I get tired sometimes because I wash bowls while standing. It is through the sales that my fees are paid.'

Interview with cohort girl, East Gonja, Ghana

'As I grow older, the work that I do after school has increased. Before I couldn't wash but now, I'm doing it. Even if the work is too much for me, I cannot complain to my mom because she is my mother.'

Interview with cohort girl, Nigeria

Although children are engaged in household chores, there are some indications that parents have in some cases reduced the workload of activities girls are engaged in

outside the homes, such as street-hawking before and after school. However, for activities within the household (cleaning and cooking), there are indications that, over the years as girls grow older, these chores in some households have increased. Parents acknowledged that girls take on a significant share of chores at home but said they had no choice as they themselves were already burdened with work or illness and could not help their children more.

A supportive learning environment

Spending time reading in their own free time was strongly associated with better literacy and numeracy outcomes in both Nigeria and Ghana. It is likely that the direction of this relationship goes both ways: while greater exposure to books is likely to be beneficial for one's learning outcomes, it is equally likely that girls who perform better at school may enjoy reading more and therefore choose to read in their spare time.

In Nigeria, we also found that receiving help with homework was associated with better numeracy outcomes. Girls who perceived that they received no support from their family to stay in school had poorer numeracy outcomes.

As discussed in the previous section, parents across the three countries believed it is important to support their girls' schooling in whatever way possible and to monitor their progress to the extent that they can, and girls reported that their parents' support was a motivating factor for them.

School infrastructure and adequate numbers of qualified teachers

In Chapter 2, we noted how infrastructural limitations and a shortage of teachers was a concern, particularly in Nigerian schools. In our regression models, we found that high PTRs are associated with poorer learning outcomes in Nigeria. On the other hand, high PTRs are associated with better literacy outcomes in Ghana. It may be that schools with higher PTRs in Ghana are those located in urban areas, which may attract better-quality teachers, although we do not have the information to examine this further.

Girls in schools with higher proportions of teachers who lack basic teaching qualifications had poorer literacy and numeracy outcomes in Kenya and poorer literacy outcomes in Nigeria.

Lastly, girls in schools with no female teachers had poorer literacy and numeracy outcomes in Ghana and Nigeria. A few girls from our qualitative sample in Nigeria complained of having a bit of a struggle to adjust when their teachers are being transferred out of the school. In Ghana, the effect of a female teacher was more pronounced where the club mentor was female. Girls reported finding it easy to confide more in female mentor. They perceived them as more friendly and supportive.

Summary

Individual, household, and school characteristics continue to pose barriers to learning. Several factors are associated with low levels of learning outcomes overall. At the individual level, girls with a disability have lower levels of learning outcomes. At the household level, poverty and children's involvement in labour activities continue to pose important barriers to learning, preventing girls from attending school, arriving on time, completing their homework, and paying attention in class. At the school level, being taught by teachers who lack basic teaching qualification seems to pose a barrier

to learning. In addition, it appears important that schools have at least one female teacher, particularly in Ghana and Nigeria.

3.1.6 Conclusion

Our midline analysis shows that DP-2 has had a large, statistically significant positive impact on literacy and numeracy outcomes in Nigeria. The findings presented in this chapter overall strongly support a link between different aspects of the intervention and the impact on learning that is observed. In particular, the findings suggest that remedial classes have played a role in contributing to improvements in learning outcomes, particularly for numeracy. The findings also point to potential links between teacher training and improvements in learning outcomes and show that self-efficacy is correlated with improvements in learning outcomes. Head teachers and girls perceived that the learning centre makes subject content more tangible and easier to understand. Links between the intervention and their potential contribution to improvements in learning outcomes are explored further in the IO chapters and in the conclusion.

The findings suggest that most girls in Nigeria take part in remedial classes; that entire grades are targeted in some cases; and that remedial class sizes often exceed 35 students. This is to be expected given that the overall low literacy and numeracy outcomes in Nigeria indicate that the majority of cohort girls need remedial support. It is therefore important to recognise that DP-2 remedial classes in Nigeria are likely to play a different role than they do in the other countries, given that they provide additional instructional time on foundational literacy and numeracy skills to the majority of students, rather than being particularly targeted at a smaller group of poorer-performing students. It remains evident that the majority of students in Nigeria continue to be far behind curriculum expectations and are likely to leave primary school without the ability to read in English. This remains a difficult challenge for DP-2. It also potentially poses a risk to achieving impact on successful transition between primary and secondary school because, despite DP-2's strong impact on learning outcomes, most girls will not be able to do what is expected from them by the secondary school curriculum.

The midline analysis found no impact of DP-2 on learning outcomes in Kenya and Ghana. It is possible that it is more difficult or takes longer to achieve impact on learning outcomes in contexts like Kenya and Ghana, where learning outcomes are better to start with and (in the case of Kenya) where remedial support is already widespread. The regression analyses do suggest that remedial classes and teacher training may be associated with improvements in learning outcomes, and head teachers and girls in Ghana perceive the learning centre to be contributing to improvements in learning outcomes. However, we are not able to establish an overall impact of the DP-2 intervention on learning outcomes at this point when comparing against a counterfactual.

Other factors likely to contribute to improvements in learning outcomes include the girls' own levels of motivation to succeed academically and their parents' support of their education. Girls at midline felt strongly motivated to study, revise, and take responsibility for their academic performance. Similarly, parents across all countries were supportive of their girls' education and wanted to support them in whatever way possible, including in some instances by reducing the time that girls spend on economic activities. Increased parental support is likely to be linked to community sensitisation activities through both the CAP process and activities from other community groups. Despite this, poverty remains an important barrier to learning

outcomes, and the qualitative research found that some parents continue to rely on their children's involvement in income-generating activities to help the household financially or cover their own school fees.

Some characteristics, particularly poverty and disability, were associated with slower rates of improvement. It is important for DP-2 to actively ensure that girls who face these barriers are not excluded from any of the project interventions, and where possible are provided with appropriate levels of additional support to bridge the gap in their improvement compared to other girls.

3.2 Self-efficacy outcome

Self-efficacy⁴⁰ is a final outcome indicator for DP-2. A contribution claim of DP-2 is that girls' clubs, together with other DP-2 activities, lead to improved girls' life skills and self-efficacy. As such, the expected outcome is that girls who participate in DP-2 will develop confidence, skills, and attitudes enabling them to succeed at school. The DP-2 logframe places self-esteem and self-efficacy at the final outcome level alongside the literacy and numeracy outcomes. This was done intentionally to reflect the fact that growing self-confidence, motivation, knowledge, and skills for life (which girls participating in the clubs would develop to an even greater degree, but which all girls exposed to more gender-responsive schools and classrooms and more supportive teachers, parents, and communities are expected to develop to some degree) would inspire and enable girls to engage more effectively academically, learn more, and develop their agency/self-efficacy. While one could argue that increased self-esteem and self-efficacy lead to improved learning outcomes, one could also argue the inverse, i.e. that improved literacy and numeracy and academic performance overall lead to increased self-efficacy.

DP-2 has provided a broad definition of *self-efficacy* as an outcome that refers to improving the self-esteem, confidence, agency, and life skills of marginalised girls. However, given the broad nature of this definition, evaluating this outcome in its entirety is outside the remit of this evaluation. Furthermore, self-efficacy as a concept is not something that lends itself easily to being measured by a single indicator. As such, this section presents both quantitative and qualitative approaches to the measurement of self-efficacy, and the combination and triangulation of these findings is used to track progress against this outcome throughout the evaluation.

In this section, we first provide a definition of self-efficacy in general and then in the context of DP-2. Within this, we describe qualitative and quantitative methods used to measure girls' self-efficacy. Thereafter, we discuss the quantitative findings from baseline and midline and present the qualitative findings to give more contextual details regarding the presented results.

⁴⁰ We are aware that self-efficacy is a concept that relates to a number of other concepts, such as confidence and self-esteem. The scope of this report does not allow us to discuss the differences and similarities between these concepts, but we can suggest some clarifications here. For example, according to Bandura, confidence refers to strength of belief but does not necessarily specify what the certainty is about and is therefore part of self-efficacy, which includes both an affirmation of a capability level and the strength of that belief. Self-esteem is slightly different as it is a static feeling, while self-efficacy varies depending on the task at hand.

3.2.1 Defining self-efficacy

Self-efficacy grew out of psychological research conducted by Bandura,⁴¹ who defines self-efficacy as people's judgements of their capabilities to organise and execute courses of action required to attain designated types of performance. This concept has two dimensions. The first is a belief about one's capability, which, as such, does not necessarily match one's actual capability in a specific domain. Second is the idea that individuals make use of their efficacy judgements (people judge their efficacy related to whether they can/cannot achieve their goal) in reference to some goal ('attain designated types of performances'). Bandura (1986; 1997)⁴² later advanced his social cognitive theory, by which people are viewed as self-organising, proactive, self-reflecting, and self-regulating rather than as solely reactive organisms or products of environmental influences. From this perspective, people are seen as agents of their circumstances, not just passive recipients.

Qualitative approach to measuring self-efficacy

Our baseline report has laid out an operationalised definition of self-efficacy for the purposes of this study. Self-efficacy is explained as girls' judgements and views of their own capabilities to study and use these capabilities to achieve their educational aspirations and goals. If children have a strong sense of self-efficacy, they have the skills and knowledge (or will develop them) to master tasks at school and home. Even if the solution does not come easily, having strong self-efficacy helps children work harder and look for ways to gain the skills or knowledge that it takes to solve problems and not to give up. However, we suggested that, in the context of Nigeria, Ghana, and Kenya, children's beliefs in their own capabilities and abilities to make use of their judgements of themselves in pursuing goals is both hindered and promoted by others rather than being primarily shaped by children themselves. This is not to suggest that the children in this cohort are less active agents; on the contrary, our baseline findings acknowledge that these children are active agents of their lives and active participants who contribute to their families and households' sense of wellbeing.

Although the theoretical definition of self-efficacy discussed above is common for both qualitative and quantitative analysis (self-judgement of girls of their abilities to act), their measures are different but not incompatible. Qualitative measures focus on the individual's own words, descriptors, and metaphors to clarify the content and context of self-efficacy obtained during semi-structured interviews while quantitative measures require operational definitions of behaviours or attributes to obtain an objective assessment through a survey.

Quantitative approach to measuring self-efficacy

Self-efficacy is measured quantitatively using the 10-item Generalised Self-Efficacy (GSE) scale, which was administered to girls at school as part of the girl survey. The scale was initially designed by Jerusalem and Schwarzer⁴³ based on Bandura (1977), and was constructed specifically to measure personal agency—that is, the belief that

⁴¹ A. Bandura (1977) 'Self-efficacy: toward a unifying theory of behavioural change', *Psychological Rev.* 84, pp. 191–215; A. Bandura (1986) *Social Foundations of Thought and Action: A Social Cognitive Theory*, Englewood Cliffs, Prentice Hall.

⁴² A. Bandura (1997) *Self-Efficacy: The Exercise of Control*, New York, Freeman.

⁴³ Jerusalem and Schwarzer (1981).

one's actions and judgements of one's abilities are directly responsible for successful outcomes. Previous studies have shown that the scale has good reliability across a variety of different countries and contexts.

The GSE scale is a Likert-type scale consisting of 10 statements (Table 40). For each statement, the respondent is asked whether she strongly agrees, agrees, disagrees, or strongly disagrees with the statement.

Table 40. GSE psychometric scale

GSE scale statements
If someone opposes me, I can find ways to get what I want
When I am confronted with a problem, I can usually find several solutions
If I am in trouble, I can usually think of a solution
If something unexpected were to happen, I could deal with it
I can always manage to solve difficult problems if I try hard enough
It is easy for me to stick to my aims and accomplish my goals
I can remain calm when facing difficulties because I can rely on my coping abilities
I can usually handle whatever comes my way
Thanks to my resourcefulness, I know how to handle unforeseen situations
I can solve most problems if I invest the necessary effort

Based on the responses to the 10 statements, a self-efficacy score was constructed at baseline for each of the cohort girls using factor analysis. This analysis allows the use of observable variables presented in Table 40 to construct a single measure of the underlying unobservable latent trait we are interested in, i.e. self-efficacy. For ease of interpretation, the score is rescaled to a scale of 0 to 100, with higher scores indicating greater levels of self-efficacy. This analysis was conducted on the girls from all three countries at once to ensure that girls across all three countries were kept on the same self-efficacy scale to allow for comparisons across countries. At midline, self-efficacy scores were calculated using the same scale as was constructed at baseline.

3.2.2 Impact of DP-2 on self-efficacy

In this section, we present quantitative self-efficacy scores at baseline and midline for the treatment and control group. To understand the impact of DP-2 on self-efficacy, what is of interest is whether self-efficacy scores in the treatment group increase statistically significantly more than in the control group. We estimate the impact of DP-2 on self-efficacy using DID estimation techniques. Table 41 below presents the quantitative findings from this analysis.

Table 41. Impact of DP-2 on self-efficacy (full sample)

Baseline self-efficacy score treatment	Midline self-efficacy score treatment	Difference baseline to midline treatment	Baseline self-efficacy score control	Midline self-efficacy score control	Difference baseline to midline control	DID (treatment-control difference)
Ghana						
64.6	66.2	1.7	67.8	64.8	-1.7	3.7*
Kenya						
61.2	63.9	2.2**	61.5	64.7	3.8***	-0.6

Baseline self-efficacy score treatment	Midline self-efficacy score treatment	Difference baseline to midline treatment	Baseline self-efficacy score control	Midline self-efficacy score control	Difference baseline to midline control	DID (treatment-control difference)
Nigeria						
67.3	72.9	6.7***	65.8	71.2	6.1***	0.6

Source: DP-2 girl surveys (2018; 2019)

Note: Asterisks indicate where means differ significantly from one another at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

In Ghana, we found a statistically significant positive impact of DP-2 on self-efficacy at midline. The magnitude of the effect is an increase of 3.7 points on the self-efficacy scale in the treatment group over and above the control group, which is statistically significant at the 10% level. To avoid confusion we note here that this has been achieved without a statistically significant increase in the self-efficacy of girls supported by the DP-2 programme. The interpretation of how this impact is achieved stems from the experience of girls in the control group, where self-efficacy fell at midline. The interpretation is therefore that DP-2 has protected girls supported by the programme from a drop in self-efficacy as they age. Without support from DP-2 it is possible that self-efficacy may fall as girls age for a variety of factors – for example, having to repeat grades because of poor performance.

We also investigated the impact of DP-2 on self-efficacy specifically for schools in Ghana in which CAMFED was operating. We found no difference in the level of impact on self-efficacy for girls in these schools where DP-2 had an impact of 3.6 points on the self-efficacy scale also significant at the 10% level. These results are presented in Annex 18.

In Kenya and in Nigeria, we did not detect an impact of DP-2 on girls' self-efficacy at midline. In both countries, girls' levels of self-efficacy increased significantly between baseline and midline. However, the increase in self-efficacy was observed to a similar degree across both the treatment and control groups, and we therefore have no evidence that the increase in self-efficacy is attributable to DP-2. In Kenya, when looking at findings across the three sampling strata, we also do not detect a statistically significant impact of DP-2 on self-efficacy in any of the strata. When looking at Wajir county separately, however, we find that DP-2 has had a large and statistically significant impact on girls' self-efficacy levels.⁴⁴

In Table 42, we explore changes in the girls' responses to the 10 GSE statements, which are combined to form the overall self-efficacy score. The table presents the percentage of girls in the treatment group that agreed or disagreed with the 10 GSE statements. Asterisks indicate where differences between baseline and midline are statistically significant. In Ghana, we see a statistically significant increase in the percentage of girls who responded with *strongly agree* in only one statement. However,

⁴⁴ Full results of the impact of DP-2 on self-efficacy outcomes for the three sampling strata in Kenya and for Wajir county are presented in Annex 19. Also note that the impact in Wajir has a similar interpretation to that of Ghana – i.e. that it is derived from a fall in self-efficacy amongst the control group rather than a large increase in the self-efficacy of girls supported by DP-2.

since we are able to detect an impact of DP-2 on self-efficacy in Ghana, we expect the responses in the treatment group to have improved more over responses in the control group, or the responses in the control group to have worsened where responses in the treatment group have stayed the same.

For Kenya, there was an increase in the percentage of girls who agreed with the GSE statements, but on fewer of the statements than in Nigeria. In Kenya, we see a statistically significant increase in the percentage of girls who responded with *strongly agree* in three out of the 10 statements. In line with this, as shown in Table 41, there was a much smaller statistically significant increase in the average self-efficacy score in Kenya in the treatment group between baseline and midline as compared to Nigeria (2.2 and 6.7, respectively).

In Nigeria, there was a statistically significant increase in the percentage of girls who responded with *strongly agree* to all GSE statements from baseline to midline. In line with this, was a statistically significant decrease in the percentage of girls who responded with *disagree* in 9 out of 10 statements. There have been considerable increases in agreement with the statements in the treatment group in Nigeria, which is also reflected in the magnitude of the statistically significant increase in the overall self-efficacy score between baseline and midline. However, given that we were unable to detect impact of DP-2 on girls' self-efficacy, similar increases were also observed in the control group.

Table 42. GSE statements, by country and survey round for the treatment group

Statements	Options	Ghana (%)		Kenya (%)		Nigeria (%)	
		Baseline	Midline	Baseline	Midline	Baseline	Midline
If someone opposes me, I can find ways to get what I want	<i>Strongly disagree</i>	5.9	6.4	10.3	10.1	4.2	2.7*
	<i>Disagree</i>	20.7	16.8*	27.4	28.3	12.2	8.8**
	<i>Agree</i>	42.7	44.4	42.5	41.1	57.1	48.5***
	<i>Strongly agree</i>	30.7	32.5	19.7	20.5	26.6	40.0***
When I am faced with a problem, I can usually find several solutions	<i>Strongly disagree</i>	4.2	4.7	4.6	3.6	1.6	2.1
	<i>Disagree</i>	15.2	12.9	15.5	13.5	9.7	5.5***
	<i>Agree</i>	46.0	48.1	54.5	50.4	58.2	49.3***
	<i>Strongly agree</i>	34.6	34.3	25.4	32.5***	30.5	43.0***
If I am in trouble, I can usually think of a solution	<i>Strongly disagree</i>	4.7	3.8	4.7	4.0	1.2	2.0
	<i>Disagree</i>	17.3	12.6**	13.0	13.0	9.0	5.1***
	<i>Agree</i>	44.9	48.8	51.6	52.9	58.3	50.8***
	<i>Strongly agree</i>	33.1	34.9	30.7	30.2	31.4	42.1***
If something unexpected were to happen, I could deal with it	<i>Strongly disagree</i>	6.5	7.2	9.4	8.3	5.4	6.2
	<i>Disagree</i>	24.3	22.7	25.7	26.6	23.9	18.7***
	<i>Agree</i>	41.4	44.5	44.0	41.1	51.5	44.0***
	<i>Strongly agree</i>	27.7	25.6	20.9	24.0	19.3	31.1***
I can always manage to solve difficult problems if I try hard enough	<i>Strongly disagree</i>	3.6	3.1	6.0	2.8***	1.0	1.4
	<i>Disagree</i>	14.7	7.7***	14.4	9.9***	7.7	4.6***
	<i>Agree</i>	47.5	51.4	45.4	47.4	57.2	45.6***
	<i>Strongly agree</i>	34.3	37.8	34.3	39.9**	34.1	48.4***
It is easy for me to stick to my aims and	<i>Strongly disagree</i>	2.3	2.9	2.4	1.8	0.6	1.2
	<i>Disagree</i>	10.1	9.8	12.7	8.9**	5.3	7.4*
	<i>Agree</i>	52.2	56.0	49.0	46.4	58.7	48.1***

		Ghana (%)		Kenya (%)		Nigeria (%)	
accomplish my goals	<i>Strongly agree</i>	35.4	31.3	35.8	42.9***	35.5	43.2***
	<i>Strongly disagree</i>	3.4	2.8	7.3	7.3	1.4	0.7
I remain calm when facing difficulties because I can rely on my coping abilities	<i>Disagree</i>	17.1	15.0	23.7	22.3	7.9	4.7***
	<i>Agree</i>	52.4	49.9	44.8	46.6	64.4	47.3***
	<i>Strongly agree</i>	27.1	32.3**	24.2	23.8	26.4	47.3***
	<i>Strongly disagree</i>	7.0	6.9	6.9	5.0	2.0	2.4
I can usually handle whatever comes my way	<i>Disagree</i>	21.4	19.3	26.2	24.8	13.3	8.4***
	<i>Agree</i>	44.0	47.5	44.3	46.5	59.6	51.7***
	<i>Strongly agree</i>	27.6	26.4	22.5	23.6	25.1	37.5***
	<i>Strongly disagree</i>	7.0	6.9	6.9	5.0	2.0	2.4
Thanks to my resourcefulness, I know how to handle unforeseen situations	<i>Strongly disagree</i>	3.8	2.4	5.2	6.6	2.0	3.4*
	<i>Disagree</i>	23.3	20.7	29.8	21.8***	11.7	9.7
	<i>Agree</i>	47.6	49.4	42.7	47.3*	59.3	54.7**
	<i>Strongly agree</i>	25.3	27.4	22.3	24.3	26.9	32.2**
I can solve most problems if I invest the necessary effort	<i>Strongly disagree</i>	1.6	2.4	2.9	2.8	1.1	1.1
	<i>Disagree</i>	10.0	5.5***	14.7	10.1***	7.3	4.3***
	<i>Agree</i>	49.9	54.2	50.0	49.4	60.1	51.9***
	<i>Strongly agree</i>	38.5	37.8	32.4	37.7**	31.4	42.7***

Source: DP-2 girl surveys (2018; 2019)

Note: Asterisks indicate where means differ significantly between baseline and midline for the treatment group at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$.

The qualitative findings at midline suggest that girls' levels of self-efficacy have increased since baseline, which is in line with the quantitative findings. In particular, our qualitative study at midline found that our cohort girls have become more confident and have clear visions of the future they would like to have. Most girls in all three countries reported that they felt happy and confident of their present and future. More specifically, when the girls were asked what made them happy, the most common response across the board was their exam results or tests scores, as well as their ability to answer questions in class. This is similar to the finding at baseline regarding the focus placed on getting higher marks and being able to do well in class that made them very happy and confident.

What is different from baseline is that girls sounded more confident of themselves and their abilities to study and pass their exams. They believe that they are intelligent, that they can volunteer to answer questions in class, and that they can also contribute during paired class work. This is also related to their ability to recall and use information taught in the girls' clubs and in the classroom. They clearly state their own efforts to study better by working hard in class, completing their homework on time, studying daily, and revising before their test. Across all schools, girls set specific goals and plans of action for themselves—they want to improve their scores and be first or second best in class. They reflect on their scores from the previous tests and come up with strategies to perform better in their next test.

'Interviewer: What are you doing now to help you improve in maths?

Respondent: Anything I don't understand I go home and start practising.

Interviewer: And what do you do with English?

Respondent: I revise.'

Interview with cohort girl, Nairobi, Kenya

'I'm also comfortable in school, because even if I did not understand what teacher did in class, I usually take my book and read without any disturbance to understand by myself.'

Interview with cohort girl, Nigeria

'When I'm doing something wrong at home when doing my homework, I pause and think, then I recall what teacher tells us then I put it correctly.'

Interview with cohort girl, Nigeria

Most girls were generally positive about how they were going to improve their scores and confident that they could do it. Even those girls who identified a weakness in some subjects stated they would work hard and try again in their next exams to do better.

'I always have the confidence that when I come to school, I will be able to answer all questions that I am asked or will be able to solve any question put before me. I urge myself to try and attempt to solve questions set by our teacher; even if I get it wrong, I know I might have tried, and the teacher will correct me where I was wrong and commend me where I got it right.'

Interview with cohort girl, East Gonja, Ghana

This is how girls' self-efficacy is manifested, and there is a noticeable positive shift in girls' judgements of themselves and confidence in their own abilities compared to baseline. These changes could be a result of girls getting older, but also it is important to note (based on our analysis of interviews with parents) that girls could not have paid so much attention to and placed so much importance on education if their parents had not enabled them to do so and not believed in them. Although parents' own education levels varied across the countries, parents in all countries recognised their girls' education as the most important achievement their children should accomplish (similar to baseline findings). They expressed beliefs that their children were able to pass their exams and, in the long run, could attain whatever academic goals they had set for themselves, and earn money to support their own financial needs as well as those of their parents. This could be because parents could see the hard work of their children and the effort they put in to do well at school. To have parental support and trust in their abilities is likely to positively boost girls' self-efficacy. DP-2 girls' clubs are also likely to have a positive effect on girls' self-efficacy and this is discussed below.

Self-efficacy and DP-2 girls' clubs

Girls' clubs are discussed in more detail in Section 6.4 on life skills, as girls' clubs are intended to contribute directly to the development of life skills. However, through improving girls' life skills and confidence, girls' clubs are also expected to contribute to improvements in girls' sense of general self-efficacy. In this section, we therefore analyse the effect of DP-2 on self-efficacy specifically for girls' club members. Box 5

briefly describes the DP-2 girls' clubs and their implementation at midline (for further details, please refer to Section 6.4).

Box 5. DP-2 girls' clubs

DP-2 encourages schools to organise girls' (and boys') clubs to support and engage girls in activities that enable them to generate income, increase their awareness about health, learn new skills, and access relevant resources to receive greater support. Each club has a club mentor who receives training on how to facilitate activities with the girls' club.

Under DP-1, clubs were independent in choosing and developing their activities, with general guidance provided to club mentors on how to facilitate this. In response to feedback at the end of DP-1, DP-2 includes the roll-out of a more structured club curriculum through MBW materials. The MBW materials consist of video content and training guides for club mentors on how to facilitate sessions. The video content focuses on developing different life skills such as taking care of the environment, being hygienic, planning ahead, and being goal-focused. The MBW content was rolled out relatively recently: the MBW materials were distributed in November 2018 in Ghana, January 2019 in Nigeria, and February and March 2019 in Kenya. We would therefore expect that any impacts of this new component are only just beginning to emerge. In addition, a business toolkit provides guidance to clubs on conducting income-generating activities, which clubs may choose to pursue.

Girls' club membership is particularly high in Ghana, where 79% of girls interviewed during the quantitative survey reported that they were a member of a girls' club. Membership of DP-2 girls' clubs was lower in Kenya and Nigeria, though still substantial, with 60% and 61% of girls respectively reporting that they were a member of a girls' club.

To quantitatively test the effect of DP-2 clubs on girls' self-efficacy with the information collected during the quantitative surveys, we replicate our impact analysis for the subgroup of girls who are part of a DP-2 girls' club. Table 43 presents the impact estimates. In Ghana, we detected a strong statistically significant impact of DP-2 clubs on girls' self-efficacy of 5.6 points. Similar to the above findings we also investigated the impact of DP-2 on self-efficacy for girls in girls' clubs in schools where CAMFED was in operation. We find no statistically significant difference in the impact observed on self-efficacy for girls in this group, with DP-2 causing an impact of 4.7 points on the self-efficacy scale.

However, quantitatively, we found no evidence of a statistically significant impact of DP-2 girls' clubs on girls' self-efficacy in Kenya and in Nigeria.

Table 43. Impact of DP-2 on self-efficacy (girls' club members only)⁴⁵

Baseline self-efficacy score treatment	Midline self-efficacy score treatment	Difference baseline to midline treatment	Baseline self-efficacy score control	Midline self-efficacy score control	Difference baseline to midline control	DID (treatment–control difference)
Ghana						
63.8	68.1	3.9**	67.8	65.0	-1.5	5.6**
Kenya						

⁴⁵ For this analysis, we limited the treatment sample to girls who reported being members of DP-2 girls' clubs. We then matched these girls to comparable girls in control schools.

Baseline self-efficacy score treatment	Midline self-efficacy score treatment	Difference baseline to midline treatment	Baseline self-efficacy score control	Midline self-efficacy score control	Difference baseline to midline control	DID (treatment–control difference)
60.9	64.2	3.0**	61.1	64.3	3.8***	-0.1
Nigeria						
67.5	74.0	7.2***	66.6	70.8	5.1***	2.2

Source: DP-2 girl surveys (2018; 2019)

Note: Asterisks indicate where means differ significantly between baseline and midline for the treatment group at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

In addition to the positive impact on self-efficacy among girls' club members in Ghana, we also found a small impact on girls' life skills among girls' club members in Kenya and in Nigeria. This analysis is presented in Section 6.4. It is possible that girls' clubs in Ghana have been focusing more on activities that may contribute to improvements in self-efficacy, while clubs in Kenya and Nigeria may have been focusing more on activities that build life skills—in this case defined as confidence in the classroom and in academic abilities.

It is interesting to note that girls' club members in Ghana are likely to have had the most exposure to MBW materials so far. The materials were distributed slightly earlier in Ghana compared to the other countries. In addition, a larger proportion of girls' club members in Ghana reported having watched an MBW video at the time of the midline survey compared to Kenya and Nigeria: 84% of girls' club members in Ghana reported watching an MBW video compared to 66% of girls' club members in Kenya and 57% in Nigeria. The content of the MBW videos may be most directly linked with contributing to improvements in general self-efficacy.

The qualitative midline findings suggest that clubs have been received positively in all three countries. Our qualitative baseline research found that the way children looked at the school setting (i.e. wearing a clean uniform and personal hygiene) made a big difference to the way children felt about themselves and their abilities to act. The fact that some DP-2 girls' clubs have personal hygiene as part of their curriculum is reported by head teachers and girls to have increased girls' confidence as well as their attendance. For example, in Kajjado, parents report that their children have developed a greater understanding of general and menstrual hygiene and confidence in the way the girls relate and behave since they have joined the club.

In addition, the DP-2 club curriculum has improved since baseline in being supportive of self-efficacy (more so in Nigeria and Ghana) through the introduction of the MBW materials. In particular, girls reported learning about the concept of a 'role model'. Positive female role models were reported as playing an important role in girls' aspirations in all three countries. Most girls, when asked about their role models, spoke about women in similar professions, usually someone in their neighbourhood or family. These aspirations often translated into them clearly outlining that they needed to work hard and concentrate on their studies to ensure they do well. Although these aspirations were not different from baseline, the very fact of having a role model made

the girls' aspirations real and helped them believe their aspirations might come true, which cannot but positively affect the way girls perceive their abilities to act. For example, in Nigeria, girls identified role models on whom they wished to pattern their lives in the belief that if they worked hard enough, they might achieve their goals.

'I have a friend who is a role model that I will like to be like when I get to secondary school. She is intelligent and she teaches other students some subjects like maths, English, social studies, and others.'

Interview with cohort girl, Nigeria

As discussed above, in the qualitative research girls mostly spoke about hygiene and role models in the context of the MBW materials. In the quantitative survey, we asked girls to name the topics they remembered from the MBW videos. The most commonly mentioned topics across all countries were related to improving health, planning for the future, achieving goals, and being helpful.

In Nigeria, a lot of the girls explained how in the past they had difficulties expressing themselves, especially in terms of answering questions in class. Organising quiz and debate competitions, according to these girls, has made them more outspoken, such that they felt confident to brainstorm ideas on their own and defend them to others.

In summary, girls' clubs are viewed positively in all countries and girls described how girls' clubs have contributed to increases in their confidence. Quantitatively, we only observe impact of DP-2 on self-efficacy among girls' club members in Ghana, which may be related to greater exposure to the MBW materials.

Self-efficacy in relation to others

From baseline, we know that girls' self-efficacy is shaped by the girls' motivation to contribute to the lives of others. They are aware of what benefits education could bring to their lives as well as others and move towards that goal despite of it being far away from their 'present'. Some of the girls, for example in Kenya, were aware that they are first-generation learners and have a responsibility towards their family to do well. Others wanted to be a doctor or teacher so they could help the community or those in need.

Interviewer: That's what they see? Why do you think they are happy when you come to school?

Respondent: Yes. Like my grandmother never finished school, so if I finish school, they know I will help them in anything.

Interviewer: Like which one?

Respondent: Build for them. Buy them a cow.

Interviewer: How do you feel when you know they are thinking when you come to school you will read and perform well, you will get money you will buy them a cow?

Respondent: I feel good, because they never went to school, they hustle to get food, so you won't hustle but you will get a good job and help them.'

Interview with cohort girl, Kiambu, Kenya

Parents reported how their children have an increased sensitivity to their struggles as they get older and aspire to support them and share their burdens. Parents reported having open conversations about their struggles with their children, but emphasised that they had faith that their children will work hard and do well. Children in their interviews were aware of the faith placed in them and strove to meet their parents' expectations—a motivation for children to do well and have a higher degree of self-efficacy.

'She normally says, "Sometimes I see you suffering and that's why I put a lot of effort in my studies so that I can improve your lives for the better one day." ... And I usually tell her that this is part of life and she should not worry so much because it's part of living and we are not suffering as such.'

Interview with cohort girl, Kajiado, Kenya

This shows that girls' self-efficacy is not only shaped by 'others', but is also for 'others'—in other words, that it is not only about 'here and now' but is also situated in the future. Although the quantitative findings did not find any significant effect of the project beyond Ghana as of yet, the qualitative findings show that, among our cohort of girls engaged in the qualitative assessment, there was a reportedly higher feeling of SE than last year, which can partly be explained by them getting older, being continuously supported by their parents despite economic challenges, learning new skills, obtaining new knowledge through the DP-2 clubs, and becoming more aware of their abilities at home and school.

Self-efficacy and two settings: home and school

According to qualitative research conducted with children at baseline, we found that home and school were two key spaces where children both developed and expressed their self-efficacy. Therefore, we suggest that the GSE statements presented earlier are likely to be interpreted by girls in relation to the settings of school and home as their most immediate spaces of daily living and acting. Self-efficacy was manifested and bounded by both these settings, and most importantly children's views of their own capabilities and abilities to act on those views were clearly influenced by their relationships with adults such as parents and teachers, as well as with other children. This suggests that although the statements are formulated as being focused on 'self', the girls' answers to them were largely shaped by 'others' in their lives and their abilities to perform at school and home. We discuss these two settings below.

Parents are the key players in girls' lives across all the countries, and their role in promoting and hindering girls' self-efficacy is obvious. Parents reported increasing pressure on their girls as they get older, so they take their studies seriously. They worry when their children spend too much time playing (it is interesting to note that playtime makes the girls happy and confident) and not enough time revising. In Ghana, parents reported the need to maintain discipline at home to push their children to do better in school and become more studious. Sometimes this came at the cost of other

activities, such as playing and spending time with friends, while at other times it came at the cost of reducing the time that children spent hawking.

‘Interviewer: Have there been significant changes in her life in the past year?’

Respondent: Well, you know, as for these children, we take care of them and we observe. Frankly, there has been a change, but I cannot say it is a dramatic change. But there has been change according to the way I have observed her. There has been a little change so what she used to do, she doesn’t do again. You know she used not to study in the night. After I put pressure on her and pestered her, she is OK now.

Interviewer: And what informed this change?

Respondent: It is the discipline. I have put some disciplinary actions in place and have also met the teachers.’

Interview with parent, Sagnarigu, Ghana

‘The father cautioned me not to allow her to sell after school and that if she closes from school, she should observe prayers and study. She sometimes assists me when I am cooking. She used to attend *madrassa* in the evenings but has stopped and now attends it on weekends. ... When she used to attend *madrassa* in the evening, she was not studious because they go and play over there, and she will not have time for her books. That is why her father stopped her from attending it, so she can study in the evening which has boosted her performance.’

Interview with parent, Tamale, Ghana

Girls appreciate the support and attention they receive from their parents. For example, in Kiambu, a girl reported that her home was a place where she felt happy because her mother helped her feel confident when she was not confident. We found a similar example from Ghana:

‘Interviewer: How do you feel about your parents’ thoughts for your education?’

Respondent: I feel happy about it.

Interviewer: Why do you feel happy about it?

Respondent: Because of their support it makes it easier for me to study well in school.

Interviewer: Why do you feel happy about your extended family’s thoughts about your education?

Respondent: Because their prayers are with me to progress in my education.

- Interviewer: Has your parents' goals and intentions for your education changed over the years?
- Respondent: It's still the same and they have been supportive in order for me to reach those goals. They even supply books, uniforms, shoes, and any other things that I need.'

Interview with cohort girl, Sagnarigu, Ghana

We discussed at baseline that being able to complete household chores and being praised by parents are important for self-efficacy since praise forms children's self-judgement. Children wrote in their diaries that they found immense happiness from sharing the families' responsibilities and being able to help their parents adds to their sense of wellbeing. Similarly, at midline, we found that if girls did well in their chores and got praised by their parents, this had a clear impact on how they felt about themselves. Moreover, children demonstrated that they were able to experience complex emotions and feelings affecting their self-efficacy. They reported how they felt upset when their teachers, friends, or parents were unhappy with them.

'Sometimes we are affected with things, like last year I was affected when my friend's mother died, so I was affected and I got 31, I mean 32. But I pray to God that I can get 40 and above and even my teacher won't get mad at me over my marks.'

Interview with cohort girl, Kiambu, Kenya

Self-efficacy is clearly relational in the way that children's self-efficacy is developed in relation to others, and should be understood in recognition of an interconnectedness with others.

Teachers are another prominent actor at schools where children express their self-efficacy. Similar to the baseline study, we found that corporal punishment is still commonly used by both teachers and parents in Kenya and Nigeria. Fear of this drives girls to ensure that their homework is complete, but they reported it also made them not want to go to school. In one case, the parent had to intervene and speak to the teacher to ensure that her daughter would not miss school to avoid being beaten.

'Sometimes when my mother asks me do some work I cannot do it and go to school, and so when I go home and want to do the work, she will say I should not do it and she will be insulting me or sometimes caning me, so I will feel bad.'

Interview with cohort girl, Ghana

However, there was also positive feedback about teachers and schools and how girls cared about their school and wanted it to be the best. Several girls in Nigeria reported that teachers sometimes assigned them to coordinate students in lower grades (classes) when there was a staff meeting or when a teacher was unavailable. At these times, girls were asked to teach simple arithmetic and literacy, which made them feel special and proud of themselves.

'... and I understand more now than ever, and at times my teacher used to ask us to go and teach Primary 1 class. This makes me very proud.'

Interview with cohort girl, Nigeria

The qualitative study found that girls often reported their ability to approach their teachers when they did not understand or had questions about their academic subjects. At midline, 90% of girls agreed that they could easily approach their teachers if they did not understand something. When they were asked what makes girls confident of being able to pass their exams, one source of assistance came from supportive teachers. Teachers are definitely crucial in shaping girls' abilities to act. This is discussed further in Section 6.1.

Friends are becoming more important to girls this year. It is worth noting that friendship is a key concept of the MBW curriculum, which is built on the same group of children, the same key characters who work through the challenges together. Friendships and relating to their peers are an important component of how the girls described their schooling. Many girls in Ghana reported feeling bad if their friends missed school or they were unable to come themselves. In addition, since most of the schools visited in Ghana did not have feeding programmes, eating food with their friends and interacting with them at break-time was described as an activity they looked forward to. At midline, in the treatment group, 92% of girls agreed that they had friends they could trust. To a lesser degree, another aspect mentioned by some girls related to them feeling upset if they fought with or had a disagreement with their friends.

Interviewer: So why would do you feel sad because of the quarrel?

Respondent: Sometimes if I have a quarrel with my friend, it will be fresh in my mind in the morning, it disturbs me, because my heart always jumps out of my mouth when I remember of it.

Interviewer: So, have you ever had a quarrel with a friend which made you felt bad?

Respondent: Yes, I argued with my colleague which resulted in a quarrel, so the next morning I was sad, and I didn't want to go to school, but my mother told me to go.'

Interview with cohort girl, Sagnarigu, Ghana

What children do with their friends clearly changes with development. Although play remains an important part of their daily social interactions, there is an emerging focus among the girls on shared norms and preferences, ambitions and competitions, and sharing and helping one another. We assume we will see more developmental contrasts in children's friendships and relationships with friends, which will also reflect differences in the function of friendships across their childhood. If early friendships were about sharing enjoyment and entertainment (which is still the case), as girls get older friendships seem to provide them with the means to explore their identity and develop their self-understanding (i.e. self-efficacy as well as to understand others.

So far, we have discussed that girls' self-efficacy at midline follows the same theoretical framework when school and home are the main settings affecting the shaping of their self-efficacy. Parents, teachers, and friends are the key actors in their lives whose attitudes, actions, and beliefs ultimately shape a girl's self-efficacy. Although teachers and parents are still important, our midline assessment found that

friends are becoming more important to that process, as the very function of friendship is no doubt becoming more and more prominent as girls are getting older. Similarly, 80% of girls agreed that they had trusted friends they could speak to when needed. However, although school and home are the common settings for all the girls to develop and exercise their self-efficacy these settings can pose a different set of barriers to certain groups of children. This is discussed in more detail in the next chapter.

3.2.3 Sub-group analysis

Table 44 presents the average self-efficacy scores at midline of girls across key subgroups. Asterisks indicate whether the change since baseline is statistically significant. While the breakdown is informative, caution should be taken in the interpretation of findings in two regards. Correlations between characteristics and self-efficacy may be reflective of other structural factors. Secondly, whilst we exclude characteristics for which there are fewer than 60 observations, at the request of the Fund Manager we have included disability status. This is particularly problematic in Nigeria where only 15 girls have a reported disability. As a result the finding that, for example, Nigerian girls with a disability have one of the larger gains in self-efficacy between baseline and midline should be treated with extreme caution.

Table 44 Self-efficacy scores of key subgroups

	Average self-efficacy score	Change in average self-efficacy score since baseline	Average self-efficacy score	Change in average self-efficacy score since baseline	Average self-efficacy score	Change in average self-efficacy score since baseline
	Ghana		Kenya		Nigeria	
All girls	66.1	1.3	63.8	2.6***	72.8	5.5***
Age 6 - 11	67.3	1.6	63	2	71.3	5.2***
Age 12 - 13	65.2	-0.6	64.3	2	73.3	6.3***
Age 14+	66.5	2.9*	64.2	5.6**	74.5	4.6***
Has disability ^a	71.2	7.7**	61.7	-2.2	76.4	11.5**
Single orphan			63.9	1.2	76.4	8.1***
Living without both parents	64.6	-2				
Living in female-headed household	65.3	2.1	62.9	-1.1		
Difficult to afford for girl to go to school	67.2	1.6	64	2.1*	71.4	2.8*
Household does not own land for themselves	69.1	2	63.8	2.9*	73.5	6.4***

	Average self-efficacy score	Change in average self-efficacy score since baseline	Average self-efficacy score	Change in average self-efficacy score since baseline	Average self-efficacy score	Change in average self-efficacy score since baseline
Likely to be extremely poor (based on extreme poverty rate of \$1.90/day)	68.1	3.3	64.1	2.9	71.8	5.9***
LOI is different from mother tongue	65.9	1.2	63.7	2.4***	76.7	8.2***
Girl does not speak LOI			65.8	4.4*	77	14.8***
Head of household has no education	66.3	1.1	62.4	2.2	72.2	5.1***
Primary caregiver has no education	66.4	1.3	63.3	3.3*	71.8	5.6***
Living with one parent only	64.5	1.1	62.1	-0.6	76	8.6***
Rural location					71.7	4.5***

Source: DP-2 girl survey 2018, 2019; DP-2 household survey 2018.

Note: (1) Subgroups with fewer than 60 observations are not shown in the table due to the small number of observations. (2) Asterisks indicate whether the midline learning score is significantly different from the baseline learning score for the subgroup at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$.

^a In Nigeria, the observations are based on only 15 girls.

3.2.4 Conclusion

Our quantitative findings suggest the impact of DP-2 (and DP-2 girls' clubs in particular) on self-efficacy in Ghana and an overall improvement in the self-efficacy of girls in our sample. Moreover, the midline qualitative analysis showed a positive change in girls' self-efficacy from our sample, which is highly likely to be a result of various factors including DP-2 project activities across all countries. In comparison to baseline, at midline cohort girls showed more confidence and assertiveness in their answers about their own judgement of their abilities to act. They were confident in being able to pass their exams successfully. Such confidence seemed to stem from their own hard work and support of their parents (both emotional and financial), but also from their teachers and friends. Girls' clubs are also contributing to this growing feeling of self-confidence in the way they help girls understand themselves and their needs, become more aware of their surroundings and abilities, improve their manual skills, and sometimes provide them with specific resources. The MBW curriculum, with its focus on a range of themes—including 'being well and doing well', 'being safe', and 'being goal oriented', as well as using friendship to build their messages on—is supportive of this growth in self-confidence. Nonetheless, it is useful to note that DP-2 clubs in combination with other factors in place are necessary, but not sufficient on their own, to lead to greater self-efficacy.

4 Transition outcome

Successful transition is one of the outcomes of DP-2. DP-2 aims to increase the rate at which cohort girls successfully progress to the next grade, move into secondary school, or move into other forms of training or employment after successfully completing primary school. In this chapter, we discuss the quantitative and qualitative findings from baseline and midline data on the transition of girls through school. First, we provide the GEC-T definition of transition we have used in this evaluation. We then go on to discuss the quantitative and qualitative findings of the impact DP-2 has had on girls' transition between baseline and midline, and compare this against the targets that were set last year. We present the different transition pathways that girls have taken at midline to understand what types of transition are most common across each of the three countries. Next, we examine which factors may be contributing (or posing a barrier) to transitioning successfully. Last, we review the targets on transition the project is expected to meet at endline.

The definition of transition used by the project is specific and has important implications for the analysis. This definition is explained in detail below.

4.1 Defining transition

When considering transition in this evaluation, it is important to note that GEC-T uses an idiosyncratic definition of transition (see Box 6), which incorporates, among other aspects, both progression between primary grades as well as transitioning between primary and JHS/JSS.

Box 6. DP-2's definition of transition

Transition in the education sector commonly refers to students transitioning from one level of education (e.g. primary) to another higher level (e.g. secondary). The GEC-T definition of transition also includes promotion through grades within a level of education. It is important to distinguish between progression/promotion within primary school and transition from primary to secondary school, as the barriers children face in each case are different. While barriers such as poverty or attitudes to education are likely to affect both forms of transition, transition from primary to secondary has its own unique set of challenges. A simple example of this is the lower availability of secondary schools relative to primary schools.

Table 45 presents the transition pathways and defines what is considered as successful and unsuccessful transition under DP-2. For each country, the first row represents the possible transition pathways between baseline and midline, which are the focus of this evaluation point. Since all girls were in Primary 5 at baseline, we consider that they have transitioned successfully if they are promoted to the next grade, i.e. to Primary 6. In some cases, girls may have been promoted to an even higher level. This is the case particularly in Nigeria and Ghana, where some girls transition to JHS/JSS after Primary 5, without completing Primary 6. All other transition pathways—such as repeating a grade, being demoted to an even lower grade, or dropping out of formal education without having completed primary school—are considered to unsuccessful transitions.

It is important to note that the definition of transition under DP-2 has changed since baseline. At the baseline stage, grade repetition was considered to be successful transition. However, it is now regarded as unsuccessful at midline.⁴⁶

Table 45. Transition pathways according to the GEC-T definition

	Baseline point	Transition points	Successful transition	Unsuccessful transition
Ghana/Nigeria	Primary 5	Baseline to midline	Student promoted to next grade level	Student not promoted but remains in school Student drops out of school due to pregnancy, household employment, marriage, etc.
		Midline to endline	Student successfully completes primary, passes exams and enrolls in JHS/JSS Student promoted to next grade level within primary school Student completes primary but opts for alternative education (i.e. trade or speciality school) and/or employment training	Student not promoted but remains in school Student drops out of education entirely due to marriage, pregnancy, lack of economic support, etc. Student is employed in a non-professional role (e.g. keeping the family shop, working in agriculture, etc.)
Kenya	Primary 5	Baseline to midline	Student promoted to next grade level	Student not promoted but remains in school Student drops out of school due to pregnancy, household employment, marriage, etc.
		Midline to endline	Student promoted to next grade level	Student not promoted but remains in school Student drops out of school due to pregnancy, household employment, marriage, etc.

The quantitative analysis of transition presented in this chapter is based on four groups of girls who together make up the transition cohort:

- girls who were present in school on the day of the visit: for these girls, class registers or confirmation from the class teacher were used to establish whether the girl was repeating her grade from last year;

⁴⁶ For comparability, girls who were repeating their grade last year are now considered to have transitioned unsuccessfully at baseline.

- girls who were absent from school, but for whom the class register and class teacher could confirm that the girl had attended school in the last two weeks: these girls were considered enrolled in school, and information from the class register or class teacher was used to establish whether the girl was repeating her grade from last year;
- girls who had transitioned to a JHS/JSS were tracked to their school, and we confirmed the girl's grade based on class registers or information from the class teacher; and
- girls who were no longer enrolled in the sampled school: caregivers of these girls were contacted telephonically and asked what the girl was doing now. If the girl was in school, the caregiver was asked whether the girl was repeating her grade from the previous year.

Based on this information, each girl was categorised as having transitioned successfully or unsuccessfully between baseline and midline using the definition above.

To determine the girl's transition status at baseline, caregivers were asked at baseline whether the girl was repeating her grade from the previous year.⁴⁷ The analysis presented in this chapter is limited to girls for whom we had information on their transition status at both baseline and midline.

4.2 Impact of DP-2 on transition and performance against targets

In this section, we present the rates of successful transition at baseline and midline for the treatment and control group. The impact analysis shows whether any changes in transition between baseline and midline can be attributed to DP-2. We discuss the findings across each country in turn, combining qualitative and quantitative results.

Table 46 presents the impact estimates from the quantitative analysis. We estimate the impact of DP-2 on transition rates using DID estimation techniques and compare the size of the impact estimate against the target set at baseline. To meet the target, the change in the rate of successful transition in the treatment group from baseline would need to be higher than that in the control group by the target percentage point change.

Table 46. Impact of DP-2 on girls' transition

Baseline successful transition rate treatment (%)	Midline successful transition rate treatment (%)	Diff baseline–midline treat (% point)	Baseline successful transition rate control (%)	Midline successful transition rate control (%)	Diff baseline–midline control (% point)	DID (treat–contr diff) (% point)	baseline–midline target (% point)	% of target achieved
Ghana								

⁴⁷ At baseline, information on grade repetition is based on caregiver reports, while at midline, grade repetition is based on information from the attendance register and class teacher for most girls. It is possible that there are some differences in reporting between the two sources, but any differences would be equally present in the treatment and control groups and would therefore not affect the estimates of impact.

Baseline successful transition rate treatment (%)	Midline successful transition rate treatment (%)	Diff baseline–midline treat (% point)	Baseline successful transition rate control (%)	Midline successful transition rate control (%)	Diff baseline–midline control (% point)	DID (treat–contr diff) (% point)	baseline–midline target (% point)	% of target achieved
86.7	95.5	8.7***	88.3	97.2	9.6***	-0.3	1	0
Kenya								
86.8	97.0	10.6***	89.5	96.0	6.1***	3.3	1	330
Nigeria								
89.0	95.2	6.0***	88.1	90.6	1.7	3.7	1	370

Source: DP-2 household survey (2018); DP-2 cohort tracking and transition surveys (2019)

Note: (1) Asterisks indicate where differences are statistically significant at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$. (2) Baseline–midline target represents the target percentage point change between baseline and midline. Impact estimation results are based on a regression model controlling for school-level covariates (described as Model 4 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates). The targets for transition that were calculated in the outcome spreadsheet for midline were 7 percentage points for Ghana, 5 percentage points for Kenya and 7 percentage points for Nigeria. Taking into account baseline transition rates, and other contextual factors, DLA and the FM however agreed to set lower targets in the logframe. The logframe targets are shown in the table above.

In Ghana, we were unable to detect any impact of DP-2 on transition. While transition rates in both the treatment and the control groups improved over time, there was no improvement in the treatment group over the control group. The one-percentage point target has therefore not been met in Ghana. However, the successful transition rate in Ghana in both groups is extremely high at midline (at 96% in the treatment group). This limits the ability to which DP-2 could be reasonably expected to generate any impact against successful transition.

In contrast, in Kenya, the rate of successful transition improved significantly from baseline to midline in the treatment group. In addition, the transition rate in the treatment group improved by 3.3 percentage points over and above the control group. The result does not reach statistical significance ($p = 0.117$), but this may be as a result of the sample not being sufficiently powered to detect an effect of this size⁴⁸. The magnitude of the effect suggests that the target for transition has been met in Kenya.⁴⁹

In Nigeria, the rate of successful transition improved significantly from baseline to midline in the treatment group. In addition, the transition rate in the treatment group improved by 3.7 percentage points over and above the control group. The result does not reach statistical significance ($p = 0.108$), but this may be as a result of the sample

⁴⁸ As per the original design of the evaluation, the sample was powered to detect a 10-percentage point impact on transition

⁴⁹ We were not able to conduct an impact analysis separately for the three sampling strata in Kenya because the sample size was not sufficient for this analysis given the small number of girls who had transitioned unsuccessfully.

not being sufficiently powered to detect an effect of this size⁵⁰. The magnitude of the effect suggests that the target for transition has been met in Nigeria.

In the next section, we discuss the role of the CAP process and DP-2 supported remedial classes in contributing to improvements in successful transition based on findings from the qualitative research.

4.2.1 Transition and the CAP process

There were differences in the three countries regarding the extent to which objectives related to transition were directly reflected in the CAPs. In schools that had a CAP available to show, 67% of plans in Nigeria contained an objective related to transition, compared to 44% of plans in Ghana and only 14% of plans in Kenya. CAP objectives related to attendance and learning outcomes may also include activities that contribute to improving transition rates, even where this was not mentioned as a specific objective. The objectives of the CAPs are discussed further in Section 6.3. Findings from the qualitative research suggest that participants in the CAP process in all countries have been addressing barriers that hinder transition, even when this may not be reflected in the action plan.

The participants in the CAP process in some communities in Kenya have been instrumental in addressing barriers that hinder transition, such as getting members of the community to contribute resources. These have been used to renovate classes or to help pay for students' school levies, uniforms, or writing materials. Through their activities, the community is sensitised on the need to educate girls and to ensure that they transition to higher classes. In Wajir, participants in the CAP process also reported sanctioning parents whose boys had dropped out of school to herd animals, which has a significant effect on the attendance rate of boys.

Qualitative findings from Nigeria also suggested that participants in the CAP process have had a strong role to play in keeping children in school. In a school in Nigeria, participants in the CAP process in conjunction with the Youth Development Association mandated every income earner to contribute NGN 100 per month to facilitate the transition of vulnerable girls and also vulnerable boys by securing admissions for them into secondary schools, buying uniforms and books, and paying their school levies. In one community in Nigeria, participants in the CAP process extended their reach to a secondary school in the community, and a token of NGN 3,000 (equivalent to US \$8) was given to any pupil who successfully passed the qualifying exams to secondary school.

'The CAP usually gives NGN 3,000 to each graduating student who wants to write to the Joint Admission Matriculation Board [a body responsible for conducting the entrance examination to secondary school].'

Interview with head teacher, Kano Municipal, Nigeria

Furthermore, the qualitative research found that, in Nigeria, the CAP process has been instrumental in deterring parents from involving their children in street-hawking and

⁵⁰ As per the original design of the evaluation, the sample was powered to detect a 10-percentage point impact on transition

promoting regular school attendance, which is ultimately likely to contribute to successful transition in the treatment group.

In Ghana, participants in the CAP process across schools increased their focus on monitoring the attendance of students in the area during school hours and patrolling the community to encourage parents or guardians to send their children to school especially if their children were found loitering.

‘It’s because of our responsibilities of checking their children from going astray. We ensure they are in school when they are supposed to and drive them away from the streets when we find out they are supposed to be in school at that particular time. Now at our PTA meetings, all the parents make sure they are present, so they can have first-hand information on what will be discussed because of the confidence they have in us.’

Interview with CAP participants, East Gonja, Ghana

Participants in the CAP process across all countries have been able to sensitise parents and caregivers on the importance of education and providing an enabling environment for continuous education. Such community efforts seem to have paid off in that we observe high levels of successful transition in all three countries, although we only find some evidence of impact in Kenya and Nigeria. In addition to the CAP activities, DP-2 supported remedial classes are also likely to influence transition by improving learning outcomes and preventing drop-outs among certain groups of learners. This is discussed next.

4.2.2 Transition and DP-2 supported remedial classes

Our analysis shows that drop-out is a process and not a single event and that the role of both school and community is important in preventing drop-out. By implication, when students start to fall behind and continue to have problems mastering the required curriculum, this results in poor learning outcome and grade repetition. The literature⁵¹ shows that repeaters are more likely to drop out of school which is exacerbated as girls get older. In this context, implementing extra academic support aimed at addressing learning needs of a targeted group of children who are lagging behind academically or not mastering specific competencies in the early grades might act as key a driver of successful transition. In this regard, DP-2 supported remedial classes are intended to provide poor academic performers an opportunity to improve their learning outcomes (see Section 3.1 for further detail).

As discussed in Section 3.1, most girls and parents interviewed in Ghana and Nigeria suggested that learning improved with the remedial classes, as teachers took their time to explain subjects and engaged students better than in regular lessons. In addition, a statistically significant impact of DP-2 supported remedial classes was observed on literacy and numeracy scores in Nigeria (3.7 and 9.8 points respectively). Head teachers in Nigeria also reported that, as students improved in their learning, they were better positioned to transition within school and to do well in the qualifying exams to secondary schools. Given positive and statistically significant improvements in learning

⁵¹ UNESCO Institute of Statistics (2012) ‘Opportunities lost: the impact of grade repetition and early school leaving’, UIS.

outcomes in Nigeria, it is logical to suggest that these results are likely to have had a positive effect on the transition rate. However, in Ghana, there was no evidence of an impact of DP-2 supported remedial classes on learning outcomes. In Kenya, students and parents both reported that girls attended remedial classes and, in some cases, considered it to be the biggest contribution to improved learning outcomes. However, given the widespread nature of remedial support in schools in this country, it is challenging to quantitatively identify an impact of DP-2 supported remedial classes on learning outcomes and its further influence on transition.

The impact of DP-2 on transition from quantitative and qualitative findings suggest the importance of the CAP and DP-2 supported remedial classes in improving transition. Given that the GEC-T definition of unsuccessful transition includes grade repetition the link between DP-2 activities and transition is a complex process. Actions that address either attendance or learning outcomes are therefore likely to contribute to lower grade repetition rates. That CAP activities have been shown above to support improved attendance, through increased community level monitoring in Ghana and where working in Kenya, is likely to be in support of lower grade repetition. We also find evidence that remedial classes are positively associated with higher learning outcomes in all countries (through regression analysis presented in Section 3.1), and the clear success of remedial classes in Nigeria, which are also likely to be positively associated with lower grade repetition.

4.2.3 Transition pathways at midline

To understand differences in impact across the three countries better, we present the different pathways of transition that girls have taken since baseline according to the GEC-T definition of transition. Table 47 presents the percentage of girls who transitioned through each of the pathways.

Table 47. Transition pathways at midline in control and treatment schools

Midline																	
Successful transition						Unsuccessful transition											
In-school progression (same school) (%)		In-school progression (different school) (%)		Transition to JHS/JSS (%)		Grade repetition/demotion in same school (%)		Grade repetition/demotion in different school (%)		Vocational training (%)		Non-formal/religious education (%)		Employment (%)		Drop out and not in any employment/education/training (%)	
Cont	Treat	Cont	Treat	Cont	Treat	Cont	Treat	Cont	Treat	Cont	Treat	Cont	Treat	Cont	Treat	Cont	Treat
Ghana																	
92.7	91.3	1.0	1.5	3.5	2.7	1.9	1.8	0.1	0.4	0.0	0.0	0.0	0.3	0.1	0.0	0.01	0.02*
Kenya																	
86.4	86.2	9.1	10.8	-	-	2.1	0.6**	1.8	1.8	0.0	0.1	0.0	0.0	0.0	0.1	0.7	0.3
Nigeria																	
76.5	83.2***	0.2	0.1	13.9	11.8	7.5	3.3***	0.0	0.4*	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.2

Source: DP-2 cohort tracking and transition surveys (2019)

Note: Asterisks indicate where means between intervention and control groups differ significantly from one another at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$.

In Ghana, the rate of in-school progression within the same primary school was high. Table 47 demonstrates that 91% of girls in the treatment group and 93% of girls in the control group transitioned into Primary 6 within the same primary school. Roughly 3% of girls also transitioned to a JHS from baseline while 2% of girls were repeating Primary 5 or, in a very small number of cases, demoted to a lower grade at midline, with almost no girls dropping out of school.

In Kenya, the rate of in-school progression within the same primary school was lower compared to Ghana due to approximately 10% of girls transferring to a different school. The most common reasons caregivers gave for transferring their children to a different school were that the family had moved to a different location; that the new school was less expensive; and that the new school had better teaching quality. These reasons were given by similar numbers of caregivers in treatment and control schools. Grade repetition in Kenya within the same primary school was significantly lower in the treatment group compared to the control group (0.6% and 2%). Drop-out rates were very low and slightly lower in the treatment group. It is likely that differences in grade repetition rates are contributing to the overall results that we observe.

In Nigeria, a significantly higher percentage of girls transitioned from Primary 5 to Primary 6 within the same primary school in the treatment group (83%) compared to the control group (77%). This was driven by grade repetition rates in the same primary school being significantly lower in the treatment group (3%) compared to the control group (8%) at midline. Given that treatment and control groups were well-matched at baseline, the finding that grade repetition rates were significantly lower in the treatment group compared to the control group provides further evidence of a potential impact of DP-2 on transition (in the form of in-school progression) in Nigeria. Drop-out rates were low in Nigeria at midline (1% in the treatment group; 2% in the control group) but were higher than in Kenya and Ghana. Lastly, 12% of girls transitioned directly from Primary 5 to JSS in the treatment group compared to 14% in the control group.

Qualitative findings also suggest that in Kenya, Nigeria, and Ghana, more children from our sample are transitioning from class to class within primary schools. In addition, head teachers reported that the number of students going to secondary schools last term was encouraging compared to the previous year.

In line with the quantitative findings, there were also reports from the qualitative sample of girls having transitioned into JSS after the end of Primary 5. We were told that a total of eight girls from the qualitative cohort in Nigeria had successfully transitioned to secondary schools, having written and passed the entrance examination at the end of Primary 5. In Ghana, all six girls in one of the sampled primary schools had transitioned to a JHS, in addition to one other girl from the qualitative cohort. It is unclear to what extent it is beneficial for girls to transition to JSS without completing the last year of primary school given that learning outcomes are generally low, particularly in Nigeria, which means that girls may not be adequately prepared for secondary school even if they are able to pass the qualifying exam.

Reports from qualitative interviews have highlighted high aspirations of girls and their responsibilities to do well as likely preconditions for the high transition rates observed. Across all schools in Kenya, Nigeria, and Ghana, girls have strong career aspirations and have set personal goals for themselves which motivate them to work harder, turn in assignments before deadlines, perform well in their exams, and transition to higher classes in their primary schools. Examples include a girl in Kenya who was able to pay her own school fee from savings she had accumulated over the years. Another in Nigeria disclosed how she repeatedly prayed for her parents to have the means to

support and see her through secondary school. These dreams and aspirations continue to drive them to traverse barriers to transition. As they grow older, they become more confident and are more ambitious and determined to complete school.

‘My parents feel good for me going to school, because I will help them in the future. I also feel good because I can see they have some trust in me.’

Interview with cohort girl, Kiambu, Kenya

‘When I become a doctor, I will help them by employing workers for them.’

Interview with cohort girl, Kajiado, Kenya

‘I want to learn how to speak English and also know mathematics so that I can further my studies.’

Interview with cohort girl, Rano, Nigeria.

‘I will be concentrating more on my studies, so I would come top position in our class, and I would move to JSS2.’

Interview with a transitioned cohort girl, Rano, Nigeria

‘Their expectation is for me to study hard to excel in future so that I can take care of them in the future.’

Interview with cohort girl, East Gonja, Ghana

Despite high rates of successful transition observed at midline, certain factors were reported during qualitative interviews as barriers to transition. These are discussed in the next section.

4.3 Barriers to successful transition

Transition is a complex process and is mediated by a student’s social class, the resources of their families, and factors that relate to the school system in general. Quantitatively, it is difficult to predict factors that enable or hinder transition given the high rate of successful transition in all countries at midline. We thus rely on qualitative interviews to present barriers associated with transition. The set of barriers that prevent a child progressing from one primary grade to another can be different to the set of barriers that prevent a child transitioning from primary school to JHS/JSS. Therefore, we analyse these separately, although we do maintain the GEC-T definition and refer to both *progression* and *transition* as *transition*.

4.3.1 Household poverty as a barrier to progression and transition

Students from low economic background often fall behind early on in their education journey. Without adequate and timely support to address their learning needs, they continue to perform poorly and might end up dropping out. As already mentioned, the baseline analysis suggests that poverty is the key driver of marginalisation, particularly

for households which are considered to be extremely poor. These households are likely to struggle in terms of both keeping their children at home as well as transitioning them within school. While primary education is technically free in all three countries, most caregivers pay schooling-related expenses such as informal fees, examination fees or PTA levies. Caregivers also reported frequently paying for school supplies and school meals. These expenses are reported to make it difficult for them to afford sending their children to school, particularly in Nigeria and Kenya.

Families in Nigeria who struggle financially engage their children in street-hawking and farming to mitigate the lack of financial resources. In spite of the success stories reported by participants in the CAP process, in most communities and schools across the three countries, as in the baseline findings, lack of finance often emerges as a key hindrance to continued education. There are reported cases of children who were out of school because parents could not afford uniforms, textbooks, and the likes. Reports from a few baseline cohort girls in Nigeria who have transitioned from primary school and are now in secondary school revealed that their parents were struggling to pay their fees and that they have had to be absent from school as a consequence. Between baseline to midline, we lost two girls from our qualitative sample in Nigeria. One of the girls dropped out of school to take care of a sick relative in another LGA, while the other simply stopped attending school.

‘The only problem that can stop my daughter from continuing school is finance; besides that I’m more than happy for my daughter to complete university.’

Interview with parent of cohort girl, Nigeria

In Kenya, parents’ inability to pay for continued schooling is the biggest barrier for children to stay at school and attend regularly. Parents save their earnings or sell their livestock to be able to fund their children to go to school. However, personal unanticipated circumstances such as illness or loss of livelihood create setbacks for parents that make it even more difficult for them to continue funding their child’s education. This was especially true for families with a poor economic background who are particularly vulnerable to any financial shock.

‘As their parent, I would love them to get education and I will be diligent towards it, but if there are financial constraints that prevent me from doing my part and their education suffers, I think I will not to be blamed.’

Interview with parent of cohort girl, Wajir, Kenya

In sample schools in Machakos and Kiambu counties in Kenya, where parents were financially better placed to fund their children’s education, we did not come across accounts of children dropping out or parents’ fears about being unable to support their children to continue schooling. No girl from our cohort in Kenya dropped out of school.

In Ghana, lack of finance often emerged as a key hindrance, especially at higher levels (including secondary school) onwards across the different districts in Ghana. This is linked to the inability to purchase school supplies or to pay school fees and exam fees on time. Two girls from our qualitative sample in Ghana dropped out of school: one became pregnant, and the other ran away with friends to an urban city.

‘My expectation in the coming year: I want my parents to be able to afford all my needs in respect to my education. I don’t want to be refused anything in respect of my education due to poverty.’

Interview with cohort girl, Ghana

Related to poverty, food poverty was reported as having a bearing on girls’ concentration levels across all countries. Some parents prevented their children from going to school because they were unable to afford daily lunch money. In Ghana, some of the parents of the girls could not afford lunch money for their children, and because the children could not go to school and learn on an empty stomach, they made them stay home. Similarly, in Kenya, during famines and drought, children also found it challenging to go to school as children and parents both went out to seek work and food.

The household arrangements seem to affect children’s transition, and children who do not live with their biological parents and stay with their relatives are more at risk not to transition. In Nairobi, Kenya, a participant in the CAP process reported that they were made aware of a child who had stopped coming to school because she was being molested by a family member. They worked with the school to help the child and re-enrol her back into school. Participants in the CAP process also worked with the church to counsel students about relationships and sexual harassment to prevent drop-outs. Furthermore, the burden that girls face to combine and balance studies and chores was exacerbated where they were not staying with their parents, but instead with grandmothers or other relatives in Ghana. In both these cases, the implication usually was that the girls not only had to do household chores, but at times also had to take care of the children of the relative they were staying with. It was also common for girls to move along with their families or for parents to leave the children behind with relatives.

4.3.2 Risks of pregnancy and parents’ aspirations of marriage as a barrier to progression and transition

The literature recognises early marriage and pregnancy as one of the barriers that prevents girls from transitioning through school. In Kenya, at baseline, this was reported as the second main barrier to transition (after poverty). At midline, girls in Wajir were reported to be particularly vulnerable to early marriage. At the same time, qualitative interviews at midline showed that steps were being taken to improve the situation. Participants in the CAP process in Wajir mentioned an incident where the administration had put in place strict punitive measures for the parents and husband of an underage girl to serve as a reminder to others that early marriage would not be acceptable. In other counties, the county governments have been working with chiefs to ensure enrolment and to track low attendance and drop-out in general.

‘It is not an encouraging practice, although it is the community’s culture to encourage early marriage. In some places in the community, some leaders hold some forums and seminars to teach against those retrogressive cultures.’

Interview with parent of cohort girl, Wajir, Kenya

In Nigeria, several parents across all schools had reservations about the level of education a girl should acquire before marriage. They stated that they would like for the

girls to be married between ages 15 and 20 or at the completion of secondary school. However, they shared aspirations that their daughter could continue schooling after marriage if her husband was willing to support her through school.

‘In my opinion, a girl child should stop at secondary level education because any girl that is up to 18 years should get married, but if the husband is ready to allow her to continue it is permissible.’

Interview with parent of cohort girl, Nigeria

In communities in Ghana, particularly Sagnarigu and Savelugu, the risk of early pregnancy was reported by parents and community members to come from the ‘bad influence’ of certain peers. They were worried that if girls ‘followed boys’, there could be situations where the girls ended up being pregnant and dropped out of school.

‘A lot of teenage pregnancies are very rampant this time around. If you have a girl child and you don’t focus on her that can prevent her from going to school. Her future would be destroyed. They are still young, and they follow the young boys who go out anyhow. Before you realise, she is pregnant and then she would give birth and you have to pave the way for her to go back to school, all a waste of time.’

Interview with parent of cohort girl, Ghana

These concerns were not unfounded since two girls interviewed at baseline had dropped out of school by midline. One girl dropped out as she became pregnant and moved to another community, while one girl dropped out since she ran away with some friends to go to Kumasi and live there. The parent of the first girl suggested that she did not get any support or follow-up from the school or community. In the other case, the girl’s caretaker expressed that she had received multiple calls from the teachers regarding the girl’s absence but was unable to influence the situation as the girl refused to come back at the time.

4.3.3 Government policies and barriers to transition

It is important to note that at endline there will be an important moment for transition for cohort girls in Ghana and Nigeria, where successful transition will relate to transition to JHS/JSS. This transition is likely to come with additional barriers. With more children completing primary education in all three DP-2 countries, the demand for secondary education must be growing where such an increased demand could pose a serious challenge for the governments. Even where the supply of secondary schools is on the increase, provision of secondary education tends to require higher levels of investment, as teachers may need higher academic qualifications and special training in specific subjects. Therefore, the cost of attending secondary school could be higher for both governments and households. Families might face additional costs associated with secondary school, such as tuition fees, school uniforms, and the time spent away from employment and household work (especially where distance to the nearest school remains far). This could contribute to low transition rates from primary to secondary schools.

In Ghana,⁵² opportunities for post-primary education have been largely limited to towns and cities, while secondary schools in rural areas are poorly resourced. This could mean that our sampled girls in rural areas might struggle to find a secondary school to transition to. In the DP-2 Baseline Report, we reported that caregivers of over 60% of girls in Ghana reported that the closest secondary school was further than a 30-minute walk away. The government has initiated efforts to address the issue by signing a US \$156 million financing agreement with the World Bank in 2014 to improve access to secondary education in under-served districts throughout the country.

In Nigeria,⁵³ there are far fewer secondary schools available across the country and the situation is challenging, with pronounced rural and urban differences. As in Ghana, Nigerian girls from our sample have a less of a chance of making the transition from primary school to JSS. Distances to secondary schools are longer in rural and northern areas of the country. During 2004 and 2010, the Nigerian government steadily increased the numbers of JSS (from around 8,200 schools in 2005/06 to almost 12,700 in 2008/09). In the DP-2 Baseline Report, we reported that caregivers of close to 40% of girls in Nigeria said the closest secondary school was further than a 30-minute walk away.

4.4 Target setting for the transition outcome

In Ghana, transition rates to JHS are high. At the national level, the 2015 Education Sector Performance Report reported a transition rate into JHS of 99.1%, suggesting that almost all children are transitioning into JHS, although rates are lower for deprived districts. Based on data from 2014, UNESCO reports that the female transition rate into JHS in the Northern region is 91%, four percentage points lower than the transition rate for boys. The Multiple Indicator Cluster Survey (2011) reports a lower transition rate at 81.6% for the Northern region, although the data from this survey are older.

In Kano, Nigeria, transition rates to JSS are very low. According to the 2016/17 Annual School Census Report (ASCR) for Kano State, female transition rates from primary to JSS were 45% on average for the state and 43.5% for the 15 LGAs covered by DP-2. The Multiple Indicator Cluster Survey (MICS, 2017) reports an even lower transition rate from primary to secondary school of 39.7% for Kano state. The survey also found that girls have slightly lower transition rates than boys for the country as a whole. In addition, grade repetition rates are likely to be high in Primary 6: the MICS survey reports that 94% of pupils who enter Primary 1 reach Primary 6, yet the primary school completion rate is only 57%. While we have to account of children who never enter school, this nevertheless suggests that grade repetition rates in Primary 6 are likely to be high.

The section above has highlighted the key context-specific barriers to transition that girls in the three countries are likely to face at the next transition point, from midline to endline. In Ghana and Nigeria in particular the availability and distance to JSSs will play an important role as girls transition from primary into secondary school.

⁵² <http://gh.one.un.org/content/unct/ghana/en/home/global-agenda-in-ghana/millennium-development-goals/mdg-2-achieve-universal-primary-education.html>

⁵³ S. Humphreys and L. Crawford (2015) 'Issues of educational access, quality, equity and impact in Nigeria: the EDOREN review of the literature on basic education', EDOREN.

In Ghana, transition rates into JHS based on secondary data are already very high and the barriers to transition tend to be economic or based on the availability of secondary schools, which will be difficult for DP-2 to address. In addition, there are likely to be some girls who transition into other forms of education or vocational and employment training, meaning that the transition rate as per GEC-T's definition will be even higher. In addition, grade repetition rates at midline were low. In light of this, we propose that DP-2 aims to maintain the transition rate measured by the survey in Ghana.

In Kenya, girls will continue to progress through primary school (from Primary 6 to Primary 7 for most girls) between the midline and endline evaluation point. Drop-out and grade repetition rates were very low at midline, and the successful transition rate was very high. In light of this, we propose that DP-2 aims to maintain the transition rate in Kenya.

In Nigeria, transition rates into JSS are very low, and grade repetition rates are highest in Primary 6. Girls transitioning into other forms of education or vocational training is, however, likely to mean that the transition rate (as per GEC-T's definition) will be somewhat higher than reported in the literature. While the strongest barriers to successful transition are likely to be economic and related to the availability of secondary schools, parents' aspirations also play a role. At midline, DP-2 has already had a strong impact on learning outcomes in Nigeria, as well as leading to significantly lower rates of grade repetition compared to the control group. CAP activities are also working well and leading to parents' being increasingly sensitised to the value of girls' education. At the same time, because of incredibly low starting levels, learning outcomes remain very low in Nigeria despite DP-2's strong impact on learning outcomes. The majority of girls will leave primary school without the ability to read English, which may pose a barrier to transitioning into secondary school. In light of this, a one-percentage point target for endline as presented in the current logframe is reasonable and achievable.

The targets generated by the outcome spreadsheet have been added in the table below, although it is not clear to us how these targets are calculated in the outcome spreadsheet. Given that transition rates are already above 95% in all countries, targets of 5-7% improvement over and above the control group are unachievable.

Table 48. Target setting for the transition outcome

	Country	Midline transition rate	Endline target (DID improvement of the comparison group)
Target generated by the outcome spreadsheet	Ghana	95.5	8
	Kenya	97.2	5
	Nigeria	95.2	7
Alternative target proposed by the EE	Ghana	95.5	0
	Kenya	97.2	0
	Nigeria	95.2	1

4.5 Conclusion

The evaluation provides evidence that targets for transition were successfully met in Kenya and Nigeria, which observed high successful transition rates of 97% and 95% respectively. While the impact estimation in Kenya and Nigeria was not statistically significant, the sample may be underpowered to detect the effect. While Ghana did not

meet midline targets for transition, which are based on a DID comparison to a counterfactual, successful transition rates in Ghana remain extremely high at 96%. In fact, the evaluation found that almost no girls in Ghana have dropped out of school, and that unsuccessful transition mostly relates to the 2% of girls who repeated a grade.

Qualitative data shed light on the possible factors that may contribute to improvements in transition rates in DP-2 schools. In Kenya, qualitative reports suggested the indirect role of participants in the CAP process as an important factor influencing transition. In Nigeria, sensitisation efforts and support through the CAP process and the success of the DP-2 supported remedial classes are likely to be contributing to improvements in transition. In Ghana, as in Nigeria, it is likely that CAP activities aimed at sensitising parents and improving school attendance have contributed to the statistically significant improvement in girls' transition rate in the treatment group from baseline to midline, but it is possible that similar sensitisation efforts from other community groups may be making similar contributions in control groups.

Despite the positive picture, transition remains a challenging milestone for some children. According to qualitative interviews, there are two main types of barriers that hinder transition in these countries: poverty and financial hindrance, as well as pregnancy and early marriage. Poverty and financial hindrance are the key reasons driving drop-outs in Kenya and Ghana, whereas early marriage after the completion of secondary school was the strongest factor in Nigeria. Kenyan and Ghanaian parents wish to see their girls reaching out the university level if they perform well academically and are worth further financial investments, whereas in Nigeria the common perception is that girls should get married after they finish secondary school.

The key barrier to girls' transition to higher education and progression within primary school remains poverty, where certain types of households are particularly prone to drop-out. Although parents aspire to see their girl child complete school and attain a university education in Kenya, those who have more than one child in school admit that they struggle financially with fees and will continue to work hard and try to fund children's education for as long as possible. In Kenya, the lack of security and financial support in poorer neighbourhoods in Nairobi, and the cultural preference for girls to get married early continue to be a concern and deterrent for girls continuing their education in Nigeria.

The poor and particularly marginalised households will also be affected by wider structural and political arrangements present in each country and suffer from them to a great extent than their better-off counterparts. They would also not benefit from the available opportunities as much as their counterparts. In all three DP-2 countries, secondary schools are not equally spread between rural and urban areas, poor and better-off locations, or the north and south. This could suggest that girls from our sample who live in poor settlements would be more at risk of not being able to transition due to limited space and limited numbers of secondary schools as well as long distances. Governmental initiatives to help such households may also not be fully effective in dealing with the multiple drivers of marginalisation these households face.

5 Sustainability outcome

5.1 Background

DP-2 has incorporated a variety of activities to support the sustainability of the project and it is worth noting that DP-2 builds on the foundations of work carried out under DP-1, although not all schools reached by DP-2 were part of the DP-1 project. The DP-2 approach to sustainability consists of engagement with key stakeholders at each of the levels identified above: community, school, and system.

The DP-2 approach to sustainability has a heavy focus on the school and community level. At the school level, DP-2 continues to strengthen positive school leaders and spread and deepen shared understanding of the value of education for all, including across parents and community members. This includes the identification of, and investment in, resource teachers who are expected to take on a lead role in supporting the training of new teachers, as well as providing refresher training, coaching, and mentoring of existing teachers well beyond the life of the project. Resource teachers are also expected to champion the effective use of media in the classroom and to demonstrate and model student-centred, gender-responsive teaching and learning in their lessons.

At the level of the community, DP-2 provides significant investment through community sensitisation and mentoring support to capacitate community members (with involvement from schools) to develop and implement CAPs that seek to address barriers to education with a focus on the particular needs of girls. It is expected that these efforts will support a gradual and continued change in the attitudes of communities and parents towards schooling and what happens in schools, as well as provide both lasting support to schools and pressure on schools to perform.

However, DP-2 also recognises the need to support change at the grassroots level with government mainstreaming to achieve systemic change. It is committed to generating high-level commitment, ongoing support, and growing buy-in from government partners, as demonstrated in some cases through the signing of high-level Memoranda of Understanding.⁵⁴ DP-2 seeks to do this specifically by engaging in activities that aim to directly boost the capacity of local MOE education staff, involving them in project planning and monitoring processes, as well as in teacher training and school visits. Towards the end of DP-1, DLA was encouraging MOE counterparts to contribute as much as possible to rolling out project training, as well as monitoring and supporting schools through follow-up visits. However, the significant shift in project focus, and the ambitious year-to-year learning targets mandated by GEC, have meant that, under DP-2, DLA has taken an even more direct and substantial role in school-level TPD than originally anticipated, at least in the short term.

5.2 Assessment approach

The approach to assessing the sustainability of DP-2's various interventions has been updated in the light of the baseline experience. We follow the same approach in terms

⁵⁴ Such as a Memorandum of Understanding with the SUBEB in Kano.

of assessing DP-2 against the GEC-T sustainability template, but now provide explicit criteria for achievement against each of the four levels of sustainability:

1. latent;
2. emerging;
3. becoming established; and
4. established.

Table 49 reports the GEC-T guidance for sustainability, which provides guideline criteria for each level of sustainability. These have been adapted into specific criteria for each of the DP-2 activities at the community, school, and systems levels which are given in Annex 3.

Table 49. GEC-T sustainability scorecard guidance

Rating	Community level	School level	Systems level
4. Established Changes are institutionalised	The specific change in practice and attitude is now well established. Communities demonstrate independent ability to act without support from project, are able to further develop existing and new initiatives, and secure funding to respond to their local needs to sustain and build on the changes that have taken place	The specific change in practice and attitude is now well established with school-level systems to support this; schools demonstrate independent ability to act without support from project, have allocated and mobilised financial and other resources and are able to develop further initiatives to respond to local needs to sustain and build on the changes that have taken place	An approach or model is shown to work at scale and is being adopted in national policy and budget as appropriate, and/or incorporated into key delivery systems (e.g. for teacher training, curriculum, school management, etc.). There is an established track record of financial support
3. Becoming established Critical mass behaviour change	Key community leaders and a critical mass of stakeholders are convinced of the benefits and have the capacity to lead and deliver changed practice independently. Financial and other resources are increasingly being mobilised locally. Project staffing and resources still play role but there is potential for this to be phased out	Head teacher and critical mass of school staff and stakeholders convinced of the benefits and have the capacity to deliver changed practice independently. To the extent possible, existing financial and other resources are being used or mobilised. Project staffing and resources still play role but there is potential for this be phased out	Authorities demonstrate active use of project evidence and uptake of specific aspects of the project approach, and have a growing capacity to support girls' education locally or beyond. This may include limited support to a delivery model without fully adopting within a national system. There is an increase in allocation of resources and evidence of planning for required resource to upscale
2. Emerging Changes in behaviour	There is evidence of improved practice and support for girls' education in specific ways being targeted by project. Change is not universally accepted among targeted stakeholders, but support is extending. Project staff and resources play key role in driving change, although there are activities in place to mobilise funding/other resources	There is evidence of improved support for girls' education in classroom practice, teacher management, and school management being targeted by project. The improved practice is not universal but is extending. Project staff and resources play key role in driving change. School leaders understand resource implications and mobilising funds locally	There is evidence of improved capacity of local officials to support girls' education through existing functions, adopting new approaches. Examples of support to project schools are being established. Government at local and/or national level has engaged with and understood evidence from the project. Resource implications are being made clear
1. Latent Develop knowledge and change in attitude	Community stakeholders (including parents, community leaders, and religious leaders) are developing knowledge and understanding and demonstrate some change in attitude towards girls' education.	School leadership, teachers, and other stakeholders are developing knowledge and understanding and demonstrate some change in attitude towards girls' education in general and towards specific	Local, district, and national officials are involved in delivery and/or monitoring; developing knowledge and showing change in attitude towards girls' education and project focus areas. Project aligns with

Rating	Community level	School level	Systems level
	Appropriate structures are being put in place at community level, and there is some level of willing engagement and/or participation from the community	teaching practice and approaches, and the way schools are managed	specific policy, systems and departments. Project's evidence is being shared with relevant stakeholders, including broader networks of organisations

The main change in the way sustainability is assessed at midline is to define a set of project- and context-specific criteria for each level of sustainability moving from latent to established sustainability. A separate set of criteria is defined for each of the levels of intervention (i.e. community, school, and system) as well as for each individual project activity (i.e. CAPs, TPD, learning centres/use of video and digital content, club support, and engagement with MOE officials). The full sustainability assessment framework, with clearly defined criteria for progressing through levels of sustainability for each project activity, is presented in Annex 3.

This change addresses two main concerns observed with the original sustainability indicators that were used to assess sustainability at baseline. First, the original indicators did not allow for sufficient articulation of the sustainability of individual project activities and there was the potential that different project activities may score differently against the sustainability scorecard. This is addressed by having clearly defined criteria to progress through levels of sustainability for each project activity.

The second concern is related to the selection of sustainability indicators at baseline, some of which would not recognise improvements beyond certain levels of sustainability. For example, the indicator '*Community members expressing a desire to address girls' education needs after project completion*', if strictly assessed against the GEC-T guidance (Table 49), would not progress beyond a 'latent' level of sustainability given that this is about expressing a desire to engage, rather than evidence that actions have been taken and followed up.

Table 50 presents the headline sustainability indicators for each of the project activities. These are representative of what would indicate that DP-2 has achieved maximum sustainability by project activity, i.e. that it has reached the 'established' level of sustainability (level 4) as defined by the GEC-T guidance. Annex 3 presents full criteria against each level of sustainability for each project activity.

Table 50. DP-2 sustainability headline indicators

Activity	Headline indicator
Community level: CAP	Through CAPs, a critical mass of communities demonstrates the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education
School level: learning centres/educational media content	A critical mass of schools demonstrates effective and continuous use of learning centres to improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media
School level: TPD (including for remedial classes)	Through the teacher training component, a critical mass of schools demonstrates effective use of teaching practices (including remedial classes) and continuous coaching and training of new and existing staff and do so sustainably
School level: girls' clubs	A critical mass of schools has established girls' clubs which are self-sustained and functioning on a regular basis using the MBW curriculum
Systems level	MOEs at the local level have fully fledged local education plans furthering project-related teacher development and school

Activity	Headline indicator
	support. Local MOE education plans are fully funded in recurrent MOE budgeting

While the sustainability assessment framework has been updated, the baseline assessment of sustainability was conducted against the GEC-T guidance depicted in Table 49 ensuring comparability of sustainability scores between baseline and midline.

5.3 Data sources for assessment

At midline, we draw on three data sources to assess the level of sustainability at each level: midline qualitative data, midline quantitative data, and data from the process evaluation. Instead of relying on project monitoring data, we included detailed questions about the implementation of the intervention directly into the midline quantitative and qualitative instruments. Limitations of the sustainability assessment at midline include that, as per the design, there are no quantitative data at the household level and only limited qualitative data at the teacher level through interviews with one resource teacher per school. It is also worth reminding the reader that qualitative findings were collected from six schools in each country.

Figure 14. Data sources for assessing midline sustainability levels

Qualitative data	Quantitative data	Process evaluation
<ul style="list-style-type: none"> • Group and individual interviews with girls and their parents as well as participants in CAP activities • Group and individual interviews with head teachers and resource teachers 	<ul style="list-style-type: none"> • School survey • Girls' survey 	<ul style="list-style-type: none"> • Interviews with DLA country office staff and MOE officials

5.4 How sustainable is DP-2 in Ghana?

Table 51 presents the sustainability scores for each indicator for Ghana.

Table 51. Ghana sustainability scores

	Community	School			Systems
	CAP	Learning centres	TPD/remedial	Girls' clubs	MOE engagement
Headline indicator (i.e. criteria to be met for reaching level 4/established'	Through CAPs, a critical mass of communities demonstrate the ability to independently develop existing	A critical mass of schools demonstrate effective and continuous use of learning centres to	Through the teacher training component, a critical mass of schools demonstrate effective use of	A critical mass of schools have established girls' clubs which are self-sustained and functioning on	MOEs at the local level have fully fledged local education plans furthering project-related teacher

	Community	School			Systems
level of sustainability)	and new CAP initiatives to continuously address barriers to girls' education	improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media	teaching practices (including remedial classes) and continuous coaching and training of new and existing staff and do so sustainably	a regular basis using the MBW curriculum	development and school support. Local MOE education plans are fully funded in recurrent MOE budgeting
Baseline score	2	1			1
Overall baseline score	1				
Midline target	2	2	2	2	2
Midline score	2	2	2	3	2
Overall midline score	2				

Note: Scores represent the following levels of sustainability: 1—latent, 2—emerging, 3—becoming established, 4—established.

Community level

At midline, we continue to score the sustainability of the CAP at a 2 (relating to an 'emerging' level of sustainability). While there has been improvement in the implementation of CAPs—more CAPs are in place and more meetings are being held—there remain some issues that prevent the sustainability of the CAP moving to a 'becoming established' level of sustainability. In particular, we observe in Ghana the lowest engagement of parents in the CAP process, and a low level of engagement of community members. Increased engagement of these groups, as is observed in Nigeria, would increase the accountability of CAPs to their intended beneficiaries and enhance the likelihood of the CAP process being sustained.

In Ghana, 87% of schools have completed a CAP, and 75% of schools were able to show the actual CAP to our research teams for verification.⁵⁵ In Ghana, engagement in the CAP process was broadly driven by members of the schools themselves. Of schools that had a CAP in place, 89% of head teachers reported involvement in the development of the CAP, while 85% of CAPs had involved teachers in the development process.⁵⁶ Engagement of other stakeholders was much lower. Just 21% of CAPs had involved community members in the development process, while just 35% of CAPs had involved parents⁵⁷—representing the lowest engagement of parents across the three countries. Furthermore, engagement of the SMC/PTA was also the lowest in Ghana, with just 59% of schools reporting involving this stakeholder group in the CAP development process.⁵⁸ This means that the CAP process is more driven by schools with an inadequate involvement of parents.

⁵⁵ Figure 27, Section 6.3.2.

⁵⁶ Figure 28, Section 6.3.2.

⁵⁷ *Ibid.*

⁵⁸ *Ibid.*

Out of those schools that reported having a CAP, 74% of head teachers reported that the participants in the CAP process have met since training, and 70% reported that the participants meet at least once a term. Given that teachers and head teachers are the driving force of CAP activities in Ghana, it is probably logical that we observe more frequent meetings of participants in CAP activities than in the other countries where there are higher levels of parent involvement. The limited involvement of parents in the CAP process also explains why parents could not identify CAP activities (only a few parents knew about them and could talk about them) or any CAP-related outcomes when interviewed by the qualitative team. Furthermore, participants in CAP activities were often members of the PTA/SMC who were already working with parents, which could also explain why it was hard for parents to differentiate CAP activities from those of the PTA/SMC. It should be noted that it is in accordance with the DP-2 project design that school leadership and governance bodies are heavily involved in the CAP process. The intention is for these bodies to develop a stronger focus on attendance, learning, and transition to ensure that these issues are taken up even higher on the agenda in a more structured way, and especially target pupils who are most at risk.

In some communities, our findings suggest that CAP activities were successful in the way that they were focused on specific barriers to girls' education. These CAP activities included sensitising parents on the workload of household chores of children and working outside the home. A common theme emerging in the interviews across schools was the increased focus on monitoring the attendance of students during school hours and encouraging parents or guardians to send their children to school. All these community activities can potentially continue as long as participants in CAPs remain committed. Participants in CAP activities were also involved in several school-level activities such as the setting up of the girls' and boys' clubs; ensuring the running of the remedial classes; setting up reading competitions or spelling competitions, among other activities. There are some positive outcomes from CAP activities on reducing household chores on children which suggests that some CAPs are designed having barriers to school in mind. We suspect that these outcomes are more likely to be achieved and sustained when CAP activities are closely aligned with PTA/SMC and engage more parents—the aspects which need more improvement in Ghana. The L4C workshop, which had not been conducted yet in Ghana at the time of the midline survey, focus on further engaging school leadership and governance bodies in the action planning process. The workshop may therefore address this concern to some extent, although it remains important to also engage parents and community members more broadly in the action planning process to increase the accountability of the CAP process to its intended beneficiaries.

School level

The three school-level DP-2 activities are progressing at different levels. We score girls' clubs at the highest level for the project activities, scoring this activity at a level 3 ('becoming established'). Ghana has the highest proportion of girls engaged in club activities, most of which are focused on the MBW curriculum and hygiene education in comparison to making and selling products. The TPD activity is scored at a level 2 ('emerging'). Teachers are engaged in DP-2 training, but stepdown training is unlikely to be long enough to adequately deliver the training material to a broader group of teachers. Remedial classes are on offer and well-attended. The learning centre activity is also scored at a level 2 ('emerging'). Learning centres are running and doing so with the help of parents' contribution in some communities. However, given the new government directive prohibiting collecting money from parents, the

sustainability of learning centres is questionable unless schools find other means of funding them.**Teacher training and remedial classes**

In Ghana, it is much more common than in the other countries for a teacher to have attended both literacy training sessions and/or both numeracy training sessions. This could signal that schools are consistent in selecting their teachers for DP-2 training, but this may also reflect that Ghana has lower teacher numbers which makes it easier to consistently send the same teachers to training. Of teachers, 79% reported receiving support visits from the DP-2 trainer, and 81% were visited by government officials.⁵⁹ Currently, the frequency of stepdown training is the lowest in Ghana, reflecting the smaller size of Ghanaian schools relative to Kenya and Nigeria, with the qualitative research confirming that the majority of teachers had been reached by the initial DP-2 direct training, particularly in smaller schools where all teachers received direct training. However, for those teachers that had received stepdown training, this was by and large conducted in a one- to four-hour session.⁶⁰ Given that the direct training⁶¹ occurs over the course of several days for each module, this raises concerns regarding whether the full content of training is being passed on adequately, particularly in light of the proportions of teachers that have left the school since they had received direct training. As such, this raises concerns over the long-term sustainability of the cascade model of training.

However, in support of the training efforts, DP-2 Ghana reported that GES public schools have mandatory 'in-service' trainings for teachers, and that in the upcoming update of the national curriculum, a provision exists to include one full day of TPD every term, on a day when school is not in session. DP-2 in Ghana is negotiating to include the step-down training content led by a DP-2 resource teacher into the TPD so that DP-2 trainings will become institutionalised. Should this strategy be successful it would greatly increase the sustainability of the teacher training component of DP-2 in Ghana.

In addition to training activities, DP-2 trainers provide support visits to teachers at schools, where DP-2 trainers conduct a number of activities including lesson observations and providing feedback on lesson performance. In Ghana, it is observed that DP-2 trainers were the least likely across the three countries to provide support such as feedback on lessons, refresher training, model lessons, or one-to-one meetings.⁶² These activities would reinforce the skills received through direct or stepdown training and increase the likelihood of the cascade model of teacher training being sustainable.

All DP-2 treatment schools offer remedial classes, and 85% of girls from our sample currently attend DP-2 supported remedial classes (the highest across the countries). The selection of girls to these classes is done through a standardised test developed by DLA, as well as based on the teacher's assessment of the pupil's performance, and we found evidence that children attending remedial classes had lower baseline literacy scores. Teachers are not directly paid for these classes, although they are provided with a monthly stipend, so they could potentially be continued after the DP-2 project is

⁵⁹ Figure 16, Section 6.2.4.

⁶⁰ Figure 15, Section 6.2.4.

⁶¹ Literacy I and Literacy II, and Numeracy I and Numeracy II.

⁶² Figure 17, Section 6.2.4.

completed, although we have not yet observed any impact of remedial classes in Ghana except qualitative findings of self-reported impact. Some schools are looking into ways to continue extra classes to be funded by NGOs after the DP-2 is over.

In addition, DP-2 in Ghana is looking to expand remedial classes to all DP-2 schools, beyond the current 165 schools included in the pilot. They will do this in remaining schools without offering the monthly stipend to the teachers. The purpose of this is to offer the GES two different models of remedial support, as the GES finalises its current plans to integrate a remedial support element into the regular school timetable as part of the new curriculum to be implemented in 2020. Continued engagement with the GES to demonstrate the potential for remedial support, particularly with different options, is likely to increase the chances of this component being sustained.

Learning centres

Head teachers are accountable to find money and resources to sustain the learning centres from community collections and schools' own resources. At baseline, there was evidence to suggest that most schools were raising some resources and money from the general community for expenses around electricity for the school, infrastructural upgrades as well as security and maintenance of the learning centre. At midline, we found one school where the children were still being charged a certain amount of money towards the associated expenses for the centre. However, this is not an effective solution, as the government's recent directive prohibits collecting money from households. This could be the reason why community support of the learning centre was mentioned less often at midline than at baseline during our qualitative fieldwork. Sustaining the learning centre equipment may also be a problem in case of faults and power breaks. For example, a TV set was broken in one of the communities but had not been repaired due to lack of money. To solve the financial issue, some schools are trying to generate funds, for example by renting out their generators. At this stage it is not yet clear whether this practice is commonplace or that it will fully solve the financial issue in a critical mass of schools, and this will be investigated further at endline.

By the project design, the idea is that school leadership/governance will integrate to a degree the running costs of learning centres into their school budget, calling on the community to help appropriately, e.g. with building construction (so that media equipment is kept in a clean, safe space) and security. Certain communities and schools may, however, struggle with raising funds, such as rural schools. The new GES directive may also make it difficult to collect money from communities. It will be important for DLA to assess how this directive may affect the sustainability of the learning centres. Indeed, interviews conducted with DP-2 staff in Ghana during the process evaluation highlighted that some schools in rural areas were not able to afford maintenance of the learning centre from existing school budgets, threatening the sustainability of this aspect of the DP-2 project without continued access to external funding.

Girls' clubs

In Ghana, 79% of girls interviewed during the quantitative survey reported that they were a member of a girls' club which is the highest among the three countries. The country also has the highest proportion of girls from the poorest quartile as members of the clubs. This suggests that girls' clubs in Ghana are more inclusive and give chances to more marginalised girls to be part of the project activities—the core of the DP-2 project objective. According to the quantitative data, 85% of girls attending girls' clubs have watched the MBW videos, 82% of them do activities related to learning English,

69% do activities related to learning maths, and 37% made and sold products in the clubs.

Unlike other countries, DP-2 in Ghana has an observable impact on girls' self-efficacy. Given that there is a causal link between self-efficacy and exposure to the MBW curriculum, it is important to examine the sustainability of the MBW materials to sustain the outcome achieved. In the qualitative study, schools reported wishing to continue the clubs and some clubs have action plans which include business plans and a hygiene curriculum. For some schools the club's running time was an issue because children struggle to stay after school, so clubs are run during lunch breaks, which are only 25 minutes long.

A point to be made across the three countries is that, according to the project, if a club is running a micro-enterprise and doing it well (with a 'business plan'), it should have revenue to work with and sustain itself in terms of covering any material costs. We have, however, so far not found evidence of these successful micro-enterprises. Instead, we found examples of clubs that either charge contributions directly from parents or source contributions through other sources to fund income-generating activities. Clubs in Ghana seem to manage without charging parents a contribution, but instead reported having varied sources of funding that are hard to identify. Some schools reported planning to approach other organisations to secure funds to sustain them, for example to buy materials for making soaps and edible items such as toffees. It is not clear at this stage how sustainable their current sources of funding are, but the fact that clubs seem to rely on funding to sustain income-generating activities also suggests that they are not sustainable by themselves at present. Shifting the focus to MBW materials rather than income-generating activities may be a more sustainable option, given that the use of MBW materials does not require any form of capital.

System level

In Ghana sustainability at the system level has been scored a level 2 ('emerging'), representing an improvement from baseline where system level sustainability was scored a level 1 ('latent'). This reflects evidence that the project is actively engaged with local MoE staff, as well as recently hiring a Senior Technical Lead (STL) whose role includes specific engagement with national government stakeholders to increase the visibility of the project in Ghana. These efforts are likely to increase the potential for the sustainability of project activities in Ghana.

In Ghana, a Senior Technical Lead has recently been hired on a part-time basis, with a dual role that seeks to support project activities and increase the capacity of DLA staff and resource teachers, as well as exploring options to enhance the sustainability of DP-2.

The STL highlighted that a common mistake made by similar projects is a lack of focus on generating higher-level government buy-in. As a result, the immediate focus of the STL in Ghana has been the establishment of government relations, beyond the strong existing ties with the local government. DP-2 in Ghana, through the STL, is looking therefore to increase the visibility of the project at this level by systematic engagement at national learning events including the National Curriculum Framework for Teacher Education (NCFTE) summit and the National Education week. These additional engagement efforts are still at a nascent stage given that the STL had only been recruited recently, within 4 months of the process evaluation fieldwork.

At the local level, DP-2 engages with the District Director and Deputy-Director of Education, with NGO desk officers⁶³, as well as with government field officers known as circuit supervisors. In Ghana, NGO desk officers and circuit supervisors were reported to be actively engaged in project-related activities including community sensitisation, attending training sessions, and monitoring. In Ghana local government officials noted that a particular challenge faced in supporting DP-2 project activities were restrictions on allowances provided for transportation. NGO desk officers and circuit supervisors are provided with a 50 Cedi stipend per month, but this was reported to be insufficient to cover fuel costs that would allow them to visit all DP-2 schools in the nine districts covered in Ghana.

In Ghana the relationship between DP-2 and the local GES was reported to be strong by both DP-2 and GES stakeholders, despite there not being a dedicated NGO desk officer for the DP-2 project. The success of this relationship is demonstrated by the positive response to DP-2 requests for changes to GES implementation. In particular, in response to the challenge of high teacher turnover which threatens the success of both the teacher training and CAP processes, DP-2 requested GES to limit transfers of head teachers or teachers to other DP-2 schools, ensuring that knowledge and skills generated by the project remained within project schools. The GES accepted this request and has actioned this where possible.

Summary

In summary, Ghana is making good progress in sustaining DP-2 activities and changes, and has met all midline targets and exceeded performance against the sustainability of girls' clubs. DP-2 girls' clubs are present in almost all sampled DP-2 schools in Ghana and have high rates of participation among the cohort girls. They are free of charge to parents (as they are designed to be) and participation is voluntary. However, clubs currently secure funding through other sources to sustain income-generating activities and it is not clear how sustainable this funding is. Shifting focus to MBW materials, which do not require any capital, may prove more sustainable. Learning centres need some level of financial contribution to be sustainable. While some schools report sourcing contributions to sustain them, it is not yet clear whether this practice is commonplace or that it will fully solve the financial issue in a critical mass of schools.

Girls watch MBW curriculum videos and have improved their self-efficacy and we assume that they will continue doing so as the videos are available for schools to use. Learning centres are not allowed to run with the financial help of the community and the use of teaching aid is still low. Stepdown training at larger schools is organised, but not regularly or consistently, and trained teachers are not provided with adequate support and coaching after their training. Small schools are better positioned since all teachers would have received training directly by DLA. Remedial classes are on offer but we have not yet seen any impact of them. CAP activities are being implemented and are in progress unlike baseline but, for those schools where parent and community involvement has been lacking, these activities are unlikely to sustain. To sustain the results achieved so far, Ghana needs to improve the support to DLA trained teachers, engage more parents and community members in CAP activities, and remain inclusive

⁶³ With specific responsibility to engage with donor funded projects such as DP-2

in reaching out to poorer girls through learning centres, remedial classes, and girls' clubs.

In Ghana engagement with the government at local level remains high, with evidence suggesting continued engagement of NGO desk officers and circuit supervisors with project activities. These efforts are likely to be enhanced with enhanced engagement with MoE officials at higher level to raise the visibility of the project, supported by the recent recruitment of the STL.

5.5 How sustainable is DP-2 in Kenya?

Table 52 presents the sustainability scores for Kenya.

Table 52. Kenya sustainability scores

	Community	School			Systems
	CAP	Learning centres	Teacher training & remedial	Girls' clubs	MOE engagement
Headline indicator	Through CAPs, a critical mass of communities demonstrate the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education	A critical mass of schools demonstrate effective and continuous use of learning centres to improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media	Through the teacher training component, a critical mass of schools demonstrate effective use of teaching practices (including remedial classes) and continuous coaching and training of new and existing staff and do so sustainably	A critical mass of schools have established girls' clubs which are self-sustained and functioning on a regular basis using the MBW curriculum	MOEs at the local level have fully fledged local education plans furthering project-related teacher development and school support. Local MOE education plans are fully funded in recurrent MOE budgeting
Baseline score	2	2			1
Overall baseline score	2				
Midline target	2	2	2	2	1
Midline score	1	2	2	2	1
Overall midline score	2				

Community level

The assessment for the community-level DP-2 sustainability is identified as 'latent', meaning that DLA is still the main driver of activities but the evaluation has observed emerging evidence of communities not only expressing their interest in the goals of the project but also translating their interest into actions. Such actions, however, expressed in the form of developed, revised, and followed-up CAPs, do not draw a holistic 'emerging' picture across all the communities visited by the qualitative study. CAP activities in Kenya have the lowest level of engagement of head teachers and community representatives

across the three countries which could partially be affected by geographies of the communities involved. Until the engagement of these two actors is improved, DP-2 is unlikely to make considerable progress towards sustaining its community activities and outcomes. In one example (the school and community visited for the qualitative research in Machakos, which have a long-standing relationship of working together, and where alumni come back to the school to volunteer), CAP processes are likely to have greater traction. However, even in examples such as this, the CAP has not been implemented according to plan.

Participants in CAP activities and parents of cohort girls interviewed are aware of the challenges their children face regarding enrolling, attending, and continuing their schooling. However, similar to baseline, a limited number of schools visited for the qualitative study had developed CAPs in Kenya. The quantitative findings show that in Kenya, only 68% of schools reported having a CAP in place at the time of the survey, with 47% of schools being able to show the CAPs to our research teams to verify.⁶⁴

When we look at the participants involved in the development of the CAP, Kenya has the lowest involvement of head teachers (79%), who are supposed to be leading the process and the lowest level of community involvement (10%).⁶⁵ These findings suggest that both schools and communities could do more to progress the CAP activities than they are doing. Both strong head teacher and community involvement are key for sustaining the CAP activities.

According to the qualitative data, the reasons for moderate progress with CAP activities in Kenya, as discussed in Chapter 6, are the slow roll-out of training sessions, the lack of DP-2 and head teacher involvement and direction, and the lack of legitimacy for CAP activities in the communities, where other activities may be more well-known. Participants in CAP activities requested to organise refresher training to remind them of the objectives of DP-2.

It is possible that schools and communities do not historically have strong or positive relationships, and that it has therefore been difficult for DP-2 to foster these relationships. Kenya may face challenges in bringing community members together more so than the other countries for two reasons. First, schools in Nairobi and surrounding counties are largely urban, which poses challenges for community engagement for several reasons including that children may travel from different communities to attend the DP-2 school. According to qualitative interviews with parents, head teachers and resource teachers, poverty, single parents, long working hours, and cramped and insecure living spaces all result in the lack of a safe environment in the community and we infer, that this may also hinder an easy implementation of community plans. Our own experience during the research was that parents hesitated meeting researchers in the community, rather they preferred coming to the school, citing security reasons. In some cases, parents would escort researchers from the school to their homes so that the researchers did not feel unsafe. This all points to a relatively difficult environment to foster participation with children coming from different areas, reduced physical mobility and insecurity in the community. Second, schools in arid or semi-arid regions in Kajiado and Wajir may face a different challenge: there are pastoralist communities that travel with cattle and may therefore not always be around to be engaged. In one example, such as the school and community visited for the qualitative research in Machakos (which have a long-

⁶⁴ Figure 27, Section 6.3.2.

⁶⁵ Figure 28, Section 6.3.2.

standing relationship of working together, and where alumni come back to the school to volunteer), CAP processes are likely to have greater traction.

According to the quantitative data, lack of community involvement is reflected in the objectives identified in the CAPs, which appear to focus more on activities that can be actioned primarily in the school (improvement in literacy; numeracy) rather than activities that require school and parental/community-based effort (improving attendance and transition). Some head teachers suggested dropping CAP altogether, claiming that parents were not involved and it was too difficult to engage them. If community involvement is low, it is highly unlikely that CAP activities will be successful and sustained in Kenya, as both community and school should be working in partnership and jointly owning the CAP process to bring about changes envisaged by DP-2.

It is important to note that all participants in CAP activities show willingness to continue DP-2 to support school. They plan to start recording/registering children in their respective communities as well as start collecting data with regard to their own work. They plan to expand their membership to be able to take on more initiatives. They wish to help children who have dropped out school to keep them busy and not let them lose the opportunity for continuing education all together. Participants in CAP activities suggest DLA to help them with sustaining their results, but at the same time they make efforts to find sources of funding other than DLA.

In general, CAP activities and processes seem to bring together various key people of the community such as chief officers, policemen, and church officers, who probably would not otherwise come together around the issue of education. However, the direct engagement of the broader community in the CAP development process was very limited in Kenya; as mentioned above, the community was involved in the development of the CAP in only 10% of schools that had one. Some communities with active community members (for example, if these members happen to have previous connection to school or teaching, have enough time to spare, are current or former members of PTA and other boards, and enjoy certain respect in their communities) are likely to continue and sustain some elements of DP-2 project such as monitoring children's attendance and enrolment. However, sustaining such aspects which require financial contribution will be challenging and depend on good will of the community members.

School level

All three areas of school-level DP-2 project activities are assessed as being at the start of the 'emerging' level. As with the community level, the progress of school-level initiatives has also been irregular. Some of the reasons for this limited progress are structural and represent issues DP-2 project or the schools and communities themselves cannot address, such as power cuts and poverty. Others are more 'fixable', but sustaining those solutions in the longer run will need financial support. Although DP-2 schools are attending teacher training, the evaluation found evidence that teachers are not receiving the full package of either literacy or numeracy training as expected. Stepdown training sessions are offered, but they are carried out so informally in some instances (for example in staff meetings) or over a relatively short number of hours (one to four hours).

Learning centres

DP-2 is known as a 'TV project', which makes it popular among teachers, parents, and children. Individuals involved in CAP activities, some parents, and some head teachers are aware of the project and state that overall it has been contributing to increased interest among children in attending school and learning, as well as encouraging them to enrol in DP-2 schools. There is some evidence from communities that there are TV sets at schools which school and communities can use. In the quantitative midline study, enumerators were able to physically verify the presence of a TV and DVD player in only 85% of treatment schools in Kenya. The proportion of girls in treatment schools who reported watching a video during regular classes⁶⁶ in the current school year increased compared to baseline, with 61% of girls reporting having watched a video in the current school year at midline compared to only 47% of girls at baseline.

Overall, the proportion of girls who reported watching a video during regular classes in the current school year remained relatively low, suggesting that many girls are not regularly accessing the learning centre and its media resources. This could be explained by power cuts, as the use of the learning centres is often disrupted by poor and irregular access to electricity, which is suggested by quantitative findings that 57% of schools from the treatment group reported not having had electricity at least once in the five days prior to the survey. According to our data, this issue has become more acute this year in comparison to the last. Information from DLA Kenya indicate that this was particularly true in Wajir. Another concern related to sustaining the use of these materials is around lack of funds for the maintenance of such equipment and their replacement in case of loss or damage. Interviews conducted during the process evaluation fieldwork suggested that this was most of concern for non-formal schools.

Teacher training and remedial classes

In Kenya, the proportion of schools that had delivered stepdown training was high compared to Ghana and Nigeria, except for the Numeracy II training. This is to be expected, as the Numeracy II training was still being rolled out at the time of the midline survey. In Kenya, the evaluation found that many teachers did not attend the full package of training offered by DP-2: either they did not attend both numeracy training sessions for maths teachers, or both literacy training sessions for English teachers, in comparison to Ghana and Nigeria, where teachers were more likely to attend both the sessions aimed at them.⁶⁷ This suggests that teacher selection for DP-2 training is inconsistent with the expectation that teachers who are directly trained should receive both of the relevant training sessions. This could partially be due to high turnover of teachers in Kenya (about a quarter of trained teachers left after receiving training).⁶⁸ However, given that the sustainability of the cascade training proposed through the stepdown training relies crucially on the success of the initial direct training, this represents a threat to the sustainability of teacher training.

Only 70% of teachers who were trained on DP-2 reported receiving a support visit from a DP-2 trainer. Of the schools that had not delivered stepdown training, the majority reported that this was because they had not had time. Of the schools, 28% reported delivering stepdown training through an informal method, defined as a trained teacher

⁶⁶ The reference to watching a video in this section refers to watching a video during regular classes. This does not include videos that girls may have watched as part of the Girls Club. This is reported on separately.

⁶⁷ Table 50, Section 6.2.4.

⁶⁸ Table 49, Section 6.2.4.

meeting with another teacher one-on-one to go over the training, sharing training notes, or briefly feeding back on the training during a staff meeting. This finding is echoed by qualitative data, where schools reported sharing training with other teachers when they join the school and taught other teachers how to use the video resources, but some do so informally during staff meetings. As at baseline, it is not evident that schools have formal training plans to continue training new teachers. There is no formalised knowledge management system in place.

Sustaining the positive results of DP-2 teacher training remains a challenge in the absence of an effective system and practice of stepdown training and knowledge management to ensure that new teachers are trained timely and effectively, and that old teachers receive regular support from the management. However, it is also worth noting that Kenya has a well-established teacher training system run by the government, and that DP-2 has a good chance of being mainstreamed into this system if MOE and TSC can be convinced of the efficacy of the DP-2 designed teacher training courses.

In Kenya, after-school remedial classes are a common practice in both treatment and control schools relative to Ghana and Nigeria. Of the girls in control schools, 36% reported attending remedial classes, compared to 64% of girls in treatment schools. Of the girls in treatment schools, 52% of girls reported that they were specifically attending remedial classes supported by DP-2. In Kenya, paid tuition (teachers charging to provide remedial support) is common despite being banned. Since remedial classes are free of charge, they have a great potential to help the poorer marginalised girls to benefit from them. However, there is a question about whether remedial classes are sustainable in Kenya, as there is a possibility that teachers would be more interested in providing tuition classes that they can get paid for.⁶⁹ It could be that after the DP-2 project is over, these classes would become less and less prominent. Inconsistent teacher selection for DP-2 teacher training and the widespread nature of paid tuition classes create doubt about whether DP-2 supported remedial classes are delivered by the DP-2 trained teachers and to an acceptable level of quality.

Girls' clubs

Almost all DP-2 schools in Kenya had girls' clubs, and 60% of our sampled girls were members of these clubs. 92% of girls reported attending girls' clubs at least once a week; 66% reported watching MBW videos; 77% reported learning English; and 66% reported learning maths. Of the girls' clubs, 41% have sold products that they make. At midline, girls' clubs showed a better pattern of work, with more activities being introduced since last year. However, clubs do not seem to be financially self-sufficient and instead charge parents for the materials used. The skills girls learn are potentially useful and may be helpful in future to give girls a change of earning an income with their hands, but sustaining these skills in the shorter term needs some planning. There seem to be opportunities to engage local women's groups in girls' clubs so that girls can continue building on their new skills.

System level

Evidence collected as part of this evaluation suggests that DP-2 in Kenya encounters greater challenges in involving government stakeholders, relative to Ghana and Nigeria. This is reported at both the levels of national and local level

⁶⁹ Teachers in Kenya receive no stipend for conducting remedial classes, unlike in Ghana and Nigeria.

government, in part reflecting that there are more government and donor education initiatives that divert the time and energy of government stakeholders. Furthermore, DP-2 in Kenya is also engaged with a relatively large number of non-formal schools outside of the government system who would not benefit from economies of scale that would result from government buy-in to DP-2 activities. Whilst the Government of Kenya has taken steps to regularise such schools, this is a work in progress. As a result, the sustainability of DP-2 at the system level is scored at 1 ('latent').

As with Ghana and Nigeria, DP-2 has recently recruited a STL with responsibilities (among others) to lead the efforts around engagement with government stakeholders. The importance of engagement with national government stakeholders was highlighted by the DP-2 team and the STL in particular. However, unlike in both Ghana and Nigeria, the STL in Kenya cited that much of his focus in the short-term has been on the quality of programme delivery and the diagnosis of issues around training design and staff.

Furthermore, in Kenya DP-2 works with a number of non-formal schools outside of the government system. As a result, the sustainability of project activities in these schools is reliant on the schools themselves, and they would not benefit from economies of scale that would result, for example, from the institutionalised funding of project activities by the MoE.

At the local level the main points of engagement are with the Quality Assurance and Standard Officers (QASOs) of the MoE and Curriculum Support Officers (CSOs) of the Teacher Service Commission (TSC). A key issue reported by DP-2 staff in Kenya during fieldwork for the process evaluation is that both QASOs and CSOs are heavily engaged in supporting on-going government initiatives, and in particular TUSOME⁷⁰, which was reported to increase the difficulty of securing their engagement in DP-2 project interventions. This is demonstrated by the results of this evaluation where, for example, we find in Section 6.2.4 considerably lower involvement of government officials in follow-up visits in support of the TPD training, which appears to be a particular problem for formal schools in Nairobi where just 31% of teachers reported a visit from a government official compared to, for example, teachers in Wajir of whom 57% had reported the same.

Summary

In Kenya sustainability targets have been met with the exception of those against the CAP activities, with the sustained impact of CAP activities unlikely and requiring of considerably greater involvement and leadership from head teachers and community representatives. Given that Kenya already has high attendance and transition rates, as well as higher learning levels on average than in Ghana and Nigeria, it seems particularly important for DP-2 CAP activities to focus specifically on the most marginalised girls. While this is in line with DP-2's design, it is not yet clear to what extent this is happening in practice. School-level project activities seem to be implemented, but they are not entirely consistent or sustainable. In particular, teacher training is not consistently targeted at the same teachers; stepdown training is most

⁷⁰ Which seeks to improve teachers' capacity to deliver classroom instruction, improve schools' access to books and learning materials, enhance instructional support and supervision, and enhance collaboration with other literacy actors.

likely in Kenya to be informal; learning centres require funding; and girls' clubs are collecting contributions to cover materials needed to make different products, as they are not currently self-sustaining financially. Where there is a widespread practice of paid tuition classes being provided, DP-2 remedial classes are a great source of support to poorer marginalised girls, but it is unclear how these lessons will compete for existence with the tuition classes. Sustaining these activities at the schools in our sample as they are run today needs more reflection. For instance, in Ghana, DLA management cited that GES public schools have mandatory 'in-service' trainings that are to be conducted at-least 3 times per term. DLA's exit-strategy in Ghana is to link the DP-2 implemented TPD step-down training led by resources teachers to this government professional development agenda (and to be conducted at specific times). DLA Kenya would do well to tap into existing structures in Kenya to sustain their training model.

5.6 How sustainable is DP-2 in Nigeria?

Table 53 presents the sustainability scores for Nigeria.

Table 53. Nigeria sustainability scores

	Community	School			Systems
	CAP	Learning centres	Teacher training/remedial	Girls' clubs	MOE engagement
Headline indicator	Through CAPs, a critical mass of communities demonstrate the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education	A critical mass of schools demonstrate effective and continuous use of learning centres to improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media	Through the teacher training component, a critical mass of schools demonstrate effective use of teaching practices (including remedial classes) and continuous coaching and training of new and existing staff and do so sustainably	A critical mass of schools have established girls' clubs which are self-sustained and functioning on a regular basis using the MBW curriculum	MOEs at the local level have fully fledged local education plans furthering project-related teacher development and school support. Local MOE education plans are fully funded in recurrent MOE budgeting
Baseline score	2	2			2
Overall baseline score	2				
Midline target	3	3	3	2	2
Midline score	3	2	3	2	3
Overall midline score	3				

Community level

At midline, we have seen the steady and solid progress of DP-2 CAP activities in Nigeria and initial plans towards sustaining the project results ('becoming established'). A critical mass of schools/communities have a CAP in place. Communities seem to be leading the CAP activities and have demonstrated full ownership of the initiatives, together with head teachers. Nigeria also appears to have the greatest involvement from a diversity of stakeholders, which increases the chances of sustaining the CAP results. There are demonstrable results of the implementation of CAPs, according to the qualitative findings and evidence of regular meetings and implementations. Although we do not see any significant results affecting attendance rates in Nigeria from our quantitative analysis, we assume that it is quite early for such results to manifest at scale. In addition, we observe some positive trends towards DP-2 having an impact on girls' successful transition rates.

In Nigeria, almost all schools reported having a CAP and were able to show physical documentation of the CAP to the survey team on the day of the visit. If at baseline the schools received CAP training sessions and developed action plans and awareness of DP-2 among the parents was low, at midline all the communities reported developing sustainability plans to harvest DP-2 project results after DLA leaves. This commitment stems from the community's and school's feeling of ownership of the project without relying on external support, which is demonstrated by the representativeness of the participants in CAP activities. The main pillar of sustainability for CAP activities is the community (chiefs, wealthier and influential members of society, former students, etc.) and teachers who make financial contributions from their own pockets towards school generators, materials for running girls' clubs, and sponsoring children in extremely poor households (such as orphans). Community members were reported as also spending their time volunteering for CAP activities and as teacher support staff. This was supported by our data, which showed heavier involvement of community representatives than school representatives in CAP in Nigeria. Having said this, the involvement of head teachers in developing CAPs in Nigeria is widespread across all schools. Almost 90% of head teachers attended every one of the three workshops in Nigeria; and of the Nigerian schools with a CAP, 76% reported that those involved in the CAP process had met at least once, according to the head teachers.

There were noticeably better relationships and synergy between the participants in CAPs, SBMCs, PTAs, and Old Boys' Associations in the DP-2 schools we visited for qualitative fieldwork. Such relationships point to more effective cooperation towards achieving a common goal and deriving mutual benefits. According to our data, of the Nigerian schools that were able to show physical documentation of their CAPs at midline, 95% had stated objectives that appeared to focus more on parental/community-based outcomes (improving attendance and transition) than on school-based outcomes (improvements in literacy or numeracy). In Nigeria DP-2 staff stated that a key success factor in generating community involvement was that the majority of DP-2 staff members were recruited locally, and are native Hausa speakers. This eased the process of generating community support, as DP-2 staff members, and CAP coordinators in particular, were more likely to be accepted by the communities in which they were working. The sustainability plans thus seem to be realistic as the communities are on board to support schools. Especially at midline, when we are starting to see positive results from the DP-2 project, activities to sustain them are more important than ever. At the community level, our findings suggest that efforts made by the members of the CAP process have helped reduce the drop-out rate of

pupils due to extensive community sensitisation efforts. Participants in the CAP process reported that they had collected contributions from most households to support their projects. The wide spread of CAP activities and buy-in from parents seem to suggest that sustaining the results of CAP activities has great potential. Of the three countries, the CAP activities in Nigeria seem to be the most adequate to address the barriers to girls' education identified at baseline. This means that CAP activities focus on some underlying negative factors affecting girls' education, and might therefore be more successful in tackling the barriers more effectively and sustaining them in the long run. However, the quantitative assessment did not find any effects on the attendance of girls, which could be explained by the timing (too early) and the poorer and more marginalised target population. We did observe some positive trends regarding DP-2 having an impact on girls' successful transition rates. The CAP activities, of course, are not capable of bringing about positive outcomes on their own, but (together with other DP-2 project activities) it is realistic to expect improvements in the learning outcomes of Nigerian marginalised girls and their school attendance and completion, as is the likelihood of sustaining these results.

School level

School-level progress towards sustaining the results of learning centres, teacher training, and girls' clubs has improved since baseline. Schools have established regular stepdown teacher training for current and new teachers, and there is evidence that DP-2 teacher training has had a positive effect on teaching quality. Head teachers and communities are committed to sustain the results of teacher training. Sustaining DP-2 project activities is achievable as long as schools and communities continue consolidating their efforts, working in partnership, trusting and acknowledging each other's contributions, and communicating effectively. Sustaining teacher training would require support beyond the communities, reaching out to government support to address the specific issue of teacher turnover. Remedial classes are delivered and have resulted in improved learning outcomes. Since teachers currently receive a stipend for delivering remedial classes to cover the direct and opportunity costs associated with teaching them (i.e. transport and time), any removal of that financial support could jeopardise sustainability. Learning centres and girls' clubs are functioning but rely heavily on parents' and communities' contribution; they also suffer from irregular access to electricity.

Learning centres

In the quantitative midline study, enumerators were able to physically verify the presence of a TV and DVD player in 98% of treatment schools in Nigeria. Of the girls in treatment schools, 67% reported watching a video in the current school year at midline, compared to 77% of girls at baseline. Overall, the proportion of girls who reported watching a video during regular classes in the current school year remained relatively low, suggesting that many girls are not regularly accessing the learning centre and its media resources. It is possible that the lack of electricity access reported by schools has played a role in this reduction. Learning centres continue to function in communities, but thanks to finances contributed from teachers and parents towards generators and purchase of fuel for their running. Some schools have an additional plan for sustaining the centres with the help of internally generated funds, for example, money raised from selling badges. Finance and lack of regular access to electricity are reported to be the key challenge in sustaining these centres, with interviews with DP-2 staff conducted as part of the process evaluation indicating that this is particularly true

of rural and remote communities that continue to suffer the effects of the 2016 recession in Nigeria.

Teacher training and remedial classes

Our assessment suggests that Nigerian teachers have improved their quality of teaching as a result of DP-2 training. According to the quantitative data in Nigeria, the proportion of schools that had delivered stepdown training was relatively high. The most common reason for not delivering stepdown training was that all the teachers in the school had already received the training directly. In Nigeria, it was relatively common for a teacher to have attended both literacy training sessions or both numeracy training sessions, which could suggest that selecting of these teachers is consistent. However, it is worth noting that Nigeria has a high level of turnover among teachers, and that some schools suffer from lack of teachers. Almost all teachers reported receiving a support visit from a DP-2 trainer, and a high proportion of teachers reported receiving a support visit from a government official. Head teachers suggested they would continue monitoring and supervision of teaching to keep quality at the level developed by the project.

Some schools suffer from not having a sufficient number of teachers to teach. The situation is further exacerbated for community-owned schools that only receive minimal logistical support from the government. For example, according to one head teacher, his school did not receive any support from the government in terms of provision of textbooks or infrastructural support, except for the payment of teachers' salaries. This could add to the problem of teacher turnover and subsequently affect sustaining the results that Nigeria has managed to produce so far. Some schools already have plans to sustain their results with the main support coming from communities. For example, a leader of CAP activities in one school has started documenting teaching methods and curricula supplied by DLA to enable the school to continue implementing teacher training modules after the project is over. He also documents success stories of the CAP activities for monitoring purposes. To help with teacher shortage, former students volunteer to help teachers, and schools recruit teachers within their communities.

In Nigeria, 70% of girls in treatment schools reported that they were currently attending remedial classes, and we found that remedial classes have contributed to the positive impact of DP-2 on learning outcomes. In Nigeria, teachers receive a stipend to deliver remedial classes, which is positive in the sense that teachers are well motivated to deliver these classes. However, this represents a challenge to the sustainability of the programme once DP-2 has closed, which the programme is addressing by engaging with SUBEB and local communities in the hope that demonstrating the success of remedial classes will encourage these to be taken up. Key to this will be the ability of DP-2 to demonstrate the impact of remedial classes on learning outcomes. As such, it is encouraging that this evaluation has found that remedial classes have had an additional impact on learning in Nigeria.

Nonetheless, early indications are positive with the SUBEB reported, during fieldwork for the process evaluation, to be exploring options to fund the stipend out of public expenditure. This was reported by government officials to be a direct result of DP-2's ability to demonstrate the success of the initial roll-out of remedial classes in Nigeria. Furthermore, DLA staff indicate that SUBEB have also agreed to integrate remedial classes into the regular school timetable, which are currently conducted on Saturdays in Nigeria, into regular school timetables.

Girls' clubs

Almost all DP-2 schools in Nigeria have girls' clubs (except four), and 61% of girls from our sample are members. Of these girls, 85% reported attending girls' clubs at least once a week. Moreover, 57% of girls' club members were engaged in watching MBW videos; 85% were engaged in activities to learn English; 86% were learning maths; and 41% of clubs reported having sold their products. The majority of parents across all schools contributed to clubs, together with teachers. As with the learning centres, parents supported clubs by helping purchase the materials and ingredients necessary for producing things and cooking. Clubs may be particularly important for girls at the upper level of primary school (Class 4–6) since they are approaching the end of primary schooling and will acquire certain hands-on life skills through creating things to make extra money. Clubs which are running and making products for sale seem to be self-sufficient, but the challenges of running clubs are not only financial—they are also linked to the sex of the patron. At one school where there was no female teacher to be a club's patron, one of the community members stepped forward to become one. Notably, having female teacher and female participants in CAP activities seems to be particularly important in Nigeria, a fact that needs to be considered for further planning and sustaining DP-2 project activities. Clubs have a great potential to continue doing micro-enterprises where these enterprises are self-sufficient, but we continue to see that parents are contributing financially to the clubs to support income-generating activities.

System level

Engagement with MoE staff was observed to be the most substantial in Nigeria, with strong reported links between MoE and the DP-2 project with both state level and local level government officials. This includes recent strengthened engagement with central ministries, such as the Ministry of Budget and Planning, who are key gatekeepers in the planning and implementation of public sector education activities. Sustainability at the system level has been scored a 3 ('becoming established').

Nigeria was the only country which reported systematic engagement with other government stakeholders beyond the MoE at regional level. DP-2 holds quarterly steering committee meetings with state level government officials. This steering committee used to be comprised of the SUBEB, SBMCs, and DP-2. In addition, the recently recruited STL has been successful in also securing the involvement of representatives of both the Ministry of Planning and Budget (MoPB) as well as the Ministry of Local Government (MoLG). The involvement of MoPB is seen as critical as they are the gate keeper of public finance of development projects, whilst the MoLG are responsible for the provision of primary education in their respective LGAs. The STL in Nigeria reported that this supported the efforts of aligning DP-2 activities with government priorities for education outlined in various planning documents⁷¹ all of which sit with the MoPB and the MoLG. Engagement with regional stakeholders who are involved with the planning, implementation, as well as financing of education is likely to increase the potential for the sustainability of DP-2 project activities.

At the local government level, Nigeria was reported as the only country that had a dedicated government desk officer. Reflective of the strong working relationship between DP-2 and SUBEB, SUBEB had assigned an NGO desk officer specifically for

⁷¹ Including the Mid-Term Sector Strategy, Education Sector Plan, and the Education Operation Plan

engagement with DP-2 activities. This supported significant government engagement at local level particularly from the SUBEB School Support Officers (SSOs) who helped to sensitise communities, attended and supported training sessions, followed-up and monitored DP-2 activities in schools, and provided feedback and coaching to teachers. It is worth noting that DP-2 provides SSOs with a stipend to carry out these services but does not provide a similar stipend to SUBEB Social Mobilisation Officers (SMOs) who support community activities. DP-2 staff consequently report a distinctly lower level of engagement from SMOs.

Similarly to Ghana, the success of this engagement with state and local government is demonstrated by SUBEB agreeing, where possible, to limit transfers of teachers in DP-2 schools to other DP-2 schools in Nigeria. This directly addresses consistent concerns of the threat of high teacher turnover to DP-2 activities and in particular teacher training and remedial classes. Additionally, the involvement of the MoPB in quarterly steering committee meetings is likely to generate further involvement of the government in sustaining activities beyond the life of DP-2, such as the interest in funding teacher stipends for remedial classes discussed above.

Summary

In summary, Nigeria is the most successful country of the three in terms of achieving positive results with regard to DP-2 project outcome areas in learning and teaching quality. This is reflected by the overall higher sustainability score, and that Nigeria has met all of its sustainability targets, with the exception of those against the learning centres, where there remain concerns about their financial sustainability particularly in rural, remote schools.

It is therefore timely to assess the extent to which the project implementation is adequate to sustain these results. The results which are in some ways are linked with community participation have good potential to be sustained, given the evidence in support of strong cooperation between school and community and the wide representation of the community in CAP activities. Moreover, CAP activities seem to be assessment-based as they target addressing specific barriers to girls' schooling. Community contributions are essential in running clubs and learning centres and are reliable and long-term, although this is not without risks associated with poverty. Community contributions are nevertheless more reliable than sustaining remedial classes after the project is over; the latter are paid by DP-2, at least in the first phase of their implementation, although the plan is to phase them down over time with partners and stakeholders locally stepping up to incentivise remedial teachers in appropriate, sustainable ways. As in other countries, marginalised girls are given equal chances to attend remedial classes and improve their learning outcomes. Teachers are trained by DP-2 and evidentially use their new teaching strategies in the classroom. A standardised but contextualised internal model of monitoring, supervision, and coaching of trained teachers across all the schools will be crucial.

Finally, DP-2 in Nigeria has made the greatest strides in terms of its engagement with local and regional government stakeholders, in support of ensuring the sustainability of project activities once DP-2 has closed. This, as in Ghana, includes working with the government in support of on-going project activities, but also uniquely includes the on-going discussion around the financing of some DP-2 project activities based on the positive results that have been demonstrated by DP-2. These efforts are likely to be supported by the engagement of DP-2 staff in Nigeria not just with education sector

officials, but also a wider group of “gatekeeper” government stakeholders including representatives from the MoPB.

5.7 DP-2’s response on the sustainability outcome

The following subsection and Table 54 should be completed by the project.

Set reasonable expectations: at each of the three levels of sustainability, what changes still need to take place to ensure that attitudes, behaviours, or approaches are established that provide for ongoing learning and successful transition for future cohorts of girls and boys? Who are the stakeholders involved in these changes? What are the factors that help or hinder changes? Refer to your sustainability plan, TOC, and logframe. Be brief in the table and provide narrative analysis below the table that refers back to the mixed-methods analysis under 1).

Table 54. Changes needed for sustainability

	Community	School	System
Change: what change should happen by the end of the implementation period?			
Activities: what activities are aimed at this change?			
Stakeholders: who are the relevant stakeholders?			
Factors: what factors are hindering or helping change? Think of people, systems, social norms, etc.			

Provide narrative analysis here of the points raised in the table above. Explain the change the project intends to achieve. Highlight cross-cutting activities, stakeholders, and factors, but also those that relate to only one level of sustainability. Link the analysis here with that under Question 1 above, drawing on the scores given for each level. Link the analysis to the other outcomes and IOs.

6 Key IO findings

This section presents findings against the key IO indicators: attendance, teaching quality, community attitudes and perceptions, and life skills. For each IO indicator, we begin by briefly describing how DP-2 intends to achieve change in the IO.

Next, we present the headline findings against the key logframe indicators. It is important to note that the logframe was populated with the findings from the baseline report for the treatment group. However, at midline, due to attrition in the sample, we did another round of matching of treatment groups with control groups as part of the CEM-DID design. This means that the group of schools and girls based on which we assess impact differs from the group presented in the baseline report, both as a result of attrition and matching. It is therefore most appropriate to use baseline values of the logframe indicators for this group so that the baseline and midline values are reported for the same group of girls. As a result, reported baseline values differ slightly from those in the baseline report and in the logframe. In all cases, baseline and midline values presented in this section are for treatment schools and treatment girls. In many cases, the logframe includes a target that is a percentage score (e.g. 65%). Because of the change in the baseline values, it is more appropriate to use a change in percentage points as the target. As an example, where the logframe indicates that the baseline value is 60% and the target for midline is 65%, we have converted this to a five-percentage point target.

After presenting the headline findings against the key logframe indicators, we review implementation and uptake of the related DP-2 activities where applicable. In particular, in the section on teaching quality we review the implementation of the teacher training and provision of post-training support to teachers. In the section on community attitudes and perceptions, we review the implementation of the CAP process, and in the section on life skills, we review the implementation of the girls' clubs. Next, we present findings on impact of DP-2 on the IO and self-reported perceptions of how DP-2 is contributing to changes in the IO.

6.1 Attendance

Attendance is a compulsory IO indicator for all GEC-T projects. As part of this evaluation, we use the attendance indicator to measure whether girls are attending school more regularly as a result of the project due to increased enthusiasm for school and greater support on the part of the community for girls' education. Drawing on the experience from DP-1, the project aims to increase attendance through the appeal of the media centres, a more gender-responsive and girl-friendly school environment, improved teaching methods, and community support towards schooling. In addition, greater support on the part of communities as a result of sensitisation efforts through the CAP process⁷² is assumed to support girls' attendance. As discussed in Chapter 1, the causal channels through which impact of DP-2 on attendance can be achieved is through teacher training and educational media, girls' clubs, and greater community support. However, despite positive evidence of the effect these channels have on

⁷² More details on the CAP process are presented in Section 6.3.

attendance, an assessment of the strength of these channels at baseline found it to be weak.

To understand the impact of DP-2 on attendance, this chapter presents findings from both quantitative and qualitative sources gathered at baseline and midline on the attendance of cohort girls. We begin by providing an overview of the key findings against the logframe indicators. Next, we discuss the quantitative impact of DP-2 on attendance rates and describe general trends in attendance across various contextual barriers at midline for all countries using qualitative and quantitative sources. We will also discuss the reliability of data on attendance to further our findings.

6.1.1 Overview of findings against the logframe indicator

Table 55 presents a summary of the quantitative and qualitative findings against the logframe indicators, a summary of the interpretation of the findings, and a reflection on whether the targets remain measurable and achievable in the next evaluation round. The findings and their interpretation and implications are explored in more detail in the rest of the section.

Table 55. IO logframe indicators on attendance

IO	IO indicator	Baseline	Midline target (% point improvement)	Midline	Target achieved ? (Y/N)	Target for next evaluation point (% point improvement)	Will IO indicator be used for next evaluation point? (Y/N)
Attendance	Percentage of marginalised girls' attendance in schools throughout the life of the project (weighted average percentage)	Ghana: 91.8% Kenya: 96.0% Nigeria: 80.8%	Ghana: 0 Kenya: 0 Nigeria: 1.8	Ghana: 93.7% Kenya: 96.3% Nigeria: 79.8%	Ghana: Y Kenya: Y Nigeria: N	Ghana: 0 Kenya: 0 Nigeria: 2.5	Y
Main qualitative findings							
<ul style="list-style-type: none"> • Head teachers' views around how effective project interventions are at facilitating enrolment and attendance. • In Ghana and Nigeria, CAP is generally perceived to create an enabling environment that encourages attendance at school by influencing communities' attitudes towards schooling and towards girls' workload. • In some of the schools in Ghana and Kenya, teachers, the head teacher, or participants in the CAP process, attribute an increase in attendance to the introduction of DP-2 videos, which made learning more attractive to children. 							
Interpretation							
<ul style="list-style-type: none"> • As the target for Ghana and Kenya was to maintain the baseline attendance rate, DP-2 has met the target. There is no evidence that DP-2 has had an impact on attendance rates, but this is likely because attendance rates are already very high. In Ghana, the qualitative study found evidence that the CAP process has affected attendance for some girls. In some cases, the CAP process may also have contributed to a reduction in late-coming or in absence during parts of the school day, which are not captured by the quantitative indicator. • In Nigeria, the target has not been met as there had been no increase in the attendance rate. The qualitative findings do provide examples of the CAP process supporting attendance. This might be particularly for a few girls who are least able to afford school fees, suggesting the CAP process may be 							

particularly important from an inclusion perspective even if it has not contributed to change in attendance rates across the board.

- DP-2 could potentially target barriers to attendance related to corporal punishment through its engagement with teachers. Barriers related to poverty and the absence of female teachers in school are, however, harder for the project to address.

Reflections and targets

- The targets for endline for the indicator presented above remain achievable in Ghana and Kenya. Given that attendance rates in Ghana and Kenya are already very high, there is limited room for DP-2 to have an impact on attendance rates and it is therefore reasonable to maintain attendance rates.
- In Nigeria, despite strong improvement on other indicators, there has been no improvement in the attendance rate. The evidence presented in this chapter suggests that many of the factors contributing towards absenteeism may be beyond the project's control, and it may be reasonable to reduce the target.
- The indicators are fit for purpose, logical, and measurable.

6.1.2 Impact of DP-2 on attendance

At midline, quantitative data on attendance were gathered at the cohort level via school registers and attendance spot-checks for girls that are part of the learning cohort. While baseline attendance rates measured attendance from January to April 2018, midline attendance rates measured the same for the term January to April 2019. We use attendance rates measured in this way to quantitatively assess the impact of DP-2 on attendance.

Table 56 reports the average baseline and midline attendance rates across the three countries. At baseline attendance rates were already high in all three countries, particularly in Ghana and Kenya (with attendance rates above 90%), but also in Nigeria, where attendance rates at baseline were above 80%. At midline, we observed marginal but statistically significant increases in the attendance rate in Ghana and Kenya for both treatment and control groups, but observed no statistically significant increase in the attendance rates in Nigeria.

Table 56 also shows that this evaluation, at midline, did not find that the DP-2 has had a statistically significant effect on attendance of girls' in each of the three countries. In Kenya, the evaluation also finds no effect on attendance in any of the three sampling strata nor in Wajir county.⁷³ This finding is not surprising given the already high attendance rates observed at baseline, which remain at 80% or above in all three countries.

Table 56. Impact of DP-2 on attendance

Baseline attendance rate treatment (%)	Midline attendance rate treatment (%)	Difference baseline to midline treatment (% points)	Baseline attendance rate control (%)	Midline attendance rate control (%)	Difference baseline to midline control (% points)	DID (treatment-control difference) (% points)
Ghana						
91.8	93.7	1.8***	92.1	93.8	1.5**	0.4
Kenya						

⁷³ Full results of the impact of DP-2 on attendance for the three sampling strata in Kenya and for Wajir county are presented in Annex 19.

Baseline attendance rate treatment (%)	Midline attendance rate treatment (%)	Difference baseline to midline treatment (% points)	Baseline attendance rate control (%)	Midline attendance rate control (%)	Difference baseline to midline control (% points)	DID (treatment-control difference) (% points)
96.0	96.3	0.5*	96.2	96.7	0.7**	-0.3
Nigeria						
80.8	79.8	-1.2	80.8	79.7	-1.2	-0.6

Source: DP-2 school survey (2018); DP-2 cohort tracking survey (2019)

Note: Asterisks indicate where means differ significantly from one another at the following levels: *** p<.01, ** p<.05, * p<.1. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

Despite this, qualitative research conducted at midline reported the role of the CAP and improved teaching practices as facilitators of attendance in school. These are explained in detail in what follows.

6.1.3 Enablers of attendance as part of DP-2

At midline, the qualitative research asked parents, cohort girls, and head teachers open-ended questions about what helped them stay in school and challenges they faced that may affect their attendance. We also triangulated this against the perceptions of teachers and head teachers as well as participants in the CAP process to understand factors that may facilitate or hinder attendance at the community or school levels. We found that DP-2 has helped increase attendance in schools by changing communities' attitudes towards attendance and housework through initiatives led by participants in the CAP process, and to a lesser extent by creating an interest in coming to school due to the video lessons. We also found other facilitating factors playing an important role in attendance, such as government punitive measures in Kenya and supportive measures (such as better sanitary provisions) that encourage girls to attend school during their menstrual cycle.

Change in community attitudes in Ghana and Nigeria

In Ghana and Nigeria, the CAP process is generally perceived to be creating an enabling environment that encourages attendance at school by influencing communities' attitudes towards schooling and towards girls' workload. A common theme emerging in the interviews with participants in the CAP process across schools in Ghana was the increased focus on monitoring the attendance of students in the area during school hours and encouraging the parents or guardians to send their children to school especially if their children were loitering around. A key focus of the sensitisation activities has been to try and streamline the workload of household chores and working outside the home on the children. While children being involved in household chores and supporting the parents in their business or occupation were still very common occurrences in all the different communities visited, in a few instances parents expressed that they had reduced their children's workload after the sensitisation activities.⁷⁴ In Yendi, parents and community members felt that providing awards for

⁷⁴ This is discussed in more detail in Section 6.3.

regular attendees was a motivating factor in getting the girls to come to school regularly. In Nigeria, the participants in the CAP process have also worked closely with the school and parents to ease constraints of paying school fees by paying the fees on the parents' behalf for some students. Participants in the CAP process undertook home visits and sensitisation through announcements in the mosque to improve attendance. They also followed up on truancy by informing parents whose children may have left home for school but were absent in school.

'There was a child who stopped coming to school because the father could not pay [the] fee. The child stopped coming to school, we investigated and resolved the issues; as I am talking to you now, the child graduated.'

Interview with CAP participants, Nigeria

Other examples of sensitisation efforts carried out by the CAP have been detailed further in section 6.3.

Video lessons in Ghana and Kenya

In some of the schools in Ghana and Kenya, teachers, the head teacher, or participants in the CAP process attributed an increase in attendance to the introduction of DP-2 videos, as they made learning more attractive to children.

'You see, when this pupil comes to school, they know that they have a TV lesson, so this pupil will be coming to school every day. So retaining the pupil in school has been made easy.'

Interview with head teacher, Machakos, Kenya

Parents reported that their children were watching videos in school, but did not link increased attendance to the videos. The findings of the quantitative survey supported the views of parents: in Ghana and Kenya, attendance rates for girls who reported watching a video in the last term were not statistically significantly different compared to the attendance rates for girls who did not. Given that video lessons have been taking place since before the baseline, it is possible that the introduction of video lessons was linked to increased attendance at that time, but that this was not linked to having watched a video recently.

6.1.4 Other enablers of increased attendance

In addition to DP-2 activities reported during qualitative interviews to influence attendance, other factors were also identified as improving girls' attendance at school. These are discussed below.

Government and NGO support in Kenya and Ghana

Parents reported increased government focus as a positive impact on parents sending their children to school. The role of the chief seemed especially prominent in Kenya at midline. Regular follow-ups by the chief and the fear of punitive measures against parents whose children were absent were reported to increase attendance and decrease drop-outs in Kenya.

‘Also to add, this programme called *watoto tusome* [meaning ‘children, let’s get educated’] is running in the community and the local government has also contributed to a high number of registration in schools because there are people appointed to go from house to house at the beginning of every year to ensure how many people live in each household, and they take details of the head of the household and all the children—whether they are blood relatives or not—whether the children are going good to school or not—for example, if you’re living with a child who is not your blood relation and they are not yet going to school, they’ll follow up to ensure the child is enrolled in school, so the *watoto tusome* programme has led to high number of registrations in school.’

Interview with CAP participants, Nairobi, Kenya

In Nairobi, schools reported support from social services and parents identifying students who may need help or may be vulnerable to dropping out as providing the assistance they need to stem absenteeism.

‘Another contributing factor is that our school has a social worker who identifies children and parents from poor backgrounds, maybe who cannot afford items like school uniforms. The parent will just come and talk to the social worker and explain that she/he would wish the child to go to school but they lack money for uniforms. The social worker then visits the parent to ascertain if indeed they are needy, and then the child is put into the programme for needy children. That’s another thing that contributes to high attendance.’

Interview with CAP participants, Nairobi, Kenya

Girl-friendly school environment

Sanitary products and clean toilets at schools is reported to have increased attendance for girls. In Sagnarigu, Ghana, the provision of sanitary pads by female teachers encouraged girls to keep coming to school. In Kenya, parents either reported buying sanitary pads for their daughters themselves or said the school provided sanitary napkins, which prevents absenteeism. It is not evident whether sanitary napkins were provided due to awareness and training by the DP-2 programme, to increased parental awareness as the girls grew older and began menstruating, or because funds for sanitary napkins are provided to schools by other programmes or donors.

6.1.5 Subgroup analysis for the attendance outcome

Despite the positive view of DP-2 across communities and initiatives by the government, school, and local organisations, several barriers continue to affect attendance. We found that most of these barriers are not gender specific, but children with single parents or who live with guardians may be more vulnerable than others.

We drew on both quantitative and qualitative data to explore the barriers affecting girls’ attendance at midline. In what follows, we present the breakdown of attendance rates by different education marginalisation characteristics and potential barriers. Table 57 presents the attendance rates for girls in the treatment group at midline and compares it to the overall average attendance in the treatment group.

Indicators with fewer than 60 observations (indicating that the prevalence of the specific characteristic is rare in the population) are removed, as it is not possible to draw firm conclusions based on so few observations.

Table 57. Attendance rates across barriers at midline for the treatment group

	Ghana (%)	Kenya (%)	Nigeria (%)
Overall ^a	93.7	96.3	79.8
Girl characteristics			
Aged 6–11	93.4	96.6	77.5
Aged 12–13	94.5	96.3	83.5***
Aged 14+	92.9	95.8	75.9
Single orphan	(<60 obs.)	95.8	80.7
Girl has disability ^b	92.4	96.2	81.5
Living without both parents	94.0	96.8	(<60 obs.)
Living with one parent only	91.9	95.6	(<60 obs.)
Living in female-headed household	95.0	96.0	79.2
Difficult to afford for girl to go to school	93.3	96.5	80.6
Household does not own land for themselves	93.7	96.4	82.3*
Poverty rate (based on poverty line of US \$1.90/day)	92.8	95.5	76.4**
LOI is different from the mother tongue	93.7	96.2	84.8**
Head of household has no education	93.4	95.8	77.5
Primary caregiver has no education	93.2	95.7	78.3
Girl doesn't feel safe travelling to or from school	92.9	94.8	83.2
School characteristics			
PTR is over 40	93.3	96.7	75.7***
School has no female teachers	89.1***	(<60 obs.)	72.1***
Teacher uses physical punishment	93.8	96.2	79.9
No access to electricity	(<60 obs.)	(<60 obs.)	77.0
No basic infrastructure	91.4	(<60 obs.)	73.0***
Rural location ^c	-	-	75.4***

Source: DP-2 girl survey (2019); DP-2 cohort tracking survey (2019); DP-2 school survey (2019). Girl-level information on characteristics is also from DP-2 household survey (2018)

Note: Asterisks indicate where means differ significantly from the overall average at the following levels: *** p<.01, ** p<.05, * p<.1.

^a This row presents the overall average attendance in the treatment group for each country.

^b For Kenya and Nigeria, there are less than 60 observations for girls with a disability.

^c Rural or urban location was based on the location of the school the cohort girl attends. Data for Kenya and Ghana were not available and thus are not reported in the table.

In Ghana and Kenya, attendance rates were not found to vary widely across several barriers at the girl level. As presented in Table 57, attendance rates in both countries were slightly lower for girls from households that were more likely to be extremely poor and for those living with single parents as compared to the average girl.⁷⁵ However,

⁷⁵ These comparisons are made using the difference between attendance of girls facing a particular barrier in the treatment group and the average attendance in the treatment group, i.e. that of the average girl.

this difference did not reach statistical significance. In Nigeria, attendance rates varied statistically significantly across a larger number of girl-level characteristics. Attendance rates were four percentage points higher for girls aged 12–13 than the average girl in the treatment group. Similarly, girls who went to schools where the LOI was different from their mother tongue had attendance rates five percentage points higher than the average girl. However, girls from more households that were more likely to be extremely poor had attendance rates three percentage points lower than the average girl in Nigeria.

Across all countries, attendance rates showed a wider variation across various school characteristics at midline. In Ghana and Nigeria, attendance was significantly lower for girls that went to schools without any female teachers (four and eight percentage points lower than the average girl respectively). In Ghana, the attendance rate was four percentage points lower for girls that attend schools with no electricity. In Nigeria, attendance rates were lower for girls that attend schools located in a rural location, with a PTR greater than 40 (both four percentage points lower), and those that attend schools without basic infrastructure (seven percentage points lower).

Quantitative findings at midline were similar to baseline, where attendance rates were not found to vary widely across girls facing these barriers at the individual or household level. However, at midline, we observed that attendance is lower for girls facing barriers at the school level than at the girl level. Qualitative findings suggest certain key barriers still exist at the girl level that could hinder attendance.

Barriers against improved attendance

Poverty

As was the case at baseline, poverty continues to be the key barrier against girls being able to attend school, learn, and transition. At midline, we continued to find that economic barriers were the key factors hindering attendance in all three countries. Attendance rates in all three countries were lower for girls from households that were more likely to be extremely poor. In Nigeria particularly, this difference is statistically significant. Across all countries, qualitative findings suggested that children who lived with single parents or with relatives were especially vulnerable.⁷⁶

The primary impact of economic vulnerability on attendance is that children and their families cannot afford to pay for their school or exam fees or school supplies. We have continued to receive reports from parents in Kenya, Nigeria, and Ghana about their children being sent home for not paying their fees. Parents and children both felt a sense of guilt or shame at being called out for not paying their fees, which also resulted in reduced attendance and eventually in drop-out.

‘Interviewer: What do you think are the barriers preventing girls from furthering their education in this community?’

Respondent: Some of the parents of the girls aren’t financially capable of paying their school fees. Some can’t even afford lunch money for their children, and since the children can’t go to school and learn on an empty stomach, they would rather

⁷⁶ This is discussed in further detail in Chapter 2.

stay at home. They can't even afford a uniform for the child. These are some of the barriers.'

Interview with parent of cohort girl, West Mamprusi, Ghana

'And more children will attend school because you know sometime children are chased out of school because they have not paid the PTA [the fee to pay teachers employed by PTA].'

Interview with parent of cohort girl, Machakos, Kenya

'Some students are facing challenges paying school fees. If the problem continues, there is a likelihood that there will be poor attendance because the girls in question will not be happy that they are being called out for not paying their fee.'

Interview with head teacher, Nigeria

Poverty also drives students to look for paid work, which was reported in both Ghana and Nigeria. Economically vulnerable families expect their children to take up paid work to increase household income. In Ghana, girls worked alone or with their parents to sell water and food items such as *kenkey*. They reported working in other people's homes to wash clothes or clean their household. The reasons for carrying out these activities were at times for girls to be able to earn feeding money and purchase school supplies.

Interviewer: When you were mentioning your daily activities, you made mention of selling of some items. What exactly do you sell?

Respondent: I sell doughnuts [*Bofrot*].

Interviewer: Regarding the selling of *Bofrot*, is it within your community that you sell or outside?

Respondent: Both within and outside.

Interviewer: Do they pay you for the selling?

Respondent: Yes.

Interviewer: How much?

Respondent: Sometimes two *cedis* and sometimes one *cedi*. It depends on how much you have sold.

Interviewer: Do you like selling, and has it been helpful to you?

Respondent: Yes, I like it, and it's been helping me because I do make some savings from what I've been given. So, when we are to pay for exams fees, I can use it to pay.'

Interview with cohort girl, Savelugu, Ghana

In Nigeria, children whose parents were farmers often worked on their farms. This affected both boys and girls, as boys missed school during the sowing season and girls missed school during the harvest season. In Kenya, boys tended to miss school more than girls, especially in pastoralist communities where they were expected to be engaged in longer-term work.

This is a barrier that does not fall under the remit of DP-2 and cannot be affected by the programme's implementation. However, it is the most significant barrier against improved attendance in all three countries.

Illness

Feeling unwell was a commonly reported reason for absenteeism in Ghana and an occasional occurrence in Kenya. In Ghana, many parents and girls reported absences from school because of sickness. In some cases this was linked to menstruation and abdominal pains, but in other situations the nature of sickness was more general.

- 'Interviewer: Do you miss school some days?
- Respondent: Yes.
- Interviewer: Why?
- Respondent: When I'm sick.
- Interviewer: Like what kind of sickness?
- Respondent: Stomach-ache or headache.
- Interviewer: Stomach-ache like when you are menstruating?
- Respondent: Yes. I usually have abdominal pains so I'm not able to come to school because I am unable to walk. I also don't want to be stared at in school when I have to always lean over in pain. But it's not always the case so when the pain is bearable, I do come to school.'

Interview with cohort girl, East Gonja, Ghana

In Kenya and Nigeria, parents occasionally mentioned a toothache or infection, but this was not as frequent as Ghana. Girls sometimes missed school if a family member was unwell and they were the oldest available caregiver in the family.

Corporal punishment

Corporal punishment (as discussed in Section 2.2.2) was a deterrent for children to attend school when they had not completed their homework or feared they would not understand their classwork and be hit by the teacher in all three countries, but reports of it were especially frequent in Nigeria and Kenya. However, quantitative data showed that attendance rates were not different for girls who reported that teachers physically punish students, nor for girls who had experienced physical punishment themselves in the last week. Students who were late for school would try their best to reach school early or opt against going to school altogether to avoid corporal punishment in Ghana and Nigeria. In Nigeria, girls were often late because they had chores to complete at

home. However, when they were late, they were punished or asked to do chores at school, which exacerbated their frustration and disincentivised them from attending school altogether.

‘People who come late to school are told to wash the toilets.’

Interview with cohort girl, Nigeria

Increased sensitisation to the negative effects of corporal punishment on students can be included in DP-2 curriculum for teacher training to make the school environment friendlier for its students.

Extreme weather

As discussed in Section 2.2.2 for Kenya, prolonged periods of drought in Kajiado, extremely hot weather conditions in Wajir, and torrential rain across all the counties was a deterrent to attendance. Girls were afraid to cross rivers or flooded roads to come to school during the monsoons; even if they did, they would not be able to study in their classrooms, which might also be flooded or have leaking roofs. Droughts in Kajiado also resulted in pastoralist communities (mostly boys in this case) walking further from their homes to graze their cattle. Girls would have to walk for longer periods to fetch water, with a negative effect on the attendance of both boys and girls. In Nigeria, too, attendance dipped during the monsoons, but this is not considered a significant barrier.

Corporal punishment and extreme weather are generic barriers to attendance which can affect any child, but our analysis shows that children from poor families are at greater risk. Nor is only household poverty at issue; spatial poverty also traps children in geographic pockets of poverty, disadvantage, and marginalisation. The geographic variation in poverty is reflected in the geographic variation of educational marginalisation: children attend schools with poor infrastructure and resources which, according to our analysis, are barriers to a child’s attendance.

6.1.6 Quality of attendance data

Attendance-keeping practices at school represent a major concern that emerged during DP-1. Therefore, building on the experiences from DP-1, the attendance indicator for this evaluation focused on data at the cohort level rather than the class level to minimise issues around incompleteness of attendance records. As part of the attendance spot-checks and cohort attendance data-gathering exercise, we observed school records for the current academic year for each school across the three countries (if records were available).

Our review found some concerns about the validity of this indicator for Nigeria and a few concerns in Kenya based on the data gathered at baseline and midline.

Overall, attendance-keeping practices were significantly better at midline than baseline in Kenya. In Kenya, attendance records were available in school for 87% of girls at baseline and were available for 90% of girls at midline. However, in Nigeria, attendance records were available for a statistically lower percentage of girls at midline (91%) than at baseline (94%). In Ghana, despite attendance-keeping practices being better than in Nigeria and Kenya, attendance records were available for a statistically significantly lower percentage of cohort girls at midline compared to baseline (97% and

99%). There was no statistical difference in the percentage of girls for whom the records were kept but not available to see during the visit to the school in Kenya (8% at midline) and Ghana (2% at midline). In Nigeria, however, records were not available to see for 2% of girls at baseline compared to 4% at midline with the difference being statistically significant.

In Nigeria, at baseline, teachers did not record attendance for 15% of the school term.⁷⁷ This statistically improved to 10% at midline. There was no difference detected in the proportion of the term for which attendance was not taken in Kenya across both rounds with teachers not recording attendance for 3% of the term in each round. In Ghana, teachers did not record attendance for 7% of the term at baseline. However, at midline, attendance was recorded, on average, for the entire duration of the term.

Overall, attendance-keeping practices seem to be sound in Ghana and have improved in Kenya since baseline. However, there are concerns in Nigeria regarding attendance-keeping practices and the frequency with which teachers take attendance. Therefore, we suggest that careful attention should be paid when interpreting results on attendance levels.

6.1.7 Conclusion

DP-2 aims to create a supportive environment for girls in the community, school, and classroom to increase their motivation to attend school. At midline, we found that attendance in school was high across all countries, and children were motivated to come to school. However, since attendance rates at baseline were high, no evidence of an impact of DP-2 on attendance was observed. Qualitative reports, however, suggested that for the students who were unable to come to school, the CAP process (and to a lesser extent the media centre) are trying to address some barriers facing students and attempting to ease their financial constraints, although corporal punishment continues to deter students from attending and enjoying their schooling experience. Despite this, the key reasons for absenteeism are poverty, illness, and adverse climate conditions. These are externalities that are outside the programme's remit and unlikely to be addressed by DP-2.

6.2 Quality of teaching

The design of DP-2 reflects the beliefs that students learn better when they are taught by effective teachers, and that teachers become more skilled and knowledgeable through training. Teacher training constitutes a core component of DP-2 project activity, with a focus on improving teachers' performance, the quality of teaching, and ultimately learning outcomes.

This chapter will mainly draw from the quantitative data and sources, because the qualitative fieldwork was limited to only exploring self-reported perceptions about DP-2 teacher training from head teachers and resource teachers only. In all schools visited for the quantitative survey at midline, a Primary 5 English or mathematics teacher was randomly selected to have their lesson observed. In treatment schools, the selection was limited to teachers who had participated in at least one of the DP-2 training

⁷⁷ This was calculated using the number of days in the school term for which attendance was not entered as a proportion of the number of days in the entire school term.

sessions, either directly or through stepdown training. The lesson observations aim to assess whether trained teachers are applying the approaches taught by DP-2 and how successfully they do so, and to compare this to the approaches used by teachers in control schools.

In this section, we start with presenting our approach to measuring teaching quality. We then give an overview of the delivery of DP-2 direct and stepdown training and self-reported perceptions of head teachers about them. Next, we present the impact of the project training against five criteria. These quantitative impact findings are complemented by more detailed accounts from head teachers and girls interviewed during the qualitative fieldwork. The high-level analysis of the difference between lessons in treatment and control lessons is explored further by a detailed examination of the teaching approaches used in treatment and control lessons at midline.

6.2.1 Measurement of teaching quality

According to the literature,⁷⁸ quality of teaching can be conceptualised either as teacher characteristics such as inputs (professional qualifications, experience, place of residence, in-service training, etc.) or as what the teachers ‘do’ in the classroom (practices, attitudes, and content knowledge). Teaching quality is claimed to be one of the most important factors contributing to pupil achievement, and is even more significant than class size.⁷⁹ However, little is known about what exactly it is about teachers and teaching quality that accounts for this contribution.⁸⁰ For the purpose of our study, we rely on the quantitative methods of data collection and analysis to assess this outcome area.

The lesson observation instrument changed a little from the one used at baseline. It was shortened to reduce the burden on enumerators and improve reliability. Most indicators are still recorded on a three-point scale (0–2), where:

- 0 indicates the practice or characteristic of interest was not observed,
- 1 indicates it was observed to a limited degree, or there was an attempt with limited success; and
- 2 indicates it was observed to a fuller degree or with greater success.

The difference between the baseline and midline instrument is that the criteria for how to assign a score between 0 and 2 have been made more explicit at midline. This should improve inter-rater reliability (the likelihood that different enumerators will record the same score for the same lesson).

The changes to the instrument have implications for estimating impact and mean that using a DID estimation technique is not appropriate. Instead, we rely on cross-sectional comparisons between the treatment and control groups at midline. Treatment and control groups were well-matched at baseline. This provides a high degree of confidence that differences at midline can be attributed to DP-2.

⁷⁸ R. Singh and S. Sarkar (2015) ‘Does teaching quality matter? Students’ learning outcome related to teaching quality in public and private primary schools in India’, *International Journal of Educational Development* 41, pp. 153–163.

⁷⁹ Darling-Hammond (2000), cited in *Ibid.*

⁸⁰ Rockoff (2004) and Rivkin *et al.* (2005), cited in *Ibid.*

It is important to understand the necessary issues associated with using lesson observations for the purpose of evaluating meaningful change in teaching practice. The relationship between classroom practice and learning is complicated, so it is impossible to codify in isolation the practices that are likely and those that are unlikely to be 'effective'. The lesson observation only captures a snapshot—a small part of the learning process—and the approaches employed by teachers interact with activities at other times, as well as with individual and relational factors, to determine how much students learn. Therefore, we have tried to reflect the training manuals by observing the approaches included within them. These represent DP-2's view on the strategies that are likely to be effective. Imposing quantitative scores onto each approach carries risks to both validity and reliability. In terms of validity, the criteria selected as the basis for judgements do not cover every important aspect of the teaching method. Some uses of the method that are scored a '2' could thus be inferior to some uses scored a '1' because the aspects that do not contribute to the score are inferior. In terms of reliability, criteria were made as objective as possible and observers were trained as well as possible, but as scores were recorded in real time, it was possible for observers to make mistakes or interpret what they were seeing differently to other observers.

6.2.2 Overview of the findings against the logframe indicators

Table 58 presents a summary of the quantitative and qualitative findings against the logframe indicators, a summary of the interpretation of the findings, and a reflection on whether the targets remain measurable and achievable in the next evaluation round. The findings and their interpretation and implications are explored in more detail in the rest of the section.

Table 58. IO logframe indicators on teaching quality

IO	IO indicator	Baseline	Midline target (% point improvement over control group)	Midline (% point improvement over control group)	Target achieved? (Y/N)	Target for next evaluation point (% point improvement DID)	Will IO indicator be used for next evaluation point? (Y/N)
Teaching quality	Average number of numeracy/literacy teaching approaches attempted (score either 1 or 2 on the strategy)	New indicator	Ghana: 5 Kenya: 5 Nigeria: 5	Ghana: 10 (additional 0.4 approaches used on average) Kenya: 15 (additional 0.6 approaches used on average) Nigeria: 12.5 (additional 0.5 approaches used on average)	Ghana: Y Kenya: Y Nigeria: Y	Ghana: 5 Kenya: 5 Nigeria: 5	Y
	Increased percentage of attempted strategies that are successful relative to the comparison group (i.e. out of the strategies the teacher used that were scored 1 or 2, on what proportion did they score 2?)	New indicator	Ghana: 5 Kenya: 5 Nigeria: 5	Ghana: maths: 35.3 English: -2.8 Kenya: maths: -12.8 English: 13.0 Nigeria: maths: 11.4 English: 33.5	Ghana: maths: Y English: N Kenya: maths: N English: Y Nigeria: maths: Y English: Y	Ghana: 5 Kenya: 5 Nigeria: 5	Y
	Increased percentage of teachers observed providing a safe and inclusive space for all students irrespective of gender, ability,	New indicator	Ghana: 5 Kenya: 5 Nigeria: 5	Ghana: 20.5 Kenya: 0.8 Nigeria: 17.3	Ghana: Y Kenya: N Nigeria: Y	Ghana: 5 Kenya: 5 Nigeria: 5	Y

	socioeconomic, or cultural background to a high standard (score of 2)						
	Increased percentage of teachers who scored 'meet to high standard' on formative assessment	New indicator	Ghana: 5 Kenya: 5 Nigeria: 5	Ghana: 15.2 Kenya: -4.2 Nigeria: 21.3	Ghana: Y Kenya: N Nigeria: Y	Ghana: 5 Kenya: 5 Nigeria: 5	Y
Main qualitative findings							
<ul style="list-style-type: none"> Both head teachers and girls agreed that teaching quality has improved in all three countries as a result of DP-2 teacher training. Head teachers reported that teachers were able to use different teaching methods and were more confident in their teaching skills. Girls also claimed their teachers were considerably better at explaining topics in a range of ways and were more attentive and patient to their needs. However, the qualitative analysis does not reveal any specific variations in self-reported changes in teaching within the countries, which are more evident in quantitative findings. 							
Interpretation							
<ul style="list-style-type: none"> In Nigeria, the evaluation found evidence that all teaching quality targets have been met, with a particular improvement noted against the proportion of teaching strategies that were successful in English, the number of formative assessment strategies implemented, and the proportion of formative assessment strategies implemented to a high standard. The Nigerian results provide strong evidence in support of the DP-2 TOC, where the evaluation provides evidence of the strongest impact on teaching quality in Nigeria, as well as the strongest impact on literacy and numeracy learning outcomes. In Ghana, the evaluation found evidence that all teaching quality targets have been met, with the exception of the proportion of teaching strategies that were successful in English. Particular improvement was noted in the proportion of teaching strategies successfully implemented in maths, the provision of a safe and inclusive environment in the classroom, and the proportion of formative strategies that were implemented to a high standard. In Kenya, the evaluation found evidence that only one teaching quality target was successfully met and one was partially met, with Kenyan teachers meeting targets for the number of teaching approaches implemented, and the proportion of teaching strategies implemented that were successful but only for English. A number of challenges faced by Kenya, both contextual and implementation-related, explain why not all teaching quality targets have been met. The new rule that teachers can only be trained on weekends or holidays has slowed down roll-out of the direct and stepdown training session, and may mean that teachers are less motivated to attend the training sessions. In addition, teacher turnover is particularly high in Kenya and we found that many teachers are not receiving the full package of training because they attend only one of the literacy or numeracy training sessions directly. 							

Reflections and targets

- The external evaluation does not collect information on 'Increased percentage of girls that demonstrate basic skills in literacy and numeracy based on periodic learner checks', which is collected directly by the project.
- Each indicator is fit for purpose, logical and measurable. The changes made to the instrument to align with the indicators and improve reliability will allow analysis using a DID approach at endline. We do not recommend removing or adding any indicators.
- The targets for the remaining evaluation points remain achievable. In Kenya, the majority of targets were not met at midline. In addition, there is limited room for improvement as performance on many of the indicators is already high. As a result, it is recommended that targets remain as they are. In Ghana and Nigeria, almost all teaching targets have been met and exceeded, and there remains room for further improvement over the next year. It however needs to be kept in mind that all of the direct trainings have already been delivered and that the support that teachers will receive between midline and endline will be through monitoring and mentoring during support visits. It might therefore be the case that the impact of the teacher training in Nigeria and Ghana has already been achieved, and that the emphasis between midline and endline is on maintaining this impact rather than achieving additional impact. Depending on how intensive the planned support to teachers is and whether refresher training will be offered, it may be reasonable to slightly increase the targets if additional impact is expected between midline and endline.

6.2.3 DP-2 training sessions and support to teachers

Box 7. DP-2's design of TPD

DP-2 offers four training sessions to primary school teachers focusing on teaching foundational literacy and numeracy strategies. These training sessions are referred to as Literacy I, Literacy II, Numeracy I, and Numeracy II.

As discussed in Chapter 1, the roll-out of these training sessions differs by country. In Ghana, the roll-out of the training sessions was completed in November 2018; while in Kenya and Nigeria, it was completed in February/March 2019.

DP-2 training sessions are delivered directly to teachers by DP-2 staff in each country (referred to as direct training). Schools are expected to send between four and six upper primary teachers to each training. Teachers who have received direct training from DP-2 are called 'resource teachers'. They are tasked with stepping down the training to other teachers in their schools.

DP-2 staff provide ongoing support to schools and teachers through regular monitoring and support visits. While there are no strict guidelines around the number of monitoring visits, it is expected that each school would be visited approximately two to three times a month.

In this section, we start by discussing the implementation of the DP-2 teacher training sessions in treatment schools at the school level as reported by head teachers and resource teachers. Then we present an overview of the training that the teachers who were sampled for the lesson observations have attended.

6.2.4 Implementation of DP-2 training sessions at the school level

Table 59 shows the average number of teachers who have attended each of the direct training sessions per school. This suggests that schools are sending the expected number of teachers to each of the direct training sessions. The number of teachers taking part in direct training sessions in Kenya is the highest, which may be because teachers from the higher primary grades (Primary 7 and Primary 8) are attending trainings in addition to teachers from Primary 4 – Primary 6.⁸¹ It may also be related to the average school in Kenya having more teachers compared to the other two countries⁸², as well as the reality that in Kenya the common practice is for subject specific teachers, rather than the practice common in Ghana and Nigeria for a single teacher per grade, which further increases the number of teachers that need to be trained.

At the time of the midline survey, a relatively large proportion of trained teachers had left the school across all of the countries, but particularly in Kenya. According to DLA staff, teachers leaving schools poses a significant challenge to the implementation of the programme. In Kenya, this is particularly a problem for non-formal schools and schools in Wajir. Teachers in non-formal schools are frequently fired if not performing. In addition, teachers in non-formal schools are working towards formal accreditation which would allow them to work at public schools and formally qualify as teachers.

⁸¹ The evaluation did not collect detailed information on the grades of the teachers attending the direct training.

⁸² The average primary school in Kenya has 19.2 teachers compared to 11.7 in Nigeria and 7.2 in Ghana.

Both factors mean that turnover of teaching staff is higher than at formal schools. In Wajir, teachers also transfer more frequently due to security concerns. In both cases, the higher turnover means that the programme has to dedicate additional time and resources to implementing activities at these schools. In Ghana and Nigeria, DLA is working with their government counterparts on trying to make sure that if teachers or head teachers are transferred, they are transferred from one DP-2 school to another. This strategy ensures that the investment of training the teacher is not lost. Nonetheless, all of these factors suggest that the impact of the training on students is likely to be diluted as a result of teacher transfers.

Table 59. Number of teachers who attended direct training and percentage of teachers who left

Training	Ghana		Kenya		Nigeria	
	Average number of teachers who attended direct training per school	Percentage of trained teachers who have left the school	Average number of teachers who attended direct training per school	Percentage of trained teachers who have left the school	Average number of teachers who attended direct training per school	Percentage of trained teachers who have left the school
Literacy I	4.8	19.2%	6.5	37.1%	4.2	22.7%
Literacy II	4.7	12.3%	7.6	24.0%	4.8	10.5%
Numeracy I	4.8	15.4%	5.6	24.2%	4.2	29.7%
Numeracy II	4.7	8.0%	5.3	19.0%	4.3	9.3%

Looking specifically at Primary 5 teachers, 91% of English and mathematics teachers in Ghana had attended at least one of the DP-2 trainings directly, compared to 87% of teachers in Nigeria and only 71% of teachers in Kenya. Despite schools in Kenya sending the largest number of teachers to direct training, they have the lowest percentage of directly trained Primary 5 teachers, likely because of a combination of the factors described above.

We also asked schools to report on whether and how they deliver stepdown training. Table 60 shows the proportion of schools that have delivered stepdown training for each of the training sessions. In Ghana, stepdown training has been delivered infrequently for most of the training sessions. The most common reasons given for not having delivered stepdown training were that all teachers in the school had been trained and that they had not yet had time to deliver the training; both reasons were given by approximately the same number of schools. Given that the average school in Ghana has only 7.3 teachers across all of its grades and that the teacher trainings were attended by about 4.7 teachers, it is likely that all teachers who teach mathematics and English would have been trained directly in many schools. This is also supported by the large proportion of Primary 5 teachers who had been trained directly.

In Kenya, the proportion of schools that had delivered stepdown training was higher, except for the Numeracy II training. This is to be expected, as the Numeracy II training was still being rolled out at the time of the midline survey. Of the schools that had not delivered stepdown training, the majority reported that this was because they had not had time.

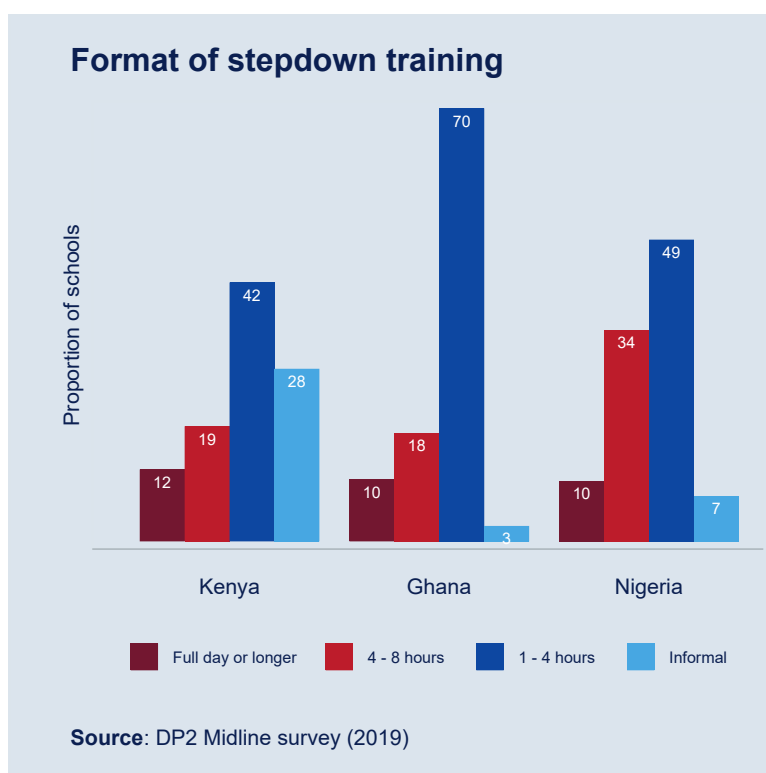
In Nigeria, the proportion of schools that had delivered stepdown training was relatively high. The most common reason for not delivering stepdown training was that all the teachers in the school had already received the training directly.

In the schools where stepdown training was delivered, it reached (depending on the training) between about 5 teachers in Ghana, 4 teachers in Nigeria and between 5 – 8 teachers in Kenya.

Table 60. Percentage of schools that have delivered stepdown training

	Ghana	Kenya	Nigeria
Proportion of schools that have delivered stepdown training (%)			
...Literacy I	70.7	91.3	83.0
...Literacy II	57.9	71.1	72.3
...Numeracy I	59.7	86.4	75.0
...Numeracy II	52.8	43.6	78.7

Figure 15 shows the format of stepdown training by the proportion of schools that use each format. Across all countries, the most common format for stepdown training was to deliver this training during one to four hours spread over either one or two days. A third of schools in Nigeria devoted four to eight hours to delivering stepdown training, but this format was less common in the other two countries. In Kenya, 28% of schools reported that they delivered stepdown training through an informal method, which was defined as a trained teacher meeting with another teacher one-on-one to go over the training, sharing training notes with a teacher, or briefly feeding back on the training during a staff meeting. Overall, given that the direct training sessions last two full days, any effect of the DP-2 training sessions is likely to be diluted for teachers who only receive stepdown training given that this is in most cases only delivered over the course of a couple of hours.

Figure 15. Format of stepdown training

DLA senior management in Nigeria and Kenya reported that resource teachers were asked to draft a training plan for the stepdown training which would subsequently be monitored by the teacher trainers during their monitoring and follow-up visits. However, teacher trainers did not mention these plans nor did they report following up on them. It is therefore unclear whether this was actually implemented. Given the varied and opportunistic nature with which a lot of the stepdown training seems to be delivered at school level, a planned and scheduled approach seems less likely. In Ghana, DLA staff did not report the existence of stepdown training plans. In fact, DLA senior management felt that resource teachers in Ghana do not have time to plan the stepdown training and are – in particular – unable to block out large chunks of time to deliver the training in one go. As a result, training is cascaded down when and if possible and in small sections. Teacher trainers in Kenya echo that this form of delivering the stepdown training is most common and cite time constraints of teachers as the main reasons for adopting this approach to implementing the training.

In Kenya, the TSC issued a circular in February 2019 stipulating that all government ministries, NGOs and other organisations undertaking educational tasks are no longer allowed to schedule activities that would require teachers to be away from schools during the week and term time. As a result, all forms of teacher training at formal schools, including government run teacher training, now have to take place over the weekend and during holidays. This poses a particular challenge in Wajir where teachers want to travel to their hometown during school holidays. DLA staff reported that this new directive has delayed both the delivery of workshops and the implementation of stepdown training in formal schools in Kenya. Even if reluctance to train over the weekend and during the holidays can be overcome, the introduction of the new curriculum that is pending and on which teachers are currently being trained and the existence of many other projects at school level means that DLA has to compete for time and attention of teachers. The subsequent delays in the

implementation of the training and stepdown training have raised concern amongst DLA staff that the impact of the original training could be diluted. As a result, DLA staff have and are planning to increase the amount of attention paid to providing refresher trainings and additional support. The extent to which this additional support is provided to schools across the sample seems less clear given the data on school visits reported below.

DLA staff in Kenya rely on support from CSOs from the TSC for mobilising teachers to attend training and implement other programme activities such as remedial classes. The role of government seems to be very active in this field, with CSOs following up with head teachers and teachers to insure attendance and implementation of project activities. However, whilst the engagement of TSC and MoE officials is undoubtedly important, capacity constraints mean that such direct support is unlikely to always be available.

Teachers in non-formal schools were reported to be more interested in attending trainings. This is perhaps unsurprising as they have fewer pre-existing commitments on their time related to other training programmes and are also personally motivated to improve their teaching skills and gain additional qualifications.

The mention of stepdown training during the qualitative fieldwork was variable across the countries for the schools visited in the qualitative sample, and most schools usually reported about teachers attending direct training sessions. Some schools did report organising of stepdown training sessions for teachers who were unable to attend the DP-2 training, but these were reported at times to be informal in nature, organised on a needs basis without a specific length or structure, and more as a conversation. The number of people varied depending on the teachers the training was relevant to. According to DLA staff, resource teachers are provided with handouts that ought to be used when delivering these stepdown trainings which should – if implemented properly – provide a level of structure and uniformity to the way the stepdown training is delivered across schools. However, reports from teachers suggest that this is perhaps not always the case.

In general, there was a positive perception among the head teachers and resources teachers in all three countries regarding the training sessions organised by DP-2 towards expanding teachers' understanding of the topics they were taught. They reported that these training sessions have helped solidify their own understanding of specific concepts and were very helpful regarding class control and management, sentence construction, and how to make a class interactive. In addition, a few head teachers revealed that delivery of lesson content had improved as a result of DP-2 training. They affirmed that teachers are now better trained and more aware of participatory teaching methods, which helps the pupil understand the lesson content better. In Kenya, there was also mention of how these training sessions were a good opportunity to step out of their school and socialise with other teachers.

'In literacy, we were taught how to teach new words, and this one I found useful, especially when you are teaching the English class. We want the pupil to pronounce the word well; they were able to read the word and it was very useful, and also in numeracy we were taught about principal in numbers and we were also taught about decimals, and that was a very good class to teach the decimals because you find that it is very challenging, and how to use the teaching aids, and I remember one of them was the principal in maths and it

was very useful to us. I remember even the other teachers were saying that they now have something they can practice with in class.'

Interview with head teacher and resource teacher, Machakos, Kenya

'I now know much more than before, and I am more confident in teaching due to the training sessions I had and the materials available to me as a result of DLA.'

Interview with resource teacher, Nigeria

Interviewer: Is there part of the training you feel was not very helpful?

Respondent: Part of the training that you need to change, not really ... you know when you go for a training, you may not benefit from each and every thing that is being said there. But you will come up with knowledge so my teachers always come and give me feedback that the training was very good. You know it's like someone who goes to church and says today's sermon was very good, but ask that person what was it about? They'll not be able to explain? Hehehe ... it is true. But they usually come when they enjoy. Every time the DLA is there when I call then they really cooperate and attend.'

Interview with head teacher, Nairobi

In general, critical feedback about the training was minimal, but the challenge presented by the limited duration of the training and the time available was reported by some schools across the countries, which perhaps also hindered their ability to learn the concepts fully.

As previously mentioned, TSC has passed a rule that teachers cannot be trained on weekdays during term time. While some teachers appreciate this and do not have a problem with being trained during their holidays and on the weekends, others were unhappy about the change. They felt they had to give up their holidays or travel to the training venue from their homes (which may be far from the school) on their day off. Some teachers were reported to have refused to train on the weekends. As mentioned in Chapter 1, this new rule has also affected the roll-out of the direct training sessions in Kenya, which has been slower than in the other countries. It is equally likely to affect delivery of the stepdown training sessions.

Exposure to DP-2 training sessions and support for sampled Primary 5 teachers in treatment schools

Because of our sampling criteria, all teachers in treatment schools received at least one of the DP-2 training sessions either directly or through stepdown training. We now look at the sampled Primary 5 teachers in treatment schools to understand the level of training and support that these teachers have received.

As shown in Table 61, the vast majority of trained teachers in treatment schools had attended at least one of the DP-2 training sessions directly, while only a very small

proportion had only attended stepdown training sessions.⁸³ The findings showed much variation in the extent to which teachers attend multiple training sessions. In Ghana and Nigeria, it was much more common for a teacher to have attended both literacy training sessions or both numeracy training sessions than in Kenya. This is once again likely to be related to the fact that Kenyan schools have more teachers on average than schools in the other two countries. However, it also means the sampled teachers in Kenya are likely to have attended fewer days of direct training sessions than teachers in the other countries, and have not been exposed to the full content of the training.

The project design is based on the premise that teachers attend multiple trainings in their area of specialisation. DLA staff across the three countries reported experiencing difficulties with persuading head teachers and teachers of the need to attend both sets of trainings. The reasons for this seem to vary across countries and DLA staff have developed different strategies for either accepting this or attempting to tackle the problem. In Nigeria, head teachers are asked to provide lists of attendees prior to the workshop which DLA uses to check attendance on the training day. Should the list include teachers who didn't attend the first training workshop or should a teacher arrive for the second workshop who had not attended the first, DLA staff reported asking them to leave. In addition, they claim to call the head teacher and ask for the original teacher to join the training. In Ghana, DLA adopted an approach whereby each training is delivered twice. Originally, the purpose of this was to ensure that smaller schools could send half the selected teachers (3 of 6) for the first workshop and the remaining teachers for the second workshop. However, this tweak to how the training was implemented has also allowed DLA to respond to the challenge of replacement teachers being sent to workshops, by asking the originally selected teacher to attend the next workshop. De facto, teachers have at least two opportunities to receive the same training. Unlike in the other countries, DLA in Kenya reported having little power to persuade schools to send the same teachers to attend both parts of the training. DLA staff felt that head teachers in formal schools often sent different teachers in order to provide a range of teachers with the opportunity to attend training or spread the burden of attending additional training. Beyond attempts to explain the importance of repeat attendance to head teachers the programme seemed to mostly focus on briefly recapping previously delivered training at the start of the second workshop.

Table 61. Exposure of sampled teachers to DP-2 training sessions

Proportion of sampled teachers (%)	Ghana	Kenya	Nigeria
Attended at least one DLA training directly	96.6	95.6	97.9
Attended both literacy training sessions directly	78.6	34.1	66.0
Attended both numeracy training sessions directly	77.2	27.3	56.5
Attended only stepdown training	3.5	4.4	2.1

To further understand the challenges faced in Kenya, Table 62 disaggregates the sample by county⁸⁴. This highlights that the main area of concern are formal schools in Nairobi which have relatively low proportions of teachers that have received either both

⁸³ This means it was not possible to explore the differential impact between teachers who attended direct training and those who attended stepdown training due to the small number of teachers in the sample who only attended stepdown training.

⁸⁴ WE group Kajiado, Kiambu, and Machakos due to the small number of treatment schools in those counties

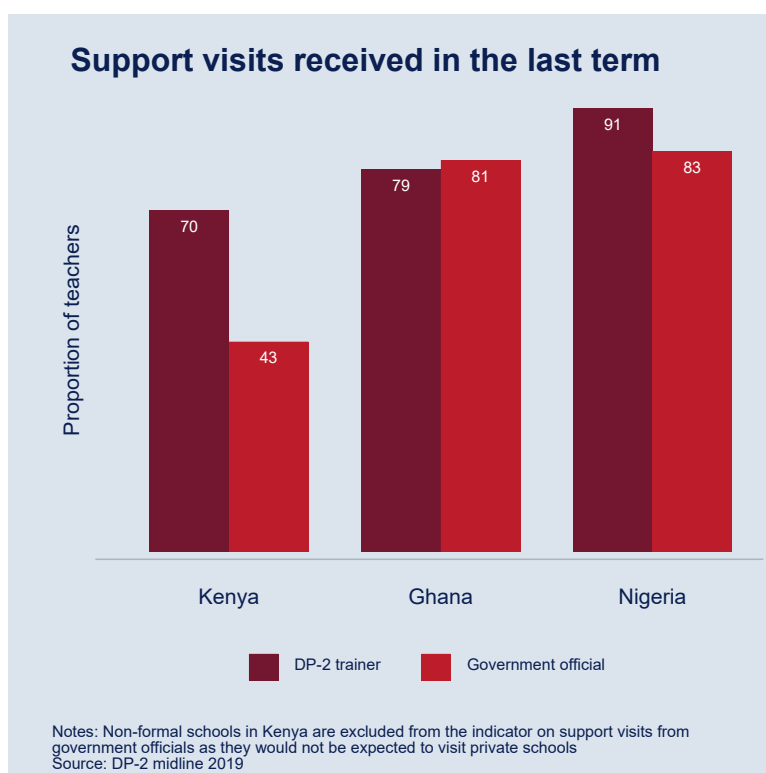
numeracy training sessions, particularly when compared to schools in Wajir and non-formal schools in Nairobi.

Table 62 Exposure of sampled teachers to DP-2 training sessions (Kenya)

Proportion of sampled teachers (%)	Kajiado, Kiambu, Machakos	Nairobi (Formal)	Wajir	Nairobi (Informal)
Attended at least one DLA training directly	88.9	92.9	100	100
Attended both literacy training sessions directly	33.3	21.4	42.9	46.1
Attended both numeracy training sessions directly	33.3	21.5	28.9	38.5
Attended only stepdown training	11.1	7.1	0	0

Figure 16 shows the proportion of teachers in treatment schools who reported having received a support visit from a DP-2 trainer or a government official in the last term. In Nigeria, almost all teachers reported receiving a support visit from a DP-2 trainer, compared to only 79% of teachers in Ghana and only 70% of teachers in Kenya. Of the teachers who had received a support visit from a DP-2 trainer in the last term, teachers in Nigeria and Ghana reported that they had received approximately four visits during the last term, while teachers in Kenya reported that they had received 3.4 visits during the last term. These numbers suggest that schools are being visited on average once or twice a month, rather than two to three times a month as expected. However, it also suggests that there may be certain schools in Ghana and Kenya that are not receiving support visits at all, while in the majority of schools support visits happen relatively frequently. DLA staff outlined a number of challenges related to scheduling the required number of school visits. A school visit could typically last around 2-3 hours. If the schools are far apart, 2-3 visits could take 8-10 hours a day including time spent travelling to schools. Once a school visit has been completed, DLA staff is expected to capture the monitoring data which can be a time-consuming activity, especially in areas with poor connectivity. In both Ghana and Nigeria, DLA staff also reported facing a number of logistical challenges in reaching schools in remote and rural areas. In Nigeria, some trainers noted that during the rainy period, some communities are entirely inaccessible due to poor roads.

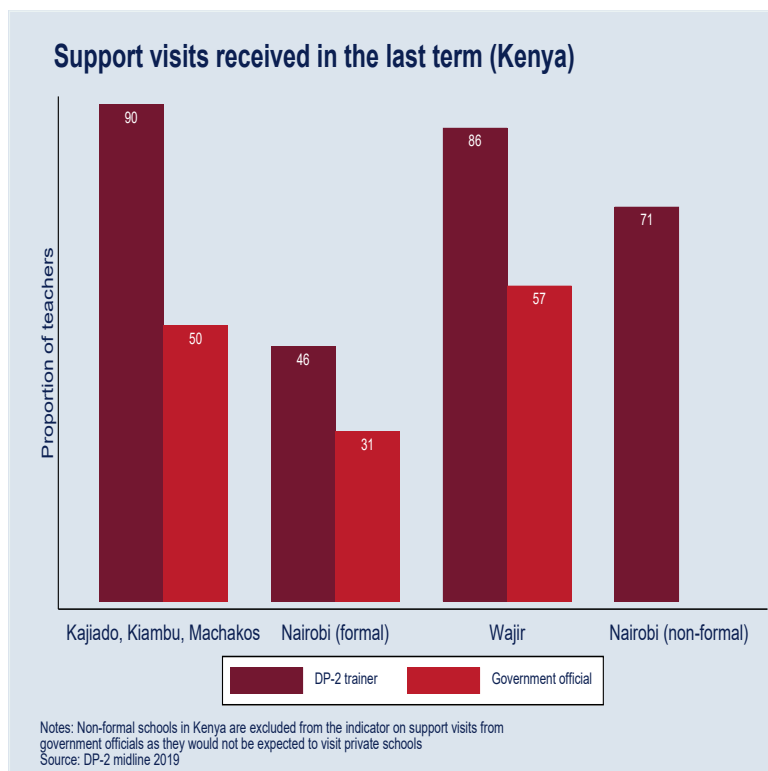
Receiving support visits from government officials was common in Nigeria and Ghana, but much less common in Kenya. In Kenya, DLA staff and government officials explained that it was not possible to implement the programme as initially planned through mostly joint visits from DLA and government staff due to difficulties in scheduling visits and time constraint of government officials. The same was reported by DLA staff in Ghana and Nigeria. In Kenya, joint visits would only happen if schedules happened to align. DLA staff reported feeling that the QASOs and CSOs were supportive of the programme, but merely lacked time and resources to support with school visits more frequently. In Nigeria, the relatively high number of government visits could be related to the fact that SUBEB has a dedicated desk officer for DP-2 embedded in the public office. Both SSOs and SMOs were reported to support the programme by conducting monitoring visits.

Figure 16. Proportion of teachers who received support visits in the last term

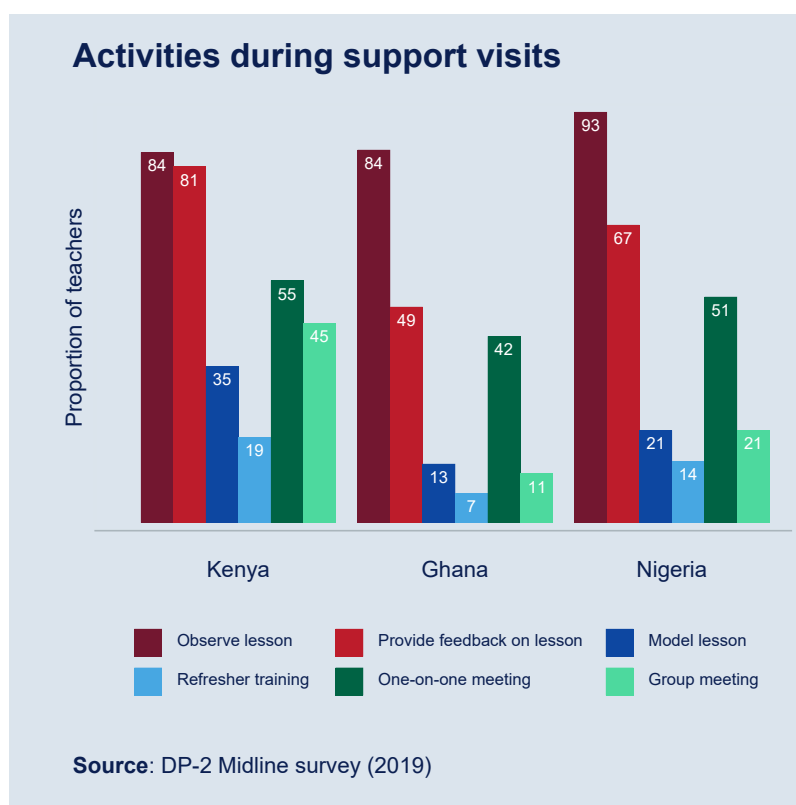
As with the implementation of direct training in Kenya, there is also significant variation in the proportion of teachers who received support visits in the last term from either DP-2 trainers or Government officials as reported in Figure 17⁸⁵. In this regard formal schools in Nairobi again arise as an area of concern, with just 46% of teachers in these schools reporting a visit from a DP-2 trainer, and 31% of teachers reporting a visit from a government official in the last term. The situation elsewhere in Kenya is significantly better – although support visits reported by government officials is still lower than experienced in Ghana and Nigeria.

⁸⁵ Kajjado, Kiambu, Machakos are grouped due to the small number of treatment schools in these counties

Figure 17 Proportion of teachers who received support visits in the last term (Kenya)



Teachers reported that DP-2 trainers conducted a variety of activities during support visits (Figure 18). Most commonly, DP-2 trainers conducted lesson observations and provided feedback on those lessons. About half the teachers reported that support trainers had a one-to-one meeting with them. Modelling lessons and giving refresher training were less common. These findings potentially raise some concerns around how teacher trainers spend their time at schools. Teacher trainers are meant to play a crucial role in providing additional follow up training at the school level. However, at the same time they are also tasked with collecting data on how the programme is operating at the school level which is described as very extensive and time consuming. In addition, DLA staff has raised a number of questions around whether the collected data is used effectively and whether staff have the capacity and are adequately equipped to engage with the information they collect. If not, this could divert time and resources from spending additional time with teachers in schools and refreshing previously provided TPD training. Naturally good monitoring data is important and also ensures that programme implementation and delivery is assessed in a uniform and comparable manner, but the quantitative data suggests that more can be done on also spending time on modelling lessons and providing refresher trainings, especially given that this was identified as a key mitigation strategy for dealing with teacher transfers and delays in implementation.

Figure 18. Activities conducted by DP-2 trainers during support visits

In summary, direct DP-2 training sessions appear to have been well-attended across the three countries, but schools differ in the extent to which they have provided stepdown training and the format they have used for this. In general, stepdown training sessions are substantially shorter than full training sessions. In Kenya, it is uncommon for teachers to attend both literacy or both numeracy training sessions, while this is more common in the other two countries. Teachers in Nigeria receive the most follow-up support from both DP-2 trainers and government officials, while support to teachers is much less frequent and consistent in Kenya. All head teachers and resources teachers shared generally positive perceptions about the use of DP-2 teacher training in improving their teaching quality. The only criticism of the training sessions regarded their length, the lack of time to attend them, and spoiling teachers' weekend.

6.2.5 Impact of DP-2 on teaching quality

This section examines the impact of DP-2 on teaching quality. There are four indicators under this IO indicator:

- average number of numeracy/literacy teaching approaches attempted (score either 1 or 2 on the strategy);
- increased percentage of attempted strategies that are successful relative to the comparison group (i.e. out of the strategies the teacher used that are scored 1 or 2, on what proportion did they score 2?);
- the increased percentage of teachers observed providing a safe and inclusive space for all pupils irrespective of gender, ability, socioeconomic, or cultural background to a high standard (score of 2); and

- the increased percentage of teachers who score 'meet to high standard' on formative assessment.

For each indicator, we conducted a simple regression analysis with the impact indicator at midline as the outcome and the teacher's treatment status as the predictor. A statistically significant difference between treatment and control groups provides evidence of impact of DP-2 on the indicator. Baseline data are provided to demonstrate change.

Average number of teaching approaches attempted

During the lesson observation, the enumerator observed whether teachers used a number of different teaching approaches during literacy and numeracy lessons. Looking at the average number of teaching approaches attempted is meaningful only for the numeracy lessons, but not for the literacy lessons because of the way the approaches are conceived. For literacy, most teaching approaches were particular to the area of literacy being taught. For example, one strategy was 'students are taught the phonic rules'. We were not concerned with this being applied during every lesson; it was only suitable if it matches the learning objectives for that particular lesson. Rather, we were interested in how well it was applied and whether teachers practised the principles taught by DP-2 (that students explore the rules themselves). We therefore only included maths lessons for this analysis. In Ghana and Nigeria, the treatment teachers attempted more strategies at midline, but the difference was not statistically significant.

There is therefore some evidence of impact in Kenya, but not in Ghana or Nigeria.

Table 63 shows the number of numeracy teaching approaches attempted (scoring 1 or 2) for control and treatment lessons and at midline. The four approaches were:

- the teacher uses relevant physical models, objects, drawings, pictures, and diagrams to aid mathematical understanding;
- the teacher explains mathematical vocabulary and concepts clearly by making connections from the known to the unknown;
- the teacher engages all students actively in mathematics; and
- the teacher provides opportunities for students to discuss mathematics in pairs or groups.

At midline, in Kenya, treatment teachers attempted more approaches during the maths lessons compared to control teachers: they attempted an extra 0.6 methods per lesson, and this difference is statistically significant at the 10% confidence level. At baseline, there was no statistically significant difference. In Ghana and Nigeria, the treatment teachers attempted more strategies at midline, but the difference was not statistically significant.

There is therefore some evidence of impact in Kenya, but not in Ghana or Nigeria.

Table 63. Impact of DP-2 on number of numeracy teaching approaches attempted

Country	Midline			Regression treatment effect coeff.
	Number of approaches in instrument	Average attempted: control	Average attempted: treatment	
Ghana	4.0	1.9	2.3	0.4
Kenya	4.0	1.7	2.4	0.6*
Nigeria	4.0	2.0	2.6	0.5

Percentage of attempted strategies that are successful

This indicator is calculated for each lesson as the number of strategies that were successful (scored 2) as a percentage of the number of strategies that were attempted (scored 1 or 2). Table 64 shows these percentages, as well as the treatment coefficient when the percentage of attempted strategies that were successful is regressed on treatment.

In Kenya, the success rates of treatment teachers were better than those of control teachers for English, but this difference was not statistically significant. Their success rates were worse for maths, and the difference was marginally significant at the 10% confidence level. There was thus no evidence of impact of DP-2 on the percentage of attempted strategies that were used successfully in Kenya. To understand this finding better, teachers in treatment lessons successfully used more strategies than those in control lessons (the difference is statistically significant), but this was because they attempted more and their success rate was a little lower. This suggests that treatment teachers are attempting the strategies that they learn and are fairly successful with them. However, some extra support or further exposure to the programme may be helpful to improve the success rates of strategies.

In Ghana, treatment teachers were 35.3 percentage points more successful at implementing maths strategies than control teachers. This difference is large and statistically significant. There were no differences between treatment and control teachers in their success rate for English.

In Nigeria, treatment teachers were significantly more successful than control teachers in their use of teaching strategies for English by 33.5 percentage points. The difference for maths was smaller and not statistically significant.

At baseline, more strategies were included in the instrument and the criteria to score a 2 were looser. The measures are therefore not equivalent between baseline and midline. However, the baseline data do provide information about differences between classroom practice in treatment and control schools before DP-2 interventions. The data show no significant differences in scores between treatment and control lessons at baseline.

There is therefore some evidence of impact in the form of more successful implementation of teaching strategies in Ghana and Nigeria, but only for one subject in each country. In addition, teachers' success rates in Nigeria remained relatively low overall. Treatment teachers use only half of the attempted strategies for English and 62% of the attempted strategies for maths successfully. In Ghana, success rates for English strategies were also low.

Table 64. Impact of DP-2 on percentage of attempted strategies that are successful

	Baseline			Midline		
	Successful strategies (av. % of attempted): control	Successful strategies (av. % of attempted): treatment	Regression treatment effect coeff.	Successful strategies (av. % of attempted): control	Successful strategies (av. % of attempted): treatment	Regression treatment effect coeff.
Ghana						
Maths	29	46	16.6	50	85	35.3***
English	23	37	13.4	71	68	-2.8
Kenya						
Maths	91	86	-4.4	93	81	-12.8*
English	88	97	9.2	78	91	13.0
Nigeria						
Maths	58	43	-14.8	51	62	11.4
English	39	39	0.4	21	54	33.5**

Percentage of teachers observed providing a safe and inclusive space

At baseline, enumerators made a judgement about whether the classroom was a safe place (physically and emotionally) and whether it was socially inclusive. If it was both, they recorded a '2'; if it was one but not the other, they recorded a '1'; and if it was neither, they recorded a '0'.

The same overall judgement was made at midline, but this was supplemented by additional strategies for providing a safe and inclusive space that are provided in the DP-2 training sessions:

- teacher voices high expectations for students' success;
- teacher praises effort and works on confidence building;
- teacher treats failure as a natural part of learning;
- teacher praises success explicitly;
- teacher uses or threatens corporal punishment;
- teacher belittles/discourages, puts down, or shames a pupil; or
- teacher refers to a pupil's gender, culture, religion, family name, physical appearance, etc. as a means of criticism or labelling.

The last three are clearly negative and teachers were instructed not to use these strategies. For these, the score was inverted, so that 0 was always worse and 2 was always best. Table 65 shows the safe and inclusive space indicators. Observer judgement shows a binary response to the indicator: 'The classroom environment offers a safe and socially inclusive space for all students irrespective of gender, ability, socioeconomic or cultural background' (1 if the classroom environment is safe and socially inclusive; 0 otherwise). The index score shows the total score from the seven indicators listed above as a percentage of the total scores available. This is not easy to interpret in isolation, but provides a useful basis for comparisons between treatment and control lesson. Further details are provided later in this section.

Table 65. Impact of DP-2 on providing a safe and inclusive space

	Baseline			Midline		
	Safe and inclusive space (% of lessons): control	Safe and inclusive space (% of lessons): treatment	Regression treatment effect coeff.	Safe and inclusive space (% of lessons): control	Safe and inclusive space (% of lessons): treatment	Regression treatment effect coeff.
Ghana						
Observer judgement	47	45	0.3	61	80	20.5*
Index score				57	57	0.2
Kenya						
Observer judgement	77	86	9.1	86	87	0.8
Index score				53	52	-0.5
Nigeria						
Observer judgement	75	68	-7.2	44	62	17.3
Index score				49	50	0.7

Percentage of teachers who score 'meet to high standard' on formative assessment

Enumerators observed whether teachers used four assessment strategies during the lesson:

- the teacher uses both closed- and open-ended questioning;
- the teacher gives students time to think before answering questions;
- the teacher checks students' knowledge and understanding during the lesson; or
- the teacher checks students' mastery level at the end of the lesson.

Each was scored on the scale of 0 to 2.

Table 66 shows the scores for two indicators. First, the number of successful strategies, which shows the number of strategies that were scored a '2'. Second, this number is expressed as a percentage of strategies attempted (scored '1' or '2').

In Kenya, there was no evidence to suggest that treatment teachers applied the assessment strategies more successfully than control teachers. Treatment teachers did not demonstrate more successful assessment strategies than control teachers and their success rate was not higher.

In Nigeria, however, there was clear evidence of better performance in treatment schools than in control schools at the 5% significance level. Treatment teachers demonstrated 0.7 more successful strategies per lesson on average, and this was largely because their success rate was higher, by 21 percentage points.

In Ghana, the difference between the number of strategies implemented successfully was not statistically significant, but the difference in success rate is significant at the 10% confidence level. The success rate was 15 percentage points higher in treatment lessons than in control lessons.

The difference between Kenya and the other two countries may be in part because of higher rates of success in all schools in Kenya, which reduces the impact of DP-2 training by these indicators. It is possible that indicators defined another way might identify differences, but they are developed to reflect training materials. It may therefore be beneficial to tailor training to reflect the higher base level of performance.

Table 66. Impact of DP-2 on attempting and successfully using assessment strategies

	Baseline			Midline		
	Number of successful assessment strategies: control	Number of successful assessment strategies: treatment	Regression treatment effect coeff.	Number of successful assessment strategies: control	Number of successful assessment strategies: treatment	Regression treatment effect coeff.
Ghana						
Number of successful strategies	0.85	1.38	0.5*	2.11	2.51	0.4
As percentage of strategies attempted	28	41	13.1	61	76	15.2*
Kenya						
Number of successful strategies	2.7	2.4	-0.3	3.1	2.8	-0.2
As percentage of strategies attempted	89	89	-0.3	86	82	-4.2
Nigeria						
Number of successful strategies	1.1	0.9	-0.1	1.1	1.7	0.7**
As percentage of strategies attempted	40	41	1.6	36	57	21.3**

Self-reported perceptions of changes in teaching quality

From the qualitative data, we also saw some emerging evidence of changes to teaching practices in the classroom mentioned by both head teachers and students.

From the perspective of the schools, in Nigeria, head teachers reported that teachers have learned more strategies and methods of teaching, such as being gender-responsive during teaching, child-centred approaches to teaching, grouping, and classroom participation methods. They reported that teachers had learned how to improvise and use local materials, which they could develop on their own with less cost or no cost at all. They can now use songs, storytelling, and local materials like broom sticks and bottle tops to teach topics in maths.

‘Teachers used to come with something like an orange, to demonstrate by cutting the orange into pieces and asking what division has happened and many other practical things. We didn’t have it before; it’s provided by Fitila.’

Interview with resource teacher, Nigeria

‘There have been significant improvement in strategies [teaching methods] which teachers did not know before now and as a result, students are doing better because their teachers have received good training and have improved in lesson delivery.’

Interview with head teacher, Nigeria

During the baseline, teachers did not report having targets for maths and English that they wished to see pupils attain, but at midline several head teachers and resource teachers reported setting targets for their students following the DP-2 training sessions they received.

Similar examples emerged in Kenya and Ghana, where schools also reported using the DP-2 training and the learning materials extensively in their lessons to allow them to explain certain abstract concepts in an easier way.

- ‘Interviewer: What about the level of comfort in teaching literacy and numeracy? How is the level of comfort?’
- Respondent: Though we are teachers, all of us are not conversant with the letter sounds and those things—you know there are some letters that have different, different sounds, one letter with different sounds—we, as teachers, some of us used to have problems with that, but because we have attended a series of workshops, we have improved in that area.
- Interviewer: What about numeracy? Have you any comfort in teaching numeracy?’
- Respondent: Yes.
- Interviewer: What you talked about is literacy, so what about numeracy?’
- Respondent: For numeracy too we have a CD. It is programme 78 or 79 for numeracy and, even as a teacher, before some of us came to that CD, maybe we wanted to teach fractions and for some of us, before we had this CD, we even had difficulty with fractions.
- Interviewer: Programme number what?’
- Respondent: Seventy-nine, and when we went to the workshop and the video was shown to us, fractions became so easy; so now when we are going to teach it we don’t find any problems. And decimals, those things were not also easy, but with the help of the CD, we brought it here, and as a teacher we sat down and watched it together.’

Interview with head teacher, Yendi, Ghana

The findings from head teachers were also corroborated by girls sampled for the qualitative study. Girls reported that teaching has improved compared to previous years, that teachers have become more willing to go over topics that were not clear, and that they do so with patience. Such examples emerged across the three countries.

They also reported that teachers use illustrations more and improvised materials to aid comprehension; that they carried out group work and question and answer sessions before and after the lesson; and that they gave students opportunities to demonstrate

in front of the class. The students also reported that they liked it when the teachers checked that the students had understood at the end of the class and provided explanations when this was lacking.

Especially in Ghana, giving examples in class was consistently mentioned as an important aspect of how easy or difficult it was for girls to grasp the issues they were being taught, although the changes reported in teaching practice seemed sometimes to be caused by other factors (such as new teachers coming in, or the grades of the children changing) and were not always directly tied to the DP-2 interventions as such.

‘It’s the same teacher who teaches both subjects. He writes on the blackboard, explains to us, and gives us lots of examples, and then asks us to tell him when we don’t understand so that he can explain to us. He also gives practical demonstrations by asking some students to come and solve some questions or explain to us to confirm that we already understand.’

Interview with cohort girl, East Gonja, Ghana

Cohort girls in some schools in Kenya such as Kajiado, Wajir, and Nairobi noticed a difference in the way their teachers were teaching them this year, and reported an increase in confidence, motivation, and inclusion as a result.

‘Interviewer: During maths and English lessons, do you feel relaxed?’

Respondent: I feel relaxed.

Interviewer: What makes you feel relaxed?’

Respondent: The teacher divides us into groups and gives girls a chance to answer questions and do mathematics on the blackboard.’

Interview with cohort girl, Kajiado, Kenya

In Nigeria and Ghana, too, some girls reported that teachers were relatively more patient and open to being asked questions in class during the lessons.

‘Our teachers have also changed in the way they teach us. This is a good change; if we did not understand, they start explaining, one after the other.’

Interview with cohort girl, Nigeria

‘Interviewer: So have you noticed any changes in the way he is teaching you?’

Respondent: Yes.

Interviewer: What changes have you seen?’

Respondent: He isn’t temperamental when teaching us. When he’s teaching and you don’t understand something, you can ask him, and he’ll take time to explain.’

Interview with cohort girl, Savelugu, Ghana

Both head teachers and girls agreed that teaching quality had improved in all three countries as a result of DP-2 teacher training. Head teachers reported that teachers are able to use different teaching methods and are more confident in their teaching skills. Girls also claimed their teachers were considerably better at explaining topics in a range of ways and more attentive and patient to their needs. However, qualitative analysis did not reveal any specific variations in self-reported changes in teaching within the countries, which are more evident in quantitative findings.

6.2.6 Further differences between treatment and control lessons

The impact indicators above provide a high-level analysis of the difference between lessons in treatment and control lessons. Here we provide further details of differences between treatment and control lessons at midline.

Classroom environment: teachers providing a safe and inclusive space

There were no significant differences between treatment and control lessons for any of the seven indicators related to teachers providing a safe and inclusive space. The negative practices were observed very rarely. This may be because teachers are less likely to do these things when they are being watched, so it is difficult to assess what normal practice might be.

Figure 19, Figure 20, and Figure 21 show that most positive practices were also used rarely. The main exceptions (to a degree) were treating failure as a natural part of learning and voicing and showing high expectations. The former indicates that the teacher does not respond negatively when a pupil gives the wrong or no response. The latter indicates that the teacher voices high expectations or shows high expectations by not letting students fail or sit out the lesson. Praising effort and praising success specifically were very rare in both countries. This indicates that teachers' praise is focused almost entirely on attainment (getting the correct answer) and that it is general in nature (good, correct, etc.) rather than constructive (e.g. 'I like the way that you...').

Figure 19. Classroom environment, Ghana

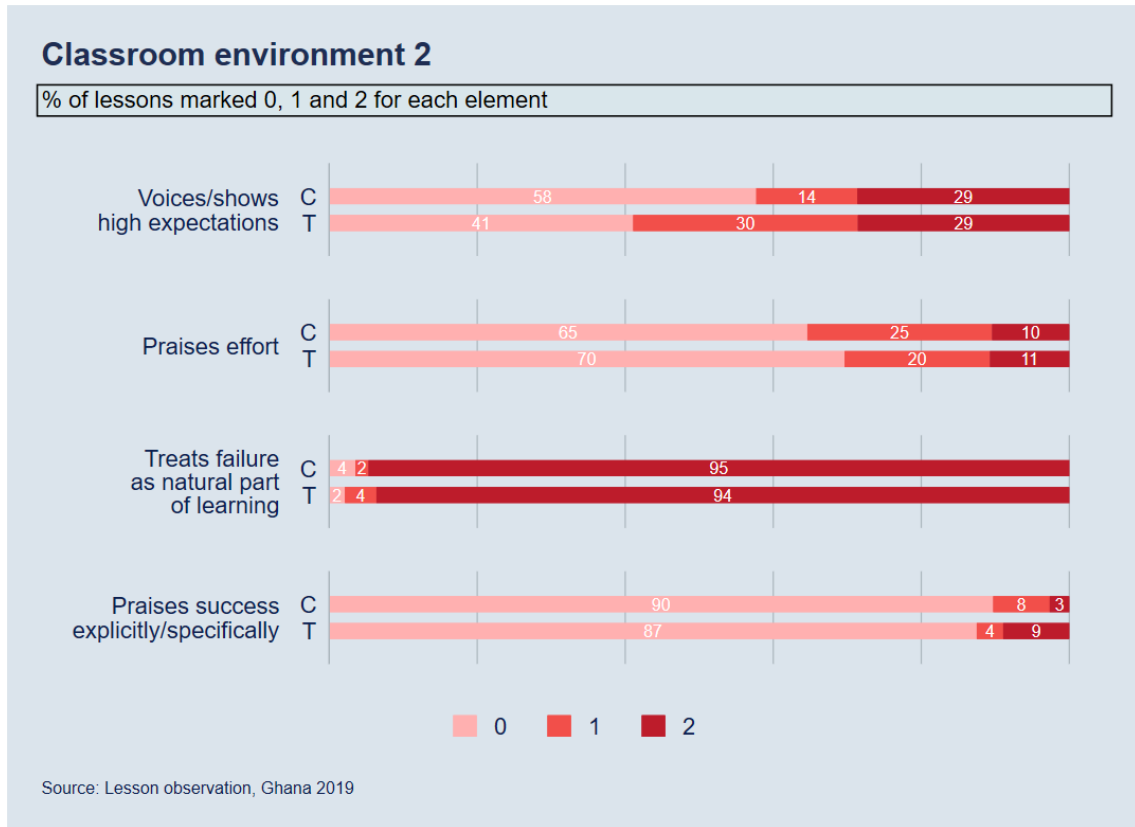


Figure 20. Classroom environment, Kenya

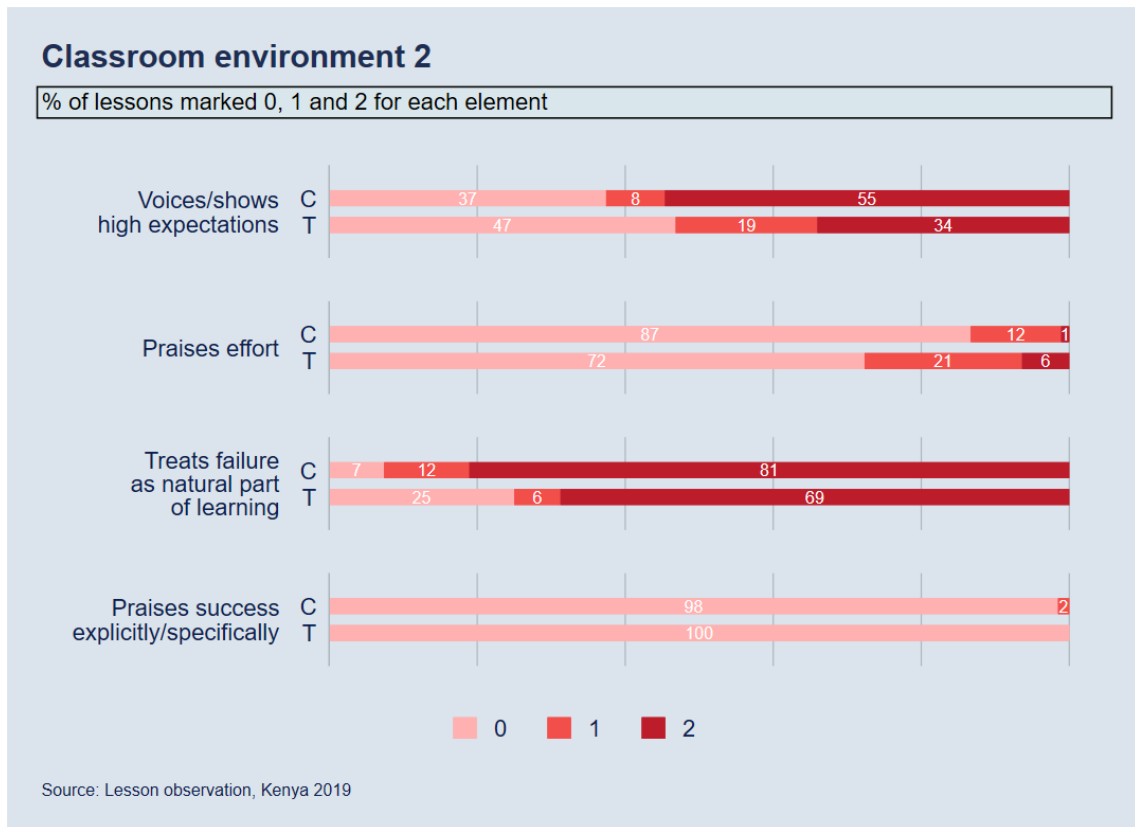
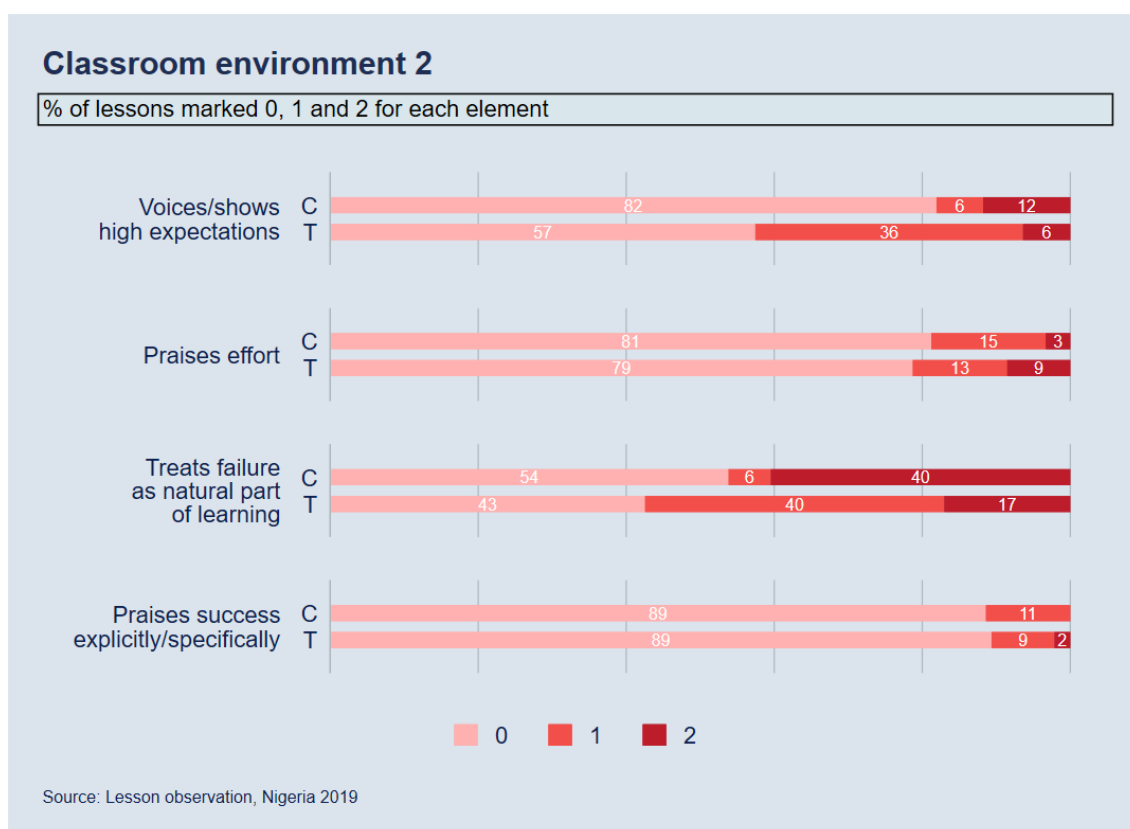


Figure 21. Classroom environment, Nigeria

Maths teaching approaches

There was only one statistically significant difference between treatment and control lessons in the scores for maths teaching approaches in Ghana and Nigeria (and none in Kenya). Treatment teachers in Nigeria were more likely to provide opportunities for students to discuss mathematics in pairs or groups. To score a 1 on this indicator, at least three-quarters of students in the class had to discuss maths for at least five minutes. To score a 2, the teacher also had to facilitate discussions by talking with students. Ordered probity regressions estimate that treatment teachers were 23% and 32% less likely to score a 0 for this indicator in Ghana and Nigeria respectively. Treatment teachers were 22% and 19% more likely to score a 2 for this indicator this than control teachers for Ghana and Nigeria respectively (Figure 22 and Figure 23).

Figure 22. Maths teaching and learning approaches, Ghana

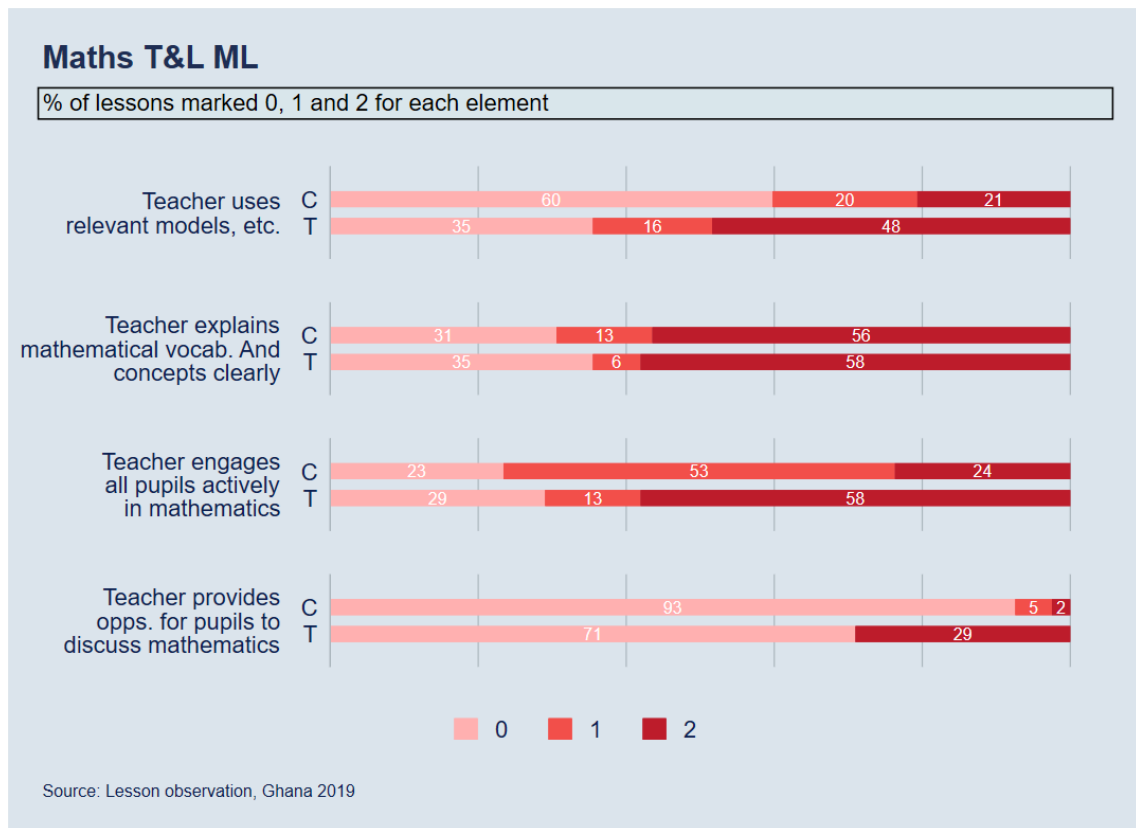
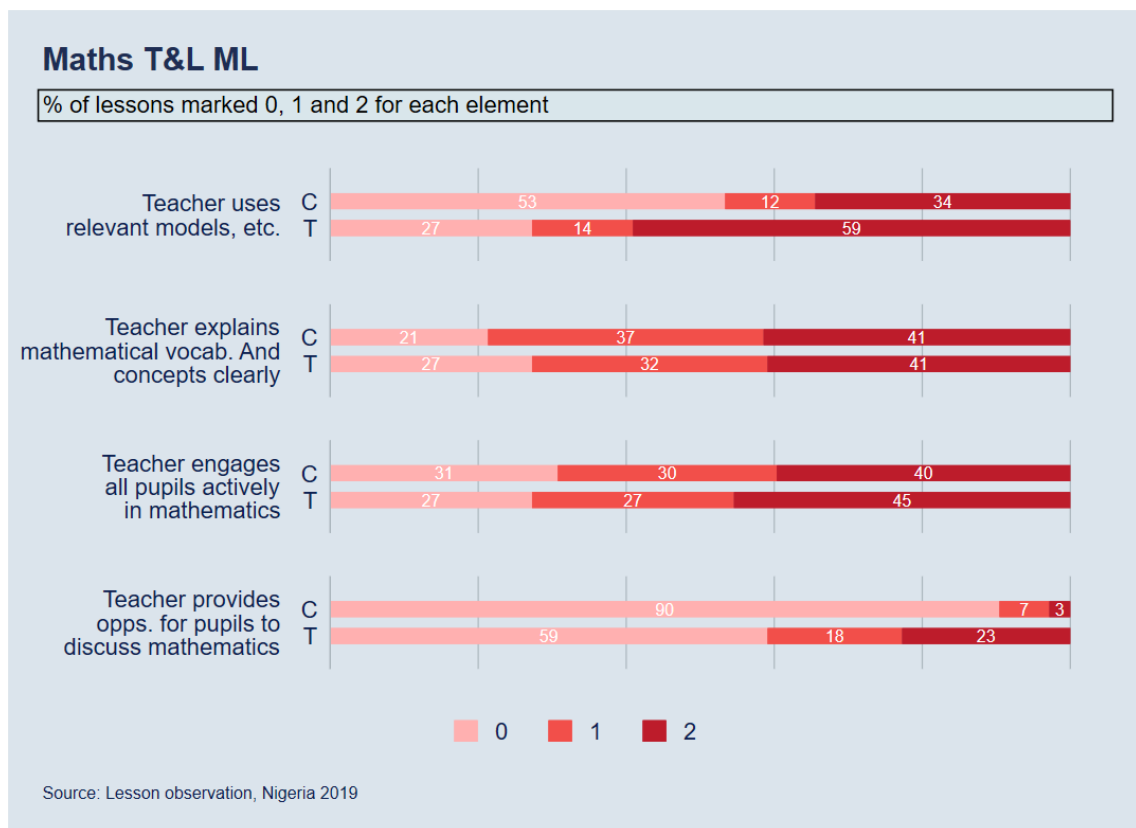


Figure 23. Maths teaching and learning approaches, Nigeria



English teaching approaches

There were no significant differences in the likelihood of scoring a 2 for any of the English approaches in Ghana or Kenya.

In Nigeria, enumerators observed that teachers were 15% more likely to score a '2', indicating that students were engaged in relevant activities for at least 10 minutes. This was not statistically significant at the 10% level so we cannot have full confidence that this is a result of DP-2. The lack of significance is partly a result of the fact that these strategies were rarely attempted, so there were very few observations of the success rate. It would have been helpful to have more observations for this, as the difference in success rate is large (Figure 24).

Compared with control teachers, treatment teachers were also 33% more likely to provide opportunities for students to write and 20% more likely to give some instruction or feedback on writing (to score a '2') (see 'Pupils spend some time writing' in Figure 25).

Figure 24. English teaching and learning approaches, Nigeria 1

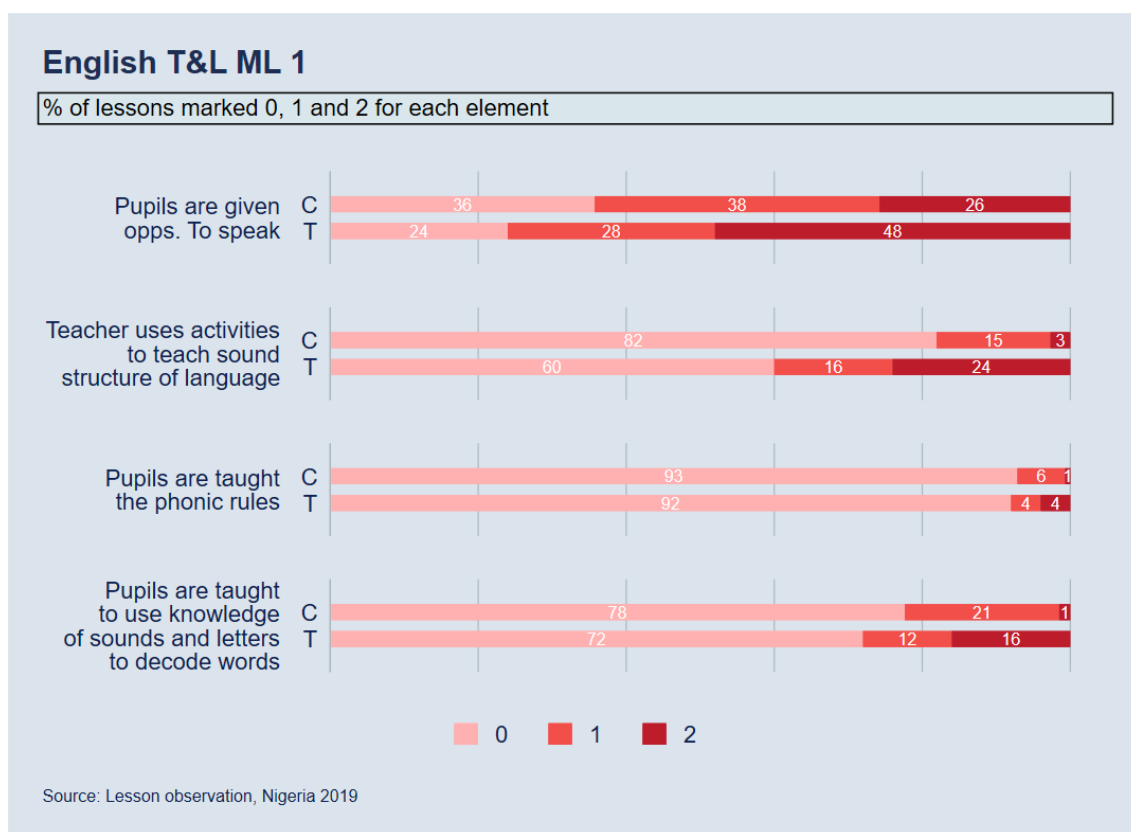
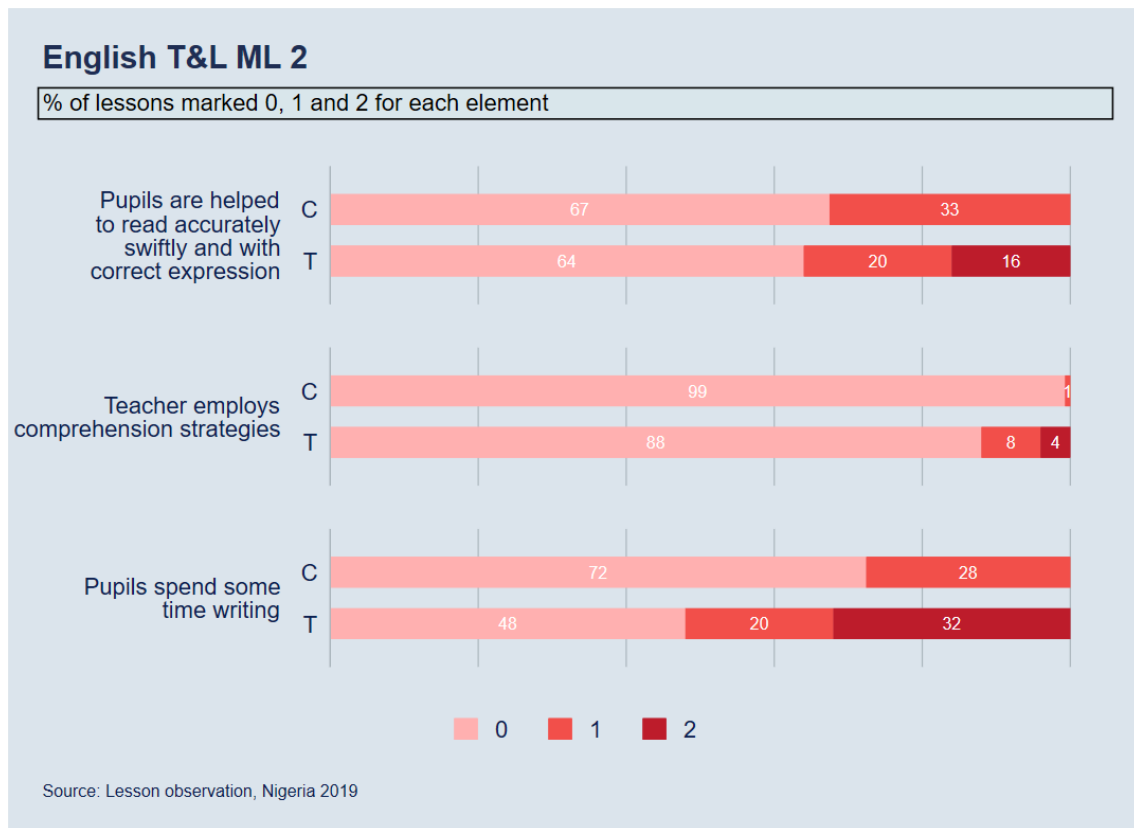


Figure 25. English teaching and learning approaches, Nigeria 2



Assessment strategies

In Ghana, the scores for individual assessment strategies were not significantly better in treatment lessons than in control lessons. However, as described earlier in the chapter, the proportion of attempted assessment strategies that were successful (scored '2') was significantly larger in treatment lessons than in control lessons (see

Table 66). Figure 26 shows the reason for these findings. Overall, slightly fewer assessment strategies were attempted in treatment lessons than in control lessons, but a slightly larger proportion of these were successful for all four strategies. The differences in success rate are not large enough to be significant at the individual level, but they are significant when combined.

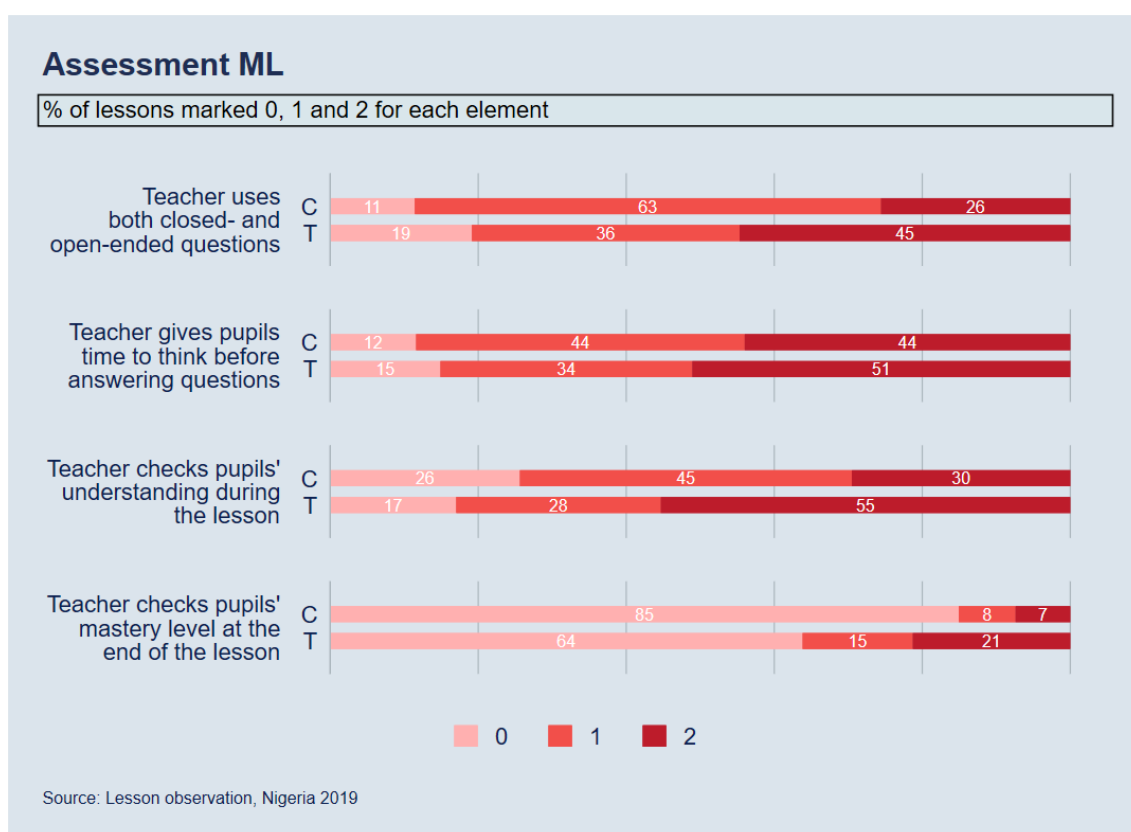
In Kenya, treatment teachers performed no better than control teachers for all four of the assessment strategies. Indeed, they were 23% less likely to check mastery at the end of the lesson than control teachers.

The opposite was observed in Nigeria, where treatment teachers were more likely to check understanding during the lesson and test mastery at the end of the lesson.

For these indicators, the difference between a '1' and a '2' was that the teacher observed or checked the understanding/mastery of a range of students (male and female, front and back).

Treatment teachers were 20% more likely to check the understanding of a range of students (score a '2') than control teachers. They were 21% more likely to check mastery at the end and 14% more likely to do so for a range of students (Figure 25).

Figure 26. Assessment methods, Nigeria (midline)



6.2.7 Conclusion

It is difficult to measure the kinds of changes in classroom practice that result in improved learning reliably so we need to be mindful of the limitations of lesson observations when interpreting the data (see the final paragraph of Section 6.2.1).

However, the lesson observation data provided some evidence of impact. Enumerators observed more numeracy teaching approaches being attempted in treatment schools than in control schools in all three countries, although the difference was only statistically significant in Kenya. Success rates were higher in treatment schools for maths teaching strategies in Ghana and English teaching strategies in Nigeria.

The lesson observations found evidence that teachers in treatment schools were applying more of the approaches taught in DP-2 and in many cases were more successful when they did so. Although the sample was not large enough to provide sufficient power to reach the level of statistical significance in many cases, the evidence suggests that DP-2 has been successful in changing teachers' practice in the desired ways.

The strongest evidence of impact was observed in assessment strategies in Nigeria where treatment teachers attempted more strategies than control teachers and had a higher success rate. They were particularly more likely to check understanding during the lesson and check mastery at the end of the lesson.

6.3 Community attitudes and perceptions

Community engagement in DP-2 takes the form of a CAP process. The process is supported by DP-2 through a series of workshops where participants (head teachers, teachers, SMC/SBMC/Board of Management (BOM) members, parents, and community leaders) identify barriers to learning and transition and capture these in a CAP. The intention is that the plan provides a detailed assessment of contextual barriers to girls' education and identifies the resources and actions required to deal with them. The CAP process itself brings the school and community together to promote joint responsibility for girls' education. While head teachers are the ultimate owners of the action plans, the communities are the closest partner in implementing these plans.

The DP-2 TOC assumes that community engagement in girls' education will contribute to their increased chances of enrolment, attendance, and overall completion of school. An underlying assumption is that engaging the community in a CAP process to identify and address barriers to learning and transition will positively change community attitudes towards girls' education, increase the value of schooling in the eyes of parents/guardians, increase support for girls' education, and in turn improve girls' own aspirations and their learning outcomes.

This section provides a midline assessment of the current state of implementation of the CAP process, any self-reported and observed attitudes towards girls' education among girls, their parents and community members involved in the CAP process and any changes from the baseline. We begin by providing an overview of the key findings against the logframe indicators. Next, we review the training and development of the action plans and their implementation, before turning to the outcomes that the CAP process has achieved.

6.3.1 Overview of findings against the logframe indicators

Table 67 presents a summary of the quantitative and qualitative findings against the logframe indicators, a summary of the interpretation of the findings, and a reflection on whether the targets remain measurable and achievable in the next evaluation round.

The findings and their interpretation and implications are explored in more detail in the rest of the section.

Table 67. IO logframe indicators on attitudes and perceptions

IO	IO indicator	Baseline	Midline target (% point improvement)	Midline	Target achieved ? (Y/N)	Target for next evaluation point (% point improvement)	Will IO indicator be used for next evaluation point? (Y/N)
Attitudes and perceptions	Percentage of cohort girls that aspire to complete university (provided no constraints)	Ghana: 52% Kenya: 74% Nigeria: 41%	Ghana: 7 Kenya: 3 Nigeria: 6	Ghana: 41% Kenya: 84% Nigeria: 60%	Ghana: N Kenya: Y Nigeria: Y	Ghana: 5 Kenya: 2 Nigeria: 5	Y
Main qualitative findings							
<ul style="list-style-type: none"> • Improving community leader knowledge of barriers to girls' education and ways to address them. • In Ghana, participants in the CAP process reported carrying out community-level activities, being involved in school activities such as clubs and remedial classes, and following up on the issues that were identified as specific barriers to education at baseline. Participants in the CAP process reported encouraging parents to decrease the workload of household chores and working outside the home, a key barrier identified at baseline. However, the progress of the CAP process suffered in those communities where head teachers and community members originally involved in the CAP process moved out of the community. • In Nigeria, community leaders continuously sensitise parents around the value of education. Participants in the CAP process clearly see their role in addressing barriers to education including encouraging parents to send their children to school and reducing drop-out. Communities in Nigeria seem to have a sense of ownership when it comes to girls' education which is manifested in the way that parents are willing to listen to their leaders, but also to make contributions. • In Kenya, participants in the CAP process regularly raise awareness within the community and work together with the chief to increase attendance and/or reduce drop-out in their personal capacity but have not done this through collective action or a planned process as designed by DP-2. Participants in the planning process felt that their inaction was due to the lack of support and direction they had received from DP-2 or other leaders of the community. • Head teachers are able to express finding utility in the CAP process. • In Nigeria, head teachers were highly involved in the CAP-related training sessions and the development of the CAPs, while in Ghana they were fairly highly involved. In Kenya, head teachers were the least involved, but particularly in formal schools in Nairobi and the surrounding regions. • Parent support for their daughters' education. • The general perception in Kenya, Nigeria, and Ghana is that parents value education to a greater degree, and that girls are more likely to transition to higher grades than ever before. In Ghana and Nigeria in particular, parents are becoming more aware of practices that could hinder favourable learning outcomes such as being late, poor attendance, hawking, and involvement in household chores. It is likely that changes in attitudes and perceptions are not exclusively because of the CAP process but also because of other projects or committees (e.g. SMC; PTA) that share similar objectives, and are in some cases already more established in the communities. 							
Interpretation							
<ul style="list-style-type: none"> • On the quantitative indicator, in Nigeria, we found strong impact of DP-2 on girls' aspirations to go to university and the target is met. In Kenya, the target is met but there is no clear indication that improvements in girls' aspirations have occurred as a result of DP-2. In Ghana, the target has not been met and girls' aspirations decreased in both treatment and control schools. • Where CAP processes are functioning, participants in all three countries were able to articulate how concrete actions have been taken to reduce drop-out rates or improve attendance of girls who were facing particular barriers to education. This suggests DP-2's causal assumption (underlying the 							

IO	IO indicator	Baseline	Midline target (% point improvement)	Midline	Target achieved? (Y/N)	Target for next evaluation point (% point improvement)	Will IO indicator be used for next evaluation point? (Y/N)
		assumption that community involvement in action planning to identify and address barriers to learning and transition leads to changed attitudes of community members and results in concrete actions in support of girls' education) holds.					
		Reflections and targets					
		<ul style="list-style-type: none"> At midline, we did not collect data on the indicator 'Percentage of parents reporting support for their daughters to attend secondary or higher education' because there was no household survey at midline by design. We do, however, report on qualitative evidence related to this indicator. The targets for endline for the indicator presented above remain achievable, with exception of Kenya where we observe that 84% of girls at midline already express that they would like to complete university education. We therefore propose lowering the target from three percentage points to two percentage points. Aspirations to attend university education are affected by the availability and accessibility of university education, and may therefore not be something that the project can reasonably influence. It would be more meaningful to change the indicator to the percentage of girls that aspire to complete secondary education, although it should be noted that that percentage is already very high in Ghana and Kenya, leaving limited room for improvement. We recommend reformulating the first and second qualitative indicator to read '<i>Participants in CAP processes report that they are better aware of barriers to girls' education in their community, are aware of who (or which groups) is particularly at risk, and are taking concrete steps to address these barriers</i>'. 					

6.3.2 Training and development of the community action plans

Box 8. DP-2's design of the CAP process

As part of the CAP process, school and community members participate in two training sessions (Community Workshop 1 and Community Workshop 2). According to discussions with DLA, the community action plan is designed to be owned by the school/head teacher and relies on heavier involvement from the school than the community, although individuals from both the school and the community are expected to be jointly involved in developing and implementing the plan. DLA country-based teams are given clear guidance on who to target for CAPs participation, and the CAP manuals outline the following participant groups@

- i. Parent-Teacher Associations;
- ii. School Based Management Committees;
- iii. Community Opinion Leaders;
- iv. Community Advocates;
- v. Religious Leaders; and
- vi. Teachers who are particularly strong in either literacy or numeracy.

Community Workshop 1 leads community and school representatives through a process of identifying barriers and needs related to learning (literacy and numeracy), attendance, and transition and developing action plans to address those needs. Community Workshop 2 provides an opportunity for participants to revise and strengthen their actions plans and to identify and plan for building local partnerships to support the implementation of their plans.

Participants generally leave the training session either with a complete action plan to be approved by important stakeholders, or in some cases in need of more time to complete the action plan and get wider approval from key stakeholders. The action plans typically contain explicit sections on: i) identification of barriers; ii) actions; iii) timeline for actions; iv) resources needed; and v) a verification strategy by CAP members. As they complete a cycle of actions, communities are encouraged to continue the process of change through renewed action planning.

In addition, DP-2 has introduced an L4C training session for school and education office leaders focusing on how to monitor and prioritise measures for improved student attendance, learning, and transition, with a focus on teacher support, identifying the most vulnerable, meeting gender-specific needs and the needs of the most vulnerable, attendance tracking, and creating a culture of learning. The workshop provides an opportunity to action plan from a leadership perspective at the school level, building on and strengthening action plans with manageable and sustainable solutions.

DP-2 training for participants in the CAP process

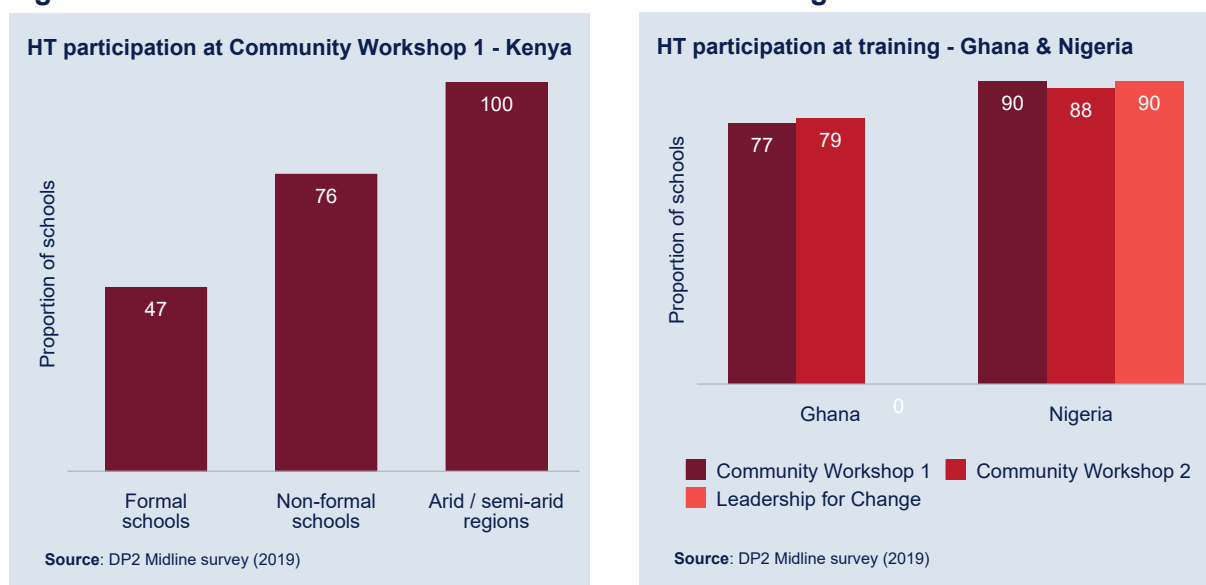
As described above, DP-2 provides three training sessions for CAP: Community Workshop 1, Community Workshop 2, and L4C training. At the time of the midline survey, based on information provided by DP-2, the first two training sessions had been completed in Ghana and Nigeria, but Community Workshop 2 was still being rolled out in Kenya. The L4C training was completed in Nigeria, in progress in Kenya, and had not yet begun in Ghana. Countries were therefore at different stages in the roll-out of the DP-2 CAP training sessions.

In the quantitative survey, we asked head teachers (the ultimate owners of community action plans) about their attendance at these training sessions. In Nigeria, almost 90% of head teachers had attended every one of the three workshops, while in Ghana,

close to 80% of head teachers had attended each of the two training sessions that had been completed at the time of the midline survey.

In Kenya, only the first community workshop had been completed at the time of the midline survey. Head teacher attendance varied greatly by stratum, with all head teachers in the arid/semi-arid regions attending the training, compared to only 47% of head teachers in formal schools in the other regions. DLA staff explained this variation in implementation practice as resulting from difficulties in engaging with head teachers at formal schools in the Nairobi region, who were described as often too busy to engage directly and instead delegated workshop attendance to teachers.

Figure 27. Head teacher attendance at CAP-related training sessions



The quantitative findings are fully in line with the qualitative data. Participants in the CAP process in Kenya reported that they were trained one to two years ago. Participants in Wajir and Nairobi's schools could only provide a hazy summary of the training sessions, whereas the participants in Kajiado and Machakos could clearly recollect what they had been taught.

'Interviewer: How did you become a CAP member?

Respondent 3: We were given a seminar, but I don't remember exactly when. I think we were taught about performance of girls and importance of their education.'

Group discussion with CAP participants, Wajir, Kenya

'Interviewer: What were you trained on?

Respondent 3: How to take care of children, behaviour in children, what you do at home that makes children underperform, and things like that; transitional behaviour when a child moves from primary to secondary, how the child will learn at school and their performance, and how I as a parent am supposed to raise this child to have the right behaviour for progress in school.'

Group discussion with CAP participants, Machakos, Kenya

In Nigeria, all members of the CAP process interviewed reported attending one or two training sessions from DLA since baseline, through which they had a better understanding of how to develop the community action plan and support the school more efficiently. They were trained on how to develop a plan and how to source funds, appoint person(s) responsible for execution, and set a timeline to achieve it. Other training sessions focused on sensitising parents and community members on issues related to the education of children, especially girls.

In Ghana, in three out of six schools visited for the qualitative midline, participants in the CAP process reported attending a workshop where they discussed the importance of girls' education, the use of videos in the classrooms, and the aims and objectives of the project. Most CAP participants spoke about attending workshops that provided guidance on how to develop the community action plan, including interaction with stakeholders from the school and the general community. Only one or two schools outlined that they attended workshops where they had roleplays teaching them how to engage with different stakeholders and partners to raise funds.

Each workshop typically runs for one or two days. The way the workshops are rolled out differs by country – both in terms of timing and approach. In Kenya, workshops are carried out by cluster in each sub-county. In Nigeria, workshops are run at LGA level by a team of mobilisers. In these instances, workshops are capped at 40-50 participants per iteration which equates to roughly six to eight schools. If attendance could not be capped, groups would be split into subgroups and then trained by individual mobilisers. Finally, in Ghana, workshops are held with 10 schools per district at a time (a circuit). Clubs and Community Action Mobilizers (CCAMs) are responsible for training schools within their district and are only able to draw on additional support from other CCAMs if they have additional capacity available.

DLA staff reported that ensuring that the right groups of people attended the community workshops could be challenging if not properly managed. One challenge reported by Ghanaian and Nigerian mobilisers is absenteeism and late arrival of participants. In Ghana this was sometimes due to delays in sending out invitation letters to schools which meant that participants were left with little time between receiving the letters and the actual training. More lead in time for planning the workshops could therefore partially address this problem. In Nigeria, mobilisers reported dealing with problems with attendance at workshops by leveraging their relationships with head teachers and proactively following up with participants. In Kenya, DLA staff reported that at times different representatives from a school and community would attend the different workshops which made it necessary to repeat content and diluted the ownership of the CAP. However, this did not seem to be a challenge the programme faced in Ghana and Nigeria.

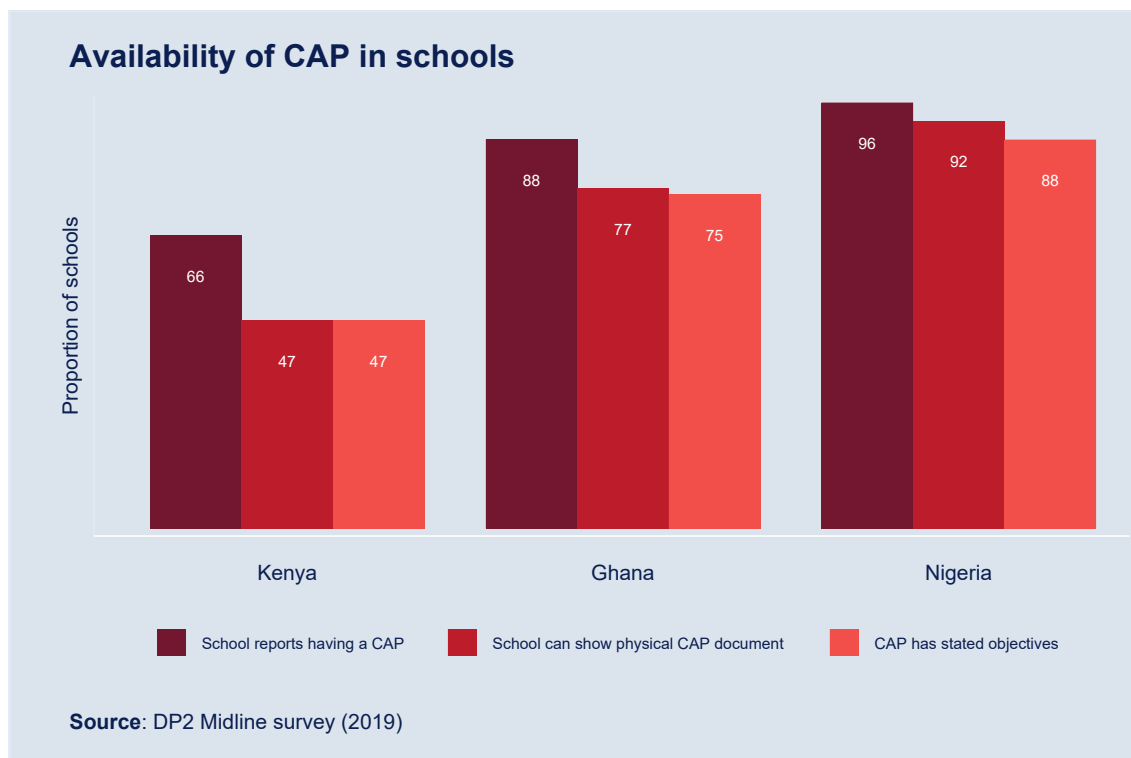
In all countries, government field officers are invited to attend the workshops so as to be better integrated into the programme and prepared for follow-up visits and monitoring activities. In Kenya, mobilisers explained that they aim to train MoE and TSC officials ahead of the wider workshops and - if possible - ask government officials to run selected sessions at the workshops. However, it was difficult to assess to what extent this actually happens and how widespread this practice is, especially as both DLA staff and government officials frequently cited time constraints as limiting their ability to engage with the different steps of the programme implementation and roll out.

Programme staff across all countries feel that for the CAP process to be successful, communities have to be properly sensitised. The programme seems to rely heavily on its partners in government to facilitate and support this process. In Ghana, the community participation coordinator (CPC) is key to sensitising local chiefs, SMCs, women leaders (Magazia), and other actors. In Nigeria, SMOs⁸⁶ who are part of the Social Mobilisation Department of SUBEB are key for handling initial community engagement and introducing DLA to the community. Although DLA staff in Kenya did not mention any particular government officials they work with when introducing the programme within a community, they do recognise the importance of gaining the approval of the chief prior to any programme implementation and seek the support of MoE/TSC for the same. However, unlike for the engagement with the MoE and TSC representatives, CCAMs reported that there are no guidelines or protocols in place that outline how, whether and when they should engage the chief.

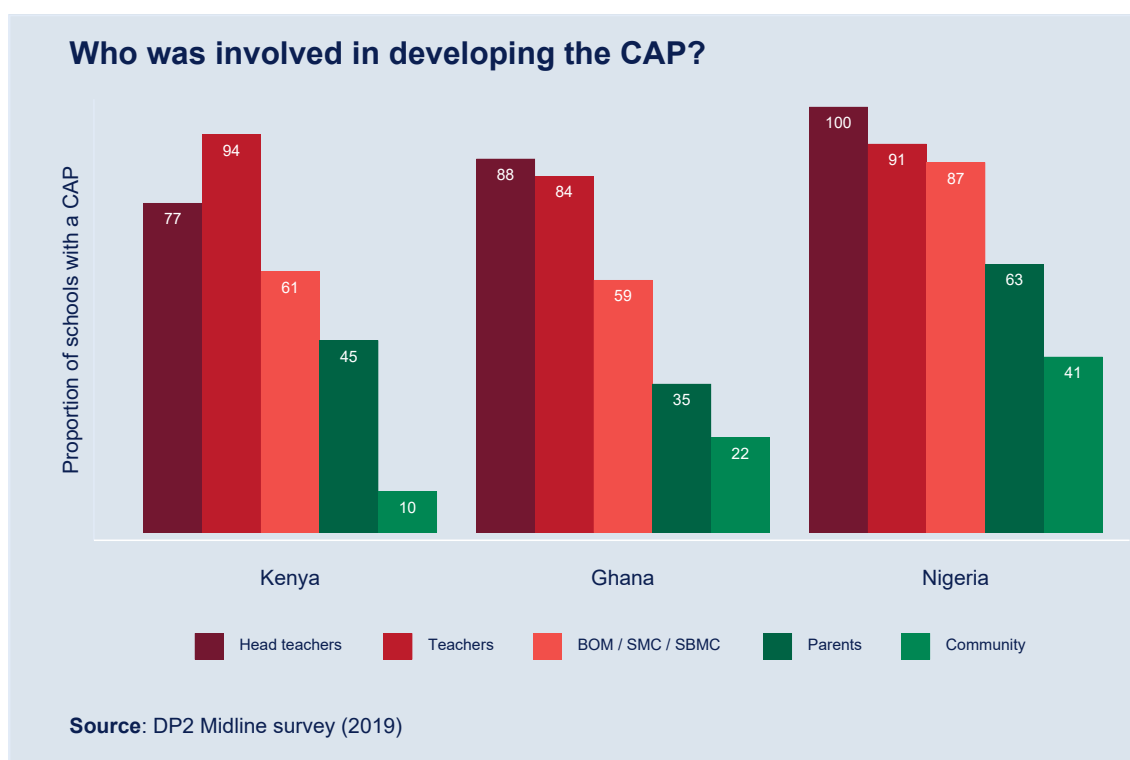
Availability and development of the community action plans

Findings from the quantitative midline showed an extensive difference in the way CAP processes and activities were implemented and in the levels of participation from individuals involved across the three countries. In Nigeria, almost all schools reported having a community action plan and were able to show physical documentation of the plan to the survey team on the day of the visit. Availability of the action plan in Ghana was fairly good, with 88% of schools reporting having a plan and 77% of schools being able to show physical documentation. In contrast, in Kenya, only 66% of schools reported having an action plan, and only 47% of schools were able to show documentation of it. DLA staff in all countries was adamant that all schools had a CAP and that they had verified this as part of their monitoring activities. In Kenya, DLA staff suggested that a possible explanation for why only a small number of CAPs could be independently verified to exist might be that CAPs had been integrated into other school development plans, such as the *school strategic management plan* or the *learning improvement plan*. Alternatively, they also suggested that knowledge around the existence of a CAP got lost as the result of the transfer of head teachers in public schools. However, even if this is the case, the findings suggest that DLA staff is not aware of what happens to the CAPs and does not follow up on their status often enough to ensure that they are visibly displayed and that new head teachers are aware of their existence. In addition, availability of the plan differed across the strata of schools in Kenya, with 71% of non-formal schools being able to show documentation of the plan compared to much lower proportions in formal schools in all regions. A possible explanation provided by DLA staff is linked to the different governance structure of formal versus non-formal schools. DLA staff reported that head teachers at non-formal schools were more likely to attend workshops and actively drive the development and delivery of the CAP. This was attributed to the fact that non-formal schools were under greater pressure to demonstrate engagement and improvement of learning outcomes to parents who paid fees to send their children to these schools. In addition, as head teachers are often also the owners of these non-formal schools, head teacher turnover is also less of a factor that impacts on the knowledge about and implementation of CAPs in these type of schools.

⁸⁶ SMOs are SUBEB staff deployed in all 44 LGAs of Kano state. Typically, each LGA has 1-2 SMOs. SMOs are responsible for sensitizing communities on any education-related activities/interventions that are supported by SUBEB

Figure 28. Proportion of schools that reported having and were able to show a CAP

In the quantitative survey, head teachers were asked who was involved in the development of the community action plan (Figure 29). Involvement of the head teachers in the development of the plan was high in Nigeria, but only 88% of head teachers in Ghana and 77% of head teachers in Kenya were involved in developing the plan. It is notable that in countries where there was less involvement of the head teachers in the development of the community action plans, schools were also less likely to be able to show documentation of the plan. This suggests that involvement of the head teachers is an important entry point in the CAP process.

Figure 29. Involvement in the development of the CAP

Involvement of parents and community members differed between countries, with heavier involvement of community representatives and parents in Nigeria compared to the other two countries. This was the case both for parents or community members who may be involved through BOM/SMC/SBMC structures, as well as for the broader community. In Nigeria, the community action and club (COAC) coordinator attributed the programme's success in engaging communities and implementing the programme in part to the fact that the majority of DP-2 staff members were recruited locally, and are native Hausa speakers. This eased the process of generating community support, as DP-2 staff members, and CAP coordinators in particular, were more likely to be accepted by the communities in which they were working. In addition, most staff members used to work for SUBEB or as public-school teachers or administrators prior to joining DLA. Ghana in particular had the lowest level of involvement of parents, while Kenya did worst on engaging communities in CAP activities. In Kenya, DLA staff partially attributed this to two key factors: Firstly, in formal schools BOM have a limited sitting allowance per term and head teachers were said to be reluctant to make use of these for the CAPs. If communities and BOMs are engaged, this seems to most frequently occur as part of a wider meeting which could decrease the visibility of this programme component. Secondly, in non-formal schools, DLA staff reported that the way the CAP component is implemented is typically with a narrower focus that relies more heavily on teacher, head teacher and BOM members. They attributed this to the need to compete for students and hence the need to achieve results quickly in order to attract more fee-paying students. Schools in Kenya may view parental involvement as perfunctory rather than viewing them as equal participants in the process, despite our analysis showing that parents in Kenya are more likely to be educated than their counterparts in Ghana and Nigeria.

'Interviewer: Since last year to date, has the school involve the local community in trying to discuss the issues at school?

Respondent 2: I think in this school we didn't involve the parents, because if you want them to boost the school, how do they do it? And they don't have anything to feed [their] children. To tell them to contribute 10 [shillings], it takes us two weeks to collect.'

Interview with head teacher and resource teacher, Nairobi, Kenya

However, involvement in the development of the community action plan differed by region and school type in Kenya. Head teachers were involved in the development of the plans in 100% of schools in the arid/semi-arid regions, 75% of non-formal schools, and only 64% of formal schools in Nairobi and surrounding regions. Involvement of parents was much higher in the arid/semi-arid regions and in non-formal schools. It could be assumed that community participation is higher in rural areas than in urban areas and in private schools where parents have to pay school fees. This, together with other factors (e.g. leadership of head teachers), can explain the varying pattern of CAP implementation across Ghana, Kenya, and Nigeria, as well as across the strata in Kenya.

In Nigeria, participants in the CAP process were predominantly male at baseline. At midline, an effort had been made towards correcting this. Across most schools, female parents were now included in the meetings and drafting of the community action plans. In one school, a female member was appointed to sit in on all CAP meetings to make contributions on how to resolve issues such as lateness, poor attendance, and learning outcomes. In two schools, participants in the CAP process had set up a women's committee that met once a month to discuss issues related to learning. Compared to the baseline, women were able to share details about the DP-2 activities and the efforts being made to improve learning and girls' education. In all schools in Nigeria, female parents were asked to find solutions for their children coming late or missing school collectively. Cohort girls themselves also confirmed how parents and siblings now provide support in completing assignments and preparations for exams.

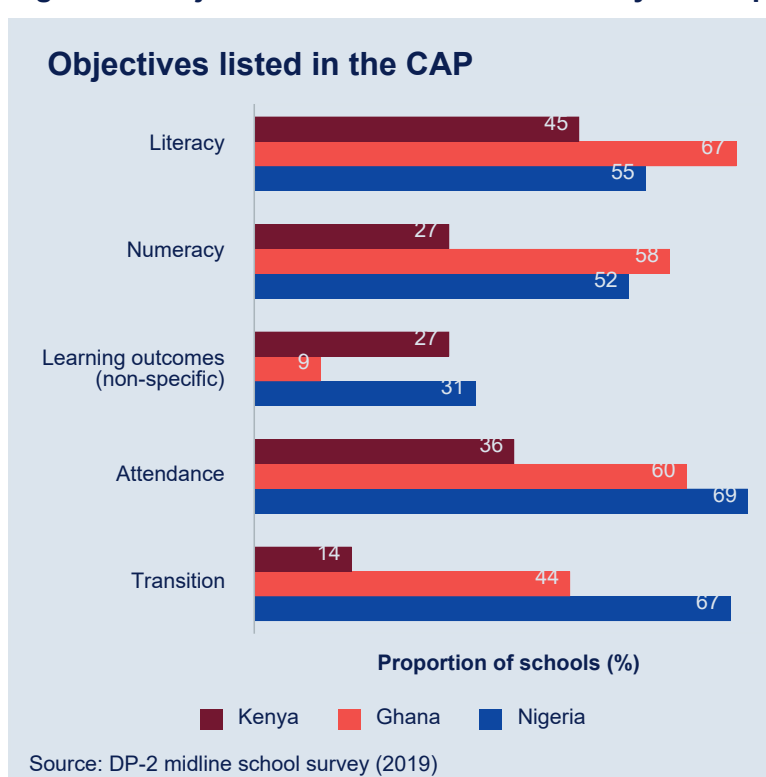
Involving the broader community and parents in the process is assumed to increase ownership and legitimacy of the process in the community. Involvement of female figures as participants in CAP activities seems to be particularly important in Nigeria.

6.3.3 Objectives of the community action plans and their implementation

Community action plans differed in the extent to which they included objectives related to learning outcomes, attendance and transition, with fewer plans in Kenya including these objectives than in Nigeria and Ghana. This may reflect the fact that attendance and transition rates are already highest in Kenya, so participants in the CAP process may choose to focus on objectives related to learning outcomes. It may, however, also be due to the composition of participants in the CAP process: fewer community leaders and members were involved in the process in Kenya, so the plans appear to be more focused on activities that can be actioned primarily in the school (improvement in literacy; numeracy) rather than focusing on activities that require school and parental/community-based effort (improving attendance and transition). DLA staff confirmed this finding and said that given challenges with community support in formal schools related to the availability of the BOM and other factors and the strong control head teachers at non-formal schools have over the content of the CAP, schools in both of these scenarios tend to focus their CAP activities on dealing with barriers which are

under the control of the school and teachers. Whilst this is likely to lead to faster implementation of the CAP, this approach to developing and implementing the CAP does dilute the objective of increasing community involvement and participation and means that CAPs are less likely to focus on barriers to learning and transition that are more community-based, such as for example parental attitudes or time students spend engaged in household chores. In addition, DLA staff feel that whether a broader group of the community is involved affects the ambition and scope of the CAPs. Formal schools in Kenya are said to have CAPs that are more likely to involve the wider community and to have been developed by a more diverse committee, comprised of members from across the community. As a result, DLA staff claim that their CAPs are more ambitious and have broader objectives. Differences in the way the CAPs are implemented in Kenya therefore seem to be driven by the context and the type of school and the programme does not seem to actively try to mitigate this.

Figure 30. Objectives stated in the community action plan



Note: Learning outcomes (non-specific) refers to objectives that focused on learning outcomes but were not specific to either literacy or numeracy.

The majority of community action plans were developed between May 2018 and March 2019. Notably, however, half the schools in Kenya with a CAP reported that their current plan was only developed in the term of the survey, that is after March 2019. This is likely to be because the second training (Community Workshop 2) was being rolled out in Kenya since April 2019, which is used as an opportunity to either develop or revise the action plan.

While DP-2 does not provide specific guidance to schools, it would be expected that participants in the CAP process would meet to review progress of implementation of the activities listed in the plan. However, only in Nigeria did DLA staff explicitly mention that timelines for meetings were meant to be agreed upon when finalising the CAP. There do not seem to be standardised protocols in place that provide guidance to

schools on how to manage this. Of the schools that reported having a community action plan, in 76% of schools in Nigeria and 71% of schools in Ghana, the head teacher reported that those involved in the CAP process had met at least once, while this was the case for only 52% of schools in Kenya. In schools where participants in the CAP process had met, head teachers most commonly reported that there were one or two meetings per term. About three-quarters of head teachers in Nigeria and Ghana reported that participants in the CAP process had conducted a review of the implementation of the current action plan compared to 68% of head teachers in Kenya.

In line with the quantitative findings, the qualitative research found that there has been limited progress in Kenya on implementing the community action plan since the baseline.⁸⁷ Participants in the CAP process reported not meeting since they were trained or meeting once in the last year to discuss the activities and goals they had set out to undertake. However, participants in the CAP process reported having previously been participants in other community projects (for example the child feeding programme in Machakos), as community health volunteers or volunteers of the church in Nairobi and as members of the BOM or PTA. As a result, they regularly raised awareness within the community and worked with the chief to increase attendance and/or reduce drop-out in their personal capacity, but had not done this through collective action or a planned process as designed by DP-2. DP-2 is not the only project operating in the community and there are other activities seeking similar objectives, which makes it hard to distinguish the results of one project from the other. Therefore, any change in community attitudes cannot be fully attributable to the DP-2.

- ‘Interviewer: Has there been any change in the attitudes of community members about [the] community action plan?’
- Respondent 3: As we told you earlier, there is nowhere we have ever had an interaction with the community in the capacity of being a member of community action plan.
- Respondent 1: Yeah, all we do is to talk to community members at the individual level, along the street, in the neighbourhood, or even sometimes as I promote community action plan by indirectly raising those issues at the meeting involving the community and other stakeholders in meetings.’

Group discussion with CAP participants, Wajir, Kenya

At midline, in Kenya, we sought to understand why there was a lack of a written plan in most schools or limited follow-up from initial plans in schools where such a plan existed. Participants in the planning process felt their inaction was due to a lack of support and direction received from DP-2 or from other leaders of the community. The lack of DP-2 support in CAP activities is not an isolated case, as Kenyan schools also reported the lowest level of support from DP-2 in post-training supervision. Interviews with participants revealed they would prefer greater direction from DP-2 through training sessions to be able to progress on their plans.

⁸⁷ At midline, as at baseline, the participants in the CAP process in Kiambu refused to be interviewed for the evaluation.

‘Interviewer: I want to ask this question again, because I didn’t understand the answer well when I asked for the answers. As CAP members, do you have any written action plan, or do you document your activities such that you would be able to say that we have achieved this, or we haven’t achieved this?’

Respondent 1: No, the reason we don’t have such action plans is that when we went for the DLA meetings, there were people appointed, and we were told we would be called to be shown how to make these action plans, but we were never called. No one has ever followed this up.

Interviewer: So, for now you don’t have any action plan?

Respondent 1: No, we don’t have any written plan.’

Group discussion with CAP participants, Nairobi, Kenya

The key activities participants in the CAP process in Kenya have focused on include ensuring the television provided by DP-2 is secure, being maintained, and used in the school; and increasing parental interest and participation in the school, especially counselling those parents whose children are not attending school frequently.

Participants in the CAP process also work as a liaison with the chief, BOM members, and Member of the County Assembly to support the school. It is likely that the lack of evidence of their work is a result of poor record-keeping (which was also a finding at baseline) rather than inaction.

‘Interviewer: You said some of your roles as the community action plan are to follow up with the parents to ensure high attendance of students in school. How many girls would you say have been enrolled in school, how many have been prevented from dropping out, and how many have returned to school as a result of this effort?’

Respondent 1: Well, for sure we just know what we have done by mobilising parents to take children to school, but we don’t keep records of children who have enrolled as a result of our action.

Respondent 2: In our concerted efforts, we have done a lot of follow-ups with parents; several girls have been enrolled and some have returned to school, but unfortunately we haven’t had any records documented to show numbers.’

Group discussion with CAP participants, Nairobi, Kenya

In Nigeria as well as in Ghana, community outreach activities have been successful. Nigeria has the highest level of participation of parents and communities in CAP activities. Of the six schools sampled for the qualitative study, five schools reported that their communities were receptive and responsive to all their activities, except for one school which reported a low interest by community members, as demonstrated by their refusal to donate to CAP activities. In Nigeria, in line with the findings from the

quantitative survey, the qualitative team found plans pasted on the wall of the head teacher's office and also in CAP files.

In Nigeria, town criers and announcements at the mosques and other community engagements are being used by the village chief and religious leaders (active participants in the CAP process) to reach out and remind parents constantly to actively support their children to come to school early. Although similar events and channels of outreach were in place at baseline as a result of the CAP process, such efforts were reported to have intensified at midline.

'My main role as the Imam is to tell the parents of those kids that are not attending school after we finish praying. This is my main role in this committee.'

Group discussion with CAP participants, Nigeria

In Nigeria, participants in the CAP process also supported the schools towards improving attendance, especially during the monsoons, when boys stop attending school to work on farms. The participants and school worked collectively to address this problem.

'If a class master reported any student that was not coming to school, we sent a letter or sent one of our female teachers to go to the child's house to invite the child's father to know what was happening. Male students are the ones mostly coming late, though.'

Interview with CAP chairman, Nigeria

In Ghana, the schools visited at midline had community action plans in place, a positive development from baseline. During the qualitative fieldwork, participants in the CAP process and head teachers reported that developing the plan was an iterative process involving consultations with stakeholders in the community and schools to identify the needs of the school (such as infrastructure or resources for learning, or the feeding programme). After this consultation, they presented the plan to DLA for feedback, after which the plan was finalised. As in Kenya, however, participants in the CAP process in the qualitative schools reported that community action plans were not updated or monitored regularly in Ghana. This is different from quantitative findings, which suggest that the proportion of schools where CAP participants have met and where the CAPs have been reviewed is quite high in Ghana, which could suggest that CAP implementation does not necessarily reflect the academic performance of schools (i.e. it is not given that well performing schools academically would also do well regarding CAP activities). In about half the schools from the qualitative sample, participants in the CAP process tried to meet once a term or once in two terms to review the progress on their activities. The other half, however, reported having met only once at the beginning when the plan was actually formed to discuss the details. To provide more context on this, some schools mentioned they had regular PTA/SMC meetings where they discussed some general elements of the plan as part of the general agenda, but there was no specific meeting in place where they reviewed the plan itself to see how they were performing. This was especially exacerbated in situations where the head teacher or previous members of the group that had drawn up the community action plan had moved away.

In Ghana, participants in the CAP process were involved in several school-level activities such as setting up girls' and boys' clubs and ensuring the running of the

remedial classes. Some schools also spoke about setting up reading or spelling competitions, among other activities. Two schools highlighted that they had set up an award/prize scheme for children who came in on time and were well-dressed to motivate children. However, the children themselves did not mention this in their interviews. In Ghana, participants in the CAP process carried out sensitisation efforts in groups and also in one-on-one settings. Since many of the members were already part of the PTA/SMC, they could reach out to parents as part of their ongoing activities.

‘It’s because of our [PTA] responsibilities to stop their children from going astray. We ensure they are in school when they are supposed to be and drive them away from the streets when we find out they are supposed to be in school at that particular time. Now, at our PTA meetings, all the parents make sure they are present, so they can have first-hand information on what will be discussed because of the confidence they have in us.’

Interview with CAP participants, East Gonja, Ghana

A key focus of the sensitisation activities that make up a part of the CAP process in most of the sampled schools in Ghana has been to try and streamline the workload of household chores and working outside the home. At baseline, these were identified as key barriers faced by students in achieving their learning and transition goals.

In Nigeria and Ghana, community action mobilisers - and to some extent their community action coordinators – felt that the training and the implementation of CAPs was easier to manage in urban areas. DLA staff felt that this might be due to community support for education being higher in urban contexts which they felt increased the likelihood of involvement from parents and the community at large in supporting the action plans around learning, attendance and transition. In Ghana, mobilisers further felt that in urban communities it was more likely that role models that support education exist and that they could positively affect community attitudes towards education of girls.

How the CAP process supports the learning centres

The qualitative research revealed that one aspect focused on by CAP activities are the DP-2 learning centres. Participants in the CAP process spent a significant amount of time and attention towards ensuring that the media centre is functional in all three countries. In Nigeria, part of the funds mobilised in each school was set aside as financial support for the purchase of fuel to power the centres. There were reported cases of vandalism in two schools in Nigeria and one in Kenya. Through the CAP process, TV sets were replaced or protected by community members. A CAP chairman in Nigeria also stated that he had at some point supplied the school with his laptop to use for viewing when the generator of the school had issues. In another school in Nigeria, the committee brought in a technician to come and demonstrate to teachers how to operate and manage the centre and provide them with basic troubleshooting skills to avoid disruption to learning due to unavoidable glitches. This was also done to train some teachers, especially female teachers who shied away from using the centre as they could not efficiently operate it. Given that refresher trainings are meant to be provided by DLA staff the fact that CAPs are mobilising resources to buy in additional support suggests that more can be done by the programme to ensure that schools are familiar with how to use the equipment provided. In Ghana, support from CAP participants for the learning centre was mentioned less often at midline than at baseline. Participants were involved in raising contributions from the general

community for the electricity bill for the centre, in setting up a generator to ensure regular power supply, or in buying a lock for the centre for safety.

Self-reported challenges with the CAP process

Our qualitative findings shed light on the challenges faced by participants in CAP activities when implementing their plans.

Mobilising resources: participants in the CAP process across all schools in Kenya found it difficult to mobilise resources from parents to conduct repairs or maintain the school. While they helped the head teacher and teachers raise awareness about the importance of parental contribution, they said that raising funds had been challenging. In Nigeria, too, participants in the CAP process were working hard towards finding land space for additional classrooms in one of the schools. In Ghana, a recently introduced (at the time of the midline evaluation) GES directive prohibited schools from asking for any fees or contributions from parents or the community. Most participants in CAP interviewed at midline felt these changes countered their own initiatives around community-level monitoring and resource mobilisation within the community for the maintenance of the school and diluted the CAP's message. In Ghana, participants in CAP believed the government had not provided enough funding on its own to make necessary infrastructural upgrades over a long period of time; they were unable to complete any resource intensive infrastructural changes such as making new toilets or expanding the learning centre as they were no longer allowed to collect contributions.

Raising awareness in the context of poverty: in Kenya, participants in the CAP process said parents were aware of the importance of school, but poverty made it difficult for them to make a convincing case to send their children to school. They suggested that, during home visits, they might find families who had not eaten that day, or families that may not be able to afford their children's basic needs. Some schools have access to funders who provide uniforms or a feeding programme, but where this does not exist, they do not feel they can persuade parents to send their children to school. In Nigeria, two CAP participant groups reported that raising awareness and sensitising parents was demanding for them. The participants had to conduct several visits and often appeal to parents to desist from allowing their children to hawk during school hours.

Volunteering: participants in the CAP process in Kenya and Ghana felt they did not have the time or resources to meet frequently or participate in activities. Whenever they did participate in training or school-related activities, it came at a cost to their daily income.

Establishing legitimacy among the community: participants in the CAP process in Kenya claimed that parents did not believe they were volunteering for the school, and thought they were being paid for their time and participation. They thus did not take them seriously.

Engaging the school and parents to participate: at midline, we continued to observe that schools and parents did not participate in activities together. Schools viewed their role as the drivers of development in the community and believed parents were reluctant (often ignorant) recipients of this development. It is not evident from our interviews with the school leadership and parents that there is equal participation towards improving education.

‘We have used many methods, we have called for so many sensitisation [meetings], we have told them only 25% comes from teacher, 75% comes from the child, there is variety of reference books so that children won’t need their teachers that much, questions and answers are not made use of, we force them to use, they tell us if they take the book it will get lost and they will be told to buy. What kind of attitude is that now? It’s parents who tell them not to take the books; if they get lost, they have no money to pay them. I have been beating some and giving them, but can you beat the whole school? Those are the kind of parents we are dealing with. World Bank paid five hundred thousand for Class 8 books, they don’t make use of those books, they don’t want to take the books just because they are afraid of losing them and this comes from parents’ threats telling them they won’t pay them in case they get lost because of lack of money. We are dealing with such parents.’

Interview with the head teacher and resource teacher, Wajir, Kenya

Challenges and lessons learned

In addition to some of the challenges with developing and implementing the CAPs discussed above, the process evaluation found that DLA staff face a number of additional challenges that if not carefully managed can impact on the effectiveness with which CAPs are being implemented. Given the crucial role head teachers are meant to play in driving the implementation of the CAP, the transfer of head teachers can stall or end the implementation of the CAP. In Ghana and Nigeria, DLA has responded to this challenge by working with its partners in government and requesting that transfers of head teachers take place from one DP-2 school to another. This increases the likelihood that CAP implementation will continue and reduces the need to reintroduce the programme or train the new head teacher. It is not clear whether a similar approach has been tried in Kenya.

Unsurprisingly, poor communities struggle to contribute financially to CAPs, especially as CAPs are often merely one of many plans that seek to involve the community in improving educational outcomes. If CAPs rely on financial contributions from community members for items such as uniforms, books, learning centre maintenance, or scholarships, this can stall the implementation of the CAP. Less resource-intensive CAPs such as ‘back to school’ campaigns were reported to be easier to implement in circumstances where resources are scarce. In Nigeria, DLA staff felt that the L4C training reflected a realisation that the programme ought to encourage the school leadership to identify feasible, sustainable plans that can be undertaken at school level. However, as noted above it is important that this does not lead to a reduction in the role of the community in the CAP development and implementation process.

If frequently done, monitoring of CAPs is time consuming for community action mobilizers, especially as it relates to data capturing and entering. This is particularly the case, as all schools across the programme are meant to have a CAP. A number of relatively comprehensive paper-based forms have to be filled out when visiting a school and later on entered into an online platform. DLA staff reported often spending several hours on data entry, which is reported by MEL officers as time consuming. In Ghana in particular, DLA staff also mentioned connectivity problems resulting in entered data being lost and CCAMs having to re-enter the monitoring data from scratch. In addition, it is not clear how effectively such detailed data collected at school level is being used to inform programming, allocate resources and identify challenges at a higher level.

Finally, the number of CCAMs and ACAMs was recently reduced to shift additional resources towards teacher trainers given DP-2's focus on literacy and numeracy. However, the shift in focus of monitoring club activities on the subset of schools piloting MBW probably mitigates this challenge to some extent. It is unclear what this has meant for monitoring and support visits by mobilisers to schools that do not form part of the MBW pilot. Given that government partners have a generally larger set of schools to visits, they are reported to struggle to visit schools frequently. It is, therefore, unsurprising that participants in the CAP process in some of the schools reported wanting more support from DLA staff than is currently being provided.

6.3.4 Self-reported outcomes of the CAP process

The implementation of CAP activities in the three DP-2 countries are reported to have brought some positive outcomes although they vary from country to country. Due to the reasons provided above for Kenya, including the lack of an action plan or of schools and communities working collectively, parents in Kenya had not heard of the CAP process, nor were they aware of its progress. As a result, it is difficult to ascertain the impact of the programme at the community level in Kenya. The fact that DP-2 is also one project among many others with similar objectives makes it impossible to clarify the boundaries between them and the results they cumulatively produce. Participants in the CAP process are often members of other committees, and this as well as the slow roll-out of the training sessions could be reasons why the sampled schools do not have action plans in place because the members could perceive other community and school initiatives as more important and effective than DP-2. Moreover, participants in the CAP process in Kenya might associate the project more with other DP-2 activities such as supplying media aids, rather than with community sensitisation and mobilisation. There could also be some more deeply-rooted issues about the nature of relationships and attitudes between school on the one hand and community/parents on the other.

In Nigeria, parents have become more aware of the importance of girls' education as more participants in CAP continue to sensitise the community. They are becoming more aware of practices that could hinder favourable learning outcomes, such as being late, poor attendance, and hawking—issues that were raised at baseline. Cohort girls confirmed being woken up early by their parents to commence school preparation, although we also know that students spend a large part of their mornings on household chores (for more details see Sections 2.2.2 and 3.1.4). Parents viewed waking their children up earlier than usual as a way of support to ensure that they got to school on time. Girls appreciated that they were being woken up by their parents and reminded to finish their task as quickly as possible to arrive at school on time. Other parents motivated their children, paid school levies, and contributed to CAP funds. Participants in the CAP process reported collecting contributions from most households to support their projects in Nigeria. The success of the CAP process in Nigeria seems to be dependent on individuals and their motivations, such as a committed chief, imam, etc. These community members seem to have a great influence on the communities, which could be higher in rural than in urban areas. Among the three countries, CAP activities in Nigeria seem to be the most adequate to address the barriers to girls' education identified at baseline. This could be one of the factors contributing to a positive effect on learning outcomes in Nigeria, as discussed in Section 3.1.

CAP activities in Nigeria go even further when efforts made by the members of the CAP process have helped reduce the drop-out rate of students due to extensive

community sensitisation efforts (Chapter 4 discusses the reduced drop-out rates in Nigeria). From their records, and as confirmed by the head teacher, three students who dropped out re-enrolled after a visit was made to the parents and children to motivate them. In another Nigerian school, members of the CAP process introduced a programme called 'Back to School', in which they identified students who had dropped out from school or were regularly absent and engaged their parents in discussions. This succeeded in bringing 10 girls back to school.

In Ghana, too, we found that some CAP activities relating to the reduction in household chores have had some effect on parents. While children were found to be involved in household chores and supporting their parents in their business or occupation in all the schools visited during the qualitative midline study in Ghana, parents in a few schools reported that they had either decreased or not increased their children's workload due to sensitisation efforts. For example, in East Gonja, a couple of parents whose children were involved in hawking or street selling were allowed either to sell only on weekends or to stop completely. Some parents reported buying bicycles for their children; others reported taking them to school personally and bringing them home after school. While in another case in Sagnarigu, a girl used to sell *kenkey* (food) for another woman to get money to support her schooling, but her mother made her stop to go back to school after realising that it was keeping her daughter away from school.

Interviews with parents in Ghana, however, revealed a varied response to sensitisation efforts. Some parents did not consider household chores or caregiving responsibilities to be a burden and expected their children to manage these tasks alongside their schoolwork.

- 'Interviewer: Besides providing basic needs for girls at school, what else can parents do to encourage their girls to stay in school?
- Respondent: Parents need to counsel their daughters on regular basis by telling them to be wary of the opposite sex and concentrate on their books to go higher in their schooling.
- Interviewer: Do they provide these counselling at your meetings?
- Respondent: Yes, because parents are urged to allow their children to study at home by restricting them from doing some chores. Even though we cannot stop them from doing chores at home, we are encouraged not to burden them with it, so they can study.'

Interview with parent of cohort girl, Yendi, Ghana

As was the case in Kenya, the involvement of CAP participants in other organisations such as the PTA/SMC meant that parents in Ghana were unaware of the CAP process or its progress. As a result, parents did not recognise the CAP's contribution and attributed changes to PTA/SMC sensitisation efforts.

However, the general perception in Kenya, Nigeria, and Ghana was that parents valued education to a greater degree, and that girls are more likely to transition to higher grades than ever before. It is therefore likely that changes are not exclusively due to the CAP process, but also to the fact that other community motivators (such as

stronger role models, both successful men and women) encourage them to send their children to school. The reasons for this are provided in Section 6.3.5.

While the quantitative survey at midline did not include a household survey, we did ask girls about their aspirations for completing secondary education and attending university. It might be expected that, if barriers to girls' education are being addressed by schools and communities and if parents value girls' education to a greater degree, then girls' aspirations for their own education will increase. We found that DP-2 has had a large, positive impact on girls' aspirations to complete and continue their education in Nigeria. In Kenya, we saw a smaller impact on girls' aspirations that reaches marginal statistical significance⁸⁸ for girls' aspirations to complete secondary education. In Ghana, we did not observe an impact of DP-2 on girls' aspirations. We also saw that the proportion of girls who aspire to attend university has decreased significantly between baseline and midline in both treatment and control groups. While the question asked girls about their aspirations imagining that they faced no constraints, it is nevertheless possible that girls in Ghana were taking into account the barriers they may face to reach university, and they may view these barriers differently as they get older.

It is likely that any impact of DP-2 on girls' aspirations will not be linked to the CAP's community activities alone. For example, as we discuss in Chapter 3.1, girls' aspirations are also likely to be linked to their learning outcomes and (for those who are members of girls' clubs) due to the mentorship they receive in clubs. Nevertheless, the evidence of successful implementation of CAP activities in relation to barriers to girls' education, particularly in Nigeria, suggests that the CAP process is likely to have played a role in DP-2's impact on girls' aspirations.

Table 68. DP-2 impact on girls' aspirations

Cohort	Baseline treatment	Midline treatment	Difference baseline to midline treatment	Baseline control	Midline control	Difference baseline to midline control	DID (treatment – control difference)
Ghana							
Aspires to complete secondary education	94.1	97.8	3.8***	95.3	97.9	3.0***	0.7
Aspires to complete university	52.1	41.3	-10.2***	62.0	50.6	-10.2**	0.8
Kenya							
Aspires to complete secondary education	97.9	96.5	-1.3*	99.2	95.5	-3.6***	2.2*
Aspires to complete university	74.0	83.5	7.0***	73.2	80.6	3.8	2.3
Nigeria							
Aspires to complete secondary education	83.7	92.8	9.2***	85.1	85.0	0.8	9.2***

⁸⁸ The DID estimate is therefore statistically significant at the 10% level.

Cohort	Baseline treatment	Midline treatment	Difference baseline to midline treatment	Baseline control	Midline control	Difference baseline to midline control	DID (treatment – control difference)
Aspires to complete university	41.2	60.4	19.6***	44.4	52.1	9.1***	11.4***

Source: DP-2 girl survey (2019; 2018)

Note: Asterisks indicate where means differ significantly from the overall average at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$.

6.3.5 Other reasons for changes in community attitudes and behaviours

As discussed earlier, several other community-level activities are ongoing in the sampled schools in all three countries. Apart from school-related activities and committees such as PTA, BOMs, SMCs, etc., there are community-level initiatives contributing to purposes similar to those of DP-2. These activities include government initiatives, activities of community-based organisations, and any factors that are associated with the market economy. We discuss some elements of these competitive initiatives below.

Involvement of the chief and education authority

In Kenya, the chief's involvement in increasing attendance and enrolment in schools has intensified, reportedly due to MOE's emphasis on ensuring no child is out of school. Across all schools, parents, community members, and school staff reported that the chief personally followed up on reports on truancy and drop-outs and addressed complaints if they found that a girl may be vulnerable to early marriage. According to those sources, the chief had the authority to register complaints formally with the police: the chief also had the authority to report truancy cases to the police where a child was vulnerable to early marriage, with the threat that this might lead to prosecution. While it is not clear whether creating fear among parents is a long-term solution towards increasing awareness of the importance of education, it has reportedly made a strong impact in the short term.

In Nigeria, schools and SBMCs confirmed receiving visits from the LGA Education Board and DLA to supervise activities at the school. These they reported had helped them review CAPs and re-strategise where necessary, and also kept them on their toes and ready for spontaneous visits and assessments.

Other community-level programmes

In Ghana, community members and teachers mentioned that programmes such as Jolly Phonics and School for Life had positively influenced teaching and learning. Participants in the CAP process were positive about the training sessions and resources provided by these projects, and claimed they have had an impact on improving the outlook of the community towards girls' education in general, especially since they provided teaching and learning materials, stationery, and uniforms. While the timelines and coverage for these projects varied, they believed these projects impacted communities positively in the past. In all countries, local and international NGOs contributed to schools, providing resources towards uniforms, books, fees, or the school feeding programme. These programmes helped support parents and

improved the community's impression of efforts made by the school towards supporting children and families in need.

Demand for higher education

In Kajiado, Kenya, community members said the attitude towards schooling had changed as community members learned that even entry-level jobs require higher skills, and that parents were no longer able to find their children employment unless they had passed Form Four. Recent government-sponsored work in the area also required young people to have a degree, which several youths in the community lacked. The realisation that there was a greater demand for a degree motivated students to work harder.

6.3.6 Conclusion

This section presents the findings of the midline assessment regarding the implementation of DP-2 community activities, any self-reported and observed attitudes towards education at the community level, any changes to the latter since baseline, and any changes in girls' reports of their aspirations for their own education.

The progress of the DP-2 CAP activities varies from country to country. Kenya has had the slowest progress in terms of developing the CAPs themselves and reviewing their implementation. Only about half of the schools were able to show documentation of the CAP and reported that participants in the CAP process had met. Formal schools in Nairobi and surrounding regions had made the least progress, and both head teachers and parents from these schools appeared to be the least involved in the CAP process compared to non-formal schools and those in arid/semi-arid regions. Poor progress in CAP activities in Kenya is likely to be linked to the slower roll-out of the training sessions and could be linked to urban and rural divisions between schools and communities.

In Nigeria, the CAP process is working well. All three training sessions had been conducted and most head teachers had attended them. CAPs were in place and focused on the desired objectives, and participants in the CAP process had met in most schools. In addition, parents and community members were involved in the development of the CAP, with a higher degree of involvement from female figures. Participants in the CAP process had made progress in setting up community organisations, following up on baseline recommendations and working on the barriers to girls' education identified at baseline. In all countries, the role of chiefs and religious leaders was reported to be paramount in achieving success and is an invaluable part of the project implementation, similar to the involvement of the local education authority and DLA country office. The communities in Nigeria seem to have a sense of ownership when it comes to girls' education, manifested in the way parents are willing to listen to their leaders but also to make contributions. These schools and communities already have inherently cooperative relationships, which DP-2 has been building on. However, these positive steps are not without challenges, since some families cannot stop their children being involved in income-generating activities due to poverty.

In Ghana, CAP activities have been implemented with moderate success. Most head teachers have attended the training sessions, most schools have a CAP in place, and most participants in the CAP process have met, but progress on all of these indicators is lower than in Nigeria. In addition, parent and community member involvement in the

development of the CAPs was limited. Participants in the CAP process reported carrying out community-level activities, being involved in school activities such as clubs and remedial classes, and following up issues that were identified as specific barriers to education at baseline. However, the progress of the CAP process suffered in those communities where head teachers and community members originally involved in the CAP process had moved out of the community. This means that progress of future CAPs may slow down if there are no follow-up training sessions from DP-2 or if schools do not conduct refresher training sessions.

In Kenya and Ghana, community activities in relation to the girls' education and schooling that were specific to DP-2 CAP project activities were hard to separate from the activities of other projects, since most of the communities do not have CAPs in place or because other participants were already providing support as SMC or PTA members. In Kenya, this could also be due to the role of the community chief in increasing children's attendance, which could overshadow the role of DP-2 in the eyes of the community members. The reasons reported by the participants in the CAP process in Kenya are the lack of direction from the local DLA office and the lack of legitimacy of the CAP process in the eyes of the community members. This may in part result from the limited involvement of head teachers, parents, and community members in the CAP process. This could suggest that the CAP activities are not really owned by the communities, which could jeopardise their ability to contribute to impact. The situation may be exacerbated by the perception of the community that the DP-2 project mainly provides media teaching aids (such as televisions) rather than being a community project.

The challenges in implementing the activities identified through the CAP process by respondents mainly surrounded raising funds for the community and school activities in the context of poverty across the countries, as well as because of the CAP process's lack of legitimacy in Kenya. The Ghanaian government's new directive, which prohibits asking for contributions from parents and communities, could potentially be an obstacle to the continuity of the CAP initiatives.

Across all the countries, there does not seem to be any problem with girls' education caused by negative perceptions of their parents. On the contrary, parents were described as being aware of and understanding the meaning of education for girls, and of the need to eliminate the barriers girls face such as excessive household chores, lateness, and working outside their homes, as well as the desirability of making positive changes towards decreasing the amount of time children spend on paid work by limiting it to weekends or stopping it altogether. This is a result of the awareness raised through CAP, through the SMC and SBMC, or through the chief, as well as being the result of a positive attitude towards the initiatives at school such as Jolly Phonics, School for Life, and *Tusome* run by other NGOs or the government. The situation gets complicated in relation to household chores, because not all parents considered this activity as a barrier to education, as the role of children in their societies is to help with certain household chores.

Overall, participants in the CAP process in all countries gave examples of how community activities have led to reduced drop-out or improved attendance for some girls facing particular barriers to education. We also found an impact of DP-2 on girls' aspirations to complete and continue with their education, particularly in Nigeria and (to a lesser extent) in Kenya. This suggests that the DP-2 causal assumption underlying the TOC holds: that community involvement in action planning to identify and address barriers to girls' learning and transition leads to changed attitudes and beliefs on the

part of community members and concrete actions in support of girls' education, which in turn increase girls' abilities to enrol, attend, learn, and continue with their schooling. However, we have not yet seen any evidence that communities are able to hold their schools accountable for better learning outcomes. They are also limited in their ability to contribute resources to improved educational access and outcomes due to poverty and marginalisation. The risks to the successful implementation of the CAP process still stand, as we still see that some communities in Ghana and most in Kenya do not update and follow up their CAPs.

6.4 Life skills

DP-2 aims to improve the skills and knowledge of girls primarily through schools choosing to set up a girls' club where mentors are trained to support and engage girls in activities that enable them to generate income, increase their awareness about health, learn new skills, access relevant resources to receive greater support, and link vulnerable girls to other support programmes to increase attendance and retention in school. The life skills component focuses predominantly on those girls engaged in girls' clubs as part of the intervention.

A contribution claim of DP-2 with regard to girls' clubs is that girls' clubs lead to improved girls' motivation, self-confidence, and life skills, which in turn improve their school attendance, learning, and transition outcomes. As such, the expected outcome is that girls who participate in the clubs will develop the confidence, skills, and attitudes to enable them to succeed at school and aspire to higher levels of education.

In this section, we begin by providing an overview of the key findings against the logframe indicators. Next, we present the details about the clubs' membership and functioning modalities, and move on to the specific activities the girls are engaged in as members of these clubs in each country. Having discussed in detail the types of activities, we then present the results of our quantitative measurement of life-skills.

6.4.1 Overview of the findings against the logframe indicators

Table 69 presents a summary of the quantitative and qualitative findings against the logframe indicators, a summary of the interpretation of the findings, and a reflection on whether the targets remain measurable and achievable in the next evaluation round. The findings and their interpretation and implications are explored in more detail in the rest of the section.

Table 69. IO logframe indicators on life skills

IO	IO indicator	Baseline	Midline target	Midline (% point diff. relative to control)	Target achieved ? (Y/N)	Target for next evaluation point (% point improvement)	Will IO indicator be used for next evaluation point? (Y/N)
LS	Percentage of girls' club members that can report either having used or intending to use additional knowledge, skills, or talents they have learned from MBW	New indicator	Ghana: 60% Kenya: 60% Nigeria: 60%	Ghana: SE: 6*** LS: 1 Kenya: SE: 0 LS: 2* Nigeria: SE: 2 LS: 2*	Ghana: SE: Y LS: N Kenya: SE: N LS: Y Nigeria: SE: N LS: Y	Ghana: 15 Kenya: 15 Nigeria: 15	Y
Main qualitative findings							
<ul style="list-style-type: none"> • Girls' club members can describe a way in which they have improved knowledge, skills, or attitudes. • Girls report that clubs have provided them with a range of knowledge and skills, including manual skills developed through engagement with the production of various crafts or products, such as making soap in Ghana, the production of <i>Sukuma</i> in Kenya, and a wide range of reported products in Nigeria from soap and perfume to food. • This also includes personal hygiene, with a particular focus on menstrual hygiene, which is reported to have enabled girls to discuss a 'taboo' topic that has a big impact on their lives. • Girls' club members can describe a way in which improved knowledge, skills, and attitudes have led to the achievement of one of their goals or other positive results. • Girls report that girls' club membership has supported them to deal with certain issues which act or can act as barriers to girls' schooling such as menstruation and confidence in speaking up, as well as providing additional support targeted at numeracy and literacy. • In particular, girls in all three countries reported MBW's use of role models as being particularly supportive, helping them to realise that their aspirations were real and achievable. This has resulted in girls reporting an increase in self-confidence, which is supported by the quantitative finding of an impact on SE in Ghana, which was strongest in magnitude for girls who were girls' club members, and an impact on life skills (which broadly reflects confidence in the classroom) in Kenya and Nigeria, also strongest in magnitude for girls who were girls' club members. 							
Interpretation							
<ul style="list-style-type: none"> • The qualitative research provides evidence that girls' clubs are providing girls with a range of knowledge and skills, and that this is leading to clearly articulated gains in self-confidence in terms of engagement in the classroom and handling difficult topics, as well as making their aspirations seem more real and achievable. • This is supported by statistically significant gains in self-efficacy in Ghana, and in Kenya and Nigeria in the life skills index that is attributable to DP-2 and is greater in magnitude for girls who have attended girls' clubs. 							
Reflections and targets							
<ul style="list-style-type: none"> • The phrasing of the quantitative indicator implies that girls always know that they are being exposed to the MBW content. This may not always be the case. At the moment, the indicator is broad and merely reflects a <i>desire</i> to use the knowledge and skills from MBW, which is difficult to assess quantitatively as it is very prone to a positive response bias (i.e. respondents are likely to answer 'yes'). Because of the difficulty in collecting this information quantitatively, at midline we focus on whether we observe changes in the measurable outcomes that MBW is trying to influence, i.e. life skills and self-efficacy. We would recommend aligning the phrasing of the indicator so that it focuses on the outcomes. 							

lower in Kenya and Nigeria, though still substantial, with 60% and 61% of girls respectively reporting they were a member of a girls' club. This reflects the programme design which seeks to ensure that clubs are attended by girls from different wealth quintiles in order to avoid stigmatisation related to club membership.

Figure 31 shows the proportion of girls who are a member of a DP-2 girls' club overall, as well as by poverty status quartiles. In Ghana, more girls from the poorest quartile attend DP-2 girls' clubs than girls from the second and third quartile. In contrast, in Kenya and in Nigeria, the proportion of girls' club members is similar across the poorest, second, and third quartile. In all countries, girls from the wealthiest quartile are the least likely to be attending a DP-2 girls' club.

Figure 31. Proportion of girls who are a member of a DP-2 girls' club overall and by poverty quartiles⁸⁹

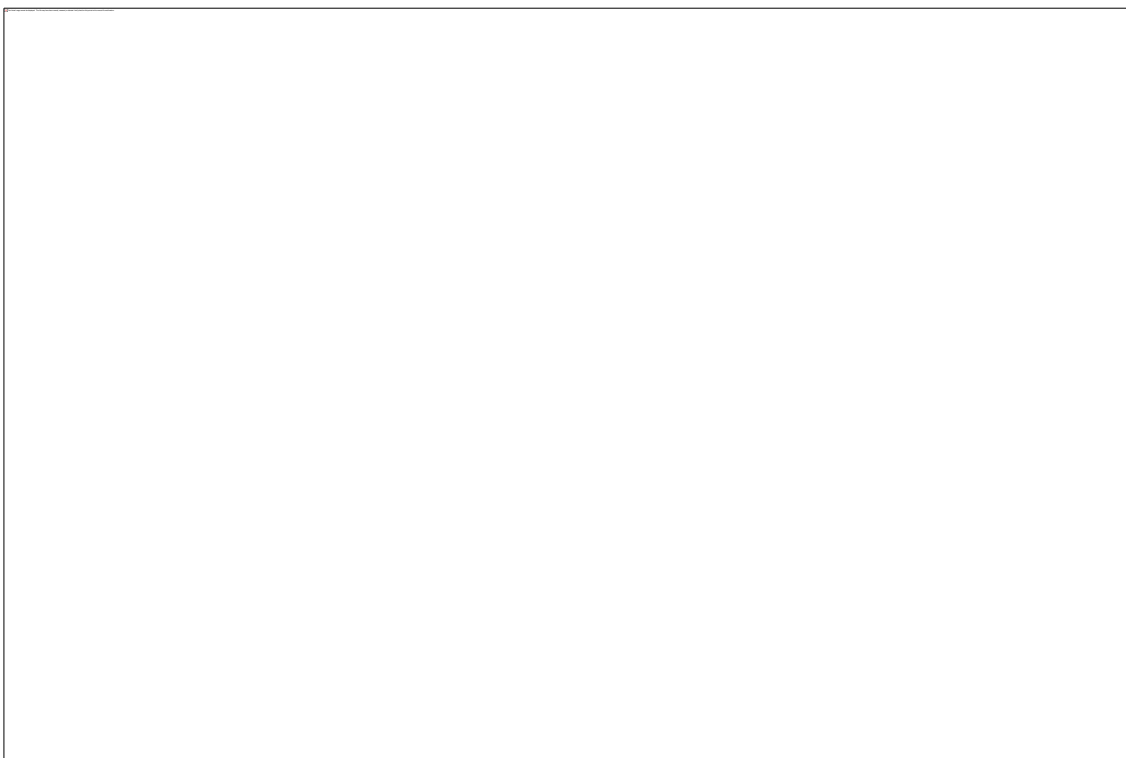


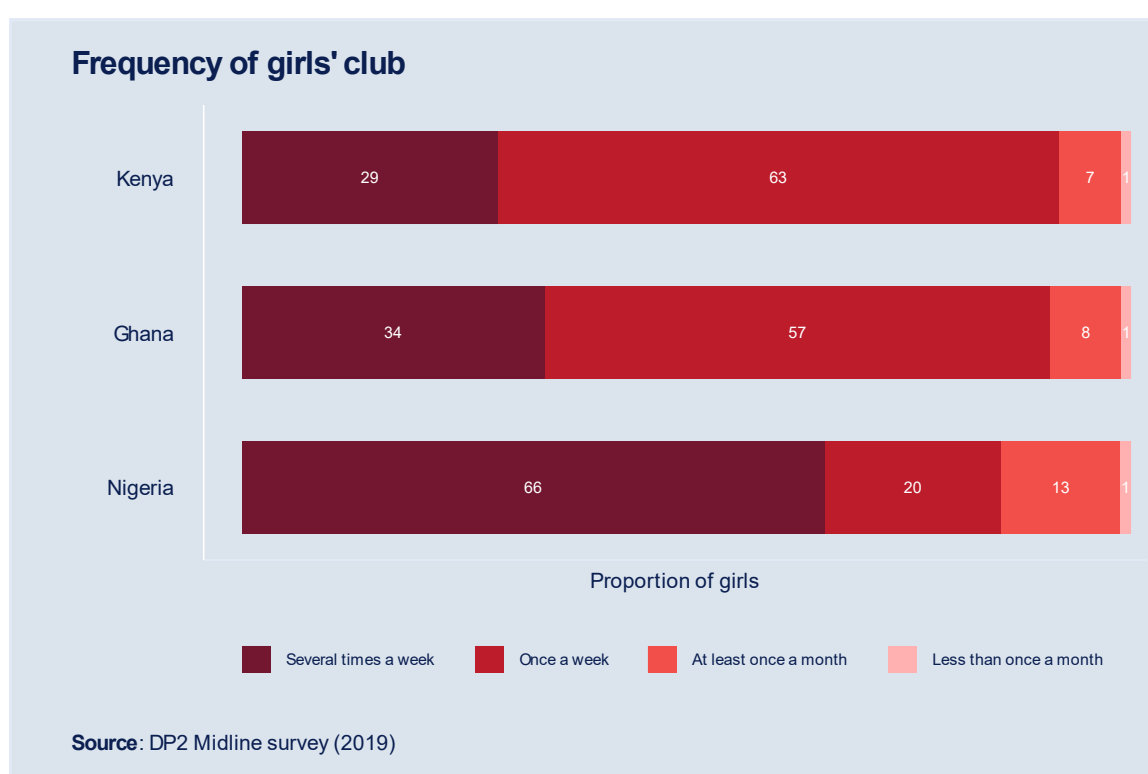
Figure 32 reports the frequency with which girls' clubs meet. The programme encourages clubs to meet at least once a week. The majority of girls' clubs across the three countries meet regularly, with approximately 90% of girls' club members reporting that they attended a club meeting at least once a week. Nigeria has the highest proportion of girls reporting that girls' clubs meet more regularly, with two-thirds of girls reporting that their girls' clubs met more than once a week.

DLA staff reported that the frequency of meetings can vary and depends on a range of factors: Firstly, the programme design relies heavily on the commitment and availability of mentors and may vary by school type or context. In Kenya, teachers in non-formal schools more frequently have time available to run clubs. However, the higher turnover of teaching staff in these non-formal schools can disrupt club activities and makes it

⁸⁹ Given that no household data were collected at midline, the baseline PPI Wealth Score is used to derive quartiles of wealth.

necessary for new mentors to be selected and trained. The programme has adapted by training multiple mentors at a time in order to provide a level of continuity of activities. However, given the lack of capacity amongst rural teachers, and the particularly small number of female staff, this is not always possible. Secondly, schools engage in a range of activities during the school year. Depending on the type of activity the club decides to focus on, this can either increase the frequency of meetings or mean that the girls or the mentor spend parts of the year focusing on different activities. Thirdly, clubs are meant to not have more than 40 members. If too many girls want to be part of a club, the programme encourages the school to set up additional clubs. The idea is to ensure that club membership remains small enough to allow meaningful discussions. However, given the fact that the programme is already struggling with capacity of teachers to act as mentors this poses an additional challenge.

Figure 32. Frequency of girls' club meetings



DLA staff reported that if any club activities require monetary resources, mentors were advised to be mindful of losing poorer and more vulnerable members. In some instances, the required funds were obtained via the school management (soft loan). DLA staff also reported that mentors themselves sometimes provided the required funds. However, they also acknowledged that in some instances girls were asked to contribute money to support club activities. However, DLA field staff was adamant that poor girls who could not afford to contribute financially were still invited to participate in all activities.

In the sections below, we look at the qualitative findings on girls' club membership for each country.

Ghana

In Ghana, the qualitative study found that members of girls' clubs came primarily from Primary 4 and Primary 6. Some girls reported being approached by teachers to join. In two schools, according to the girls, they wrote an exam and were selected based on their performance. This was corroborated by other girls, whose perception was that only good students were chosen to be club members. In another school, all the girls from a particular class were automatically chosen to be club members. Most girls, however, suggested they were approached because they were a particular age and a public announcement was made at school where their teachers asked them if they were interested in joining.

'Interviewer: How were you selected into the DLA club?

Respondent: They looked at our ages and whether we were willing to be members or not.

Interviewer: So, was your wish to be part, is that the case?

Respondent: Yes.'

Interview with cohort girl, Tamale, Ghana

One distinguishing feature of club membership in Ghana was that there were no explicit reports of the payment of any membership fees or money for the club supplies. These seemed to be funded from other sources.

Kenya

As mentioned earlier, girls are not meant to pay for club membership and if club activities require additional funds, mentors are meant to first try to mobilise resources from the school in the form of asking the head teacher for a loan and only if unsuccessful ask club members to contribute if they can. Girls should not be excluded from club activities if they are unable to contribute in order to ensure that the clubs reach their target group of vulnerable girls. However, in all schools in Kenya, girls had to contribute some money towards the DP-2 club to ensure having sufficient funds for their activities (KSH 5–20). Funds were reported to be used to fund activities such as buying beads, seeds, or flour for their projects, or buying sanitary napkins or first aid products for their health and hygiene. As a result, girls who could not afford this fee were unlikely to participate in the club, even if they were likely to need the support of the club the most. The quantitative findings suggested that those in the poorest quantile of the poverty probability wealth index (PPI) were no less likely to be a girls' club member than peers in higher quantiles of wealth. However, it should be noted that the PPI wealth index serves only as a proxy of a household's ability to pay for extracurricular activities such as girls' clubs, given that it is an index based on the ownership of a range of assets and does not necessarily reflect how cash liquid a household is. The programme relies on head teachers and mentors to identify who the most vulnerable girls are and for ensuring that they participate in the clubs. There seem to be no clear protocols in place for selecting the most vulnerable girls or monitoring that they continue to attend and participate in the clubs. More generally, the practice of charging contributions for girls' clubs is not in line with DP-2's design and is likely to exclude some girls, as illustrated by the following quote:

'Interviewer: What were you told to do to join the group?

Respondent: Pay 50 shillings for membership.

Interviewer: What has made you not go to the girls' club this year?

Respondent: I have not paid 50 shillings.'

Interview with cohort girl, Kajiado, Kenya

Membership of the girls' clubs is voluntary in most of the schools sampled for the qualitative study in Kenya—that is, anyone who wishes to join the club can join it. In Kiambu, the head teacher and resource teacher reported that the school decided to include girls from Primary 5 and Primary 6, but not girls from Primary 7, as the girls felt they had too much to do in school and the club was taking too much of their time. By contrast, in the Nairobi formal school, they preferred to include girls from Primary 7 and Primary 8 as they were affected by where they lived and needed the support of the club more. According to the head teacher, these girls grew up in areas where they were vulnerable to sexual harassment and early pregnancy. Girls from P4 to P7 are meant to be able to join clubs, with girls in P8 not targeted so as to not interfere with the preparation for the pre-secondary examination. In Wajir, while the head teacher and resource teacher claimed no one was exempt from joining the club, one of the girls reported they were selected by the teachers according to their performance.

'Interviewer: You said you are in a club. How are the members chosen?

Respondent: They are selected according to class performance and they are selected by the teachers.

Interviewer: You joined willingly, or you were forced?

Respondent: I was forced by the teacher.

Interviewer: Why didn't you join willingly?

Respondent: Because it is wasting my time.

Interviewer: What were you doing then?

Respondent: Studying.'

Interview with cohort girl, Wajir, Kenya

In Kenya, it seems that enrolling in girls' clubs was voluntary but contingent on their ability to pay the contribution, and in some instances on the academic performance of girls and teachers' choice of girls according to their needs and age. Mentors and head teachers are, however, meant to actively encourage and persuade vulnerable girls to attend these clubs.

Nigeria

The selection of girls for DP-2 clubs in Nigeria seemed to be inclusive of girls with certain skills as well as their ability to pay for the club materials used. At baseline in Nigeria, all schools prioritised selection of girls in Primary 5 into the clubs on the basis

that they were about to graduate from the school and so might need the skills more. At midline, however, girls were selected from Primary 5 and Primary 6.

In three schools, girls reported that only a few girls who performed well in class were selected. This was confirmed by resource teachers, who suggested that they wanted to ensure that only girls who could learn the skills were enlisted.

'The selection for those in the *Fitila* club are from the top performers. They are selected from Primary 5 and 6. The club teaches student business. The classes are divided into two. We have males and females. Female classes learn how to produce air fresheners, car washes, I Z, and Vaseline. Male students are learning fashion design.'

Interview with head teacher, Nigeria

'We were given a task to complete; we were observed. Only those who they saw could do it well were selected.'

Interview with cohort girl, Nigeria

In two schools, club activities were financed by the members of the CAP process and the money made from selling materials produced by the students. Girls were supposed to buy the materials to be used for learning new skills, and only those who could afford them were able to participate in the clubs' activities. As mentioned above, this finding shows that clubs are at times not implemented as intended. Parents also reported paying money to the club. One of the schools had a monthly membership fee of NGN 100 per girl.

'Members of the CAP contribute in supporting this girls' association, and also they contribute many materials to the club for its activities.'

Interview with resource teacher, Nigeria

'The challenges we have concerning the club, we used to face financial issues, because most students used to get money to buy his or her materials.'

Interview with head teacher, Nigeria

Despite the requirement to pay membership fees or to purchase materials, the quantitative study, as in Kenya, found that children in the poorest wealth quartile (Figure 31) were no less likely to participate in DP-2 girls' clubs than their peers in higher quartiles of wealth. This reflects the views of DLA staff who did not think that exclusion of poor children in club activities was a problem.

The quantitative study suggested that, on aggregate, while the poorest may not be able to afford the girls' club, there is little evidence to suggest widespread exclusion based on wealth. Another criterion for selecting girls is their academic performance. Selection of girls for club membership in these ways stands in contrast to the project's design and ethos, given that the very purpose of the clubs is to benefit marginalised girls.

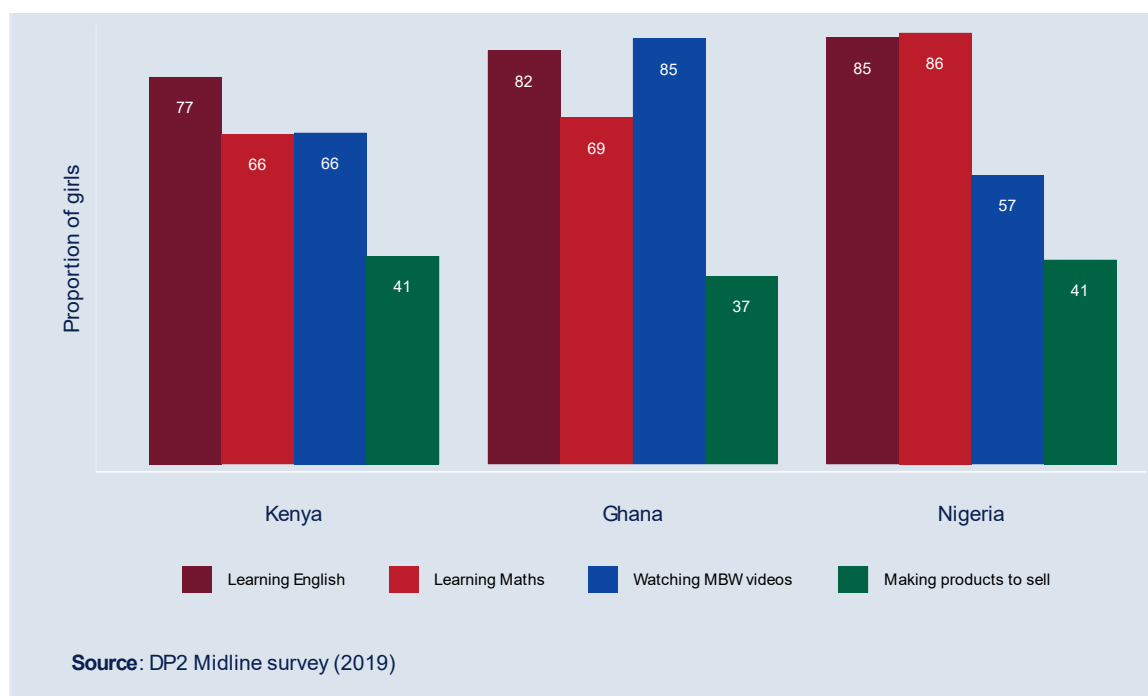
While the DP-2 design does not require clubs to charge fees for membership (and the new activities performed by clubs—watching MBW videos and discussing LS—do not require a financial contribution), at baseline and to a significant degree (40%) at

midline, we found clubs conducting income-generating activities such as bead-making, bread-making, and mat-making that require some up-front costs related to the materials required. For many clubs, the assumption seems not to hold that these activities need capital funding at the start, after which they receive sufficient funding to sustain subsequent activities from first-round sales. Clubs may not be productive or successful on the first or even subsequent round of activities, or they may use the funds raised for something other than the club itself. The club will therefore continue to require funding through this trial-and-error process. To be able to fund this activity now, clubs charge their member girls a sum to participate. If clubs continue these income-generating activities, therefore, they will need funding from the school or community to ensure that the activities are sustainable. If they do not receive money from the school or the community, they are likely to continue charging girls for the material required, which in turn makes membership exclusive to those who can pay. The programme tries to mediate these challenges through the business toolkit training that covers modules on how to choose an income generating activity that is likely to succeed and the basics of running a business. The findings from the qualitative research suggest that more can be done in this area. We found that some clubs also provide sanitary napkins and other hygiene products, which improves self-efficacy and is appreciated by both girls and parents, but this also requires funding and, if these activities are to be sustainable, DP-2 clubs will have to consider the need to find funding in their design. Going forward, if clubs were only required to provide support through group discussion and provide a platform for watching and discussing MBW, members would not be charged.

Life skills and knowledge activities

At baseline, our analysis showed that, in Kenya and Nigeria, club members engaged in producing a range of hand-made products for sale to generate some money for the club and/or school. The clubs taught girls some life skills, especially manual skills and knowledge of their personal hygiene. At baseline, in Ghana, the production of goods for sale was slightly lower—clubs usually focused on activities such as talks about hygiene, drama, and quiz competitions. None of the clubs mentioned using tools such as the business toolkit in Nigeria and Kenya, and in Ghana these tools were mentioned only a limited number of times.

Figure 33 shows the proportion of girls who reported engaging in different activities as part of the girls' club. In all three countries, approximately 40% of girls reported making products in the girls' clubs to sell. The majority of girls in all countries reported activities related to learning English and maths in the girls' clubs, although this was most commonly reported in Nigeria. At midline, 85% of girls' club members in Ghana reported watching an MBW video, compared to 66% of girls' club members in Kenya and 57% in Nigeria. The greater take-up of the MBW videos in Ghana thus far may reflect the slightly earlier roll-out: in Ghana, MBW videos were distributed in November 2018, while they were distributed in January 2019 in Nigeria and February and March 2019 in Kenya.

Figure 33. Proportion of girls that report engaging in different activities as part of the girls' club

Below we describe the findings from the qualitative research regarding the activities girls reported taking part in as part of the DP-2 girls' clubs.

Ghana

In Ghana, the club activities reported by girls had some key common elements, but the operational modalities of their functioning differed to some extent. Five out of the six schools in Ghana spoke about the club activities happening regularly, while in one school it was reported that the club activities had not happened in the last year since the teacher/club leader had left. This finding was supported by the quantitative research, which found that 91% of girls reported that clubs were occurring at least once a week (Figure 32).

For those schools where the clubs were running relatively more regularly, the girls participated in income-generating activities and were taught about personal hygiene. Other girls participated in drama competitions and cultural dancing as part of the clubs.

Interviewer: Have you learned something new in the club in the past week?

Respondent: Yes.

Interviewer: What did you learn?

Respondent: I learned how to make soap. I used not to know what went into soap making, but now, I know the ingredients combined to come up with soap.

Interviewer: Are the activities in your club beneficial to you?

- Respondent: Yes.
- Interviewer: Which aspects of your club's activities are beneficial to you?
- Respondent: The one that teaches us how to take good care of ourselves, such as how to maintain good personal hygiene.
- Interviewer: How does taking good care of yourself benefit you?
- Respondent: It helps to promote your health. If you visit the toilet room and after coming out, you don't wash your hands, you are going to contract diseases. But if you wash your hands, you will be free from the disease.'

Interview with cohort girl, Tamale, Ghana

In some clubs, girls were doing different activities such as toffee making, which they thought was also useful for them to be able to sell on the market if they wanted.

- 'Interviewer: Which aspects of the activities are very helpful?
- Respondent: The toffees that we make are very helpful because if you have money, you can buy the condensed milk and make the toffees and sell them.'

Interview with cohort girl, East Gonja, Ghana

Head teachers and resource teachers also alluded to organising quiz competitions and spelling bee contests as part of the club activities, although this was relatively less reflected in the data from the girls. More parents were also aware of the clubs, although parents who were not part of the PTA/SMC groups seemed less well informed.

In two schools in Ghana, it was observed that there seemed to be some confusion in the minds of the girls regarding the difference between the girls' clubs and the remedial classes. These cases usually came up in situations where the club activities were not being held regularly.

Kenya

Girls' clubs in the schools sampled for the qualitative study all undertook different activities in Kenya. In several clubs, activities from the previous year had failed due to lack of funds or poor weather, so the clubs reported trying out new activities at midline.

In two schools, girls reported watching MBW videos and that this helped them understand the importance of discipline and hygiene. In most schools, the discussion topics were related to the challenges faced by the girls in their daily lives. For example, in Nairobi's schools (both formal and informal), girls were taught to be aware of their surroundings, not to stay out late, and to be careful with strangers or people known to them who may make them uncomfortable. They also discussed issues such as female genital mutilation and HIV to raise awareness among girls and boys. Girls reported a greater concern for their surroundings and thought about what they were taught in the clubs.

‘You know for a girl, it’s not good for her to stay outside ... Because you know the condition of this place, you know there are rapists outside, if you stay until late, you may be raped and me, I always say better a person hates me but God loves me.’

Interview with cohort girl, Nairobi, Kenya

Girls reported enjoying the clubs’ discussions and, although parental knowledge of the clubs was low, where parents were aware of the club activities in Machakos and Kajiado, they reported a positive change in their children.

‘Let’s say since she joined this club, I have seen changes. In fact she wasn’t good in relating with other children and she was that one kid who didn’t like kids, but when she joined that club with others, she has become a good girl.’

Interview with parent of cohort girl, Kajiado, Kenya

As with the baseline findings, Kenyan sampled schools continue engaging girls in several income-generating activities and lessons on specific topics such as hygiene. These clubs seemed to be doing better than at baseline in the way girls were engaged in more activities than before. Girls reported having more collective discussions with their peers about topics that were important to all of them than at baseline. They enjoyed having time to spend with their friends talking. Parents also seemed to observe changes in their girls, which was not the case at baseline.

Nigeria

Sampled schools in Nigeria seemed to have an extensive list of activities being conducted at girls’ clubs. Club members reported being taught to produce a variety of products, as well as talking about hygiene:

‘They used to teach us morals, cleanliness, and discipline from the television centre and club.’

Interview with cohort girl, Nigeria

‘We are taught how to make milk balls (*gullisuwa*), milk sticks (*illoka*), meat pie, fried groundnut, and sweets (*kantu ghana*).’

Interview with cohort girl, Nigeria

‘At the club, we are taught how to make soap and perfume. After we make it into the finished product, they allow us to buy at lowest prices, and then we take it to our parents. This gives me a lot of joy.’

Interview with cohort girl, Nigeria

Girls reported benefiting from these activities and seemed to enjoy them.

‘I do not have time to practise the knitting learned from the club because of the hawking. Yeah, so long as I have time, I would like to keep practising. Like now that fasting is on, I practise better because I do not have to hawk.’

Interview with cohort girl, Nigeria

Some even saw far-reaching benefits from attending the clubs.

'I'm aware that she belongs to the *Fitila* club, where they are taught how to produce different soap and perfumes. This learning will help her to be self-empowered in the future; she can depend on herself and she can also help others.'

Interview with cohort girl, Nigeria

As demonstrated in Figure 32, girls' clubs met most regularly in Nigeria. At midline, clubs reported that they continued to carry out similar activities to those at baseline. Clubs continued to make and sell different products to make money to reinvest into the clubs. What was different from baseline was that three out of six schools had introduced the MBW materials.

Challenges and lessons learned

In addition to some of the difficulties related to setting up and running the clubs that were discussed above, the process evaluation found that DLA staff face a number of additional challenges that if not carefully managed can impact on the effectiveness with which clubs are implemented. As already mentioned, the programme relies heavily on mentors. In particular, mentors have to be committed, be able to connect with the children and earn their trust, as well as have time available to attend training, facilitate club activities and engage with the MBW curriculum. As with other parts of the programme, DLA needs to ensure that teachers with the right type of attributes are put forward to become mentors. This is not always the case. The programme has responded to these challenges by explaining to head teachers what type of a person a mentor should ideally be. In Kenya, CCAMs have additionally adapted by asking head teachers to nominate more than one mentor at a time. If all else fails, they have also resorted to asking head teachers to come and join club activities in order to see for themselves whether the clubs are implemented as intended. In order for these mitigation strategies to work, CCAMs/ACAMs need to maintain good relationships with head teachers and frequently visit schools whilst the clubs are running. High turnover of teaching staff in Kenya, especially in non-formal schools, presents an additional challenge to implementing the programme and if not mitigated properly can lead to an end to club activities or dilution of the curriculum and training provided.

Mentors of the girls' clubs need to be women in order for the clubs to meet their objectives, especially as they relate to facilitating discussions around MBW. In rural areas, there is a smaller number of female teachers and DLA staff reported that some schools do not have any female teachers. This is a concern particularly in Nigeria, where the quantitative findings show that 44% of schools do not have a female teacher, compared to 7% of schools in Ghana and 2% of schools in Kenya. As a result, running clubs is more difficult in rural areas. The project relies on community members when no female teachers are available. However, depending on literacy and numeracy levels within the community, such mentors sometimes struggle to engage with the training and the material provided for running the clubs. In Ghana, the project is able to make use of the structures set up by CAMFED to mitigate this challenge, by using their learner guide mentors. Ghanaian communities also have a women's leader - known as the Magazia - that in some instances is called upon by DLA to take up the club mentorship.

As mentioned for the monitoring of CAP activities, monitoring of club activities similarly is time consuming for CCAMs and ACAMs, especially as it relates to data capturing and entering. As with the monitoring process of CAP activities, the monitoring of club activities relies on a number of relatively comprehensive paper-based forms that have to be filled out when visiting a school and later on entered into an online platform. The process faces similar problems as have been discussed in relation to monitoring of CAP activities in section 6.4.2.

As discussed in section 6.4.2 the number of club and community action mobilizers was recently reduced to shift additional resources towards teacher trainers in Ghana and Nigeria. The staffing shortfall was however offset to an extent by a reduction in monitoring activities for mobilizers to only those schools that are piloting the MBW curriculum. Although mobilizers may manage to visit a school 2-3 times a month, this is often challenging for a number of reasons. Moreover, partners in government are only able to make far fewer visits given other responsibilities – making joint monitoring even more difficult. In practice, joint monitoring only takes place when the schedules of government and DLA staff happen to align. This does, however, not seem to imply a lack of involvement from the government officers and merely reflects contextual factors that make it necessary to deviate from the way the programme was designed. Generally speaking, travel time, time needed at each school, timing of the clubs, availability of government counter parts and stipends for reaching the schools were cited as reasons for lower than expected monitoring visits and delays in data entry.

The following subsection discusses the effect of these activities on girls' LS measured quantitatively.

6.4.3 Quantitative assessment of life skills

To quantitatively assess the impact of DP-2 on life skills we constructed a life skills index using factor analysis. The index is constructed on the set of statements reported in Table 70 on which girls were asked to agree on a 1–5 Likert scale ranging from 'strongly disagree' to 'strongly agree'. The statements focus on a set of skills related to confidence, goal orientation, and ability to work with others. It should be noted that these do not cover the full range of knowledge, skills, and attitudes covered in girls' clubs, and in particular by the MBW materials,⁹⁰ which were better explored through the qualitative research described above.

Table 70. Life skill scale statements

Life skill scale statements
I feel confident answering questions in class
I ask the teacher if I don't understand something
I am as capable at school as others my age
I would like to continue studying/attending school after this year
I like to make plans for future studies and work
If I study hard at school, I will be rewarded with a better job in future
I can describe my thoughts to others when I speak

⁹⁰ Such as the concept of 'being safe', which was explored in girls' clubs for example through discussions regarding personal hygiene.

I can work well in a group with other people
I can organise my peers or friends to do an activity
If I try hard, I can improve my situation in life

Table 71 reports the impact of DP-2 on the life skills index. For each country, the first row shows the impact on all girls in the evaluation sample. The second row identifies the impact for those girls who were members of girls' clubs specifically. For the sample of all girls, including those not participating in girls' clubs, we find that DP-2 has had a positive and statistically significant impact on the life skills index for girls in Kenya, but not in Nigeria or in Ghana. When looking at the three strata separately for Kenya, the evaluation does not detect a statistically significant impact in any of the strata. We do, however, find a large and statistically significant impact of DP-2 on the life skills of girls in Wajir county only.⁹¹

Similarly to the impact observed against self-efficacy in Ghana reported in Section 3.2, the impact on life skills observed in Kenya is observed without a statistically significant increase in the life skills index of girls' in the treatment group. This has a similar interpretation given that a DID estimate of impact is derived from the interaction of the changes in treatment and control groups over time, i.e. that DP-2 has protected treatment girls from a fall in the life skills index (which is created on similar constructs to the self-efficacy index) over time as they age.

Considering only the sample of girls who participated in girls' clubs, and who are the most likely to have reported an increase in their life skills as a result of DP-2, we found a positive and statistically significant impact of DP-2 on girls in both Kenya and Nigeria, but not in Ghana. Furthermore, we found that this impact is marginally stronger for girls' club participants in Kenya, relative to the full sample of girls. This provides some evidence that girls' club participation has an additional effect on life skills as measured by the life skills index.

Table 71. DP-2 impact on life skills

Cohort	Baseline treatment	Midline treatment	Difference baseline to midline treatment	Baseline control	Midline control	Difference baseline to midline control	DID (treatment – control difference)
Ghana							
Life skills index	83.6	84.4	1.6**	83.7	84.4	1.4	0.6
Life skills index (girls' club members only)	83.6	84.6	1.6***	83.7	84.3	1.4	0.2
Kenya							
Life skills index	83.0	83.3	0.6	83.4	83.2	-0.7	1.6*
Life skills index (girls' club members only)	82.8	83.8	0.6	83.9	83.2	-0.8	1.8*
Nigeria							
Life skills index	81.8	85.3	4.3***	80.7	83.3	3.2***	1.0
Life skills index (girls' club members only)	82.0	86.2	4.5***	80.8	82.9	2.8***	1.7*

⁹¹ Full results of the impact of DP-2 on life skills for the three sampling strata in Kenya and for Wajir county are presented in Annex 19.

Source: DP-2 girl survey (2019; 2018)

Note: Asterisks indicate where means differ significantly from the overall average at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$. Impact estimation results are based on a regression model controlling for girl- and school-level covariates (described as Model 3 in Annex 3.7). Baseline and midline means are unadjusted means for the sample that the regression analysis is conducted on (this omits any observations that have missing data on any of the covariates).

While we did not find a statistically significant impact on life skills for girls in Ghana, this should not necessarily be viewed as an indication of the efficacy of the girls' club intervention in Ghana. In Section 3.2, we found a strong, positive, and statistically significant impact on the self-efficacy of girls in Ghana. We also found that the magnitude of this impact is almost double for girls who have participated in girls' clubs compared to a sample of all girls. These results may well reflect a relative difference in the focus of girls' clubs, as well as a difference in focus on which MBW materials are presented to girls' clubs in Ghana. Whereas the life skills index focuses on confidence, goal orientation, and ability to work with others with a focus on the girls' education, the self-efficacy index is based on set of statements that broadly reflect the ability of a girl to be able to handle unforeseen challenges and problems.

6.4.4 Conclusion

Girls' clubs in all three countries offer the girls a space to use and develop their manual skills, raise their understanding and awareness of issues around personal hygiene, and have time and space to collectively discuss issues that relate to each one of them. However, some clubs in Nigeria and all clubs in Kenya continue to charge parents some fees and ask for contributions towards income-generating activities, which poses a risk that the most marginalised groups of girls—i.e. those with multiple drivers of marginalisation—will be left behind. This practice also goes against both the design of the programme and what implementers think is taking place in schools.

It is understandable that schools have to ask for parents' contribution to be able to offer these activities, since they require certain resources at certain costs. This raises a question about how DP-2 schools in Ghana can do what Kenyan and Nigerian schools cannot without passing on the costs of these clubs to parents. Since girls are not required to pay in Ghana, the process of selecting girls for DP-2 clubs seem to be more inclusive than in the other two countries.

Girls' clubs offer girls chances to get engaged in life skills development activities of any kind, starting from making soap to doing drama. Some of these activities seem to be continuing by default from baseline, e.g. making soap, which is one of the schools' income-generating activities. Other activities, such as poem recitation and drama classes, could be helpful for improving girls' confidence (e.g. encouraging them to speak up). Hygiene classes are useful for increasing girls' understanding of girls' issues and discussing taboo topics with their friends. All these activities have the potential to contribute positively to girls' improved self-confidence, life skills, and educational and life aspirations, i.e. self-efficacy. This hypothesis is certainly supported by the quantitative results, where we found that DP-2 had a positive impact in Kenya and Nigeria on the life skills index for girls who participate in girls' clubs, and that DP-2 had a positive impact in Ghana on self-efficacy for girls participating in girls' clubs to a significantly stronger extent than for our full sample. These in turn can improve school attendance, retention, and learning outcomes.

At midline, we generally found that girls' clubs were becoming more relevant to the DP-2 project context in that clubs are playing their part in contributing to the overall project objective alongside its other components. In particular, clubs seem to be more oriented towards helping girls deal with certain issues which act or can act as barriers to their schooling, such as menstruation, confidence in speaking up, learning outcomes, etc. The more clubs target their focus on identified barriers in any given context, the more successful these clubs will be in contributing towards improvements in self-efficacy, learning outcomes, and transition. As discussed in the DP-2 Baseline Report, there is a strong evidence base in the literature to suggest that learning outside the classroom through informal extracurricular activities such as clubs has a positive effect on girls' learning outcomes, confidence, and attitudes.

6.5 Project checks on IO indicators

Box 10. Project checks on intermediate outcomes

Ensure that the IO analysis reflects the links between different levels in the logframe and informs the validity of the Theory of Change. This includes checking whether they have:

- Measured and analysed all IO indicators presented in logframe;
- Disaggregated the data according to the logframe;
- Used both the qualitative and quantitative analysis stated in the logframe;
- Related the IO analysis to the analysis of Outcomes.

7 Conclusions and recommendations

7.1 Conclusions

In this section we present a summary of the midline findings for the evaluation of the DP-2 project in Ghana, Kenya, and Nigeria.

7.1.1 Profile of project beneficiaries and barriers to learning and transition

In this section, we draw on the findings of Chapter 2. In each of the countries in which it operates, DP-2 targets marginalised groups with a long history of exclusion. It does this by operating in schools in areas with low economic development, limited educational resources, and limited educational capacity, thereby defining all girls attending schools targeted by DP-2 as marginalised.

At midline, we found that the main barrier to learning and transition remains poverty, which was highlighted as by far the most important driver of marginalisation overall across the three countries. Poverty manifests itself in a number of ways that affects learning and transition. Poverty is directly related to parents' ability to afford school-related expenses and extracurricular contributions. Poverty also affects the ability of girls to concentrate at school, as girls arrive hungry and tired, and in the absence of school feeding programmes have limited money to buy food. In Ghana and Nigeria this is compounded by the apparent need for girls to engage in economic activities to support their household's budget.

Household chores also remain as an important barrier to learning and transition in all three countries, but particularly in Nigeria and Ghana. This was identified at baseline, with the midline study providing further nuance in how household chores can manifest as a barrier to learning and transition, including that the expectations of girls to perform household chores increased as they got older. At midline, we found that girls are expected to get up early in the morning to perform several tasks, sometimes resulting in them arriving at school late, and often tired and hungry. In some cases, this prevented girls from going to school (sometimes at all) for fear of being punished by teachers for arriving late. On the other hand, in some cases increased sensitisation of parents to the importance of education had resulted in parents reducing the workload for their children.

School infrastructure remains as a key barrier to learning and transition particularly in Ghana and Nigeria, where large proportions of schools reported to have no separate toilets for girls, no female teachers, and high PTR ratios. Of particular concern to DP-2 should be the increasing proportions of schools in Kenya and Nigeria that do not currently have access to electricity, which would limit the use of learning centres.

Distance to school emerged as a key barrier across all three countries, in particular for children living in rural communities. For children who lived particularly far from schools, this meant that they sometimes had to leave school early before the end of formal school hours to return home before dark, excluding them from attending extracurricular activities available at their school.

This is often linked to concerns around safety when travelling to school, particularly in Ghana and urban areas of Kenya (Nairobi). In Ghana, we found that the proportion of girls who reported feeling unsafe travelling to school had increased since the baseline survey. In Kenya, while safety concerns for the full evaluation sample had diminished since baseline, safety concerns remain prominent for girls in Nairobi restricting travel in the evenings or on weekends.

Weather conditions have emerged as a barrier to learning and transition. This is particularly true for Kajiado county in Kenya, which suffers from extremes of weather, with heavy rains resulting in unsafe classroom environments, while recurring droughts required parents and children to go out to seek work and food. In addition, extreme heat was identified as a barrier in Wajir in Kenya, while in some communities in Ghana and Nigeria schools became inaccessible following rains.

7.1.2 Literacy and numeracy learning outcomes

In this section we draw on findings presented in Section 3.1. Significant additional focus has been given to improving literacy and numeracy outcomes by DP-2 with the addition of the ALP, which provides remedial classes for the poorest academic performers.

In Nigeria, where baseline learning levels for both literacy and numeracy were overall the poorest, we found that DP-2 has had a strong and positive impact on both literacy and numeracy, far exceeding targets in both cases. Despite this undoubted positive outcome, it remains evident that learning outcomes for both literacy and numeracy remain behind curriculum expectations in Nigeria, with the majority of girls likely to leave primary school without the ability to read English, potentially posing a barrier to transition between primary and secondary school.

This evaluation did not find evidence of statistically significant positive impact on literacy and numeracy outcomes in Ghana and Kenya, and as a result found that DP-2 has not met learning outcome targets in the two countries. It may be that impact on learning outcomes takes longer to achieve in the context of Ghana and Kenya where learning outcomes were better than Nigeria at baseline. Poorer implementation of some parts of the intervention, particularly in Kenya (as discussed further below), is also likely to be a factor in the lack of observed impact.

DP-2 implemented remedial classes were found to be supportive of improving learning outcomes in all three countries. This is particularly true in Nigeria, where a high proportion of girls attended DP-2 supported remedial classes. In Nigeria, we found that the magnitude of impact on numeracy learning outcomes was stronger for children who had attended remedial classes, compared to the full evaluation sample of girls. Furthermore, regression analysis that quantitatively identifies the main drivers of improving learning outcomes found a positive association between attendance of DP-2 supported remedial classes and learning outcomes in all three countries.⁹²

DP-2 implemented teacher training was also found to be supportive of improving learning outcomes, with attendance at a school with a larger proportion of English

⁹² Section 3.1 identifies a positive association with DP-2 remedial class attendance and numeracy outcomes in Nigeria, and literacy outcomes in Ghana and Kenya.

and maths teachers who had received direct training being positively associated with improvements in learning outcomes, particularly in Kenya and Nigeria.

Subgroup analysis suggests that poverty, disability, and experiences of physical punishment were associated with slower rates of improvement in learning outcomes. Poverty was associated with lower improvement in learning outcomes in Kenya and Nigeria in particular, where the midline research found that some parents found it difficult to cover all school-related expenses, reducing the necessary support that they could provide for their children. Poverty also manifests itself as a barrier for children who engage in economic activities, with the midline research finding a negative association between engagement in child labour and poorer learning outcomes in Ghana. The midline research also found that poverty can affect learning outcomes through irregular attendance and poor concentration (if a child arrives hungry or tired), which may result in poor performance on school exams. The midline research identified that disability is associated with both with lower learning outcomes and with slower rates of improvement in Ghana and Kenya, but not Nigeria.

Subgroup analysis suggests that girls' own motivation and positive support that they receive from their parents is positively associated with improvements in learning outcomes. The midline research revealed that this is realised in a number of ways. Girls who reported spending time reading at home had stronger improvements in learning outcomes, while Nigerian girls' who reported that they received support with homework also demonstrated stronger improvements in learning.

7.1.3 Self-efficacy outcome

In this section, we draw on findings presented in Section 3.2, which assessed self-efficacy both quantitatively using a GSE scale and qualitatively. Self efficacy focuses on a girl's judgements of her own capability to study and use of her capability to achieve their educational aspirations and goals.

We found a strong and positive effect of the DP-2 on the GSE in Ghana, as well as improvements in self-efficacy of girls in all countries, although we did not find that this is attributable to DP-2 in Kenya and Nigeria at this stage. This is supported by qualitative findings which suggest that, at midline, cohort girls show more confidence and assertiveness in their answers about their own judgements of their abilities to act to achieve their goals.

In Ghana, we found strong evidence that DP-2 supported girls' clubs have contributed to improving self-efficacy, with the magnitude of impact on the GSE almost double for girls who have attended girls' clubs compared to the full sample of cohort girls. Nonetheless, the qualitative research provides evidence that girls' clubs are supportive of improving self-efficacy in all countries, both through the provision of practical skills and through the provision of information (in particular with regard to personal and menstrual hygiene), advice, and role models supported through the MBW curriculum. The qualitative research identified in particular that the introduction of role models into the MBW curriculum was having a positive effect, with girls now identifying female role models in their own communities for themselves. This was reported as supporting a belief among girls that their aspirations could be achievable.

7.1.4 Transition outcome

In this section we draw on findings presented in Section 4. In education, transition commonly refers to transition between one level of education (e.g. primary) to another (e.g. secondary). The GEC-T definition of transition also includes promotion through grades within a level of education. Given that all cohort girls were in Grade 5 at baseline across all three countries, successful transition at midline relates to the successful promotion from Grade 5 to Grade 6. It is important to note that, at endline, there will be an important moment for transition for cohort girls in Ghana and Nigeria, where successful transition will relate to transition to JSS, while in Kenya successful transition will relate to promotion to Grade 7 within primary school.

The evaluation provides evidence that targets for transition were successfully met in Kenya and Nigeria, which observed high successful transition rates of 97% and 95% respectively. While Ghana did not meet midline targets for transition, which are based on a DID comparison to a counterfactual, successful transition rates in Ghana remain extremely high at 96%. In fact, the evaluation found that almost no cohort girls in Ghana have dropped out of school between baseline and midline, and that unsuccessful transition mostly relates to the 2% of girls that repeated a grade. As such, the results of evaluation suggest that setting a one-percentage point improvement in transition relative to a counterfactual in Ghana for midline was inappropriate given that the already high rates of transition limit the ability to which DP-2 could be reasonably expected to generate any impact against successful transition.

There are some differences in the pathways for successful transition across the three countries. While within primary school progression is by far the most common transition pathway in all three countries, 12% of girls in Nigeria successfully transitioned to JSS a year earlier than expected because they passed the qualifying examination. In Kenya, 10% of girls transferred to other primary schools because parents relocate or in search for lower cost or better-quality schools. Grade repetition rates were low in all countries.

The key contextual barriers to successful transition across the three countries continue to be poverty, early marriage, and pregnancy. The qualitative research identified that poverty was the key barrier to successful transition in Kenya and Ghana, while early marriage was the key identified barrier in Nigeria.

In Ghana and Nigeria, a key barrier to successful transition at endline outside of DP-2's control will be the availability of JHS/JSS, as cohort girls make the transition from primary school next year. The availability of JHS/JSS are significantly lower than primary schools in both countries significantly decreasing the opportunity for girls to attend school, as well as increasing the cost of reaching school, particularly for girls living in remote rural communities in both countries.

7.1.5 Sustainability score

In this section, we draw on findings presented in Section 5. DP-2's approach to sustainability has a heavy focus on the school and community levels. At the school level, DP-2 continues to strengthen positive school leaders to create a shared understanding of the value of education for all, including across parents and community members. This includes the identification of and investment in resource teachers, who are expected to take on a lead role in supporting in the training of new

teachers, as well as providing refresher training, coaching, and mentoring of existing teachers. Resource teachers are also expected to champion the learning centres.

At the community level, DP-2 provides significant investment in community sensitisation and mentoring support to capacitate community members and schools to develop and implement CAPs that seek to address barriers to education with a focus on the particular needs of girls.

At the system level, DP-2 recognises the need to support change at the grassroots level with government mainstreaming to achieve systemic change and has committed to generating high-level commitment, ongoing support, and growing buy-in from government partners. DP-2 seeks to do this by engaging in activities that aim to boost the capacity of local MOE counterparts, involving them in project planning and monitoring processes.

In Ghana, we found that DP-2 has moved from a *latent* level of sustainability to an *emerging* level of sustainability overall. This improvement in the observed level of sustainability of the programme in Ghana is driven by improvements to the sustainability of its school-level activities, which were observed to be at a *latent* level at baseline. At midline, we found that, on average, the school level of activities had an *emerging* level of sustainability, while girls' clubs had a *becoming established* level of sustainability. This improvement in sustainability in girls' clubs in particular arises from two factors: the fact that a critical mass of schools have functioning girls' clubs and the use of the MBW curriculum is widespread, and the fact that the girls' clubs are free of charge in Ghana, meaning that no girl is excluded because of a lack of financial resources. For teacher training and remedial classes, while schools reported finding significant value in the training, it is still too early to say whether the sustainability of this activity will continue to improve, given that direct training has only recently been implemented and there are as yet too few indications of whether a critical mass of schools will effectively replicate this through stepdown training. The learning centres have been maintained through community contributions, but a recent Government of Ghana directive now prohibits this, and as such it is unclear whether schools will be able to find alternative sources of funding. There is no change in sustainability of the CAPs at community level which remain *emerging*, with the midline research indicating that this could be furthered improved by encouraging greater community participation and ownership over the CAP process. At the systems level there is no change in the sustainability score which remains at *emerging*. However, there is some evidence of progress at this level. This includes GES working with the DP-2 team to ensure the management of teacher transfers from one DP-2 school to another, as well as plans to increase the visibility of the project at national level through engagement with national level education events.

In Kenya, we found that DP-2 has remained at an *emerging* level of sustainability overall. However, we found that the sustainability of the CAP at community level has fallen from an *emerging* level of sustainability to a *latent* level of sustainability. This is because the proportion of schools that reported having a CAP and were able to produce the actual CAP itself has fallen since baseline to 68% and 49% of schools respectively. At the school level, all activities remain at the *emerging* level of sustainability. With regards to teacher training and remedial classes, the midline research found inconsistencies in implementation, particularly that not all teachers exposed to direct training were receiving the full package of training on offer, violating the assumption for sustainability that 'resource teachers' could cascade this training to others. For the learning centres, we continued to find that a common concern was the

lack of funds for maintaining or replacing equipment. In Kenya, girls are charged for membership of girls' clubs. Given that DP-2 hopes to target marginalised girls, there is potential that this could be excluding the most marginalised of girls. In Kenya, DP-2 has found it more difficult to generate progress on system level sustainability. This emanates from the concern that local government stakeholders are heavily involved in other government initiatives that dilute their capacity to engage fully with DP-2 project activities.

In Nigeria, we found that DP-2 has increased at a *becoming established* level of sustainability overall, driven by the finding that the sustainability of the CAP at community level and the sustainability at the system level have both improved from an *emerging* to a *becoming established* level of sustainability. The improvement in the sustainability of the CAP is driven by two factors: the fact that a critical mass of schools have a CAP in place, with clearly defined objectives; and the fact that CAPs in Nigeria have the most diverse range of active stakeholders, and in particular the greatest involvement of community members and parents, who have a great stake in the success of the CAP process. At the school level, the resource centre remains at an *emerging* level of sustainability, as issues with access to electricity have emerged and where we see a reduction in the proportion of girls who reported watching a learning centre video. The sustainability of teacher training and remedial classes is rated at a *becoming established* level, as initial direct training is well implemented in Nigeria. Head teachers reported continuing to monitor teachers to keep the quality at the level developed by DP-2, and we see strong improvements in teaching quality and learning outcomes. The sustainability of the girls' clubs also remains at an *emerging* level of sustainability, despite a high proportion of schools having a functioning girls' club and because in Nigeria (as in Kenya) a membership fee is charged, which may prevent the most marginalised of DP-2's intended beneficiaries from accessing the clubs. At the system level the sustainability is rated as *becoming established* in large part due to the systematic efforts to engage with government stakeholders at both the local and state level, with state level engagement involving a wider group of government stakeholders, including representatives of the Ministry of Budget and Planning, key gatekeepers. This increases the likelihood of the sustainability of project activities in which success has been demonstrated to government stakeholders – with teacher training and remedial classes being noted in particular.

7.1.6 IOs

Attendance

In this section, we draw on findings presented in Section 6.1. DP-2 aims to support the creation of a supportive environment for girls in the community, school, and classroom to increase their motivation to attend school.

The evaluation provides evidence that targets for attendance were successfully met in Ghana and Kenya, where attendance rates remained very high at 94% and 96% respectively. We did not find evidence that targets for attendance were successfully met in Nigeria, although attendance rates remain moderately high at 80%. This suggests that rates of attendance in Ghana and Kenya support achieving learning outcomes, as was observed during the baseline round of research. However, there is room for improvement in Nigeria, where we found that girls are missing one in five days of school. Improving this attendance rate will likely further contribute to the already

impressive impact on literacy and numeracy observed as children are able to take further advantage of the improvements to teaching quality that are attributable to the DP-2 project in Nigeria.

The evaluation found that the CAP process encouraged attendance in Ghana and Nigeria by influencing communities' attitudes towards schooling and the workload of girls. In Ghana, this was realised by focusing attention on the monitoring of student attendance, as well as sensitisation around how time spent on household chores and economic activities affects attendance. In Nigeria, this was realised by schools working closely with parents through the CAP process to ease constraints around the payment of school fees, as well as sensitisation through announcements in local mosques.

Government and NGO support was also reported to support attendance in Ghana and Kenya. For example, in Kenya the qualitative research revealed that community chiefs have been officially involved in the task of improving attendance by following up with parents of children who are absent from schools.

Barriers to attendance outside DP-2's control may explain why attendance targets have not been met in Nigeria. While poverty and the ability to pay fees was identified in the qualitative research as a barrier to attendance, this was most prevalent in Nigeria, where we found statistically significant differences in the attendance rates of the poorest children. In Nigeria, we also found that the lack of female teachers, high PTRs, and the lack of basic school infrastructure were all linked with statistically significant lower attendance rates.

Teaching quality

This section draws on findings presented in Section 6.2. The design of DP-2 reflects the belief that students learn better when they are taught by effective teachers and that teachers become more skilled and knowledgeable through training, a core component of DP-2. Progress against teaching quality is measured by four distinct targets against indicators in DP-2's logframe:

- the average number of teaching approaches attempted;
- the increased percentage of attempted teaching strategies that are successful;
- the increased proportion of teachers observed providing a safe and inclusive space for all students; and
- the increased percentage of teachers who implement formative assessments that are of a high standard.

In Nigeria, the evaluation found evidence that all teaching quality targets have been met, with particular improvement noted against the proportion of teaching strategies that were successful in English, the number of formative assessment strategies implemented, and the proportion of formative assessment strategies that were implemented to a high standard.

The Nigerian results provide strong evidence in support of the DP-2 TOC, where the evaluation provides evidence of the strongest impact on teaching quality in Nigeria, as well as the strongest impact on literacy and numeracy learning outcomes.

In Ghana, the evaluation found evidence that all teaching quality targets have been met, with the exception of the proportion of teaching strategies that were successful in English. Particular improvement was noted in the proportion of teaching

strategies successfully implemented in maths, the provision of a safe and inclusive environment in the classroom, and the proportion of formative strategies that were implemented to a high standard.

In Kenya, the evaluation found evidence that only one teaching quality target was successfully met and one was partially met, with Kenyan teachers meeting targets for the number of teaching approaches implemented and the proportion of teaching strategies implemented that were successful, but only for English. In Kenya, however, it should be noted that, while roll-out of literacy training had been completed just before the midline survey, numeracy training was still ongoing. The slow roll-out of the direct training in Kenya is likely to have been a result of the new government rule that teachers can only be trained on weekends and holidays.

A number of challenges faced by Kenya, both contextual and implementation, explain why not all teaching quality targets have been met. Teacher turnover is particularly high in Kenya. We found that, of the teachers who received direct training from DP-2, 37% had left their school since receiving Literacy I training and 24% had left their school since receiving Literacy II training. These rates are approximately double to those observed in Ghana and Nigeria. For both literacy and numeracy training, DP-2 implements two separate rounds of direct training, and completion of both rounds is considered to be the full training package. Whereas a high proportion of teachers in Kenya had some exposure to DP-2 direct training, the evidence provided in this evaluation indicates that many teachers are not receiving the full training package. For example, we found that just 34% of teachers had received both Literacy I and Literacy II training, greatly diluting the potential for DP-2 to improve teaching quality.

7.1.7 Community attitudes and perceptions

This section draws on findings presented in Section 6.3. Community engagement in DP-2 takes the form a CAP process, which provides training through a series of workshops. This is designed to enable CAP participants to identify barriers to learning and transition and subsequently to identify resources and actions required to overcome them. The DP-2 TOC assumes that community engagement in girls' education will contribute to their increased chances of enrolment, attendance, and completion of school.

There is significant variance in the degree to which the CAP process has been implemented successfully across the three countries. In Nigeria, the CAP process is working particularly well. The vast majority of CAPs are in place in Nigeria, and there is a large degree of buy-in to the process from a wide range of stakeholders, including from the community and parents. In Nigeria, communities were reported as having a sense of ownership over the CAP process to a degree not observed in the other countries. This is realised in Nigeria through a clear articulation of the barriers to education specific to the context of the community, as well as engagement in their solutions including making financial contributions.

In Ghana, the CAP process is working moderately well, with the midline research indicating that most schools have a CAP in place and most participants in the CAP process have met, but not to the same degree as observed in Nigeria. In particular, we found that the involvement of community members and parents was approximately half the level observed in Nigeria. Nonetheless, where CAP processes were in place, participants reported carrying out community-level activities to address education barriers as well as being involved in school activities such as clubs and remedial

classes. However, it was noted in Ghana that the CAP process suffered where head teachers moved to different schools, and (with narrower buy-in from a range of stakeholders than observed in Nigeria) the future progress of CAP processes may slow if DP-2 does not provide refresher training sessions.

In Kenya, the CAP process has progressed the slowest, with just two-thirds of schools reporting having a CAP in place (compared 96% of schools in Nigeria and 88% of schools in Ghana), and only half of schools being able to produce the CAP itself. In Kenya, the lack of progress on the CAPs is likely to have been the result of a variety of factors, including the fact that CAP participants often support schools through other structures (such as PTAs or SMCs), a reported lack of direction by DP-2 local offices, and the presence of other government initiatives (including the mandated role of community chiefs in improving child attendance). The lower participation of head teachers, community members, and parents also reduces the ownership of the individuals with the highest stakes in addressing barriers to education, further diluting the potential for real impact through the CAP process in Kenya.

Where CAP processes are functioning, participants in all three countries are able to articulate how concrete actions have been taken to reduce drop-out rates or improve attendance of girls facing particular barriers to education. We also found evidence of DP-2 impact on the aspirations of girls to complete education, particularly in Nigeria and to some extent in Kenya. This suggests the DP-2 causal assumption (that community involvement in action planning to identify and address barriers to learning and transition lead to changed attitudes of community members and results in concrete actions in support of girls' education) holds.

Across the three countries, the qualitative research found positive parental attitudes towards girls' education, with parents able to articulate the benefits of education of girls and supportive of eliminating barriers that girls face such as excessive household chores or working outside their homes. This is reported to have been supported through sensitisation efforts of the CAP, but also through other structures such as the SMC, community chiefs, or government programmes such as Jolly Phonics, School for Life, and *Tusome*.

7.1.8 Life skills

This section draws on findings presented in Section 6.4. DP-2 aims to improve life skills and knowledge primarily through schools choosing to set up a girls' club where mentors are trained to support and engage girls in activities that enable them to increase their awareness about health, learn new skills, access relevant resources to receive greater support, and link vulnerable girls to other support programmes. Girls' club mentors are supported by DP-2 with training in the MBW curriculum, which explores a range of themes such as 'being well and doing well', 'being safe', and 'being goal-focused'.

Girls' clubs across all three countries offer girls a space to use and develop manual skills, raise their understanding and awareness of issues around personal hygiene, and give them time and space to collectively discuss issues that relate to each other. At midline, we found that the girls' clubs are becoming more relevant to the project context in terms of how they interact with other project components. In particular, clubs seemed to be more oriented towards helping girls to deal with certain issues which act or can act as barriers to girls' schooling such as menstruation, confidence in speaking up, and learning outcomes (through additional

support to literacy and numeracy). Across all countries, the qualitative research reported that girls' clubs have contributed positively to girls' self-confidence, identifying the MBW curriculum's use of 'role models' as particularly supportive in helping girls to realise that their aspirations are real and achievable.

There is a positive impact on a Life Skills index in Kenya and Nigeria, and we found that that this impact was stronger for girls who had attended girls' clubs. In Ghana, while we did not find an impact on LS, we did find a strong impact on the GSE scale, with the impact almost double in magnitude for girls who attend girls' club. These findings may indicate a difference in focus across countries with the LS index mainly representative of confidence in the classroom and goal orientation, while the GSE is mainly representative of identifying solutions to challenges.

There is variation in the implementation of girls' clubs across the three countries. In particular, membership of girls' clubs was highest in Ghana (79% of girls), compared to Kenya and Nigeria (60% and 61% of girls respectively). Girls' clubs met most regularly in Nigeria, with two-thirds of girls reporting that the clubs met more than once a week, although attendance was frequent in Ghana and Kenya, with more than 90% of girls reporting attending at least once a week. In Kenya and Nigeria, girls frequently reported that a membership fee was required to participate in girls' clubs. While there is the potential that this will exclude the poorest and most marginalised of girls in each country, it is encouraging that girls from the poorest quintile are not systematically excluded. Charging fees was viewed as understandable to cover the cost of resources required by the clubs.

7.1.9 GESI

This section draws from findings presented across this report. In December 2018, DFID introduced an additional focus on GESI with the publication of its Gender Analysis Guidance and Framework, which includes the GEC's minimum standards on GESI.

DP-2 has the potential to be transformative in the way some of its activities are targeted at challenging inequitable gender norms. In particular, CAP processes, where they are working, are identifying barriers to education that are specific to girls. In Nigeria in particular, and to some extent Ghana, CAP processes have identified that heavy chore burdens expected of girls have led to girls arriving at school tired, reducing their ability to concentrate. The CAP processes have responded by sensitising communities regarding the links between household chores and school performance, which has led to some reported changes in behaviour. Girls' clubs which implement the MBW curriculum, with its inclusion of discussions on personal hygiene, have increased the confidence of girls to talk openly about 'taboo topics' such as menstrual hygiene, providing considerable support to girls at a moment of significant change in their lives.

DP-2 could be more transformative by ensuring their interventions are tailored to the reality of project context. For example, in Ghana and urban areas of Nairobi where security is viewed as a real concern, girls sometimes leave school early to ensure that they arrive home before dark. DP-2 should continue to ensure that the timing of their activities, such as remedial classes or girls' clubs, reflects this reality. In addition, as discussed below, DP-2 should review the practice of charging fees for girls' club membership in Kenya and Nigeria to ensure that the poorest and most

marginalised girls are not excluded from participating in girls' club activities, although we did find the poorest quintiles are not systematically excluded.

7.2 Reflections on the ToC

In Section 1.1.1 of this evaluation report we defined three main causal assumptions for the desired learning and transition outcomes. In this section we reflect on how well these have held based on the evidence presented in this report

Teacher training, remedial classes and educational media

The causal statement included in Section 1.1.1 reads “*TPD and educational media (for both in-school teaching and for after-school remedial classes) lead to improved teaching quality, better school attendance, and better learning outcomes.*”

We find that where teacher training has been well implemented and where DP-2 remedial classes offer the most significant value add relative to what is offered as part of normal school operation that there is strong evidence that this causal statement holds. This is best seen with a comparison between two cases Nigeria and Kenya.

We find that teacher training is well implemented in Nigeria, with relatively high proportions of teachers receiving the full direct training for both numeracy and literacy. We also find that this is supported by continued coaching, with Nigerian teachers reporting the highest level of support visits received from the DP-2 country team, but also a high proportion of teachers that report that DP-2 staff are likely to provide them with feedback and engage with them in one-to-one meetings⁹³. This is reflected in the intermediate outcomes related to teaching quality, where DP-2 in Nigeria has met all teaching quality targets.

This is compared to the implementation of teacher training in Kenya, as well as contextual challenges faced in Kenya. In terms of implementation we find that considerably fewer teachers that were exposed to direct training from DP-2 had received the full complement of teacher training. Whilst 96% of teachers in Kenya had been exposed to some direct training just 34% had been exposed to both literacy training sessions, and just 27% of teachers had been exposed to both numeracy training sessions. This is compounded by contextual factors, and in particular teacher turnover with the evaluation finding that in Kenya teachers were significantly more likely to have left their school since having received DP-2 direct training. This is reflected in the intermediate outcomes related to teaching quality where DP-2 in Kenya meets fewer targets.

This strongly suggests that continued and supportive engagement with teachers is necessary for teacher training to lead to improved teacher quality.

With regards to the remedial classes the evaluation finds that these are well implemented across all three countries. However, findings presented in Section 3.1.4 suggest that the DP-2 remedial classes provided in Nigeria are a real innovation. This can be seen by examining the proportion of schools in our control sample that offer remedial classes, reflective of a pre-DP-2 situation in treatment schools. In Kenya 76% of control schools offer remedial classes compared to just 1% of Nigerian schools. The

⁹³ See Section 6.2.4

implication of this is that children in Kenyan schools (and to a large extent in Ghana where 46% of control schools offer remedial classes) are significantly more likely to have had some exposure to remedial classes before these were implemented by DP-2. This is not to say that there is no value add to DP-2 remedial classes in Kenya, particularly as these are accompanied by TPD specifically tailored at numeracy and literacy, but rather that the value add is likely to be higher where these are an innovation such as seems to be the case in Nigeria.

The combination of these relative cases is reflected in evaluation findings against learning outcomes. Where implementation is strong and where contextual factors are supportive, as is the case in Nigeria, the evaluation finds strong performance against learning outcomes and in particular for children who have been exposed to remedial classes, suggesting that the causal statement presented above for learning outcomes holds.

Further investigation of the evaluation sample in Kenya provides additional support for the DP-2 TOC. We find that implementation performance of the teacher training component in Wajir County is significantly better than the Kenyan average, particularly in relation to formal schools in Nairobi⁹⁴. Whilst the sample of schools and teachers in Wajir is too small to judge the DP-2 impact on teaching quality, we do find evidence that DP-2 has had a positive impact on learning outcomes in Wajir county⁹⁵.

The causal statement also expects that better teacher training and remedial classes will support improved school attendance. The evaluation does not find evidence to suggest that this causal link holds. This must be considered against two factors. First, that baseline attendance rates in all three countries were high, limiting the extent to which it is reasonable to expect further improvements. Second are factors outside of the control of DP-2, and in particular that poverty remains a major factor that the findings of this evaluation suggests will continue to inhibit gains against attendance.

Girls' clubs

The causal statement included in Section 1.1.1 reads "*Girls' clubs improve girls' self-confidence, life skills, and educational and life aspirations (i.e. self-efficacy), which in turn improves their school attendance, retention, and learning outcomes.*"

This evaluation finds evidence that is supportive of the first link in this causal statement, that girls' clubs improve girls' self-confidence, life skills, and educational and life aspirations – or in other words self-efficacy. In particular we find that DP-2 has a positive impact on a life skills index in Kenya and Nigeria, and importantly that this effect is stronger for girls who have been exposed to DP-2 supported girls' clubs⁹⁶. In Ghana we find that DP-2 has a positive impact on a generalised self-efficacy scale, where this impact is also crucially stronger for girls' who have been exposed to DP-2 supported girls' clubs⁹⁷. In addition, whilst only relatively recently implemented by DP-2, the early indications from the evaluation suggest that the MBW curriculum can play an important role in supporting this link through breaking taboos around sensitive topics (such as menstruation), as well as by encouraging girls to identify role models

⁹⁴ See Section 6.2.3

⁹⁵ See Section 3.1.2

⁹⁶ See Section 3.2.2

⁹⁷ See Section 6.4.3

which the evaluation finds is supportive of encouraging belief in girls that their aspirations are achievable.

At this stage the evaluation finds limited evidence to support the next step in the causal statement, and in particular how improvements in self-efficacy or life-skills can lead to improvements in school attendance, retention, and learning outcomes. That is we find no impact of DP-2 in any country on attendance and impact of DP-2 on transition only in Kenya. However, regression analysis to understand the main factors associated with learning achievement⁹⁸ suggest that girls with higher levels of self-efficacy are more likely to perform better on both numeracy and literacy learning assessments for girls in Nigeria, although this was not observed in Ghana or Kenya.

However, it is important to note that improving self-efficacy and how this affects outcomes is a long term process⁹⁹ and it is not unreasonable to expect that it would be difficult to measure the full realisation of further gains from improved self-efficacy within just a year of implementation of DP-2, particularly with the relatively recent introduction of the MBW curriculum.

This causal statement receives further support through a literature review performed earlier in this evaluation presented in Section 1.1.1, which finds strong evidence for the link between self-efficacy and learning outcomes and moderate evidence between self-efficacy and the retention of girls in school. Where we do not find evidence to support the causal statement is in the linkage between self-efficacy and attendance – where only weak evidence is found in an earlier literature review, and where this evaluation does not yet establish a link.

School leadership and community involvement in action planning

The causal statement included in Section 1.1.1 reads “*Joint school leadership and community involvement in action planning to identify and address barriers to girls’ learning and transition leads to changed attitudes and beliefs on the part of community members and to concrete actions in support of girls’ education, which in turn increase girls’ abilities to enrol, attend, learn, and continue with their schooling*”.

Evaluation results presented in Section 6.3 provides evidence that where the CAP process is working well that the first step in this causal statement holds, that is that community action planning to identify and address barriers to girls’ learning and transition leads to changed attitudes and beliefs and to concrete actions in support of girls’ education. In Ghana and Nigeria a large majority of schools have a CAP in place, with the Nigerian CAP process in particular including a wide range of key stakeholders, that crucially also included parents and community members. This is compared to the situation in Kenya where significantly fewer schools and CAPs in place, where the head teacher was often not involved in the CAP process, and where the inclusion of wider community members was much lower.

This is reflected in outcomes achieved. In Ghana and Nigeria the evaluation finds concrete evidence of the identification of barriers to education and concrete actions to address these often through intensive community sensitisation efforts. These appear to have been successful where parents in Ghana and Nigeria, in particular, report being more aware of barriers to education such as involvement in household chores or

⁹⁸ See Section 3.1.5

⁹⁹ Bandura (1994)

hawking and report to have taken steps to address these. We do not find these effects in Kenya, where the CAP process is working less well. This strongly suggests that broad and consistent school and community engagement is necessary to support this first causal linkage.

At this stage the evaluation does not find strong evidence to support the next link the causal chain which asserts that these actions will improve enrolment, attendance, learning and retention. It would be expected that the concrete actions taken to address barriers to girls' education would improve attendance rates, which would then subsequently lead to improved learning outcomes. At this stage we do not find that DP-2 has had an impact on attendance in any country, though this may reflect that these changes take longer to play out than afforded by the comparison between baseline and midline.

7.3 Recommendations

In this section, we draw from the evidence presented in this report and the conclusions generated by this evidence to draw up a set of recommendations designed to be action-oriented and supportive of improved DP-2 performance over the last year of the GEC-T programme.

7.3.1 Recommendations for teacher training

DP-2 should review the implementation of the direct training component of its teacher training intervention. While we understand that the direct training component is now completed, in Kenya in particular our evaluation found that relatively high proportions of teachers were only attending either the first or second of the literacy or numeracy training workshops. Given the cascade model of training adopted by DP-2, it is expected that these teachers will pass on their knowledge and skills to new teachers. As some teachers will not have received the full complement of training, this represents a real threat to the potential success of this approach. DP-2 should, therefore, consider providing systematic identification of teachers who did not receive the full training expected, and undertake catch-up training.

DP-2 should review the implementation of the stepdown component of its teacher training intervention. Each direct training workshop is implemented over a period of two days, while we found that the majority of stepdown training implemented thus far is either informal in nature (for example, given in staff meetings) or delivered in short sessions which cumulatively delivered training in one to four hours. The apparent lack of structure to stepdown training implies that the full teacher training courses are not being fully imparted through stepdown training as intended by DP-2.

Stepdown training could be improved by actively identifying suitable stepdown training champions within DP-2 schools, which would retain active responsibility for providing training to other teachers in the school who did not receive direct training or are new. Accompanied by regular ongoing support and materials from DP-2 to strengthen the ability of 'champions' is likely to increase the efficacy of stepdown training. DP-2 is currently providing ongoing support, which could be further strengthened by ensuring that these support visits, for example, ensure that lesson observations by DP-2 are always accompanied by lesson feedback. This is necessary to address the key assumption behind the 'cascade training model' that DP-2 has adopted—that the training of trainers is of sufficiently high quality to enable the content

of teacher training to cascade to other teachers in a manner that is intended by DP-2 and provides content and quality as similar as possible to the original direct training.

This should be considered a critical activity given the high observed rates of teacher turnover, which will necessitate the regular provision of stepdown training if the positive impacts on teaching quality observed in this evaluation (in particular for Ghana and Nigeria) are to be preserved beyond the lifetime of the project.

7.3.2 Recommendations for remedial classes

DP-2 should review its remedial class offer in Kenya, where the practice of already providing remedial classes is relatively high compared to other countries. In particular, and at odds with Government of Kenya policy, it is reported that the practice of charging a fee for these other remedial classes is common. This may cause teachers to prioritise remedial classes where they can charge a fee, which would then prioritise students who are able to afford these fees rather than those targeted by DP-2. DP-2 should consider the possibility of getting commitment from MOE and head teachers to allocate resource teachers to DP-2 remedial classes.

7.3.3 Recommendations for use of video and digital content

DP-2 should consider external threats to the use of its learning/media centres, in particular access to electricity. The midline research observed a large increase in the proportion of schools that do not have access to electricity, most notably in Nigeria and to some extent in Kenya. In Nigeria, this has been associated with a decrease in the proportion of girls who reported watching learning centre videos. There is the potential for this to be resolved through funds generated through the CAP process, for example through the purchase of generators or solar panels.

7.3.4 Recommendations for the CAP process

DP-2 should learn from the positive experience of the implementation of the CAP process in Nigeria, in particular to learn how Nigeria has successfully engendered high ownership among critical stakeholders, including head teachers, community members, and parents, who have the biggest stakes in the success of activities supported by the CAP. Community and parent participation and ownership appears to be a driving force behind the success of the CAP process in Nigeria. Active engagement and ownership by a broader set of stakeholders is also likely to make it more sustainable and resilient to changes in key personnel, for example if the head teacher retires or moves to a different school.

DP-2 should more clearly insist on a fixed membership of the CAP process. While DP-2 provides guidance on the preferred membership of the CAP process, which encourages the participation of a variety of stakeholders but ideally including head teachers, parents, and community representatives, this evaluation has found that this broad participation has not occurred in many cases. As demonstrated in Nigeria, the CAP process is most successful when there is broad engagement from a range of stakeholders, notably community members and parents. Not making this explicit threatens engagement with the stakeholders for whom the success of CAP activities is most relevant.

A literature review conducted at baseline suggests that community-based monitoring has the potential to improve attendance and school quality. The CAP process potentially offers a suitable vehicle by which schools might be held accountable to the communities that they serve. This potentially low-cost activity might support the continued implementation of DP-2 activities such as learning centres, teacher training, and remedial class implementation by actively engaging parents and the community in monitoring the performance of schools against their delivery, increasing the sustainability of activities in which CAP participants place value.

7.3.5 Recommendations for girls' clubs

DP-2 should review how widespread the practice of charging fees for girls' club membership is in Kenya and Nigeria, which was observed as common in the qualitative research albeit from just the six schools visited per country. This has the potential to exclude the most marginalised of girls (although we did not find evidence of systematic exclusion of the poorest quintile), and (as we saw in Ghana) where fees are not charged there is the highest engagement in girls' clubs in terms of the proportion of girls who attend. There is the potential to link this to other project activities, such as the CAP process, which has the potential to provide support to the most marginalised of girls if the practice of charging fees in Kenya and Nigeria remains necessary.

Box 11. Project contribution: response to conclusions and recommendations

The recommendations above should come from the External Evaluator. The project should add a short response to the recommendations in light of the conclusions of the Midline Evaluation Report into Annex 17.

Project response to evaluators' comments on gender & social inclusion approach and how transformative the project is regarding gender and social inclusion.

Discovery Project 2 Midline Evaluation Report - Annexes

Oxford Policy Management

31 August 2019

About Oxford Policy Management

Oxford Policy Management is committed to helping low- and middle-income countries achieve growth and reduce poverty and disadvantage through public policy reform.

We seek to bring about lasting positive change using analytical and practical policy expertise. Through our global network of offices, we work in partnership with national decision makers to research, design, implement, and evaluate impactful public policy.

We work in all areas of social and economic policy and governance, including health, finance, education, climate change, and public sector management. We draw on our local and international sector experts to provide the very best evidence-based support.

Oxford Policy Management Limited
Registered in England: 3122495

Level 3, Clarendon House
52 Cornmarket Street
Oxford, OX1 3HJ
United Kingdom

Tel: +44 (0) 1865 207 300
Fax: +44 (0) 1865 207 301
Email: admin@opml.co.uk
Website: www.opml.co.uk
Twitter: [@OPMglobal](https://twitter.com/OPMglobal)
Facebook: [@OPMglobal](https://www.facebook.com/OPMglobal)
YouTube: [@OPMglobal](https://www.youtube.com/OPMglobal)
LinkedIn: [@OPMglobal](https://www.linkedin.com/company/OPMglobal)

Table of contents

List of tables, figures, and boxes	iii
Annex 2. Intervention roll-out dates	1
Annex 3. Midline evaluation approach and methodology	4
3.1 Key evaluation questions and indicators	4
3.1.1 Key evaluation questions	4
3.1.2 Outcomes and intermediate outcomes	6
3.2 Evaluation methodology	22
3.2.1 Impact evaluation methodology	22
3.2.2 Target beneficiary groups for the evaluation	25
3.2.3 Learning and transition cohort for the evaluation	25
3.2.4 Mixed-methods approach	26
3.2.5 Gender- and disability-sensitive approach	27
3.3 Midline data collection process	28
3.3.1 Pre-data collection	28
3.3.2 During data collection	40
3.3.3 Post data collection	54
3.4 Challenges in midline data collection and limitations to the evaluation design	56
3.4.1 Challenges in midline data collection	56
3.4.2 Limitations to the evaluation design	60
3.5 Representativeness of the learning and transition samples, attrition and matching of intervention and control groups	64
3.5.1 Sample size achieved at midline	64
3.5.2 Attrition analysis	66
3.5.3 Construction of balanced treatment and control groups through coarsened exact matching (CEM)	69
3.5.4 Sample size by region, grade, age and disability status	78
3.6 Contamination and compliance	80
3.7 Learning and transition outcomes estimation	87
3.8 Changes to learning and transition outcomes means and targets between baseline and midline	91
3.9 Nigeria learning outcomes and censoring	92
Annex 4. Characteristics and barriers	95
Annex 5. Logframe	98
Annex 6. Outcome spreadsheet	99
Annex 7. Project design and intervention	100
Annex 8. Key findings on output indicators	102
Annex 9. Beneficiary tables	104
Annex 10. MEL framework	109
Annex 11. Inception report	110
Annex 12. Data collection tools used for midline	111

Annex 13.	Datasets, codebooks and programmes	112
Annex 14.	Learning test pilot and calibration	113
14.1	Design of the learning assessments	113
14.2	Subtasks administered	113
14.3	Calibration and pilot testing of the assessments	114
14.4	Description of the learning assessments used at midline	116
14.5	Methodology for marking the assessments.....	118
14.6	Calculation of targets for the project	119
14.7	Use of learning assessments at endline	121
Annex 15.	Sampling framework	122
Annex 16.	External evaluator declaration.....	123
Annex 17.	Project management response	125
Annex 18.	Supplementary data on pupil learning.....	148
18.1	Regression models predicting change in learning outcomes	148
18.2	Regression models predicting learning achievement.....	158
18.3	Impact results on self-efficacy outcome for CAMFED supported Ghanaian schools	165
Annex 19.	Key results by sampling strata in Kenya	167

List of tables, figures, and boxes

Table 1. Intervention roll-out dates - Ghana	1
Table 2. Intervention roll-out dates - Kenya.....	2
Table 3. Intervention roll-out dates - Nigeria.....	2
Table 4. DP-2 key evaluation questions	4
Table 5. DP core questions for the evaluation.....	5
Table 6. Outcomes for measurement	7
Table 7. Community level – updated indicators.....	15
Table 8. School level - updated indicators.....	16
Table 9. System level - updated indicators.....	20
Table 10. DP-2 Sample size achieved at baseline compared to the target sample size	29
Table 11. Quantitative data collection tools used at midline.....	31
Table 12. Midline qualitative data collection tools, their purposes and respondents	34
Table 13: Process evaluation data collection tools and purpose.....	35
Table 14: List of respondents for process evaluation by country.....	36
Table 15. Tool details for quantitative tools	49
Table 16. Challenges in midline data collection.....	57
Table 17: Limitations to the evaluation	60
Table 18. Midline sample of cohort girls and attrition	64
Table 19. Characteristics of girls lost from learning cohort.....	67
Table 20. Characteristics of girls lost from the transition cohort.....	68
Table 21. Pre-baseline CEM match indicators	70
Table 22. Evaluation sample breakdown by region at midline.....	78
Table 23. Evaluation sample breakdown by grade at midline	79
Table 24. Evaluation sample breakdown by age at midline.....	79
Table 25. Proportion of girls who reported having a disability at BL and ML.....	80
Table 26. Status of Ghana treatment schools in sample	81
Table 27: List of other education programmes operating in Nigeria, Kenya and Ghana	82
Table 28. Treatment and control girls' exposure to remedial classes, clubs and videos	86
Table 29. Treatment and control teachers' exposure to teacher training (school report)	86
Table 30 List of covariates included in each model specification	87
Table 31. Results from impact estimation models for the literacy outcome.....	88

Table 32. Results from impact estimation models for the numeracy outcome	89
Table 33. Results from impact estimation models for the self-efficacy outcome	90
Table 34. Results from impact estimation models for the transition outcome	90
Table 35 Results from Tobit Impact Estimations: Learning Outcomes Nigeria	94
Table 36. Characteristics of cohort girls at midline in treatment and control groups	95
Table 37. Characteristics of cohort girls by sampling strata in Kenya at midline in treatment and control groups.....	95
Table 38. Characteristics of schools at baseline and midline in treatment and control groups.....	96
Table 39. Characteristics of schools by sampling strata in Kenya at baseline and midline in treatment and control groups.....	96
Table 40. Project design and intervention	100
Table 41. Output indicators.....	102
Table 42. Midline status of output indicators	102
Table 43. Output indicator issues	103
Table 44. Direct beneficiaries	105
Table 45. Other beneficiaries.....	105
Table 46. Target groups - by school.....	106
Table 47. Target groups - by age	106
Table 48. Target group - by sub group	107
Table 49. Target groups - by school status	107
Table 50. Beneficiaries matrix	108
Table 51. Subtasks administered in each evaluation round	113
Table 52: English literacy and numeracy subtasks administered at midline.....	116
Table 53. Literacy targets for midline and endline	119
Table 54. Numeracy targets for midline and endline	120
Table 55. Model predicting change in literacy outcomes - Ghana	148
Table 56. Model predicting change in numeracy outcomes - Ghana	149
Table 57. Model predicting change in literacy outcomes - Kenya	151
Table 58. Model predicting change in numeracy outcomes - Kenya	152
Table 59. Model predicting change in literacy outcomes - Nigeria	154
Table 60. Model predicting change in numeracy outcomes - Nigeria.....	155
Table 62. Model predicting literacy achievement at midline - Ghana	158
Table 63. Model predicting numeracy achievement at midline - Ghana	159
Table 64. Model predicting literacy achievement at midline - Kenya.....	160
Table 65. Model predicting numeracy achievement at midline - Kenya	162
Table 66. Model predicting literacy achievement at midline - Nigeria.....	163

Table 66. Model predicting numeracy achievement at midline - Nigeria	164
Table 67 Impact of DP-2 on self-efficacy (CAMFED supported schools)	166
Table 70. Impact of DP-2 on self-efficacy scores in Kenya, by sampling strata and in Wajir.....	167
Table 71. Impact of DP-2 on attendance in Kenya, by sampling strata and in Wajir..	167
Table 72. Impact of DP-2 on life skills in Kenya, by sampling strata and in Wajir	168
Figure 1. Midline data collection timeline.....	40
Figure 2 Minimum detectable effects.....	65
Figure 3. Steps to defining a balanced sample.....	69
Figure 4. CEM girl level learning cohort - Ghana.....	74
Figure 5. CEM girl level transition cohort - Ghana.....	74
Figure 6. CEM teacher level - Ghana	75
Figure 7. CEM girl level learning cohort - Kenya	75
Figure 8. CEM girl level transition cohort - Kenya	76
Figure 9. CEM teacher level - Kenya.....	76
Figure 10. CEM girl level learning cohort - Nigeria	77
Figure 11. CEM girl level transition cohort - Nigeria	77
Figure 12. CEM teacher level - Nigeria.....	78
Figure 13 Implications of censoring.....	93
Figure 14 Testing the difference in Tobit and OLS estimates of impact	94
Figure 15 Estimated total learning beneficiary numbers.....	104

Annex 2. Intervention roll-out dates

The tables below show the intervention roll-out dates across the three countries.

Table 1. Intervention roll-out dates - Ghana

Intervention	Start	End
Literacy 1 Training	1 January 2018	21 March 2018
Literacy 2 Training	1 October 2018	23 October 2018
Numeracy 1 Training	28 May 2018	14 June 2018
Numeracy 2 training	5 November 2018	8 November 2018
Distribution of new Lit/Num videos	28 February 2018	5 November 2018
ALP Training/Orientation	18 September 2018	19 September 2018
Club/Association Mentor Training	2 October 2017	6 October 2017
Distribution of MBW materials/videos	14 November 2018	26 June 2019
Community Workshop 1	9 October 2017	22 December 2017
Community Workshop 2	1 July 2018	19 July 2018
Cell-Ed Onboarding	16 July 2019	Ongoing
MBW Training	26 November 2018	26 June 2019

Table 2. Intervention roll-out dates - Kenya

Intervention	Start (Greater Nairobi)	End (Greater Nairobi)	Start (Wajir)	End (Wajir)
Literacy 1 Training	Feb 2018	June 2018	Feb 2018	March 2018
Literacy 2 Training	August 2018	Dec 2018	July 2018	Sep 2018
Numeracy 1 Training	April 2018	August 2018	April 2018	May 2018
Numeracy 2 training	Nov 2018	March 2019	Oct 2018	Feb 2019
Distribution of new Lit/Num videos	Oct 2018	Nov 2018	June 2018	July 2018
ALP Training/Orientation	June 2018	June 2018	May 2018	June 2018
Distribution of MBW materials/videos	Feb 2019	March 2019	Feb 2019	March 2019
Community Workshop 1	Feb 2018	July 2018	Feb 2018	July 2018
Community Workshop 2	April 2019	ongoing	April 2019	June 2019
Cell-Ed Onboarding	Jan 2019	July 2019	April 2019	June 2019
MBW Training	Nov 2018	Feb 2019	Jan 2019 (Hour 1)	June 2019 (Hour 2)

Table 3. Intervention roll-out dates - Nigeria

Intervention	Start	End
Literacy 1 Training	3 April 2018	14 May 2018
Literacy 2 Training	2 October 2018	7 November 2018
Numeracy 1 Training	17 January 2018	22 February 2018

Intervention	Start	End
Numeracy 2 training	4 December 2018	19 February 2019
Distribution of new Lit/Num videos	16 October 2018	14 December 2018
ALP Training/Orientation	9 July 2018	12 July 2018
Club/Association Mentor Training	2 August 2018	29 August 2018
Distribution of MBW materials/videos	26 November 2018	30 January 2019
Community Workshop 1	16 October 2017	12 December 2017
Community Workshop 2	19 March 2018	17 April 2018
Cell-Ed Onboarding	14 May 2019	24 May 2019

Annex 3. Midline evaluation approach and methodology

The following section describes the approach to the evaluation and the mixed methods methodology.

3.1 Key evaluation questions and indicators

3.1.1 Key evaluation questions

In this section, we present the key evaluation questions. Table 4 presents the key evaluation questions for DP-2.

Table 4. DP-2 key evaluation questions

OECD-DAC criteria	Evaluation questions
Impact	<p>Learning: Has basic literacy and numeracy for marginalised girls increased as a result, at least in part, of the project and, if any, then why and how?</p> <p>Transition: Has the project (and specific project activities) increased marginalised girls' rate of primary school completion? Specifically, have girls been enabled to complete primary and continue school? If not, what activities do girls that drop out engage in?</p> <p>Self-efficacy: Do marginalised girls report a better degree of self-efficacy as a result of the project, especially as a result of attending girls' club and why so, if any? What aspect of the clubs' activities and club types are most appealing to them and why? How does the improved self-efficacy affect cohort girls' experience of schooling, if any?</p>
Effectiveness	<p>Attendance: By the end of the project, are more marginalised girls in the project areas attending school at a greater rate? Has the project contributed to this and, if it has, then in what ways?</p> <p>Quality of teaching: What aspect of teacher training improved gender-responsive, student-centred, and interactive pedagogy? Has teacher training contributed to improved numeracy and literacy and increased school attendance and transition to secondary school among marginalised girls and in what ways, if any? Has the teacher training improved classroom teaching in literacy and numeracy and in what ways, if any?</p>

OECD-DAC criteria	Evaluation questions
	<p>Life skills: Are there changes in students' (boys and girls attending DP clubs) attitudes to schooling and behaviours (school transition) as well as their self-efficacy as a result of them attending girls' and boys' clubs and in what ways, if any?</p> <p>Community-based attitudes and behaviour change: Are there any changes in the attitudes and behaviours of parents of marginalised girls, and community leaders (those who are part of CAPs), regarding the value of education for girls as a result of CAPs, and in what ways?</p> <p>Process: Have project activities and inputs been successfully implemented as planned at the design stage? If not, why not?</p>
Efficiency	Do the activities of the DP-2 represent value for money (VfM)?
Sustainability	What plans and strategies are implemented/steps taken by sampled school committees, school administrators, and MoEs to assure the continuation of project investments and results after the donor funding is over?

Note: The wording of some of the evaluation questions has been further refined following the inception report submitted in February 2018 to improve clarity and measurability.

In addition to these key evaluation questions outlined in Table 4, during the inception phase we identified together with the DP team a series of evaluable core questions that the evaluation should seek to answer, which are presented in Table 5. **The purpose of the core questions is to further understand and identify the contribution of each of the DP-2 activities (i.e. teacher training, girls' clubs, etc.) to achieving the outcomes.**

Table 5. DP core questions for the evaluation

Question no.	Core questions
DP 1	What is the role of DP teacher training in producing better numeracy and literacy rates and increased attendance and transition to primary school among marginalised girls in the selected schools, if any?
DP 2	What is the role of DP-supported girls' clubs in the selected school in improving the self-efficacy of marginalised girls, if any, and how might it contribute to their better literacy and numeracy? Does cohort girls' increased self-efficacy affect their transition rates, if at all, and how?
DP 3	What is the role of CAPs in increasing school attendance among marginalised girls, improving their numeracy and literacy rates, and transition to secondary school in the selected school, if any?
DP 4	What aspects of the DP teacher training are most useful for teachers to improve classroom teaching and learning, if any?
DP 5	What aspects of girls' clubs are most useful to their education and self-efficacy, if any?

Question no.	Core questions
DP 6	What aspects of CAP are most useful to communities to encourage their engagement in school activities, if any?

3.1.2 Outcomes and intermediate outcomes

Table 6 shows the project's outcomes, intermediate outcomes and their respective indicators, as well as describing the changes to the indicators that have been made since the baseline. The indicators presented in each table are in line with the logframe. It is important to note that while this table describes the main indicators for the outcomes and intermediate outcomes, the mixed methods evaluation takes a broader approach to assessing impact on each indicator, combining quantitative and qualitative data in each domain to provide estimates of impact and answer the full set of evaluation questions described above.

Table 6. Outcomes for measurement

Outcome as per logframe	Level at which measurement will take place, e.g. household, school, study club etc.	Tool and mode of data collection (please specify both the quantitative and qualitative tool used)	Rationale, i.e. why is this the most appropriate approach for this outcome	Frequency of data collection, i.e. per evaluation point, annually, per term	Who collected the data?	Discuss any changes from BL (including whether this indicator is new)
Outcome 1: Number of marginalised girls supported by GEC with improved learning outcomes						
Average score on literacy assessment	School	Quant: EGRA & SeGRA	EGRA & SeGRA are predetermined by the FM	Per evaluation point (annually)	External evaluator	No changes for baseline midline comparison Additional subtasks (SEGRA1 comprehension & SEGRA3 writing for Kenya, SEGRA1 comprehension for Ghana) were added at midline to be used for midline to endline comparisons
Average score on numeracy assessment	School	Quant: EGMA & SEGMA	EGMA & SEGMA are predetermined by the FM	Per evaluation point (annually)	External evaluator	Kenya: EGMA subtask 1 (number identification), EGMA subtask 2 (number discrimination) and EGMA subtask 4 (addition) were dropped. Ghana: EGMA subtask 1 (number identification) was dropped. Nigeria: no change

						As Baseline scores were recalculated using the subtasks that respondents answered at both baseline and midline.
Average score on generalised self-efficacy scale	School	<p>Quant: Generalised self-efficacy (GSE) scale</p> <p>Qual: KIIs with girls</p>	GSE is reliable, well-validated scale that measures general aspects of self-efficacy	Per evaluation point (annually)	External evaluator	No change
Outcome 2: Number of marginalised girls who have transitioned through key stages of education, training or employment						
Successful transition rate	School & household (telephonically for quant)	<p>Quant: Verification of enrolment/ attendance records / physical presence at school; phone interview with caregiver</p>	Indicator predetermined by FM. The girls' and household surveys best reach target girls in a safe environment in which to collect this information. The FGDs and KIIs help provide context to explain the trends in the transition	Per evaluation point (annually)	External evaluator	<p>Grade repetition is no longer considered to be successful transition.</p> <p>Baseline indicators were recalculated taking this change into account.</p>
Outcome 3: Sustainability (see Table 7, Table 8, and Table 9 below)						

Intermediate outcome 1: Improved attendance						
Average attendance rate over the last term	School	Quant: Tracking of attendance registers	Indicator is predetermined by FM. Tracking attendance for each of the cohort girls allows linking of characteristics of girls with attendance outcomes.	Per evaluation point (annually)	External evaluator	No change
Head teachers' views around how effective project interventions are at facilitating enrolment and attendance.	School	Qual: KII with head teachers	Provide context to explains trends in attendance.	Per evaluation point (annually)	External evaluator	No change
Intermediate outcome 2: Access to higher quality instruction						
Average number of numeracy/literacy teaching approaches attempted (score either 1 or 2 on the strategy)	School	Quant: Lesson observation	Bespoke instrument designed based on review of training manual to capture strategies teachers are expected to	Per evaluation point (annually)	External evaluator	Phrasing of indicator changed to more closely link to focus on literacy and numeracy strategies. From baseline to midline, change is measured based on questions that appear in both rounds. Some options were changed in the instrument at midline and are used to assess differences in

			use based on the training content.			treatment and control groups at midline, and will be used to track change between midline and endline.
Percentage of attempted strategies that are successful relative to the comparison group (i.e. out of the strategies the teacher used that are scored 1 or 2, on what proportion did they score 2)	School	Quant: Lesson observation	Bespoke instrument designed based on review of training manual to capture strategies teachers are expected to use based on the training content.	Per evaluation point (annually)	External evaluator	<p>Phrasing of indicator changed to more closely link to focus on literacy and numeracy strategies.</p> <p>From baseline to midline, change is measured based on questions that appear in both rounds.</p> <p>Some options were changed in the instrument at midline and are used to assess differences in treatment and control groups at midline, and will be used to track change between midline and endline.</p>
Percentage of teachers observed providing a safe and inclusive space for all pupils irrespective of gender, ability, socio-economic or cultural background to a high standard (score of 2).	School	Quant: Lesson observation	As it is important that teachers are familiar with all parts of GESI, this indicator is designed to track how teachers interact with all their students and how well they use inclusive techniques.	Per evaluation point (annually)	External evaluator	<p>Phrasing of indicator changed to focus more strongly on GESI.</p> <p>From baseline to midline, change is measured based on one question.</p> <p>Additional questions were added to the instrument at midline and are used to assess differences in treatment and control groups at midline, and will be used to track change between midline and endline.</p>

Percentage of teachers who score “meet to high standard” on formative assessment; with their students	School	Quant: Lesson observation	A key point of interest is whether teachers are likely to have an understanding of where pupils are in term so their learning.	Per evaluation point (annually)	External evaluator	New logframe indicator. The relevant question existed in the baseline instrument, so change between baseline and midline will be assessed.
Percentage of girls that demonstrate basic skills in literacy and numeracy based on periodic learner checks	School				Project	
Intermediate outcome 3: Life skills						
Girls’ club members that can report either having used or intending to use additional knowledge, skills, or talents that they have learned from MBW	School	Quant: interview with girls Qual: KIs with girls		Per evaluation point (annually)	External evaluator	Change in phrasing to place explicit focus on the MBW curriculum. Qual instruments at midline were designed to respond to the current phrasing.

Girls' Club members can describe a way in which they have improved knowledge, skills or attitudes.	School	Qual: KIIs with girls		Per evaluation point (annually)	External evaluator	No change
Girls' Club members can describe a way in which improved knowledge, skills and attitudes have led to the achievement of one of their goals or other positive results.	School	Qual: KIIs with girls		Per evaluation point (annually)	External evaluator	New logframe indicator
Intermediate outcome 4: Attitudes and perceptions						
Percentage of parents reporting support for their daughters to attend secondary or higher education	Household	Quant: interview with caregiver Qual: KIIs with parents		At baseline and endline for quant; the midline focuses on the qualitative aspects of the measure	External evaluator	Change in phrasing to provide a more direct indicator of support on the part of parents for girl's education. Qual instruments at midline were designed to respond to the current phrasing.

Improving community leader knowledge of barriers to girls' education and ways to address them	Community	Qual: FGDs with those involved in CAP		Per evaluation point (annually)	External evaluator	Change in phrasing to focus on shift in perceptions. Qual instruments at midline were designed to respond to the current phrasing.
Head teachers are able to express finding utility in the CAP process	School	Quant: Interviews with head teachers Qual: KIIs with head teachers		Per evaluation point (annually)	External evaluator	Change in phrasing to better capture the opinions of those directly impacted by the CAP process Qual and quant instruments at midline were designed to respond to the current phrasing.
Percentage of cohort girls that aspire to complete secondary or higher education (provided no constraints)	School	Quant: Interview with girl		Per evaluation point (annually)	External evaluator	Change to a quantitative indicator because of specificity of measurement to complement qualitative indicators for this outcome. Question existed in baseline instrument, no change to instrument.

According to the OECD-DAC criteria, sustainability is concerned with measuring whether the benefits of an activity or project are likely to continue after donor funding has been withdrawn. Also, projects need to be environmentally as well as financially sustainable. For this evaluation, sustainability is defined as 'whether the project can demonstrate that the changes it has brought about which increase learning and transition through education cycles are sustainable'.¹

¹ GEC-T MEL Guidance Part Document.

Table 7, Table 8, and Table 9 show the indicators related to the measurement of sustainability at the community, school and system level. Data for the measurement of sustainability comes from quantitative and qualitative data from a variety of different sources and respondents. The data is collected annually by the external evaluator.

To assess whether the sustainability aim under each of the three levels has been met, we will use the sustainability scorecard developed by the Fund Manager. Ahead of the baseline study, we adapted the scorecard to the DP-2 sustainability framework to ensure the criteria for scoring align with the indicators being measured at each level. After the baseline survey, the evaluation team with inputs from DLA further redrafted indicators for the three main intervention arms of DP2 – at community, school and system levels. These revised indicators are based on the evaluation team’s experience of evaluating DP2s sustainability at baseline and are informed by the GEC guidance for measuring sustainability. The updated scorecard aims to provide a clear distinction between the four levels/ ratings from emerging to established in order to provide an accurate and transparent assessment of the programme’s progress in subsequent evaluations.

Our analysis will assess against the sustainability framework:

- Whether conditions have been met against each of the three levels; understand what work the project has done toward meeting the conditions and what it needs to do for the intervention or activity to remain sustainable;
- If the conditions are not met against each of the three levels, we will assess whether this is something within or beyond the scope of the project; and
- If there is inadequate data to assess whether or not the conditions have been met, the gap will be identified for further investigation by the project or the evaluation in the subsequent years.

It is important to note that sustainability will be measured as DP2 will be implemented, rather than after the programme has ended. Therefore, our evaluative judgement will rely on information provided by key stakeholders during the life of the project and be based on their perceptions on whether the programme fulfils the criteria for sustainability at each level.

Table 7. Community level – updated indicators

Rating	Indicator 1 Criteria	GEC Sustainability Scorecard
<p>4- Established: <i>Changes are institutionalised</i></p>	<p>Through CAPs, a critical mass of communities demonstrate the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls’ education.</p> <p>CAP is an integral part of school, community and government mechanisms, independent of DLA support.</p>	<p>The specific change in practice and attitude is now well established. Communities demonstrate independent ability to act without support from project, are able to further develop existing and new initiatives and secure funding to respond to their local needs to sustain and build on the changes that have taken place.</p>
<p>3- Becoming established <i>Critical mass behavior change</i></p>	<p>In most communities, CAP members are leading their action plans with some DLA support.</p> <p>CAP is able to demonstrate results of the implemented CAPS.</p> <p>Evidence of regular meetings, repeated planning and implementation process and resource mobilisation to carry out implementation.</p>	<p>Key community leaders and a critical mass of stakeholders are convinced of the benefits and have the capacity to lead and deliver changed practice independently. Financial and other resources are increasingly being mobilised locally. Project staffing and resources still play role but there is potential for this to be phased out.</p>
<p>2- Emerging <i>Changes in behaviour</i></p>	<p>DLA drives CAP process. CAP members can demonstrate evidence of addressing barriers to girls’ education through a situational analysis, evidence of implementing CAP with resources to do so from the community, or through raised funds.</p>	<p>There is evidence of improved practice and support for girls’ education in specific ways being targeted by project. Change is not universally accepted among targeted stakeholders, but support is extending. Project staff and resources play key role in driving change, although there are activities in place to mobilise funding/other resources.</p>
<p>1- Latent <i>Develop knowledge and change in attitude</i></p>	<p>CAP members have, with DLA support, recognized the challenges/ barriers that hinder girls’ access to continued education.</p> <p>They articulate a desire to address these challenges/ barriers.</p> <p>There is buy-in amongst members that CAP is a way to address these barriers.</p>	<p>Community stakeholders (including parents, community leaders, and religious leaders) are developing knowledge and understanding and demonstrate some change in attitude towards girls’ education. Appropriate structures are being put in place at community level, and there is some level of willing engagement and/or participation from the community.</p>
<p>0- Negligible <i>Null or negative change</i></p>		<p>No evidence that community members accept the project approach, and changes in attitude or engagement with activities very limited. Stakeholders may even reject key</p>

Rating	Indicator 1 Criteria	GEC Sustainability Scorecard
	Through CAPs, a critical mass of communities demonstrate the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education.	
		aspects of project. Project not working effectively to build consensus or support, but focus only on activity implementation.

Table 8. School level - updated indicators

Rating	Overall indicator for learning centres (LCs)	Overall indicator for teacher training	Overall Indicator for girls' clubs	GEC Sustainability Scorecard
	A critical mass of schools demonstrate effective and continuous use of LCs to improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media	Through the teacher training component, a critical mass of schools demonstrate effective use of teaching practices and continuous coaching and training of new and existing staff and do so sustainably	A critical mass of schools have established girls' clubs which are self-sustained and functioning on a regular basis using the my Better World curriculum.	
4-Established: <i>Changes are institutionalised</i>	A critical mass of DP-2 schools have fully functioning LCs with LCMC and funds secured for long term use;	A critical mass of DP-2 schools have established teacher training schedules and are able to implement them without DLA support. Schools demonstrate interest and have resources to share their modules and experience with other schools and MoE	Evidence that girls' clubs are established in a critical mass of schools and are self-sustained, with resources from the school, CAP etc. Schools have plans in place to continue clubs, including training of new mentors, recruitment of new members, continuing club activities. Evidence that My Better World curriculum is followed regularly in all schools and all members are able to follow/ articulate benefits of the curriculum and the club.	The specific change in practice and attitude is now well established with school level systems to support this; schools demonstrate independent ability to act without support from project, have allocated and mobilized financial and other resources and are able to develop further initiatives to respond to local needs to sustain and build on the changes that have taken place.

Rating	Overall indicator for learning centres (LCs)	Overall indicator for teacher training	Overall Indicator for girls' clubs	GEC Sustainability Scorecard
<p>3- Becoming established</p> <p><i>Critical mass behavior change</i></p>	<p>A critical mass of schools demonstrate effective and continuous use of LCs to improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media</p> <p>A critical mass of schools set up LCMCs which have updated plans and effective implementation; evidence of frequent and regular use of LCs; evidence of LMC being actively in lead of LCs with limited support from DLA; - updated plans to continued use of the LC.</p> <p>Evidence of LC/use of video refresher training conducted with new teachers.</p>	<p>Through the teacher training component, a critical mass of schools demonstrate effective use of teaching practices and continuous coaching and training of new and existing staff and do so sustainably</p> <p>A critical mass of schools have established plans and implementation of regular DP teacher training for current and new teachers; ; evidence of quality of step-down and refresher training for current and new teachers; evidence of critical mass of teachers use DP skills in their lessons</p>	<p>A critical mass of schools have established girls' clubs which are self-sustained and functioning on a regular basis using the my Better World curriculum.</p> <p>Evidence that girls' clubs are functioning regularly in most of DP2 schools.</p> <p>School, community members provide resources, where needed or desired, to the girl's club to support activities and evidence that clubs are self-sustained.</p> <p>Evidence that schools have the framework and systems to maintain girls clubs (including training if mentors as necessary) and evidence of active participation in club's projects and activities.</p> <p>Evidence that My Better World curriculum is followed in most schools and club members are able to articulate its benefits.</p>	<p>GEC Sustainability Scorecard</p> <p>Head teacher and critical mass of school staff and stakeholders convinced of the benefits and have the capacity to deliver changed practice independently. To the extent possible, existing financial and other resources are being used or mobilised. Project staffing and resources still play role but there is potential for this be phased out.</p>

Rating	Overall indicator for learning centres (LCs)	Overall indicator for teacher training	Overall Indicator for girls' clubs	GEC Sustainability Scorecard
<p>2- Emerging <i>Changes in behaviour</i></p>	<p>Evidence of adoption and use of LC; evidence that the school is providing space and security to LC; evidence of use of LC in lessons; evidence of Learning Center Management Committee (LCMC) being set up and plans being made for securing funds and sustainability of LCs; evidence of training on use of LC equipment for DLA teachers</p>	<p>Evidence of schools engaged in teacher training; evidence of a set number of teachers attending DLA training per year, month, etc; evidence of step-down training implemented at schools on all teaching modules; evidence of coaching trained teachers by DLA and school leadership; evidence of teachers implementing new DP skills in lessons; evidence of BOM/SPMC supporting teacher training</p>	<p>In some schools, support is provided to the mentor from school and CAP to ensure club activities can continue</p> <p>Evidence that clubs are meeting regularly and that all its members are aware of its activities and can articulate the benefit of participating in the club.</p> <p>Evidence of continuing or finished projects carried out by the club members.</p> <p>Evidence that My Better World Curriculum has been shared during meetings and girls' clubs members are aware of it.</p>	<p>There is evidence of improved support for girls' education in classroom practice, teacher management, and school management being targeted by project. The improved practice is not universal, but is extending. Project staff and resources play key role in driving change. School leaders understand resource implications and mobilising funds locally.</p>
<p>1- Latent <i>Develop knowledge and change in attitude</i></p>	<p>School leadership (HT, PTA, BOM/SPMC), resource teachers and DLA trained teachers recognize the existing challenges and consequences of having inappropriate and insufficient gender sensitive learning materials and see the value of the LC/technology in addressing these challenges.</p>	<p>School leadership acknowledge that teaching quality is one of the main barriers in education and recognize that DP-2 teacher training adds value to improving teaching quality via adopting teaching practices encouraged by the programme.</p> <p>Teachers demonstrate an interest in addressing</p>	<p>School leadership and staff, parents and CAP recognize the importance of the girls' club in improving gender equity amongst girls.</p> <p>Evidence that the school leadership and girls club mentors are trained and recognize the importance of girls' clubs (and boys clubs) activities and</p>	<p>School leadership, teachers and other stakeholders are developing knowledge and understanding and demonstrate some change in attitude towards girls' education in general and towards specific teaching practice and approaches, and the way schools are managed.</p>

Rating	Overall indicator for learning centres (LCs)	Overall indicator for teacher training	Overall Indicator for girls' clubs	GEC Sustainability Scorecard
	<p>A critical mass of schools demonstrate effective and continuous use of LCs to improve learning and teaching practices and have developed and enacted plans to sustain an active use of educational media</p>	<p>Through the teacher training component, a critical mass of schools demonstrate effective use of teaching practices and continuous coaching and training of new and existing staff and do so sustainably</p> <p>challenges to girls' education and show commitment to teacher training and other ways of addressing these barriers.</p>	<p>A critical mass of schools have established girls' clubs which are self-sustained and functioning on a regular basis using the my Better World curriculum.</p> <p>discussions as valuable in addressing gender equity amongst vulnerable girls.</p> <p>Evidence that vulnerable cohort girls are aware of a girls' club (and boys) in the school, how to participate and know and understand the benefits of participating in the girls' clubs activities in the school.</p> <p>All eligible cohort girls have equitable access to the clubs.</p> <p>Evidence that My Better World Curriculum is introduced in some schools</p>	
<p>0- Negligible <i>Null or negative change</i></p>				<p>No evidence that school stakeholders accept the project approach, and changes in attitude or engagement with activities very limited. Stakeholders may even reject key aspects of project. Project not working effectively to build consensus or support, but focus only on activity implementation.</p>

Table 9. System level - updated indicators

Rating	Overall systems revised indicator: <i>MOEs at the local level have fully fledged local education plans furthering project-related teacher development and school support. Local MOE education plans are fully funded in recurrent MOE budgeting</i>	GEC Sustainability Scorecard
4- Established: <i>Changes are institutionalised</i>	Demonstrable evidence of ownership of project activities by MOE at national/sub-national levels. Activities by local MOE officers to support project activities have been included in MOE recurrent budgets and education sector plans.	An approach or model is shown to work at scale and is being adopted in national policy and budget as appropriate, and/or incorporated into key delivery systems (e.g. for teacher training, curriculum, school management etc.). There is an established track record of financial support.
3- Becoming established <i>Critical mass behavior change</i>	<p>Demonstrable evidence of the engagement of a critical mass of local MOE staff in project activities, related to the monitoring of project activities and support of teacher development, with these activities being led by local MOE staff.</p> <p>Evidence that national/sub-national MOE are beginning to incorporate project activities in regular planning and budgeting.</p>	<p>Authorities demonstrate active use of project evidence, uptake of specific aspects of the project approach and have a growing capacity to support girls' education locally or beyond. This may include limited support to a delivery model without fully adopting within a national system. There is an increase in allocation of resources and evidence of planning for required resource to upscale.</p>
2- Emerging <i>Changes in behaviour</i>	<p>Demonstrable evidence of the engagement of at least some local MOE staff in project activities, related to monitoring of project activities and support of teacher development.</p> <p>DLA demonstrates evidence that the success (or barriers to this success) have been communicated to national/sub-national MOE offices to encourage support for project activities at these levels. National/sub-national officers demonstrate an understanding of project activities and processes.</p> <p>National/sub-national MOE has an understanding of how project activities are resourced, whether these resources are generated at community, school, or system level.</p>	<p>There is evidence of improved capacity of local officials to support girls' education through existing functions, adopting new approaches. Examples of support to project schools are being established. Government at local and/or national level has engaged with and understood evidence from the project. Resource implications are being made clear.</p>
1- Latent <i>Develop knowledge and</i>	DLA demonstrates evidence of active engagement with local MOE staff to generate interest in project activities and to demonstrate the potential for project activities to contribute to improved education outcomes. Local MOE	Local, district, and national officials are involved in delivery and/or monitoring; developing knowledge, and showing change in attitude towards girls' education and project focus areas. Project aligns with

<p><i>change in attitude</i></p>	<p>staff report an understanding of the importance of their potential role in project activities.</p> <p>DLA demonstrates evidence of active engagement with national/sub-national MOE officers to secure authority to operate, and national/sub-national MOE officers demonstrate an understanding of the importance of project activities in addressing barriers to girls' education.</p>	<p>specific policy, systems and departments. Project's evidence is being shared with relevant stakeholders, including broader networks of organisations.</p>
<p>0- Negligible <i>Null or negative change</i></p>		<p>Very limited and ineffective engagement with system level stakeholders, including district or national authorities. Authorities do not see relevance of intervention. There is limited alignment to existing systems /structures and policies, or limited understanding by project of how it intends to influence change at this level.</p>

3.2 Evaluation methodology

The study is longitudinal and spans three years, starting with the baseline in 2018 and followed by midline in 2019 and endline in 2020. We implement different evaluation designs and methodologies to address the various evaluation questions using both quantitative and qualitative research methods at different stages of the evaluation. We discuss each evaluation methodology briefly below.

3.2.1 Impact evaluation methodology

Quantitative methodology

We employ a quasi-experimental impact evaluation design – **CEM-DID** – to quantify and attribute the impact of DP-2 on learning and transition. The key challenge for the DP-2 evaluation is the fact that schools have been purposively selected into the treatment group, specifically as those who received the intervention under DP-1. As a result, we find some systematic differences between treatment and control units in some key characteristics. To overcome this challenge we have implemented a matching technique known as **Coarsened Exact Matching** to assess the impact of the DP-2 against key impacts and outcomes of the project. To bring further confidence to our quantitative estimates of impact, we combine the CEM approach with **Difference-in-Difference** to further control for time-invariant differences between treatment and control units.²

Identifying the impact and the intensity of treatment

A particular area of concern for DP-2 is understanding the impact of the project on girls who are exposed to the full range of DP-2 interventions. In technical jargon, given that girls self-select into some of the DP-2 interventions, there is a large potential for **one-sided non-compliance**.³ In other words, this means that there is the chance that some girls in intervention schools will not be exposed to the full range of DP-2 interventions, in particular given that girls self-select into attending girls' clubs and that in many cases we understand that it is more than likely that girls' club membership is capped. There is also the concern that not all girls will be exposed to remedial classes that are now being conducted in DLA schools, in order to boost learning outcomes. As a result, some girls will not be exposed to the full range of DP-2 activities.

The evaluation should, therefore, be able to distinguish between two types of impact:

- **Intention to Treat (ITT)**: which gives the causal effect of being assigned to treatment. In other words, this gives the average treatment effect regardless of the fraction of the treatment group that is actually exposed to the full range of interventions. In some cases, this is the most useful estimate in determining the *effectiveness of DP-2* as it will describe the extent to which the project actually 'made a difference' in terms of improving educational achievement of girls who attended intervention schools

² Further details of this approach are given in the inception report, which is appended as Annex 11.

³ Gerber and Green (2012)

- **Average Treatment Effect on the Treated (ATET):** which gives the causal effect of actually receiving treatment. In other words, this gives the average treatment effect of the project conditional on actually receiving the full range of interventions. In some cases, this is the most useful estimate to understand the impact of the interventions if they are implemented as designed.

A challenge for the evaluation is that during the sampling for the baseline survey we did not know whether evaluation units (whether teachers or girls) will be *compliers* or *non-compliers*. For example, we did not know what proportion of children would end up going on to receive additional support in the form of remedial classes.

To resolve this concern, it is important for the evaluation to have a good understanding of the fidelity and intensity of the DP-2 interventions across our sample of treated schools, teachers, and girls. This is achieved by including questions in the quantitative survey that allow us to understand whether, for example, teachers have received training or girls have attended girls' clubs. This information will be triangulated with information from both our own process evaluation as well as the DP-2 project management information system to deliver a holistic picture of the level of *non-compliance* within treatment units in our sample.

To assess the ITT we have applied the CEM-DID to the full matched sample of girls. To assess the ATET we follow two approaches depending on the level of non-compliance to the relevant activity. In the first instance where there is sufficient level of compliance to a particular activity such as participation in remedial classes, and where therefore we have sufficient sample power, we implement the CEM-DID on the sub-sample of "compliers" in the sample. This will allow us to understand if there is a differential impact on the programme for this group of children. In cases where there is an insufficient level of compliance, and where we therefore do not have sufficient sample power to investigate the ATET for the sub-set of compliers we include additional programmatic covariates in our CEM-DID estimation model that relate to participation in programme activities, such as the remedial classes. This will allow us to see if these activities have an additional effect on the outcome of interest, but does not allow us to fully assess the ATET as in the first approach.

Qualitative methodology

The quasi-experimental design is implemented alongside a qualitative approach serving two main purposes. The first purpose is to provide explanations of trends of key impact and intermediate outcome level indicators across the evaluation points and to the extent possible triangulate the quantitative findings to answer some of the effectiveness and impact questions presented in Table 4. It will also explore the factors that stakeholders, especially girls themselves, perceive to be influential for continuing (or not) education, transition, and teacher effectiveness, to give indications about how DP-2 may be impacting outcomes or reasons why it may be failing to do so. It will also seek to examine contextual factors that may have affected project implementation and unanticipated consequences resulting from project delivery. The second purpose is to generate evidence to answer the set of core DP questions (Table 5). We have divided these questions into two series of core questions to structure the qualitative approach to this evaluation (i.e. data collection and analysis). The core questions seek:

- To understand **the contribution of the DP-2 intervention** to positive learning and transition outcomes (questions DP 1–3); and

- To understand **how the interventions may have contributed** (questions DP 4–6).

The purpose of the midline qualitative data collection is to collect data on qualitative indicators, explore the DP-2 programme' implementation progress made since the baseline and generate midline answers to the evaluation and learning questions as possible. In so doing we mainly

- collect data on perceptions of project users (the same cohort of girls, parents, community leaders and members part of CAP, HTs and RTs from the baseline) on barriers to girls' school attendance, learning, transition, opportunities for economic activities (throughout) and explore whether or not these perceptions changed since the baseline and explanations of why they have changed.
- collect data on any change in attitudes, behaviours and values of project users (as above) due to the project i.e. self-reported change attributed to the project activities
- follow the same cohort of girls (including those who have dropped out from the school) and their parents/caregivers in order to understand the reasons for dropping out and the role of barriers to transition⁴.

Process evaluation methodology

The process evaluation aims to understand how DP-2 is implemented and focuses on questions related to *process*. It will examine the implementation of the project (i.e. dose, uptake, reach, fidelity, and quality of implementation) and the contextual factors that affect this implementation in combination with the high-quality impact evaluation to determine how, why, and under what conditions the DP-2 best functions. Furthermore, it helps to explain failure (if observed) and helps the evaluation to distinguish failure because of poor design from that due to poor implementation.

The process evaluation draws on information from the midline primary quantitative and qualitative research as well as primary qualitative data collection that will be specific to the process evaluation. Also, the process evaluation will rely on a range of secondary data including project documents as well as data collected as part of DP-2's M&E efforts and those of its implementing partners. The findings from this component of the evaluation will enable DLA, the FM, and other stakeholders to assess the extent to which implementation followed the design so as to test implementation failure versus theory failure, and provide lessons and recommendations on how to adjust project delivery in the final years of implementation.

VfM assessment methodology

The level of investment made by the DLA and GEC to implement DP-2 raises critical questions for the evaluation not just around whether the project has worked or not but whether it offers VfM when considering the impact achieved against the resources put in. For policymakers deciding how to use scarce resources, is important to consider not

⁴ Where feasible, girls who dropped out from their schools but continue to reside within the same local area/ catchment area of the school were tracked. However, if girls have moved away from the local area, interviews were conducted with their parents only.

only the quantum of impact expected from options but whether they will get the most impact possible with the resources available. The VfM assessment for this project will specifically focus on cost-effectiveness analysis, which is an incremental analysis that evaluates the difference (or increment) in costs and difference in outcomes between the intervention and the comparator. The VfM assessment will be conducted at endline (2020).⁵

3.2.2 Target beneficiary groups for the evaluation

The evaluation focuses on five target beneficiary groups that are the focus of the project:

- **Marginalised girls in primary 5, 6, and 7/JSS-1 in the project schools:** DP-2 defines marginalised girls (and boys) as *‘those students with low economic development, limited educational resources, and low educational capacity.’* The selection of the DP schools was along the lines of these criteria, and thus all students in these schools are considered to be marginalised. The marginalised girls selected from the evaluation schools make up the cohort sample used to track learning and transition outcomes.
- **Parents and community members:** The parents of each of the selected cohort of girls will be tracked and surveyed for the evaluation.⁶ Community members are also be interviewed through the qualitative component of the study, specifically targeting CAP members, village or community leaders, etc.
- **Teachers:** The evaluation conducts classroom observations and semi-structured interviews with teachers, as well as KIs with head teachers and resource teachers in a select number of schools. Teachers in treatment schools specifically include those that have received DP-2 training, coaching, and mentorship.
- **MoE officials at the district and provincial levels:** Key MoE respondents who could speak to the sustainability of the project were selected in collaboration with DP country teams for KIs.

3.2.3 Learning and transition cohort for the evaluation

The evaluation is tracking a joint sample for both learning and transition. At baseline, girls were randomly sampled from amongst all girls from Primary 5 who were present on the day of the visit in treatment and control schools. These girls were interviewed at school and were administered the learning assessment. In addition, the girls’ households were tracked and their caregivers were interviewed. These girls made up the learning and transition cohort at baseline. Given that DP-2 works with in-school children, these cohorts consisted only of in-school girls at baseline.

At midline, we aimed to track all girls who were interviewed at baseline. **At midline, the learning cohort consists of all girls who could be successfully tracked to a**

⁵ Further details on the approach can be found in the inception report in Annex 11.

⁶ As per our design, we did not track parents at midline for the quantitative component but will track them for the endline evaluation. For the qualitative component, we tracked the same parents of the girls that were selected for the qualitative component at baseline.

school that is part of the evaluation sample. In Nigeria and Ghana, it was expected that some girls would have already transitioned into JHS / JSS by midline. Whenever a girl had transitioned into a junior secondary school that was within the same locality (LGA in Nigeria, district in Ghana) as the primary school, we attempted to track the cohort girl to the junior secondary school and administered the interview and learning assessment at this school.

The transition cohort consists of all girls that are part of the learning cohort. In addition, the transition cohort also includes girls who are no longer enrolled in a school that is part of the evaluation sample, but whose caregivers could be tracked through a telephone interview. For these girls, we collected information on their transition status but did not conduct any interviews or learning assessments with the girls directly.

Therefore, while the evaluation is based on a joint sample approach, the sample for the learning cohort at midline is smaller than that for the transition cohort.

3.2.4 Mixed-methods approach

The evaluation implements a mixed-methods approach combining both primary quantitative and qualitative data collection. We use a combination of various techniques to mix methods throughout the evaluation including the following:

- **Integrating methodologies for better measurement:** the evaluation matrix presented in Table 4 and Table 5 illustrate how various evaluation questions will be answered using a variety of quantitative and qualitative methods. Mixing will, therefore, occur during data collection, recognising that different elements of evaluation questions will be explored in more depth using qualitative tools, while others will rely solely on quantitative surveys.
- **Merging findings for better action:** recognising that triangulating findings across multiple sources of information increases the confidence in the robustness of evaluation results as well as increases the understanding of the particular contexts and factors that lead to these results. We have adopted an approach whereby both qualitative and quantitative analysis have been combined to provide context and evidence to support the conclusions and recommendations presented in this report.

At midline, each evaluation method targeted different stakeholders based on the strengths of each method to maximise the breadth of the data and enable us to answer all key research questions. To enable us to triangulate findings from the different research methodologies and contextualise the findings from the quantitative research, girls and head teachers were targeted in both the quantitative and qualitative research. The midline quantitative research focused particularly on respondents in the school setting, including girls, teachers and head teachers. The midline qualitative research focused particularly on parents and communities, head teachers and girls. Finally, the process evaluation focused particularly on programme staff and local government stakeholders.

We ensured that the qualitative and quantitative strands worked closely at the methodological stage. Each chapter in the report is co-authored by a member from each of the quantitative and qualitative teams. This 'buddy' system works by members of each team sharing and commenting on iterative drafts of the chapter, thereby

strengthening the analysis from each methodology. We organised a workshop to share emerging quantitative and qualitative findings early in the analysis phase to point to areas of further investigation in both data sets. In addition, the quantitative and qualitative research leads reviewed all chapters of the report and jointly developed the conclusions and recommendations. During a workshop, the draft conclusions and recommendations were shared and discussed in detail with the full team.

3.2.5 Gender- and disability-sensitive approach

As per the GEC guidelines, the DP-2 evaluation calls for a gender- and disability-sensitive approach to the evaluation. To do this we will need to view the evaluation process, design, and the key elements of each evaluation stage through both a 'gender lens' and 'disability lens' to ensure that the evaluation, associated data collection, and analysis practices are fully informed by an awareness of how gender and disability shape and are shaped by both DP-2 and its evaluation. As such, this evaluation has operationalised the 'gender and disability lens' at the baseline round through the following actions:

- **Design issues:** The data collection tools were developed so that they considered the gender aspect of the content of the evaluation and included gender concerns across all tools. We also seek to understand specific local contextual gender and disability inequality factors affecting girls' education in Nigeria, Kenya and Ghana; however, the design of tools was done in a way that they did not make any biased assumptions or were premised on a specific way of thinking and judging wrong and right in regard to gender. Instead, our tools are neutral, and some are explorative and serve for collecting 'gendered' data from a range of respondents.
- All country teams of researchers had female and male researchers to ensure both genders were represented but also to be able to respond to any contextual demands while collecting data across the countries. The qualitative researchers had a reflexivity session as part of their training on revealing and interrogating personal biases and situations to mitigate their possible manifestation during the data collection. All quantitative and qualitative researchers also had a special session on the code of conduct to prevent any situations that could endanger our gender- and disability-sensitive design.
- Our approach to data analysis follows both deductive and inductive analysis, in that we had a pre-developed coding framework with embedded gendered aspects but also remained open to exploring new dimensions of gendered practices in relation to girls' education.
- **Intensity:** The DP-2 design may reflect gender- or disability-sensitive approaches, but activities may not have been sufficiently long or frequent enough to effect the desired changes, which will be explored through the qualitative research; and
- **Participation:** For disability, in particular, we included a short module in the quantitative survey at household and girl level using the Washington Group disability questions,⁷ specifically designed for identifying a range of disabilities

⁷ www.washingtongroup-disability.com/

in children. The qualitative data collection tools were all inclusive and engaged boys and girls attending school clubs and the girls' parents, most of whom were mothers. More girls participated in the data collection than boys given the resource restrictions in all three countries but also the primary focus of the evaluation. To allow for mothers' participation in the household interviews in Nigeria, special permissions were obtained from the community chiefs. We did not have any control over selecting head teachers, DP-resources teachers, and DP-trained teachers since we followed specific details of sampling these respondents. Similarly, MoE representatives were identified by DP country officers and therefore we could not ensure any gendered representation at that level. When choosing community members, we faced further restrictions since community leaders tend to be men rather than women, although this factor was addressed somewhat by us enrolling female community members in our group interviews to the extent possible in each context.

3.3 Midline data collection process

3.3.1 Pre-data collection

Adaptation of the sampling framework

Quantitative approach

The evaluation is designed to track a cohort of girls over the course of the evaluation and measure their progress on the outcome and intermediate outcome indicators.

Our approach to cohort tracking and maintenance of the sample by the end of the evaluation takes a three-pronged approach: (i) inflating the sample to account for attrition; (ii) cohort tracking at each stage of the data collection and (iii) replacing cohort girls that have left the study only when necessary.

- I. **Inflating the sample:** As discussed in the inception report, our sample size calculations included padding of the overall sample to account for 30% girl-level attrition in Nigeria and Ghana, and 40% girl-level attrition in Kenya. These expected attrition rates were based on the results from DP-1 evaluation.
- II. **Cohort tracking:** Cohort tracking involves tracking the same girl respondents throughout the course of the evaluation. At baseline, we captured sufficient information about the sampled girls and their households to enable tracking them at different points in the evaluation. The presence of the girl in the sampled schools and the location and contact information of her household will be verified at midline.
- III. **Cohort replacement:** This approach is considered to be the last resort if attrition levels fall above the 30-40% buffer. Given that the evaluation will track change from baseline to midline, and from midline to endline, it is possible to add girls to the sample at midline and to track these girls at endline. The girls added to the sample at midline will be included in the sample for the midline to endline comparison.

The sample size achieved at baseline fell short of our target sample size in all countries because several schools did not have 20 girls (in Nigeria and Ghana) / 21 girls (in Kenya) attending Primary 5 on the day of the visit, which meant that fewer girls

were surveyed in these schools. As this became evident during the baseline data collection, we began increasing the sample size in larger schools to make up for this shortfall. Nevertheless, by the end of the baseline data collection, there was a small shortfall of 5% in Nigeria and Kenya, and a larger shortfall of 18% in Ghana. See Table 10 for details of required and achieved sample size at baseline by country.

Table 10. DP-2 Sample size achieved at baseline compared to the target sample size

		Target sample size per country		Sample size accounting for 30% attrition for Ghana/Nigeria and 40% for Kenya		Achieved Sample at Baseline		Shortfall (<i>required - actual</i>)			
		Schools	Girls	Schools	Girls	Schools	Girls	Schools		Girls	
								#	%	#	%
Ghana	<i>Treatment</i>	60	900	60	1,200	62	1,051	-	0%	149	12%
	<i>Control</i>	60	900	60	1,200	58	914	2	3%	286	24%
	Total	120	1,800	120	2,400	119	1,965	1	1%	435	18%
Kenya	<i>Treatment</i>	60	900	60	1,260	60	1,264	-	0%	-	0%
	<i>Control</i>	60	900	60	1,260	61	1,128	-	0%	132	10%
	Total	120	1,800	120	2,520	121	2,392	-	0%	132	5%
Nigeria	<i>Treatment</i>	60	900	60	1,200	65	1,182	-	0%	18	1%
	<i>Control</i>	60	900	60	1,200	62	1,107	-	0%	93	8%
	Total	120	1,800	120	2,400	127	2,289	-	0%	111	5%

This means that if attrition rates are at the expected levels, our sample padding would not be sufficient and we would be underpowered at the endline evaluation point. To account for this, we planned to top up the sample by the shortfall from the baseline. Top up girls were sampled from the grade in which we expect our cohort girls to be if they progress normally through the school system, i.e. top up girls were sampled from Primary 6. Taking into account the pupil enrolment from baseline and the shortfall by treatment group, we set specific top-up targets for each school to make up the shortfall.

In addition, we monitored attrition rates on a daily basis during fieldwork with the aim of adding additional top up girls to the sample if attrition rates were higher than expected. Our expected attrition rates were 15% between baseline and midline in Ghana and Nigeria, and 20% between baseline and midline in Kenya, i.e. half of the overall attrition that we are assuming will occur during the full duration of the evaluation.

In the next section, we discuss the implementation of this approach during the midline data collection.

Qualitative approach

The qualitative data collection at the baseline applied a sequential nested mixed-methods sampling approach for the baseline data collection. That means that the qualitative sample followed the quantitative sample when information from the

quantitative sample was required to draw the qualitative sample of schools and girls.⁸ In particular, the qualitative team, with the help of DP, selected a small number of cases to study intensively the combination of both purposeful and random sampling. Sampling took place at three levels: school, community, and system level. The selection of the target LGAs in Nigeria, counties in Kenya, and districts in Ghana for the qualitative research was linked to the selection of schools from the overall quantitative sample. Six schools in each country were selected by the DP country teams using the following criteria outlined by the qualitative team: i) best performing DP-2 school according to the DP's assessment; ii) availability of a minimum of three teachers who received DP-2 literacy and numeracy and/or any another DP-2 training modules (i.e. Intensive Teacher Training, Gender-Responsive Pedagogy, etc.); iii) a mix of urban and rural schools; and iv) schools with a functioning girls' club (a functioning boys' club was a bonus but not a necessary condition).

The DP country teams determined "Best-performing schools" on a case-by-case basis, using primarily the factors of teachers that performed well in classroom observations (i.e. were observed using DP-taught methods), had active school management committees, had clubs engaged in activities, and that had demonstrated good implementation of the CAPs. These assessments were made at the country level based on both performance in DP-2 as well as historical performance from DP1.

The midline sampling followed the same sample choices made previously i.e. the same schools in each country, the same communities and the same cohort of girls were tracked. The girls included both girls who were still at schools and girls who have dropped out from schools except if those dropped out were out of the reach of the evaluation team (i.e. moved to a different community, or school).

Data collection instruments at midline

The evaluation utilises a set of quantitative and qualitative tools to capture data on the key impact and intermediate outcome indicators.

Quantitative data collection instruments at midline

At midline, we administered the same quantitative instruments as were administered during the baseline data collection, with the exception of the household survey which was not administered at midline as per the design of the evaluation. In place of the household survey, we included a short transition tracking tool administered telephonically only to those parents / caregivers of girls who we were not able to track at school. The purpose of the tool was to establish the transition status of these girls. Table 11 describes these tools and the changes that were made to the tools for the midline evaluation. To establish impact on outcomes and intermediate outcomes, most questions in the tools remained the same between baseline and midline. Minor changes to the tools at midline were made for the following reasons:

⁸ An example includes a study where the team generated six strata based on two dimensions (three levels of community type crossed by two levels of implementation of innovation). Their final sample had only six schools in it (one purposively selected school per stratum): one 'typical' urban, one 'typical' suburban, one 'typical' rural, one 'better' urban, one 'better' suburban, and one 'better' rural. For further details, see Teddlie, C and Yu, F. (2007) 'Mixed Methods Sampling: A Typology With Examples', *Journal of Mixed Methods Research* 1: 77–100.

- Changes to the tools primarily focused on adding questions in treatment schools that captured the extent to which schools, head teachers, teachers and girls had participated in DLA activities.
- The girl survey was adapted based on the updated template provided by the FM.
- The classroom observation was adapted based on experiences of implementation of the tool at baseline to shorten the tool and improve specificity, as well as to better align with the changed logframe
- The learning assessments were reviewed based on the performance of the girls at baseline. Certain subtasks were dropped while others were added. This is described in detail in Annex 14.

Table 11. Quantitative data collection tools used at midline

Tools	Description	Respondent	Changes to the tools from baseline
Quantitative tools			
School survey	Adapted from the previous GEC-1, the purpose of this instrument is to gather data on school level characteristics including but not limited to school demographic characteristics, enrolment, cohort attendance, cohort transition of students, teacher characteristics, training and support received, etc.	Head or deputy teacher	Questions that ask about implementation of DLA activities since the baseline were added for treatment schools.
Head count	Adapted from the previous GEC-1, the purpose of the head count tool is to measure and monitor the attendance-keeping practices of teachers including actual head count of students (girls and boys) present in the class for the day of the school visit compared to the attendance recorded by the teacher for that day. It also capture previous day attendance rate and whether attendance was recorded for the past five days prior to survey.	One class each in primary 5, 6 and 7/JSS-1	No changes
Classroom observation + teacher assessment	Designed by OPM's education team to capture information about the three foci of the programme: student-centred, gender-responsive and interactive pedagogy, use of video/media, and numeracy and literacy pedagogy. The teacher assessment module included in the classroom observation tool will be used to test teachers' understandings of	One English or Math class in Primary 5	Several changes were made to the classroom observation instrument. The main drivers for changing the instrument were: (i) to improve the focus and specificity of the instrument to respond to the needs of the programme and the

Tools	Description	Respondent	Changes to the tools from baseline
	<p>the different pedagogical methods and approaches covered by DP-2.</p>		<p>information and issues identified at baseline,</p> <p>(ii) to shorten the instrument so that enumerators can concentrate on fewer aspects and record these more reliably.</p> <p>(iii) to improve the clarity of description of certain strategies and scoring mechanisms. Our experience at baseline showed that in order to achieve consistency in the scoring for several approaches, stricter definitions for each score or clarity on the types of behaviours that we expect to observe were required. We therefore discussed more specific scoring criteria during the trainings and these were implemented by observers at baseline. We have slightly changed or adapted the phrasing of certain approaches or scoring criteria to better capture how these were trained on and implemented at baseline.</p> <p>The descriptive questions in the teacher assessment were adapted to focus on lesson planning and formative assessment. The intention of these questions was not to be comparable between rounds but to provide additional information on teaching practice in each round.</p> <p>Questions on the participation of teachers in DLA trainings and their perception of the trainings were added for treatment schools.</p>
<p>Learning assessments</p>	<p>Designed by OPM's education specialist and local education experts following the guidelines provided by RTI and FM. Both EGRA/EGMA and SEGRA/SEGMA tools</p>	<p>Cohort girls</p>	<p>The midline version of the learning assessment was administered. The learning assessments were revised ahead of the midline, with</p>

Tools	Description	Respondent	Changes to the tools from baseline
	have been designed and adapted in line with the curriculum for each country and the DP-2 numeracy and literacy 1 training modules. The tools will capture students (i.e. cohort girls) proficiency in reading and math skills.		certain subtasks in Ghana and Kenya being dropped, while others were added. This is described in detail in Annex 14.
Girl survey	GEC-T tool adapted for this evaluation. A 10 -point self-efficacy scale drawing from Schwarzer, R. & Jerusalem, M. Other questions relating to self-efficacy, life skills, decision-making, and feelings and attitudes (that comprised the girl module) were adapted from the DP-1 evaluation and from the 2013/14 Young Lives Child Questionnaire for the younger cohort in Ethiopia. The main purpose of the tool is to measure the cohort girls education and future aspiration, confidence, motivation, etc.	Cohort girls	Changes to the tool focused on adding questions that ask about the extent to which girls have been receiving the programme interventions, adding questions that are required by the FM, and dropping questions that did not provide useful information at baseline or are not expected to provide new information at midline, as well as dropping those questions that are no longer required by the FM.
Transition tracking survey	Integrated into the girl survey, this tool was administered telephonically to caregivers of cohort girls who could not be tracked at school to establish the girl's transition status.	Caregivers of cohort girls	Developed for midline

Qualitative data collection instruments at midline

The main qualitative tools at midline were semi-structured interviews with head teachers together with DP resource teachers; parents of the cohort girls; community leaders with community members involved in CAP; and two interviews with cohort girls. The design of the tools for the midline data collection was guided by the following principles:

- **In line with the evaluation questions and baseline report:** Qualitative data collection instruments were developed in line with the evaluation questions and matrix suggested in the inception report (see Annex 11). The tools were used as conceptual and methodological frameworks in developing each question for a range of respondents and were in line with the findings of the baseline report.
- **The interviews with children were developed** based on our assumptions of the children's interest and skills that would be most suitable for the age category of our respondents to express their views. The interview on daily routines made use of a drawing exercise to ease the environment and help children express themselves.

Table 12 below summarises the key respondents for the qualitative data collection and purposes of each tool.

Table 12. Midline qualitative data collection tools, their purposes and respondents

Target group	Purpose/ Remarks
Interviews with Head Teachers (with resource teachers)	<ul style="list-style-type: none"> • To collect data in relation to sustainability of DP-2 • To understand the progress of DP-2 implementation at school (teacher training, step down training, remedial classes, CAP related activities, girls' clubs, etc.) since the baseline and its results, if any • To explore any changes to the beliefs, attitudes and behaviours towards girls' education among their peers, community members and parents as well as any changes to barriers to girls' education
Interviews with members who are part of the CAP process	<ul style="list-style-type: none"> • To understand the progress of the CAP since the baseline, and any barriers to progress, changes to attitudes towards girls' education and collect data on sustainability of DP-2
Interviews with parents of girls and girls who are still at school	<ul style="list-style-type: none"> • To understand girls' experience in school and of the girls' clubs • To learn about girls' experience of transition; identify any issues girls have been facing since the baseline and assess whether or not these issues have been overcome with the help of the interventions • To explore any changes in girls' attitudes to schooling and behaviour as well as their self-efficacy as result of them attending girls' clubs • To explore any changes in parents' attitudes to girls' education; perceptions of parents and girls about barriers to education • To explore barriers to girls' education and any changes to them as girls get older
Interviews with parents of girls and girls who have dropped out from schools	<ul style="list-style-type: none"> • To explore the reasons for not transiting and understand whether and how these reasons are relevant to the intervention activities; • To explore any changes or lack thereof of girls and parents' attitudes to education and barriers to education • To understand whether or not and to what extent girls are using the skills/knowledge gained from the girls' clubs and schooling in their current context; to examine what activities these girls are engaged in.

We used two types of interviews with girls still at school instead of diaries, which were used at baseline. This allowed us to collect data on any major changes in their life and learning but do so within a short period of time. The first interview focused on general evaluation focus i.e. the key outcome areas as well as any changes in attitudes,

behaviours and self-efficacy of girls and those of their parents and communities and the role of girls' club and teaching.

The second interview focused on the children's daily routine. This interview used a special exercise to explore the way the cohort girls selected for the qualitative study spend their days, focussing on their tasks from the start to the end of the day. This was in order to follow up on one of the findings at baseline that children tend to spend a considerable amount of their time doing household chores which is more than likely to affect their learning. The exercise helped us explore not only the patterns of time spent but also to see whether or not there were any changes to girls' daily routine since the baseline and enquire about why those changes have happened. We assume that with the CAP process, parents' attitudes to girls' schooling would have changed towards more positive outlook and better prioritising it over other tasks. Open-ended questions enabled us to find possible reasons to why the situation may have improved, worsened or maintained, how much time girls had to dedicate to school and their schoolwork. This exercise replaced the rich picture exercise (originally used for both boys and girls at baseline) to allow us to get more in-depth data on the scope and effect of household chores on children's schooling as our baseline findings suggest it to be one of the key factors affecting the outcome areas of our interest.

Using diaries at the baseline was not without challenges mainly associated with having insufficient time for in-depth analysis and children's varying degree of writing competencies and ability to maintain diaries. Therefore, the midline gave us a possibility to follow up on the diaries written at baseline during the two rounds of interviews at midline and go into even more details about their daily routine. We will re-consider using diaries at the endline when our cohort of girls will be older which might increase their benefit for our study.

We shared all draft versions of the quantitative and qualitative tools with the FM and DLA for comments and revised them accordingly. Since the quantitative tools were largely similar to the baseline, they were not piloted again. The piloting process for the learning assessments is described in Annex 14. DLA and the FM signed off on all midline tools.

Process evaluation data collection purpose and respondents

Table 13 and Table 14 below provide an overview of respondents for the process evaluation and purpose of the data collection.

Table 13: Process evaluation data collection tools and purpose

Group	Position	Purpose
Main Management	<ul style="list-style-type: none"> • Kenya <ul style="list-style-type: none"> ○ Director ○ Training and Outreach Manager • Nigeria <ul style="list-style-type: none"> ○ Country Director ○ D. Director, Training ○ D. Directors, Operation • Ghana <ul style="list-style-type: none"> ○ Country Director ○ D. Director for Teaching and Learning ○ D. Director for Club Support and Community Outreach 	<ul style="list-style-type: none"> • MANAGEMENT ONLY - to get an overview of how the programme is being implemented and main success and challenges • to understand how (the process by which) DP2 is implemented • to understand how different parts of the intervention interact • to understand whether the programme and its components were implemented as intended • to understand whether changes in design were made and why • to understand what contextual factors impact on the implementation of the overall programme
	<ul style="list-style-type: none"> • Kenya <ul style="list-style-type: none"> ○ Lead Teacher Trainer ○ Teacher Trainers 	

Group	Position	Purpose
	<ul style="list-style-type: none"> • Nigeria <ul style="list-style-type: none"> ○ Training Coordinators ○ Literacy-Numeracy Coordinator • Ghana <ul style="list-style-type: none"> ○ Teaching and Learning Coordinators ○ Remedial Coordinator 	<ul style="list-style-type: none"> • to explore how many of the intended activities were delivered and received by beneficiaries • to explore whether specific outcomes observed in the quantitative and qualitative data can be explained due to implementation processes
Club and Community Action Coordinators	<ul style="list-style-type: none"> • Kenya <ul style="list-style-type: none"> ○ Club and Community Action Coordinator • Nigeria <ul style="list-style-type: none"> ○ Association and Community Action Coordinator • Ghana <ul style="list-style-type: none"> ○ Club and Community Action Coordinator 	
Senior Technical Lead	<ul style="list-style-type: none"> • Kenya, Ghana, Nigeria <ul style="list-style-type: none"> ○ Senior Technical Lead 	<ul style="list-style-type: none"> • to understand the intention behind creating the role and the likely impact on the implementation of DP2 going forward • to understand their view of the current programme design and implementation modalities and material • to understand if any changes in design or implementation are being planned • NOTE: This is a recently created post
Monitoring, Evaluation & Learning officer (MEL)	<ul style="list-style-type: none"> • Kenya, Ghana, Nigeria <ul style="list-style-type: none"> ○ MEL officer 	<ul style="list-style-type: none"> • to understand how the programme monitors dose, uptake and reach • to understand what progress the programme has made vis-a-vis its targets • to understand how and whether and for what the programme uses its monitoring data • to understand how and whether and for what the cross-country programme uses the monitoring data
Teaching and Learning Field-staff	<ul style="list-style-type: none"> • Kenya, Ghana, Nigeria <ul style="list-style-type: none"> ○ Teacher Trainers 	<ul style="list-style-type: none"> • to understand how the different programme activities are implemented in schools • to understand whether activities are implemented as intended by the programme • to understand how, when and why changes to the approach of delivering programme activities are made • to understand what contextual factors affect implementation
Club and Community Action Field-staff	<ul style="list-style-type: none"> • Kenya, Ghana <ul style="list-style-type: none"> ○ Club and Community Action Mobilizer • Nigeria <ul style="list-style-type: none"> ○ Association and Community Action Mobilizer 	<ul style="list-style-type: none"> • to better understand the amount of time spent on the implementation of different activities • to understand whether and how monitoring data is used to guide daily implementation activities
Ministry of Education Official	<ul style="list-style-type: none"> • Kenya <ul style="list-style-type: none"> ○ Sub-county Director, Kasarani • Nigeria <ul style="list-style-type: none"> ○ Director for Nomadic Schools, SUBEB • Ghana <ul style="list-style-type: none"> ○ NGO Desk Officer, Savelugu Municipality 	<ul style="list-style-type: none"> • to understand how the different levels of the government interact with DP2 • to understand whether and what value add the government sees DP2 as having • to explore sustainability of the different interventions post DP2 and what would be needed to strengthen this

Table 14: List of respondents for process evaluation by country

Kenya

Structure	Position	Name
Main Management	Country Director	Salome Aloo
	Training and Outreach Manager	Benta Grace
Teaching and Learning Coordinators	Lead Teacher Trainers	Irene (Greater Nairobi) Richard (Greater Nairobi) Osman (Wajir)
Club and Community Action Coordinators	Lead Club and Community Action	Christine
Senior Technical Lead	Senior Technical Lead	Peter Otieno
Monitoring, Evaluation & Learning officer (MEL)	MEL officer	Cavin
Teaching and Learning Field-staff	Teacher Trainers	Jeremy Abraham Lawi Elizabeth (Liz) Jane
Club and Community Action Field-staff	Club and Community Action Mobilizers	Lorna Evangeline Paul Susanne Muthoni
Ministry of Education Official	Sub-county Director, Kasarani	Victoria Mbiwika

Nigeria

Structure	Position	Name
Main Management	Country Director	Abdullahi Tijjani
	Deputy Director, Operations	Halima Umar Gambo
	Deputy Director, Training	Hadiza Gidado
Teaching and Learning Coordinators	Training Coordinators	Hajara Bishir Abdullahi Shehu Habiba Hamisu
	Literacy-Numeracy Coordinator	Joy Bamidele Ogechukwu
Club and Community Action Coordinators	Community Action and Clubs Coordinator	Ado Muhammed
Senior Technical Lead	Senior Technical Lead	Aminu Abdu Bichi
Monitoring, Evaluation & Learning officer (MEL)	MEL officer	Ismail Abubakar Na'Inna
Teaching and Learning Field-staff	Teacher Trainers	Mannir Mukhtar Aisha Haruna Zainab Gwadabe
Club and Community Action Field-staff	Association and Community Action Mobilizers	Rashida Lawal Jamila Lawal Abdullahi Bala Kyauta Yakubu Anas
Ministry of Education Official	Sub-county Director, Kasarani	Dahiru Yadakwari

Ghana

Structure	Position	Name
Main Management	Country Director	Julius Agbeko
	Deputy Director, Teaching and Learning	Tanko Iddrisu
	Deputy Director, Club Support and Community Outreach	Patience Gamado
Teaching and Learning Coordinators	Teaching and Learning Coordinators	Noella Kaburi Albert Akoubila
	Remedial Coordinator	Chrysanthe Antaarem
Club and Community Action Coordinators	Community Action and Clubs Coordinator	Zelia Abukari
Senior Technical Lead	Senior Technical Lead	Samuel Awuku
Monitoring, Evaluation & Learning officer (MEL)	MEL officer	Daniel Yakubu
Teaching and Learning Field-staff	Teacher Trainers	Martha Tieyiri Huseini Faisal Victor Asamoah
Club and Community Action Field-staff	Club and Community Action Mobilizers	Humu Abdul-Rahaman Charlotte Atinee Abukar Anass Neindow
Ministry of Education Official	NGO Desk Officer, Savelugu	Musah A. Bawa

Recruitment and training of researchers

Recruitment of researchers and team division

Our local data collection partners – Research Guide Africa (RGA) in Kenya, TNS RMS in Ghana, and OPM in Nigeria – conducted recruitment of field staff for this evaluation for both qualitative and quantitative data collection in each of the countries. During the recruitment, priority was given to fieldworkers and researchers who had been part of the baseline team because of their familiarity with the work. Where fieldworkers who had been part of the baseline data collection team were no longer available, additional fieldworkers were recruited. Recruitment criteria were determined by the data collection partners, but included experience conducting surveys with children

We also recruited one research assistant in Ghana and one in Kenya to support the qualitative data collection. Research assistants were recruited on a competitive basis and were chosen based on their experience of managing qualitative studies, working with qualitative datasets, and knowing the local contexts and language.

In Kenya, the teams were divided into 3 smaller teams, two teams were led by a lead researcher from OPM/local partner. One team that travelled to Wajir did not have a research lead, but worked independently and reported to the local partners on a daily basis. In Nigeria, a total of eight qualitative researchers were engaged for the fieldwork. Researchers were divided into two teams per school, each comprising four national qualitative researchers. Each team was further divided into two sub-teams, consisting of one facilitator and one note-taker each. Survey activities were supervised by OPM survey staff to provide technical support. In Ghana, we had 8 researchers working on the qualitative component. They were divided into 2 teams of 4 each including the

supervisor. Within each team, there were 2 facilitators and 2 note takers. About half of these 8 researchers had also worked on the baseline, giving them a strong understanding of the project context and our approach. To oversee the work of the teams on the ground, there was a fieldwork manager (from the local data collection partner) and a research assistant (from OPM). The research assistant conducted field monitoring in 4 out of the 6 schools visited and led the debrief sessions with each team after the completion of a school.

Training for quantitative fieldwork

Separate training for quantitative and qualitative researchers were held in each country. The quantitative training included six days of classroom-based training and two days of in-field practice. The training was led and conducted by OPM staff responsible for the quantitative component of the study and the respective country, and was supported by the staff from the data collection partners in each country. Training was classroom-based with presentations, and interactive exercises and emphasis was placed on the team understanding the project and the research tools. In particular, the training focused on an introduction to the study, data collection instruments, field protocols, research ethics and child protection training, and practice of tools. Practical sessions helped researchers gain familiarity with the tools.

Following the classroom-based training, the entire field team tested the instruments and protocols in about 10 primary schools. We conducted daily debriefs with the team to ensure all team members were provided with feedback and felt confident before the research began, while we also undertook re-training of enumerators and researchers that did not perform well. The in-field practice also served as an opportunity to practice school entry protocols, research teams' work patterns, logistics and personal strengths and weaknesses of the researchers. The teams who started training earlier fed back their experience to the other country teams.

Training for qualitative fieldwork

Training for the qualitative midline started in Kenya, followed by Ghana then Nigeria. The qualitative training took place over four days followed by one day of piloting and a one-day debrief in each country (except Ghana where debriefs were part of the training). The training was led and conducted by OPM staff responsible for the qualitative component of the study and the respective country. Training was classroom-based with presentations, and interactive exercises and emphasis was placed on the team understanding the project and the research tools. In particular, the training refreshed the memories about the study background and its ethics and safeguarding policies. Then it introduced the field researchers to the new data collection instruments, field protocols, and followed with practicing the tools. Practical sessions helped researchers gain familiarity with the tools.

Following the training, the field team piloted the instruments and protocols in minimum one school in each country. In Kenya, the teams piloted the instruments and protocols in two schools in Nairobi. In Nigeria, the team piloted in one school in Kano Municipal LGA. In Ghana, the field pilot was conducted in 2 schools in Tamale Metro. These were the same schools that we had visited for the pilot during baseline.

We conducted daily debriefs with the team to ensure all team members were provided with feedback and felt confident before the research began, while we also undertook re-training of enumerators and researchers that did not perform well. Piloting of the tools was used to check the content and meaning of each tool, the length, and logistics in relation to implementing the tools at the school and community. We also tested our

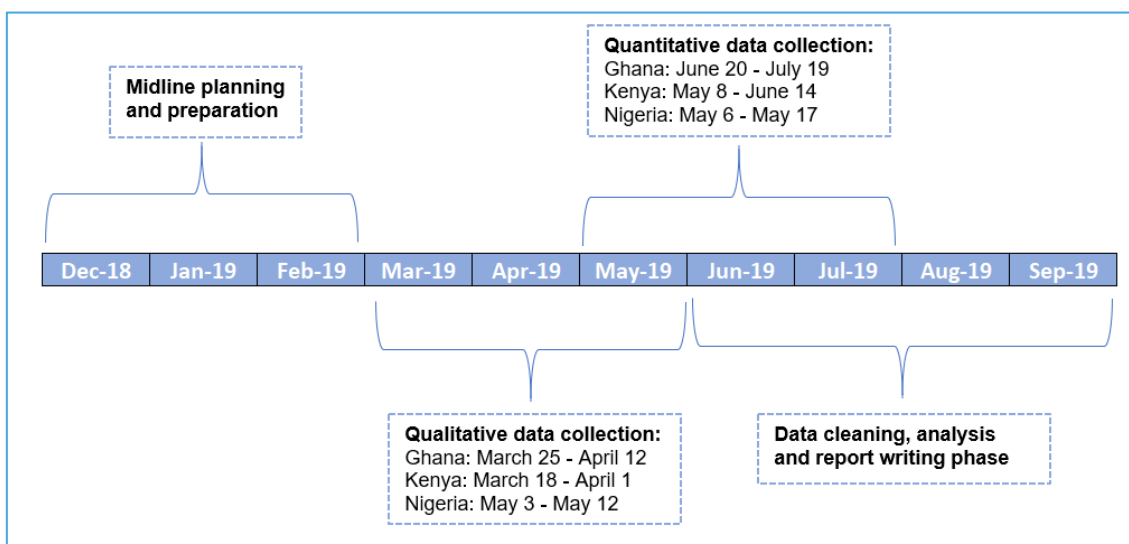
entry protocols as well as the research teams' work patterns and personal strengths and weaknesses of the researchers. Since the fieldwork started in Kenya, the revised tools were later revised in Ghana to allow any adjustments to the Ghanaian context and re-used in Nigeria after being adjusted to the Nigerian context.

3.3.2 During data collection

Midline data collection

The midline data collection was planned in line with school holidays and taking into account the national election in Nigeria, the timing of Ramadan and the particular farming seasons in each country, during which absenteeism rates are likely to be higher. The qualitative data collection occurred before the quantitative data collection in Ghana and Kenya. The timing of the election in Nigeria and other constraints as mentioned above meant that the quantitative and qualitative data collection happened at the same time in Nigeria. Figure 1 shows the data collection timeline.

Figure 1. Midline data collection timeline



Quantitative fieldwork

The quantitative data collection teams ranged from seven to 13 teams per country comprising about five members per team. Each team member was responsible for a specific set of tools. For instance, the classroom observers were responsible for conducting only the classroom observations and administering and marking the SeGRA and SeGMA assessments, while supervisors were responsible for conducting the school survey, headcount, and cohort attendance and enumerators were responsible for administering the learning assessment (i.e. EGRA and EGMA), the girls' survey, and transition tracking tool. We had a separate quality assurance team comprising three to five individuals per country that were responsible for conducting daily checks on the field team to monitor the data collection process, protocols, and procedures. Daily debriefs were conducted at the end of the field day with the teams at specified locations. Live data checks were conducted throughout the data collection by the OPM surveys team using an interactive dashboard created using Power Bi software to monitor information such as the number of surveys completed by the team

and by the enumerator, completeness checks, random checks of key variables of interest, duplicate IDs, incorrect entries, etc.

Qualitative fieldwork

As discussed earlier the qualitative data collection took place in the same sampled schools i.e. six schools and their surrounding communities which were selected at baseline in each country. The schools were selected in consultation with DP as discussed in the qualitative sampling section above and in the baseline report, i.e. i) best performing DP-2 school; ii) availability of a minimum of three teachers who received DP literacy and numeracy and/or other DP training; iii) a mix of urban and rural schools; and iv) schools with functioning girls' clubs. The midline qualitative data collection was limited to cohort girls, their parents (the same or the other parent), community members who were part of the CAP process (could be the same or new respondents) and head teachers and resource teachers (the same unless they were replaced).

Each interview and discussion had a lead facilitator and a note-taker. Note-takers were taught how to take specific types of notes and provided with a note-taking format for each tool. Interviews and discussions were conducted mostly in local languages and translated into English, where consent was received to record, interviews were recorded on audio devices. The division of tasks among researchers, i.e. note-taking and facilitating/conducting interviews as well as conducting activities with children, was based on the skills and competencies of researchers. To ensure consistency in data collection and synthesis of the qualitative data, the same team of researchers worked with the same type of tools and respondents across the research sites. This approach ensured that the teams were making rapid and consistent progress in mastering a specific tool and were able to generate a full analytical set of data per type of respondent and therefore were able to compare and contrast data across schools and communities as well as respondents. Where possible, we also tried getting the same researchers who had conducted the baseline as they had a strong understanding of the project context and our approach.

In Nigeria, all interviews were conducted in Hausa language. In Ghana, school level interviews with head teacher and resource teacher were conducted in English. Language used for interviews with cohort girls, members of the CAP process, community leaders, and parents/caregivers varied among Dagbani, Hausa (in East Gonja), and English, based on the preference of the respondents. Field researchers were sent to districts where they could speak the languages.

The data collection at midline was to some extent easier because local field researchers knew what was expected and had the knowledge and experience from baseline. The same was true about the transcribers since they knew the project and the level and type of transcription that were required. However, data collection timelines were tight, especially in Kenya where the term was ending and exams were beginning, and fieldwork had to be planned around Ramadan and elections in Ghana and Nigeria, and the rainy season in Kenya.

Similar to the baseline, notes collated during the interviews and discussions were used to facilitate team debriefs, as well as provide a back-up source of information should the audio recordings be unclear or if we were unable to record an interview (e.g. due to respondents' preferences or if the recording device failed). Daily debrief sessions were held to discuss fieldwork and provide an initial synthesis of the findings. These sessions were a key stage of the analysis and were used to reveal research gaps to

address during the fieldwork and generate an evidence-based analytical synthesis of findings per day per location. In particular, the debrief was a mechanism to think about the team's performance, the effectiveness of the tools, and how each data collection tool added to the overall understanding of the evaluation questions. As a result, the teams were able to consolidate all the findings generated each day and conduct initial analysis for a particular school and community. Daily debriefs followed a special framework as a means for brainstorming and triangulating sources, methods, and respondents, enabling us to challenge one another and serving as a quality assurance mechanism in which technical queries that arose during the day were addressed. The debrief sessions marked the start of building a narrative around findings, discussing emerging themes, and identifying additional areas to explore throughout the fieldwork. The data collection was followed by two days of debriefing and analysis in each country to allow the teams to develop country-based debriefs, complete school and community debriefs, and finish typing up all the instrument notes.

The completion of the qualitative data collection was followed by the transcription of data recorded during the interviews and discussions.

Research ethics, safeguarding and child protection

Conducting evaluations of this nature requires high ethical standards to ensure confidentiality is maintained, that respondents are never forced to participate or encouraged to speak about subjects that may be traumatising, and that all activities are age appropriate. Ethical considerations have been taken into account throughout the entire evaluation process, including evaluation design, composition, recruitment and management of the evaluation team, consultations and interviews with informants, and data storage and use.

The evaluation design, instruments, information sheets, consent forms, and fieldwork protocols underwent a formal approval process with **OPM's Ethical Review Committee**. Furthermore, local ethical approval was sought in each of the three countries prior to the baseline commencing.⁹ All evaluation and field staff were required to undertake a background check prior to joining the team and were over the age of 18. All evaluation team members underwent ethics and safeguarding policy and practice training before the start of fieldwork. The training covered topics such as the rights of participants, how to obtain informed consent and assent from respondents, how to enter the community and school, general researcher codes of conduct, and procedures for ensuring the safeguarding of children and other vulnerable groups to protect them from any harm.

In addition to ensuring this evaluation adopts the highest ethical standards in particular when consulting with children, OPM put in place specific child protection measures to ensure our research team and local partners understand their ethical and statutory responsibilities when it comes to protecting children from harm. The entire evaluation team, partners, and DP country teams were trained on the child protection policy and procedures for the DP-2 evaluation, so they know what action to take if any child we come into contact with during the evaluation discloses an incident of abuse, violence, exploitation, or neglect.

⁹ See Annex 6 of the DP-2 baseline report for our detailed ethics approach for this evaluation.

During the course of the DP-2 evaluation, a research team member may be informed of, become aware of, or suspect sexual, physical or other child abuse or exploitation in any of the following circumstances:

- i A child “disclosing” to a team member that he/she is being or has been abused or exploited, by an OPM or DLA team member, a member of the school community or someone else close to him/her;
- ii Becoming concerned that a team member’s behaviour towards children is inappropriate;
- iii Receiving an allegation from an external stakeholder that an OPM or DLA team member is abusing a child.

All team members who find themselves in one or more of the circumstances above (which are considered ‘child protection incidents’) are required to submit a written ‘child protection incident report’ within 24 hours (or immediately if it is an emergency situation) for further assessment and subsequent action of relevant research leadership.

Child protection incidents identified during the fieldwork are raised to the Child Protection Committee in each country. The Child Protection Committee comprises of the OPM Project Director, the fieldwork manager and a representative from the DLA country office who is responsible for child protection and safeguarding. The Child Protection Committee reviews each case and decides on the appropriate action to be taken based on the laws and customs of each country, and following DLA’s child protection policy and OPM’s safeguarding policy. The Child Protection Committee decides whether emergency action is required, whether cases need to be reported to the local police and/or a social welfare authority for investigation, whether the child should be referred to a social welfare organisation and other appropriate actions. While incidents or concerns are usually raised in writing, they can also be raised verbally with any member of the Child Protection Committee or anonymously through OPM’s externally hosted whistleblowing service.

The DP-2 Child Protection Framework for each country describes the safeguarding process in detail and is provided in Annex 16 of the DP-2 Baseline Report. Any safeguarding issues identified at midline were treated based on this procedure.

Re-contact protocols and attrition tracking

Quantitative re-contact protocol

Because there is no household survey at midline, cohort tracking at midline was only be conducted at the school level. Cohort tracking at the school level followed the following steps:

- **Step 1 – Tracking of schools:** As a first step, all schools in our evaluation sample were be tracked to ensure that the school still exists and is still functional ahead of the start of the fieldwork.
 - For treatment schools, a list of the sampled schools was be shared with the DLA country office to identify any schools that may have closed down or that may no longer be taking part in the programme.

- Control schools were contacted telephonically.
- **Step 2 – Verify whether the cohort girl is still enrolled at the same school:**

As part of the team’s visit to the school at midline, the supervisor verified with the head teacher whether each cohort girl is still enrolled at the same school using specific questions designed as part of the cohort tracking tool in CAPI as well as a girl tracking sheet that contained the girl’s name, her caregiver’s name and contact information for the caregiver. The girl’s enrolment status was confirmed with the school records, and by the deputy head teacher / class teacher, wherever the head teacher had any doubt.

 - a. **If the cohort girl is still enrolled at the same school:** The cohort girl was interviewed by a member of the team if she is present on the day of the visit.
 - i. Before starting the interview, the team member confirmed with the girl that she is indeed the girl that was selected at baseline. This was done by confirming the girl’s name and age, as well as her caregiver’s name and household information where available.
 - ii. The team member also confirmed whether the girl’s household information collected at baseline is still up to date. This will facilitate the tracking of the girl’s household at endline in case the girl no longer attends the same school at endline. If the household survey could not be completed with the girl’s household at baseline, contact information for the household was collected.
 - b. **If the cohort girl is no longer enrolled at the same school:** The supervisor asked the head teacher,
 - i. Whether the cohort girl transferred to another school, and if yes, to which school.
 - ii. Whether the cohort girl dropped out of school, and if yes, ask for the reason for having dropped out of school.
 - iii. Whether the head teacher has contact information (address, telephone number) of the cohort girl. The supervisor compared the contact information provided by the head teacher to that collected at baseline and updated any contact information.
- **Step 3 – Track girls that have transferred to another school that is part of the evaluation sample when possible:** If the head teacher reported that a cohort girl had transferred to another school that is part of the evaluation sample, the teams attempted to track the cohort girl in her new school. If the girl was successfully tracked, the learning assessment was administered to the girl.

In Ghana and Nigeria, it was expected that some girls would have already transferred to a JHS / JSS. Where the head teacher reported that a girl had transferred to a JHS / JSS, the team attempted to track the girl to the JHS / JSS whenever possible and provided that the JHS / JSS was in the same locality (LGA in Nigeria, district in Ghana).

- **Step 4 - Phone tracking using available phone numbers:** Team members made courtesy phone calls to households of cohort girls that were not found enrolled at midline and could not be tracked to another evaluation school.
 - a. Team members called the caregiver using the contact number provided at baseline or via the school at midline.
 - b. Calls were made at acceptable hours during the day. If not successful, alternative phone numbers provided during data collection were attempted.
 - c. If the initial call was not successful, supervisors attempted to call the household up to three times over the course of three days.
 - d. If the team member reached the correct household and respondent, then he/she verified the enrollment status of the cohort girl and gathered information about her new status or school that she is currently enrolled in using the transition tracking tool.

Attrition tracking and replacements / top-ups

As described in section 0, specific targets were set for each school for sampling additional girls from Primary 6 to make up for the shortfall in the sample size at baseline. In addition, we monitored attrition rates throughout fieldwork to establish whether additional replacements / top-ups would be necessary. The following approach was followed in each country:

- **Ghana:** The aim was to top up the shortfall of 286 girls in control schools and 192 girls in treatment schools. From the baseline data collection, it was evident that the sample in Ghana includes many small schools and only few larger schools. As a result, in all schools, all Primary 6 girls who were present on the day of the visit and were not already part of the sample were added to the sample at midline. In large schools, the maximum number of girls to be interviewed was limited at 40 girls.
- **Kenya:** The aim was to top up the shortfall of 132 girls in control schools by sampling an additional 3 girls from the 20 largest control schools and 2 girls from the remaining 41 control schools.¹⁰ However, during the course of fieldwork, it became evident that the attrition rate would be higher than 20% given that two schools could not be tracked and given high attrition rates of cohort girls. As a result, the decision was made during fieldwork to replace girls lost from the sample whenever possible. Replacement girls were sampled in the same way as the top up girls: they were randomly selected from amongst all girls who were present in Primary 6 on the day of the visit.
- **Nigeria:** The aim was to top up the shortfall of 93 girls in control schools by sampling an additional 2 girls in the 31 largest control schools and 1 additional girl in the remaining 31 control schools; and to top up the shortfall of 18 girls in treatment schools by sampling 1 additional girl in the 18 largest treatment schools. During fieldwork, there were some schools were not enough additional

¹⁰ The size of the school was based on the enrolment of Primary 5 girls at baseline based on enrolment data collected as part of the baseline school survey. We chose to have higher targets for top-up in the larger schools from baseline to maximise the possibility of meeting our top-up targets.

girls were present in Primary 6 to achieve the top-up target for that school. The shortfall in the top-up in those schools was made up in other schools where enough girls were present. Attrition rates in Nigeria were well below 15% and there were therefore no additional sample replacements required.

Qualitative re-contact protocols

Cohort tracking involves tracking the same girl respondents throughout the evaluation. At baseline, we captured sufficient information about the sampled girls and their households to enable us to track them at different points in the evaluation. This includes the full name of the girl and parent/guardian, age and current grade of the cohort girl, phone numbers of caregiver and head of household and other people that might know about the cohort girl's whereabouts within a three-year period, and community name, address, GPS locations¹¹ of the cohort girl's household, and any nearby landmarks.

At midline we verified the presence of the girl in the sampled schools and the location and contact information of her household just before the qualitative data collection started. In so doing we contacted the schools using a short structured questionnaire to identify whether or not and if yes which of the girls have dropped out from the sampled schools. Where available, the contact details of those girls were used to track them during the fieldwork as well as the reasons for their drop out according to the schools' own records. As a result we found out that 8 girls in total have dropped out or left their schools and transitioned to other schools who were part of our baseline (Kenya - 4; Nigeria – 2, Ghana – 2) among whom we were unable to interview any of the girls in Kenya and Nigeria and 1 girl in Ghana. In some cases we managed to interview either the parents/carers of such girls or the girls themselves without their carers. In some cases we could only obtain data about these girls from their schools since the girls and their households have moved somewhere else.

Prior to the qualitative interviews with girls, research assistants read their diaries from the baseline and took notes for each child. This helped us to tailor our interviews to each individual child since we knew each of the child's individual context.

Sampling protocols at midline

Here we describe the sampling protocol followed for each tool in the quantitative midline data collection:

- **Girl survey, learning assessment, transition tracking and cohort attendance tracking tools:** We tracked the cohort of girls that was interviewed at baseline using the protocols described above. Top up and replacement girls were randomly sampled from amongst all girls in Primary 6 who were present on the day of the visit and were not already part of the cohort sample.
- **School survey:** In all schools that are part of the quantitative sample, we administered a school survey to the head teacher, or to the deputy head teacher in cases where the head teacher was not available. In treatment schools, resource teachers were brought in for specific parts of the interviews

¹¹ Although note that Section 2.5 outlines some challenges in terms of establishing GPS locations for some households.

that involved questions on the DLA project activities. No sampling was required as the respondent was preselected.

- **Head count:** In all schools, we randomly selected one arm from Primary 5 and one arm from Primary 6 (and for Kenya, one arm from Primary 7) in which we conducted a head count of boys and girls present on the day of the visit.
- **Classroom observation and teacher assessment:** The evaluation is not tracking a cohort of teachers. As a result, a new teacher from Primary 5 was randomly selected from each school at midline for the classroom observation and teacher assessment. Teachers who teach Primary 5 were sampled to maintain consistency with the baseline. Teachers were sampled by making a list of all Primary 5 teachers in the school with the help of the head teacher and the teacher attendance register. After making a full list of teachers, enumerators recorded which teachers were present at school on the day of the visit.
 - **Control schools:** In control schools, we randomly sampled one Primary 5 teacher who was present on the day of the visit, and who teaches English or Mathematics.
 - **Treatment schools:** In treatment schools, we sampled from amongst all Primary 5 teachers present on the day of the visit who teach English or Mathematics, and who had received at least one of DLA's teacher trainings, either directly or through the step-down method.
 - To ensure an even spread of English and Mathematics lessons, we pre-selected which subject should be observed in each school. The teacher sampling instrument on CAPI was programmed to select a teacher who teaches the allocated subject wherever possible. In some cases, it was not possible to observe the allocated subject, either because there was no (trained) Primary 5 teacher present for that subject on the day of the visit, or because the lesson to be observed had already started if it was the first lesson of the day. In such cases, enumerators switched to the other subject.

Quality assurance

OPM's full quality assurance approach is detailed in Annex 15 of the DP-2 baseline report. Our quality assurance approach spans all phases of the midline, including planning and preparation, data collection and processing of the data post data collection. Aspects of our quality assurance approach include:

- **Stakeholder consultations:** The planning phase involved extensive engagement with the DLA team, including country offices, and other stakeholders to ensure that data collection tools and protocols are appropriately adapted to the context and meet the project's needs, and that stakeholders were aware of all data collection timelines.
- **Preparing for fieldwork:** This involved obtaining appropriate ethical clearance, developing detailed manuals and fieldwork protocols, recruiting staff with the necessary qualifications and experience, developing a fieldwork implementation plan, intensive training of all researchers, and ensuring security and duty of care. OPM strives at all times to minimise the risks arising from its work in the field and takes on the responsibility for the security and duty of care to ensure

the safety and wellbeing of all our staff and consultants, including making appropriate security arrangements.

- **Quality control during fieldwork:** The core staff involved in the delivery of quantitative fieldwork quality assure the fieldwork operations by regularly visiting and observing teams during fieldwork, carrying out spot checks and live interview observations. Data validation procedures were coded into the CAPI instruments directly. Data were sent on a daily basis to the data management team who played a key role in the quality assurance system. After having received new interview files and fieldwork reports, the central data management team ran automated secondary checks in a statistical package (such as Stata or SPSS) before accepting individual interviews. Where inconsistencies were found, the data management team either followed up with enumerators or respondents over the phone or sent enumerators back to the respondents. Due to the short time lag, enumerators were typically still in the area, allowing the use of timely revisits to clear inconsistencies. The data management furthermore monitored fieldwork progress and enumerator performance, and provided feedback to individual enumerators or the entire field team when necessary.

Final sample sizes per tool

Table 15 shows the final sample sizes per tool.

Table 15. Tool details for quantitative tools

Tool (used for which outcome and IO indicator)	Beneficiary group	Sample size agreed in MEL framework for treatment and (control group) - if appropriate	Actual achieved sample size at baseline Treatment and (control group) – if appropriate	Actual achieved sample size at midline treatment and (control group) - if appropriate	Remarks:
Ghana					
School survey (no outcome)	Head teachers and resource teachers	60 schools (60 schools)	62 schools (58 schools)	62 schools (58 schools)	1) 0% (0%)
Headcount (used for attendance IO)	Schools	60 schools (60 schools)	62 schools (58 schools)	62 schools (58 schools)	1) 0% (0%)
Classroom observation and teacher assessment (used for teaching quality IO)	Primary 5 English and mathematics teachers	60 teachers (60 teachers)	62 schools (58 schools)	62 schools (58 schools)	1) 0% (0%)
Learning assessment (used for learning outcome) and girl survey (used for self-efficacy outcome) and cohort attendance (used for attendance IO)	In-school girls (Grade 5 at baseline)	1200 girls (1200 girls) With 30% assumed attrition between baseline and endline	1051 girls (914 girls)	Re-contacted: 888 girls (726 girls) Top-up: 208 girls (194 girls) Total: 1096 girls (917 girls)	1) Attrition from learning cohort between baseline and midline excluding top-up: 15.5% (20.6%) 2) Shown on the left 3) We had assumed 15% attrition between baseline and midline. Attrition rates were slightly higher than expected. The addition of top-up girls ensures that we have enough girls to track between midline and endline.

¹² Major changes to tools are described in Table 5.

Tool (used for which outcome and IO indicator)	Beneficiary group	Sample size agreed in MEL framework for treatment and (control group) - if appropriate	Actual achieved sample size at baseline Treatment and (control group) – if appropriate	Actual achieved sample size at midline treatment and (control group) - if appropriate	Remarks: 1) Attrition rate from baseline to midline 2) Re-contacted sample vs replaced sample 3) Major changes to tools ¹² or differences between anticipated and actual sample sizes
Transition tracking (used for transition outcome)	In-school girls (Grade 5 at baseline) and girls no longer enrolled in evaluation schools	1200 girls (1200 girls) With 30% assumed attrition between baseline and endline	1051 girls (914 girls)	Re-contacted: 1006 girls (838 girls) Top-up: 208 girls (194 girls) Total: 1214 girls (1032 girls)	1) Attrition from transition cohort between baseline and midline excluding top up: 4.3% (8.3%) 2) Shown on left 3) Attrition from the transition cohort was below the assumed level of 15% attrition.
Kenya					
School survey (no outcome)	Head teachers and resource teachers	60 schools (60 schools)	60 schools (61 schools)	59 schools (60 schools)	1) 1.7% (1.6%) 2) 59 out of 60 treatment schools were recontacted. 60 out of 61 control schools were recontacted. No replacements were made. 3) One treatment school from baseline was dropped from the sample because the school is no longer part of the DP-2 programme. One control school from baseline was dropped from the sample because the school has relocated to a different part of Nairobi and pupils did not move with the school.
Headcount (used for attendance IO)	Schools	60 schools (60 schools)	60 schools (61 schools)	59 schools (60 schools)	As above

Tool (used for which outcome and IO indicator)	Beneficiary group	Sample size agreed in MEL framework for treatment and (control group) - if appropriate	Actual achieved sample size at baseline Treatment and (control group) – if appropriate	Actual achieved sample size at midline treatment and (control group) - if appropriate	Remarks: 1) Attrition rate from baseline to midline 2) Re-contacted sample vs replaced sample 3) Major changes to tools ¹² or differences between anticipated and actual sample sizes
Classroom observation and teacher assessment (used for teaching quality IO)	Primary 5 English and mathematics teachers	60 teachers (60 teachers)	60 teachers (61 teachers)	59 teachers (59 teachers)	1) 1.7% (3.3%) 2) Teachers from baseline were not re-contacted. New teachers were sampled at midline. 3) One treatment and one control school were lost from the sample as described above. In addition, in one control school, one classroom observation was not conducted because no Primary 5 teacher teaching English or Maths was present on the day.
Learning assessment (used for learning outcome) and girl survey (used for self-efficacy outcome) and cohort attendance (used for attendance IO)	In-school girls (Grade 5 at baseline)	1260 girls (1260 girls) With 40% assumed attrition between baseline and endline	1264 girls (1128 girls)	Re-contacted: 981 girls (880 girls) Top-up: 133 girls (221 girls) Total: 1114 girls (1101 girls)	1) Attrition from learning cohort between baseline and midline excluding top-up: 22.4% (22.0%) 2) Shown on the left 3) We had assumed 20% attrition between baseline and midline. Attrition rates were slightly higher than expected, owing in part to the loss of two schools from the sample. The addition of top-up girls ensures that we have enough girls to track between midline and endline.
Transition tracking (used for transition outcome)	In-school girls (Grade 5 at baseline) and girls no longer enrolled in evaluation schools	1260 girls (1260 girls) With 40% assumed attrition between baseline and endline	1264 girls (1128 girls)	Re-contacted: 1171 girls (1075 girls) Top-up: 133 girls (221 girls)	1) Attrition from transition cohort between baseline and midline excluding top up: 7.4% (4.7%) 2) Shown on left 3) Attrition from the transition cohort was below the assumed level of 20% attrition.

Tool (used for which outcome and IO indicator)	Beneficiary group	Sample size agreed in MEL framework for treatment and (control group) - if appropriate	Actual achieved sample size at baseline Treatment and (control group) – if appropriate	Actual achieved sample size at midline treatment and (control group) - if appropriate	Remarks:
				Total: 1304 girls (1296 girls)	<ol style="list-style-type: none"> Attrition rate from baseline to midline Re-contacted sample vs replaced sample Major changes to tools¹² or differences between anticipated and actual sample sizes
Nigeria					
School survey (no outcome)	Head teachers and resource teachers	60 schools (60 schools)	65 schools (62 schools)	65 schools (62 schools)	1) 0% (0%)
Headcount (used for attendance IO)	Schools	60 schools (60 schools)	65 schools (62 schools)	65 schools (62 schools)	1) 0% (0%)
Classroom observation and teacher assessment (used for teaching quality IO)	Primary 5 English and mathematics teachers	60 teachers (60 teachers)	65 teachers (62 teachers)	64 teachers (58 teachers)	<ol style="list-style-type: none"> 1.5% (6.5%) Teachers from baseline were not re-contacted. New teachers were sampled at midline. In one treatment school and four control schools, no classroom observations were conducted because no Primary 5 teacher teaching English or Maths was present on the day.
Learning assessment (used for learning outcome) and girl survey (used for self-efficacy outcome) and cohort attendance	In-school girls (Grade 5 at baseline)	1200 girls (1200 girls) With 30% assumed attrition between baseline and endline	1182 girls (1107 girls)	Re-contacted: 1089 girls (1028 girls) Top-up: 46 girls (105 girls)	<ol style="list-style-type: none"> Attrition from transition cohort between baseline and midline excluding top up: 7.9% (7.1%) Shown on left

Tool (used for which outcome and IO indicator)	Beneficiary group	Sample size agreed in MEL framework for treatment and (control group) - if appropriate	Actual achieved sample size at baseline Treatment and (control group) – if appropriate	Actual achieved sample size at midline treatment and (control group) - if appropriate	Remarks: 1) Attrition rate from baseline to midline 2) Re-contacted sample vs replaced sample 3) Major changes to tools ¹² or differences between anticipated and actual sample sizes
(used for attendance IO)				Total: 1135 girls (1133 girls)	3) Attrition from the transition cohort was below the assumed level of 15% attrition.
Transition tracking (used for transition outcome)	In-school girls (Grade 5 at baseline) and girls no longer enrolled in evaluation schools	1200 girls (1200 girls) With 30% assumed attrition between baseline and endline	1182 girls (1107 girls)	Re-contacted: 1140 girls (1068 girls) Top-up: 46 girls (105 girls) Total: 1186 girls (1173 girls)	1) Attrition from transition cohort between baseline and midline excluding top up: 3.6% (3.5%) 2) Shown on left 3) Attrition from the transition cohort was below the assumed level of 15% attrition.

3.3.3 Post data collection

Data cleaning and analysis

Quantitative approach

For the quantitative data, while data checking and cleaning were run concurrently with the data collection, we performed additional data processing activities once data collection was complete to transform the collected cleaned data into a format ready for analysis. This involved reshaping and integrating datasets for different levels of analysis, classifying non-response and coding, properly naming, and labelling variables in each dataset, calculating weights, and anonymising data by removing all variables that identify respondents such as names, addresses, GPS coordinates, etc. All data was checked, cleaned and analysed using Stata software.

Various methods were used for the quantitative data analysis:

- **Descriptive summary statistics:** We produced descriptive summary statistics of all outcome and intermediate outcome indicators to describe trends in these indicators over time, that is between the baseline and midline. Descriptive statistics of the characteristics of girls and schools were produced to analyse how the sample has changed compared to the baseline, and whether there have been any changes in the barriers to learning and transition. In addition, descriptive summary statistics are also used to describe the implementation that has happened between baseline and midline.
- **Polychoric principal component analysis:** in order to create an index of self-efficacy based on a set of variables ordered on Likert scales we use a statistical procedure known as principal component analysis (PCA). This approach allows us to uncover the underlying “latent variable” of self-efficacy which determines the way in which girls respond to the 10 individual self-efficacy related questions. To account for the fact that the self-efficacy variables are ordinal and as such not normally distributed we employ polychoric PCA which provides the maximum likelihood estimates of the underlying correlation between our unobserved latent variable of self-efficacy (which is normally distributed) from the ordinal versions based on the observed variables.
- **Difference-in-difference impact estimation:** As described in section 3.2.1, the evaluation uses a CEM-DID approach to quantitatively establish the impact of DP-2 on the outcomes and intermediate outcome indicators. The implementation of the CEM-DID approach is described in more detail in section 3.5.3.
- **Multivariate Ordinary Least Squares regression analysis:** This is used to further explore the impact findings on learning outcomes. In particular, the regression analysis is used to understand what girl and school characteristics and education barriers are associated with (1) overall performance on the learning outcomes and (2) changes in learning outcomes over time.

Qualitative approach

The qualitative analysis is largely thematic and combines a technique of inductive but largely deductive analysis. Thematic analysis is a search for themes that emerge as

being important to the description of the phenomenon.¹³ The process involves the identification of themes through 'careful reading and re-reading of the data'.¹⁴ It is a form of pattern recognition within the data, where emerging themes become the categories for analysis which is then conducted via a stage-by-stage process of iterative analysis from generic to specific, from respondents to respondents, from tool to tool, and from description to analytical. The first stage of analysis took place during debriefs in the field based on the tools conducted daily. Debriefs provided an opportunity for the research team to summarise initial themes identified during data collection as well as triangulate and compare findings across the respondents, schools, and communities visited.

The second stage of analysis was based on the individual notes of each of the tools implemented as well as the debrief notes from each community, school, and country. These notes were coded and analysed using qualitative analysis software (QSR NVivo 11) following the thematic analysis logic. An initial codebook of themes was developed based on the evaluation questions and literature review to ensure consistency across the country data sets. To ensure contextual differences were incorporated, each team was also free to change the codebook to allow the themes to emerge from the data without the restraint of imposing pre-conceived concepts or bias on the data to test hypotheses or assumptions (deductive analysis). Findings were being considered both within each school and its surrounding community as well as through common themes across all the areas visited in each country. Our data analysis aims to show how overarching themes are supported by excerpts from the raw data to ensure data interpretation remains directly linked to the words of the respondents. Our principle is that people differ in their understanding and experience of DP-2 and that they cannot be understood outside the context they are in.

The third stage of analysis focused on identifying recurrent themes, noticing patterns, identifying respondent clusters and causal links, if any, as well as analysing why we have the patterns, themes, and clusters as they are and what that means for our evaluation questions. Thus, our analysis moved from descriptive to analytical findings and was further developed into inferences to contribute to the meta-inferences of the mixed-methods report.

Mixed methods approach

We ensured that the qualitative and quantitative strands worked closely at the analysis stage. Each chapter in the report is co-authored by a member from each of the quantitative and qualitative teams. This 'buddy' system works by members of each team sharing and commenting on iterative drafts of the chapter, thereby strengthening the analysis from each methodology. We organised a workshop to share emerging quantitative and qualitative findings early in the analysis phase to point to areas of further investigation in both data sets. In addition, the quantitative and qualitative research leads reviewed all chapters of the report and jointly developed the conclusions and recommendations. During a workshop, the draft conclusions and recommendations were shared and discussed in detail with the full team.

¹³ Daly, j *et al.* (1997) 'Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development'. Accessed on 13 June 2018 from <http://journals.sagepub.com/doi/full/10.1177/160940690600500107>

¹⁴ Rice and Ezzy (1999), *Qualitative research methods: A health focus*. Melbourne: Oxford University Press, p. 258.

Cohort tracking at endline

The cohort tracking approach at endline will largely follow the same approach as at midline. We will track the following girls:

Learning cohort:

- Baseline cohort girls who were successfully re-contacted at the sampled primary school at midline
- Baseline cohort girls who were enrolled at the sampled primary school at midline but were absent during the visit
- Replacement / top-up girls from the sampled primary school who were added to the sample at midline

At midline in Ghana and Nigeria, we attempted to contact all girls who had already transferred to a JHS / JSS. Ahead of the endline data collection, we will review this data as well as information collected from head teachers and district / LGA officials on the JHS / JSS that girls from the sampled primary schools are usually expected to transfer to. We will also review the matching of primary schools and JHS / JSS that was carried out at baseline for the purposes of the benchmarking exercise. Based on this, we will match primary schools with JHS / JSS, taking into account which JHS / JSS girls from the sampled primary schools are most likely to transfer to. In this way, we will develop a sample of JHS / JSS that will be visited at endline. We will submit this sample to DLA for review ahead of the endline data collection.

As part of the cohort tracking in Ghana and Nigeria, we will visit all sampled primary schools to track girls who are repeating a grade, and visit the matched JHS / JSS to track girls who progressed through the school system as expected (or who entered JHS / JSS immediately after Primary 5).

We will also track the households of all girls from this learning cohort. Some girls will drop out from the learning cohort at endline because they transfer to other schools, transition to other opportunities or drop out of school. For these girls, we will track their households to establish the transition status of the girls.

Transition cohort:

In addition to the groups of girls mentioned above, the following group forms part of the transition cohort and will be tracked at the household level:

- Baseline cohort girls whose caregivers were successfully contacted for the transition interview at midline

3.4 Challenges in midline data collection and limitations to the evaluation design

3.4.1 Challenges in midline data collection

In Table 16, we outline some of the challenges encountered during both the quantitative and qualitative data collection activities across the three countries

Table 16. Challenges in midline data collection

Challenges	Mitigation approaches
Quantitative challenges	
Interviewing girls who had transitioned to JSS was logistically challenging	Some of the girls had transitioned to JSS. In order to minimise attrition from the learning cohort, the team visited every JSS that girls had transitioned to, to administer the learning assessments to those girls. This greatly reduced attrition from the learning cohort but was at times logistically challenging.
Invalid contact details/addresses: Of the girls that had transferred/transitioned, many girls had either relocated to a new location or changed their contact details, hence, tracking them was difficult.	Foreseeing this challenge, we recorded multiple phone numbers at baseline. In addition, we asked head teachers and class teachers for updated contact details for the girls on the day of the visit. Despite these mitigation approaches, this remained a challenge as many contact numbers were invalid or not answered over several attempts, particularly in Kenya.
Schools with insufficient girls present in Primary 6 to meet top-up targets: Schools were assigned number of new girls to be sampled to account for attrition based on the intervention type and school size. However, in some of the schools were top-ups were there was no P6 because all the girls transitioned from P5 or all the girls in P6 were part of the cohort.	To mitigate this, additional girls were sampled for top-up in other schools.
High attrition rates in Kenya: Attrition rates in Kenya were high, largely because transfers between schools are very common in Nairobi. In addition, two schools were lost from the sample in Kenya.	In addition to the top ups, we took the decision during fieldwork to add further girls to the midline sample to replace girls that were lost from the sample at midline. This ensures that sufficient girls can be tracked between midline and endline.
Timing of fieldwork in Nigeria: In Nigeria, we faced constraints in finding time for the midline data collection due to a combination of the national election, school holidays, Ramadan and the farming season. In the end, fieldwork was conducted at the start of Ramadan to avoid fieldwork during the farming season when absenteeism (and therefore attrition from the sample) was expected to be high.	Fieldwork was conducted at the beginning of Ramadan. We increased the number of teams to complete the data collection work in as few days as possible. We increased the team size and ensured that teams arrived at schools very early in the morning to ensure that all data collection activities could be completed during the shortened school day.
Disruption of the school day given the length of the data collection exercise: The number of tools being employed for this evaluation is extensive and this has resulted in disruption of the school teaching and learning process.	We, unfortunately, did not have any mitigation approaches for this challenge since we were required to complete the data collection within a certain time period. We ensured that we informed schools ahead of time of our activities and the length of time this would take to complete. We received positive cooperation from most schools but in some schools (particularly control schools) this proved to be challenging.
Accessing schools in some areas has been difficult due to lack of proper infrastructure and floods.	Alternative modes of transport are being used to access schools in more remote areas such as boats and motorbikes. In a particular case in Kenya, the team had to delay visiting schools until floods subsided.

Challenges	Mitigation approaches
Qualitative challenges	
Nigeria	
<p><u>Sampling</u></p> <ul style="list-style-type: none"> Tracking of transitioned girls: it was also challenging tracking few of the baseline cohort girls who had transitioned to secondary schools especially for schools located outside the LGA. There was also issues around securing permission from the school principals to talk to the girls as the permission from SUBEB did not cover secondary schools. 	<ul style="list-style-type: none"> To mitigate this, these interviews were conducted at the girl's home.
<p><u>Fieldwork</u></p> <ul style="list-style-type: none"> Parent interviews with parents were mostly with female parents who often were not so involved in school activities owing to the Purdah system. Locating households of cohort girls to track their parents was challenging for some teams. The fasting was also a constrain for some of the girls who were participating. They were unusually tired having not had anything to eat at the time <p>Early school closure due to Ramadan: Due to the Ramadan, schools were closing earlier than was anticipated.</p>	<ul style="list-style-type: none"> Attempts were made to schedule some of the session for the weekend so as to capture the views of the men as well. This worked in some cases, thus enriching the quality of information gathered. Interviews with mothers were conducted by female researchers as access to some of the households or compounds is typically restricted to males living within those households, i.e. the husbands of the mothers being interviewed. We relied on gathering as much information as possible from the girls on the physical location, e.g. identifiable landmarks and bearings (mosque, shops, major road). Field team ensured that multiple breaks were taken, and conversations were paced accordingly. Girls who were fasting were prioritized for the interview early in the day Some of the interviews with the cohort girls scheduled to happen at schools was carried out at their houses which constituted additional travel time and effort for the field staff. Sometimes, the team made multiple visits before such interviews were complete.
<p><u>Instruments</u></p> <p>Conducting two interviews with girls was challenging logistically</p>	<p>In order to manage the time better and cause minimum disruptions to the girls' schedule in Nigeria, we conducted the interviews together to avoid disrupting girls' day twice. During these two interviews we provided them with a short break.</p>
Kenya	
<p><u>Fieldwork</u></p>	<p>Research for this community was delayed, and the respondents were interviewed later, once the water had receded.</p>

Challenges	Mitigation approaches
<p>Floods in Kenya due to the monsoons meant that one of the communities became inaccessible to the team.</p>	
<p><u>Instruments</u> Some girls were shy and hesitant in speaking up during the interviews.</p>	<p>During the training and fieldwork there was emphasis on the researchers using prompts and nudges to help the children feel more comfortable, and encouraging all of them to talk freely. The team was giving girls frequent reassurance that there were no wrong answers and that their answers were important to us.</p>
<p>Ghana</p>	
<p><u>Sampling</u> Tracking of the participants was done through taking information in advance from the school and parents and was challenging at a time.</p>	<p>To mitigate this challenge in locating participants prior information had been sent to schools regarding interviews. School-level interviews were also done first and that enabled cohort girls to pre-inform their parents/caretakers about interviews with them the following day. There was however a dropout case where the cohort girl had travelled out of the district and her caretaker was unable to reach her. Researchers ensured they explored all possible means to contact her but to no avail. This was communicated with the OPM research Assistant.</p>
<p><u>Fieldwork</u> Fieldwork schedule and locations had to be kept flexible as the time availability of different respondents varied</p>	<p>The interview schedule was not strictly adhered to since the availability periods of respondents – particularly members of the CAP process, head teachers, and parents – varied. There were also few cases of miscommunication and this resulted in some community level respondents coming to schools, or appearing at the same time. In such situations, the team leads took time to clarify or update schedule to fit respondents' availability and appropriate locations for interviews properly communicated and planned for.</p> <p>School level interviews were mostly conducted early in the mornings when participants' had high energy levels. Cohort girls were given the option to signal for a short break where necessary. Interviews with parents were normally scheduled based on preference and availability of parents. There were however few cases where parents requested researchers to come to their selling areas (for parents who were vendors) for interviews due to their unavailability at home. Researchers ensured that they visited the homes of the girls to carry out observations before going to meet them.</p>
<p><u>Instruments</u> Emotional reaction to the interviews with girls about their daily routine</p>	<p>There were no main issues with the tools/types of questions but to a small extent the translation of questions into local language (in explaining further) and the skill of moderators impacted on responses. Some of the questions, especially those related to household chores, triggered emotional reactions like crying and subsequent reservations. Researchers were however quick to respond appropriately as learnt during the orientation session. Cohort girls sometimes appeared more responsive to the male field researchers than the females, and to the best of their ability, researchers took the opportunity to switch moderation where necessary.</p>

3.4.2 Limitations to the evaluation design

The limitations to the evaluation are outlined in Table 17 along with the likelihood of such a limitation being an issue and potential mitigation approaches.

Table 17: Limitations to the evaluation

Limitation	Likelihood	Mitigation
Impact evaluation		
<p>Attributing impact of specific components of the project: The impact evaluation will be able to <i>attribute</i> the impact of DP-2 as a whole based on the final outcomes of interest assuming there is no variation in the implementation of DP-2 in the sense that the full pack of interventions (such as girls' clubs, teacher training, community plans, and educational content) is implemented in all the schools that DP-2 is operating in. Given that all DP-2 girls' are intended to be exposed to all interventions, we cannot identify a credible counterfactual for <i>specific interventions</i> that form part of DP-2.</p>	Very likely	Our evaluation approach aims to unpick the linkages between project activities, outputs, intermediate outcomes, and final outcomes, and to the degree possible seek to understand the <i>contribution</i> that the various project interventions have made toward achieving progress against headline outcomes. For example, we will not be able to say what the percentage change in learning is as a result of a specific intervention such as the teacher training, but rather tell a credible contribution story as to whether, given the available evidence, it is credible to say that teacher training has or not made a significant contribution to observed changes in learning.
<p>Identifying the impact and intensity of treatment: The evaluation is particularly interested in understanding the impact of the project on girls who are exposed to a full range of DP-2 interventions. However, given that girls self-select into some of the DP-2 interventions or not all teachers have received the full teacher training package, there is a large potential for one-sided non-compliance.¹⁵ As a result, some girls and teachers will not be exposed to the full range of DP-2 activities.</p>	Very likely	The evaluation will need to try to distinguish between two types of impact: ITT and ATET. However, in order to do this, it will be important for the evaluation to have a good understanding of the fidelity and intensity of the DP-2 interventions across our sample of treated schools, teachers, and girls via the quantitative/qualitative data gathered by the evaluation and project M&E data.
<p>Time to impact: As per the GEC-T guidelines, the project is looking to achieve 0.25 standard deviation impact in learning during each year of implementation. As described in the theory of change, learning outcomes are expected to improve as a result of improvements in intermediate outcomes. It is expected that such processes may take time and that improvements in learning outcomes may not be linear (i.e. substantial improvements in learning may only emerge once intermediate outcomes</p>	Likely	In addition to reporting against the targets set by the FM for learning, we also look at whether any significant impact has been achieved on learning outcomes by midline and whether we observe impact on the intermediate outcomes that are expected to lead to improvements in learning outcomes. The process evaluation also explores the extent to which project activities have been implemented as designed. This evidence overall will provide an indication of the extent to which the theory of change is supported by the evidence, even where the target for

¹⁵ Gerber and Green (2012).

Limitation	Likelihood	Mitigation
<p>have improved for a certain period of time). The main challenge in regard to demonstrating such a change in a limited time period (i.e. by midline) is that children will have only been exposed to new elements of the DP-2 package for at most two terms. This is not a significant amount of time, particularly if DP is expected to deliver substantial impact on learning outcomes at midline.</p>		<p>learning outcomes may not have been reached.</p>
<p>Sample size not powered at the strata level (only for Kenya): In Kenya, the project is working within five counties in which three different types of school exist. These are formal or public schools, non-formal or low-cost private schools, and schools located in semi-arid/arid lands such as Wajir and Kajiado. The current sample size for Kenya is not powered to detect impact at the different levels of the strata. Each stratum delivers an MDE of 17 percentage points for transition and 0.434 standard deviations for learning. These are higher than the expected MDEs for the total sample size per country and the minimum levels required by the GEC-T guidance. Therefore, the evaluation will be able to detect impact at the country level but will fail to detect impact at the level of the strata.</p>	<p>Very likely</p>	<p>We propose a number of mitigating responses for this, including: (1) tracking heterogeneity in implementation across strata through the quantitative survey; (2) tracking perceptions of heterogeneity in impact across strata through the process evaluation.</p>
<p>External validity: The results from this evaluation will only be able to capture the impact of the project in the study target areas, and will not be generalisable to the entire districts, counties, LGAs, or countries.</p>	<p>Very likely</p>	<p>A mixed-methods design can be seen as mitigation in itself since we combine the quantitative inferences with qualitative inferences. In qualitative research, generalisability is concerned with whether the research results are transferable,¹⁶ i.e. can be extended to a wider context and have theoretical generalisability. In order to ensure both types of generalisation, to the extent possible, we will be giving rich contextual details about where the study took place and the population it worked with and discussing our empirical findings in light of previous theoretical and empirical contributions in the literature.</p>
<p>Barriers to transition: The project is looking to aid the transition of girls from primary through to JSS (for Kenya from middle to upper primary). As such, the barriers that girls face in transition within primary schools (i.e. primary 5 to 6) are different from the barriers that they face when transitioning to JSS. Therefore, the data gathered on barriers to transition for</p>	<p>Very likely</p>	<p>We will do our best to gather data at each point in the evaluation and map out the barriers at the different times of transition by speaking with multiple stakeholders (i.e. girls, teachers, parents, and community members).</p>

¹⁶ Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic Inquiry*. Sage, Beverly Hills, CA.

Limitation	Likelihood	Mitigation
cohort girls at baseline might not apply to girls at midline as they are to transition to JSS in the following year.		
<p>Measurement of changes in life skills: The activities undertaken by girls' clubs so far differ from school to school. Visits to schools and discussions with girls' club mentors and members and DP country staff indicated that activities around life skills, income-generating activities, and topics of discussion that students have within the clubs are at the discretion of the girls' club mentors and to some extent the interests of the students and the resources available to the school. DP-2 plans to introduce the MBW Curriculum for each school to implement as part of the girls' club activities. If consistency is maintained across the clubs, this will allow us to measure the impact of the life skills quantitatively at a statistically representative level. However, if this is not the case then this will not be possible.</p>	Likely	Through the qualitative work we will take a deep dive to uncover and discuss some of the impacts of the activities taking place in a set number of schools and girls that we will be following over the course of the evaluation in each country. We will also check via quantitative, qualitative and process evaluation data whether girls' clubs are implementing the MBW Curriculum consistently.
<p>The qualitative sample approach is limited to well-performing schools only (following DP's assessment). This was done taking into account the nature and focus of the evaluation questions requiring answers from the perspectives of successful schools, which will be reflected in the qualitative data collection, with findings established and conclusions drawn as a result.</p>	Highly likely	Limiting the focus to well-performing schools is valid since it will allow us to answer the evaluation and learning questions, which we would not be able to do for schools with low performance. However, since it is a mixed-methods design, the quantitative sample ensures a larger and random sample size, which complements the qualitative purposeful sample in a way that the latter covers a larger number of schools with varying performances and can, therefore, provide data from them too.
<p>The evaluation is not able to track girls who relocate to other communities, because of resource constraints. It is possible that girls who drop out of school are more likely to relocate, and in this case, the evaluation will not be able to capture information from these girls who have dropped out. This is likely to be a limitation particularly for capturing the perceptions of girls who have dropped out of school in the qualitative research.</p>	Highly likely	<p>Attrition was accounted for when the sample size calculations for the quantitative sample were performed. Attrition analysis shows the extent to which girls lost from the sample are similar to those who remain in the sample.</p> <p>In the qualitative research, interviewing the parents of the cohort girls in situations where the parents have not relocated will allow the collection of some information on the girls who have relocated. We will also aim to find out whether the girl has transferred to another school or dropped out of school. However, where girls who drop out also relocate, we may be limited in the extent to which we can capture the perceptions of girls who have dropped out of school.</p>
VfM		
<p>Costs for achieving outcome might be high: The chosen cost-effectiveness analysis methodology estimates costs for a specific impact (e.g. an additional</p>	Very likely	The additional benefits will be acknowledged in the report.

Limitation	Likelihood	Mitigation
<p>year of education). The costs may have contributed to a number of wider benefits such as teacher motivation and satisfaction, girls' self-confidence, community relationships with the school, and of course learning outcomes. Therefore, the costs may seem high for achieving only the outcome of interest.</p>		
<p>Costs may be overestimated. This can happen for a number of reasons:</p> <ul style="list-style-type: none"> • (1) Without being able to concretely say activities did not contribute to an impact, we will include all activities in the costs, which may mean that some less relevant administrative costs are included. • (2) There is often a higher cost in piloting activities than would be the case once rolled out at a greater scale, with learning and potential efficiency savings. <p>It is almost certain that all costs will need to be included because we will not be able to accurately separate the contribution of different activities to the impact. Also, DP-2 is the second phase of implementation, and therefore some of the high pilot costs will have been incurred in the first phase and efficiency will already have started to be realised.</p>	<p>Very likely</p>	<p>The report will give a detailed presentation of how the costs break down. This means that readers would be able to decide if certain costs should be excluded or might need to be adjusted to account for variation in context. We may also choose not to include the central administration costs if these are considered to no longer be necessary if the project were rolled out by the government without DP management.</p>
<p>Estimates of the value of match-funding will come through interviews with key informants and so may be subject to biases, including recall bias (usually underestimating costs) and people responding according to what the interviewee thinks the evaluation wants to hear. This is a common problem with cost estimates through interviews.</p>	<p>Very likely</p>	<p>We will carry out these interviews when the project is still in implementation to reduce the risk of recall bias.</p>
<p>Data on cost-effectiveness from other interventions and studies is not always available. Many studies do not estimate or report costs.</p>	<p>Very likely</p>	<p>We will try to access this information from comparable projects in the DP-2 countries and through the Fund Manager.</p>

3.5 Representativeness of the learning and transition samples, attrition and matching of intervention and control groups

3.5.1 Sample size achieved at midline

Quantitative sample

Table 18 shows the final sample size and attrition levels for the learning cohort and the transition cohort at midline before any matching is carried out on the two groups. Attrition levels are in line with expectations in Nigeria. In Kenya, attrition from the learning cohort is slightly higher than expected at about 22% compared to the inflation of the sample of 20%. Similarly in Ghana, attrition levels are slightly higher than the 15% expected attrition rate. As described above, additional girls were sampled in all countries to top up the sample and ensure the sample size for the midline to endline comparison is sufficient.

Table 18. Midline sample of cohort girls and attrition

Cohort group	Baseline sample (treatment)	Recontacted (treatment)	Attrition (treatment)	Baseline sample (control)	Recontacted (control)	Attrition (control)
Learning cohort						
Ghana	1051	888	15.5%	914	726	20.6%
Kenya	1264	981	22.4%	1128	880	22.0%
Nigeria	1182	1089	7.9%	1107	1028	7.1%
Transition cohort						
Ghana	1051	1006	4.3%	914	838	8.3%
Kenya	1264	1171	7.4%	1128	1075	4.7%
Nigeria	1182	1140	3.6%	1107	1068	3.5%

The adequacy of the sample size to robustly estimate the impact of DP-2 depends crucially on the Minimum Detectable Effect (MDE), which is defined as the smallest treatment effect that a research design can detect with confidence and is dependent on numerous factors including: overall sample size; evaluation design; sampling design; and the variance in the particular indicator being measured across time and within each the treatment and control groups.

Essentially a given MDE size describes the smallest treatment effect that a given evaluation design is able to detect. The implications of a given MDE is that if DP-2 has a “true impact” on key indicators that is less than the MDE, the evaluation may not be able to detect this and instead would report what is known as a false negative.

During the inception phase the design of the sample was powered to allow for a MDE of 0.247 standard deviations for literacy and numeracy learning outcomes. These MDE’s were calculated based on a set of assumptions regarding the eventual sample means and variances, and distribution and size of the sample. At midline we update the power calculations to allow for actually observed means, variances and other

parameters used to calculate MDEs using the same methodology as during the inception phase, which is presented in our Inception Report given in Annex 11¹⁷.

Figure 2 Minimum detectable effects

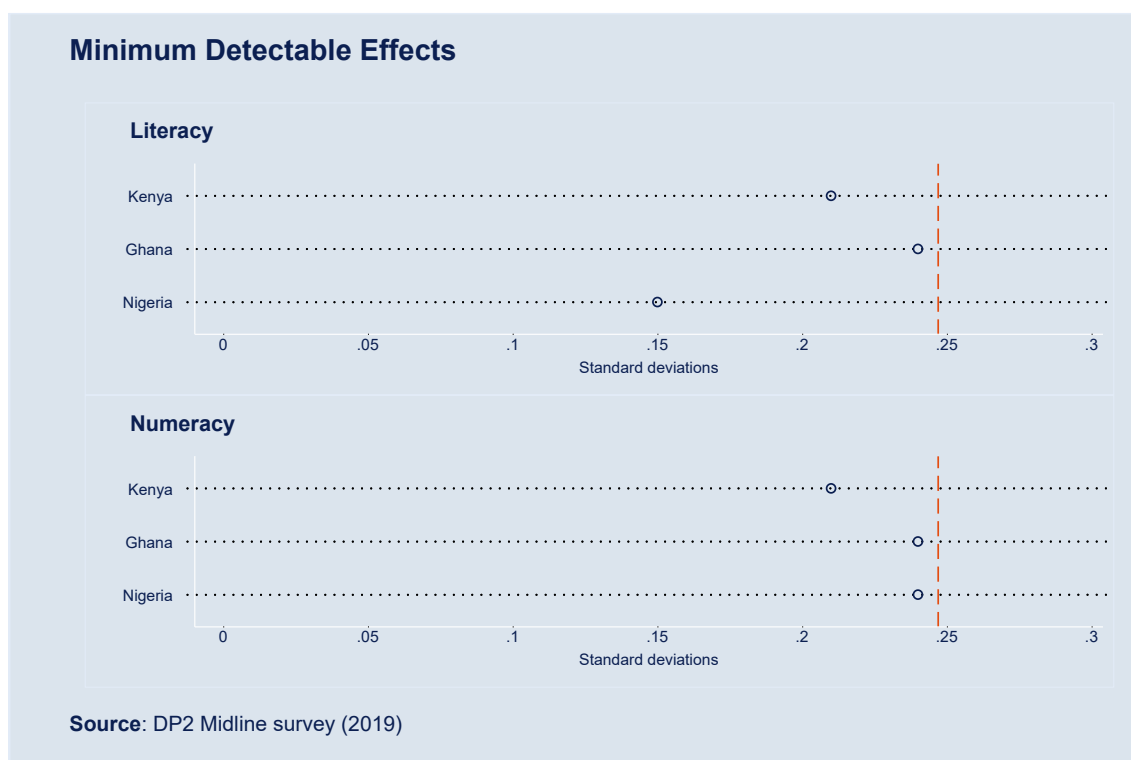


Figure 2 presents the re-calculated MDEs using baseline and midline data for literacy and numeracy across the three countries. MDEs range from 0.15 standard deviations for literacy in Nigeria to 0.24 standard deviations for literacy and numeracy in Ghana. This suggests that the sample is appropriately powered to detect expected impact across the three countries, and meets expectations set out in the Inception Report and MEL framework.

Qualitative sample

Table 19 shows the qualitative sample achieved at midline.

Table 19. Qualitative midline sample

Cohort group	Head teachers (and resource teachers)	Participant groups in CAP	Chief	Cohort girls	Parents of cohort girls	Girls who have dropped out or transferred	Parents of girls who have dropped out or transferred
Ghana	6	6	6	40	27	2	2
Kenya	6	5	0	38	37	0	2
Nigeria	6	6	6	40	39	2	1

¹⁷ See Annex C of the Inception Report for a detailed discussion

The following are the details of respondents who we were not able to interview at midline:

Details of respondents not interviewed in Kenya:

1. Four cohort girls transitioned to schools in another county and could not be interviewed. Of these four cohort girls, two parents had also relocated and could not be interviewed, while two parents had remained in the same county and could be interviewed.
2. One group of CAP participants and one parent refused to be interviewed.
3. No chiefs were interviewed because they had not participated in CAP processes and were unable to answer any questions about DP-2 at baseline.

Details of respondents not interviewed in Ghana:

1. Two cohort girls had dropped out of school and moved to other communities, and could not be interviewed at all.
2. One cohort girl had moved to a new school but still lived in the same community, as a result only one interview has been done for her instead of 2 interviews as planned.
3. Parents/ guardians of five girls who were interviewed at baseline were interviewed at midline in each field site. In one case, both parents of a girl were travelling at the time of the fieldwork and were not available for in-person or phone interview. The cohort girl was temporarily living with an elder brother. Thus, nobody could be interviewed.

Details of respondents not interviewed in Nigeria:

1. Two cohort girls had dropped out of school and moved to other communities, and could not be interviewed at all.
2. Of the two cohort girls that had moved to other communities, in one case, the parents had relocated as well and could not be interviewed. For the other girl, her parents still lived in the same community and were interviewed.

For the cohort girls that could not be interviewed in each country, knowledge of whether the girl had transferred to another school or dropped out was obtained from the parents if available, or otherwise from the head teacher and teachers at the school.

3.5.2 Attrition analysis

In this section, we compare the baseline characteristics of those girls who we were able to track successfully with those who were lost from either the learning or transition cohort.

In Ghana, girls who have been lost from the learning cohort are older, more likely to live far from a secondary school, have poorer attendance and poorer learning outcomes. Girls lost from the transition cohort are older, more likely to have a household head with no education, have poorer attendance, poorer learning outcomes and lower levels of self-efficacy.

In Kenya, girls who have been lost from the learning cohort are less likely to be living in extreme poverty, less likely to have a household head who has no education and less likely to live a long distance from a secondary school. The group of girls that is retained in the learning cohort at midline can therefore be considered to be more marginalised than the girls who were lost from the sample. One potential reason for this may be that some 'better off' girls have transferred to private schools or to boarding schools, or migrated to other cities.

When looking at the girls lost from the transition sample, the pattern of results is similar, though fewer differences reach statistical significance. The number of girls lost from the transition cohort is small so the sample size may be too small to detect significant differences in some instances.

In Nigeria, girls who are lost from the learning cohort are slightly older, have poorer attendance, and somewhat poorer English outcomes and self-efficacy. Girls lost from the transition cohort have poorer attendance and lower levels of self-efficacy. Other characteristics, such as the likelihood of living in extreme poverty are however not related to attrition. It is possible that girls lost from the sample dropped out of school or that they migrated to other areas and were therefore unreachable.

It is important to note that this reflects girls who have been lost from the sample across both treatment and control schools. The matching approach that is employed on the midline sample ensures that treatment girls and control girls are matched on key characteristics, and the sample is therefore not unbalanced.

Table 20. Characteristics of girls lost from learning cohort

	Re-contacted for learning cohort	Lost from learning cohort	
	Mean	Mean	p-value
Ghana			
Age	12.5	12.8	0.005***
Disability status (%)	9.4	12.0	0.165
Likelihood of living in extreme poverty (%)	9.2	10.3	0.168
Household head has no education (%)	72.7	76.8	0.112
Long distance to secondary school (%)	61.5	72.7	<0.001***
Attendance (%)	91.7	86.1	<0.001***
Maths score	21.8	16.8	<0.001***
English score	56.0	51.1	<0.001***
Self-efficacy	64.4	63.9	0.673
Kenya			
Age (years)	11.2	11.1	0.143
Disability status (%)	5.2	7.3	0.079*
Likelihood of living in extreme poverty (%)	26.4	19.5	<0.001***
Household head has no education (%)	28.3	15.7	<0.001***
Long distance to secondary school (%)	34.2	20.7	<0.001***
Attendance (%)	96.1	94.2	<0.001***
Maths score	50.9	50.2	0.344
English score	56.3	56.0	0.753
Self-efficacy	60.9	60.6	0.788
Nigeria			
Age (years)	11.4	11.9	0.003***
Disability status (%)	2.2%	2.3%	0.898

	Re-contacted for learning cohort	Lost from learning cohort	
Likelihood of living in extreme poverty (%)	24.2	23.2	0.427
Household head has no education (%)	42.9%	49.7%	0.104
Long distance to secondary school (%)	41.4%	46.0%	0.253
Attendance (%)	77.9	66.7	<0.001***
Maths score	32.4	30.0	0.243
English score	2.6	1.9	0.092*
Self-efficacy	66.6	64.2	0.059*

Table 21. Characteristics of girls lost from the transition cohort

	Re-contacted for transition cohort	Lost from transition cohort	
	Mean	Mean	p-value
Ghana			
Age	12.5	12.9	0.034**
Disability status (%)	9.7	11.6	0.533
Likelihood of living in extreme poverty (%)	9.4	10.3	0.491
Household head has no education (%)	72.8	83.9	0.002***
Long distance to secondary school (%)	63.2	69.2	0.194
Attendance (%)	91.3	81.7	<0.001***
Maths score	21.4	14.6	<0.001***
English score	55.3	52.2	0.053*
Self-efficacy	64.6	59.5	0.019**
Kenya			
Age (years)	11.1	11.3	0.246
Disability status (%)	5.6	6.2	0.771
Likelihood of living in extreme poverty (%)	25.1	19.9	0.046**
Household head has no education (%)	25.8	19.1	0.116
Long distance to secondary school (%)	31.6	23.7	0.106
Attendance (%)	95.7	94.3	0.042**
Maths score	50.8	51.1	0.79
English score	56.2	56.5	0.843
Self-efficacy	60.8	61.1	0.849
Nigeria			
Age (years)	11.4	11.7	0.225
Disability status (%)	2.1	4.9	0.240
Likelihood of living in extreme poverty (%)	24.2	22.8	0.450
Household head has no education (%)	43.4	45.3	0.737
Long distance to secondary school (%)	41.6	45.3	0.522
Attendance (%)	77.4	66.3	0.003***
Maths score	32.2	32.3	0.964
English score	2.6	2.6	0.957
Self-efficacy	66.5	62.8	0.015**

3.5.3 Construction of balanced treatment and control groups through coarsened exact matching (CEM)

This section describes our approach to the construction of balanced treatment and control groups through coarsened exact matching.

Approach to selecting treatment and control group

The impact evaluation is designed to provide a representative sample of project schools to enable a country-level analysis of impact, i.e. the samples are not representative of the country as a whole, only the targeted intervention areas. Specifically Ghana's Northern Region, Kano State in Nigeria, greater Nairobi schools in and around the city's informal settlements, and the counties of Wajir, Machakos, and Kajiado in Kenya.

Taking into account DP-2 implementation approach¹⁸, we employed a multi-stage cluster random assignment strategy, which considers schools as the **Primary Sampling Unit (PSU)**, from which teachers and students were randomly selected to be part of the evaluation sample. A master sampling frame was constructed using EMIS data for each country (which includes all schools in the evaluation areas including both treatment and potential control schools) and a list of all DP-2 intervention schools.¹⁹

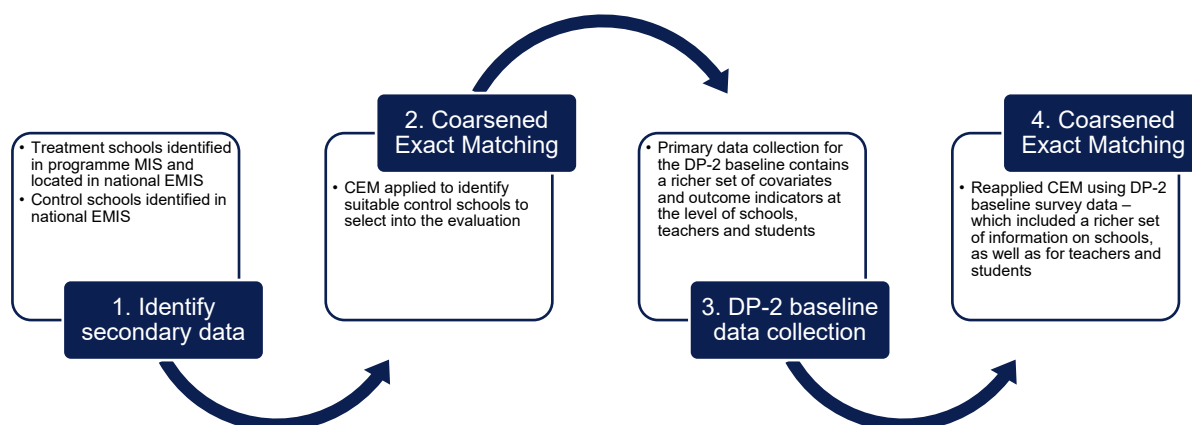
Given that random assignment of treatment and control schools was not feasible for DP-2, we expect there to be systematic differences between the average treatment and average control school. To improve the chances of identifying a set of control schools that can form an appropriate counterfactual our random selection of control schools was bolstered by matching using the CEM approach. Figure 3 presents steps taken to reach a balanced school sample for this evaluation; this was done in two stages.

Figure 3. Steps to defining a balanced sample



¹⁸ DP-2 implementation has prior to this evaluation purposively selected intervention schools on the basis of geographic proximity and the necessary local MoE support structures

¹⁹ The master sampling frame was refined further by taking into account 'zones of exclusion' around treatment schools to avoid the potential for spill over effects; by mapping out schools that were receiving 'other GEC-T interventions' and 'other GEC-T programme control school'.



The **first stage** of matching used CEM to match treatment and control schools on a set of indicators available in the EMIS data. These indicators varied slightly by country depending on the availability and completeness of the secondary data (i.e. EMIS data). Table 21, lists the variables used for matching using the EMIS data.

Table 22. Pre-baseline CEM match indicators

Country	Nigeria	Kenya	Ghana
Indicators	Boys enrolment Girls enrolment Local government administration School location (<i>urban/rural</i>) Type of school (<i>religious/public</i>)	Boys enrolment Girls enrolment County Access to electricity	Boys enrolment Girls enrolment District

Utilising the respective variables in Table 21, treatment and control schools were then randomly selected in pairs, with each pair of schools having a broadly similar set of characteristics based on CEM. This approach was necessary to greatly reduce the chances of selecting control schools into the evaluation sample that would have to be dropped during the analysis stage because of significant statistical dissimilarities with all treatment schools in the evaluation sample. Using this approach the final sample of schools were selected before baseline. For each country, we selected 120 schools – 60 treatment and 60 control.

However, when visiting selected schools based on the CEM pairing approach at baseline we had to drop and replace a significant number of schools across the three countries for a number of reasons. These include: (i) due to insufficient number of girls enrolled in primary 5; (ii) schools with no primary 6 grade; and (iii) errors in matching school names (due to mismatch spelling) between the EMIS data and DP-2 treatment schoolmaster list. These challenges are described in more detail in the DP-2 baseline report. The issue of not having sufficient girls enrolled in primary 5 could result in potential bias in the sample due to exclusion of smaller schools. Attaining 20/21 girls per school was a big challenge across the majority of school in the three countries, but particularly in Ghana. To mitigate this issue as far as possible, we oversampled in schools where the number of girls enrolled were higher. Sample sizes achieved at baseline are shown in Table 10.

The **second stage** of matching was applied following the data collection. The data contains a much richer set of covariates on which to perform matching than is available through EMIS. The evaluation quantitatively identifies the impact of the DP-2 programme at two levels: for girls (e.g. learning outcomes, transition, self-efficacy) and for teachers (e.g. changes in pedagogy). As such we applied the CEM at these two levels:

- **Matching of treatment and control girls:** using information collected during the baseline survey we applied CEM to match treatment and control girls on a range of indicators at various levels including school; teacher; classroom; student; primary caregiver; and household.
- **Matching of treatment and control teachers:** using information collected during the baseline survey we applied CEM to match treatment and control teachers on a range of school-level indicators.

This second stage of matching was initially conducted at baseline based on the baseline data collection. However, because of attrition from the sample at midline, it is necessary to redo the matching exercise to confirm the balance of the treatment and control groups. The matching is done using the baseline data for the indicators, but is conducted only for those schools and girls that could be tracked at midline.

Coarsened exact matching

CEM works by temporarily *coarsening* each covariate available for matching by recoding them so that substantively indistinguishable variables are grouped and assigned the same numerical value. To see how this works in practice one could consider the potential covariate, the age of the primary caregiver: one could coarsen this variable by recoding into groups for 20-25 year olds, 26-30 year olds, and 31-35 year olds and so on.

Once covariates have been coarsened an **exact matching** algorithm is applied to identify matches which are achieved by splitting all treated and control units into various strata that have identical values on all coarsened covariates. All units in 'matched strata' (i.e. strata containing at least one treatment and one control unit) are retained and any 'unmatched strata' (i.e. strata containing only treatment units or only control units) are pruned²⁰.

To each matched unit i in stratum s , CEM assigns the following weights to adjust for different stratum sizes (necessary as different numbers of treatment and control units are included in the different "exactly matched" strata):

$$w_i = \begin{cases} 1, & i \in T^s \\ \frac{m_C}{m_T} * \frac{m_T^s}{m_C^s}, & i \in C^s \end{cases}$$

Where:

m_C = number of matched control units

m_T = number of matched treatment units

m_C^s = number of control units in stratum s

m_T^s = number of treatment units in stratum

²⁰ *Iacus et. al. (2011)*

To estimate the sample Average Treatment Effect (ATE) the following econometric estimation is applied in an Ordinary Least Squares (OLS) framework, which is weighted by the CEM weights w_i , given above.

$$Y_{i1} = \alpha + \beta D_i + \varepsilon_{i1}$$

Where:

Y_{i1} = value of outcome indicator for unit i at follow up

D_i = treatment status of unit i

β = coefficient that gives the ATE

Given that we are following the same panel of schools and girls over time it is also possible to implement the **difference-in-difference** estimator. This uses the panel structure of the data to control for time-invariant unobservable differences that may affect outcomes and that are not captured by the exact matching algorithm. The “before and after” nature of the differences-in-differences estimates implies that any non-varying unit-specific characteristics which might (in addition to exposure to the DP-2 project) have an influence on key outcome indicators being measured are controlled for in expectation.

The difference-in-difference estimator was estimated in an OLS framework, which is weighted by the CEM weights, w_i , given above.

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \varepsilon_{it}$$

Where:

Y_{it} = value of outcome indicator for unit i at time t

D_i = treatment status of unit i

T_t = time period t

This equation incorporates: (1) a group fixed effect captured by coefficient on the treatment status, β_1 ; (2) a sample time trend captured by the coefficient on the time dummy, β_2 ; and (3) the difference-in-difference estimate of impact given by the coefficient on the interaction between treatment status and the time dummy, β_3 .

Treatment and control sample comparability

Below we present the pre/post matching differences between treatment and control schools on a number of covariates for each country by applying CEM at the teacher and girl level. At the girl level, we conducted the matching for the two

different cohorts (the learning cohort and the transition cohort)²¹, since the transition cohort is larger than the learning cohort at midline because of girls that were tracked for transition through class registers/teachers and caregivers. The transition cohort was limited to those girls for whom transition information was available at both baseline and midline.²² The graphs show point estimates for pre- and post-matching and 95% confidence intervals. When the confidence interval does not overlap with zero, this is an indication that a statistically significant relationship exists between the covariate and the treatment assignment, however, if the confidence interval overlaps with zero, then this is an indication that there is no statistically significant difference between the covariate and the treatment assignment.

Post-matching balance was achieved for treatment and control groups at the teacher and girl level for all covariates in all countries, with distance to primary school for the learning cohort in Nigeria being the only covariate that is statistically different post-matching. We control for any of the imbalance observed for some of the covariates at midline through robustness and sensitivity analysis checks, which are presented in section 3.7.

In addition to assessing the level of balance on individual covariates, we also perform two tests to assess the overall post-matching balance across all covariates cumulatively: Rubin's B and Rubin's R. Rubin's B provide the absolute difference between the means of a linear index across all covariates on which balancing is tested in the figures below. Rubin's R provides the ratio of treatment to matched counterfactual variances of this linear index. *Rubin (2001)* recommends that properly balanced samples should have a post-matching Rubin's B score under 25, and a Rubin's R score between 0.8 and 1.5. As is presented in the figures below we report that our post-matched sample has satisfied these requirements to provide for adequately matched treatment and counterfactual units for all evaluation samples of interest.

²¹ In addition, we also conducted additional matches for two subgroups: girls attending DP-2 supported remedial classes and girls attending girls' clubs. For these matches, the treatment group was limited to the girls who attend remedial classes / girls' clubs and this sample was then matched against all control group girls. The matches achieved similar levels of balance as for the full sample of girls and are not shown here.

²² To determine whether the girl had transitioned successfully at baseline, we used the reporting of grade repetition provided by the caregiver in the household survey. Because the household survey was not completed for some respondents at baseline whose households could not be tracked, we did not have information on the transition status of these girls.

Figure 4. CEM girl level learning cohort - Ghana

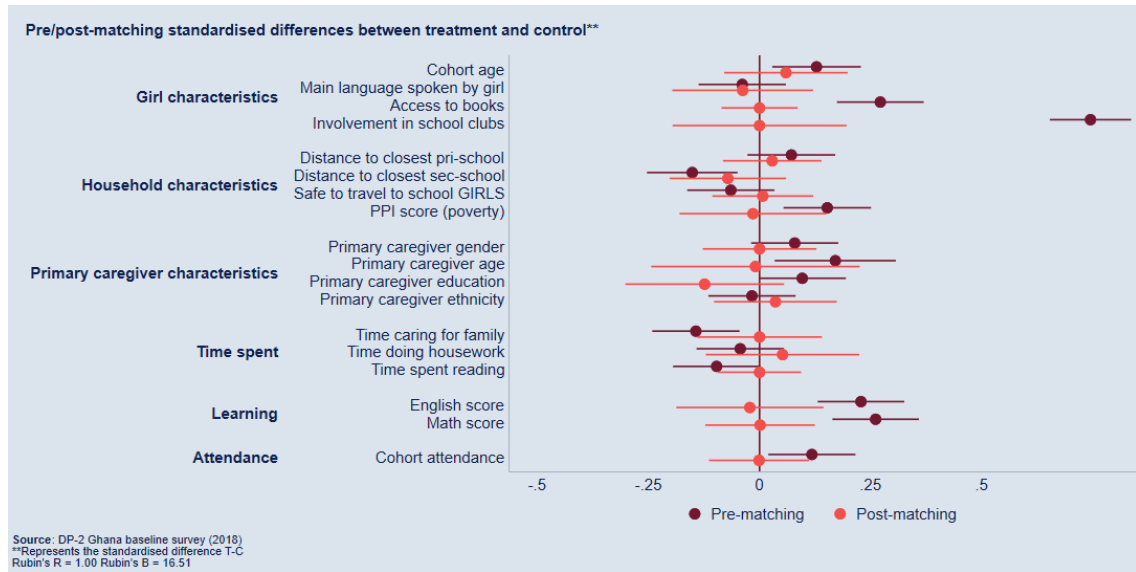


Figure 5. CEM girl level transition cohort - Ghana

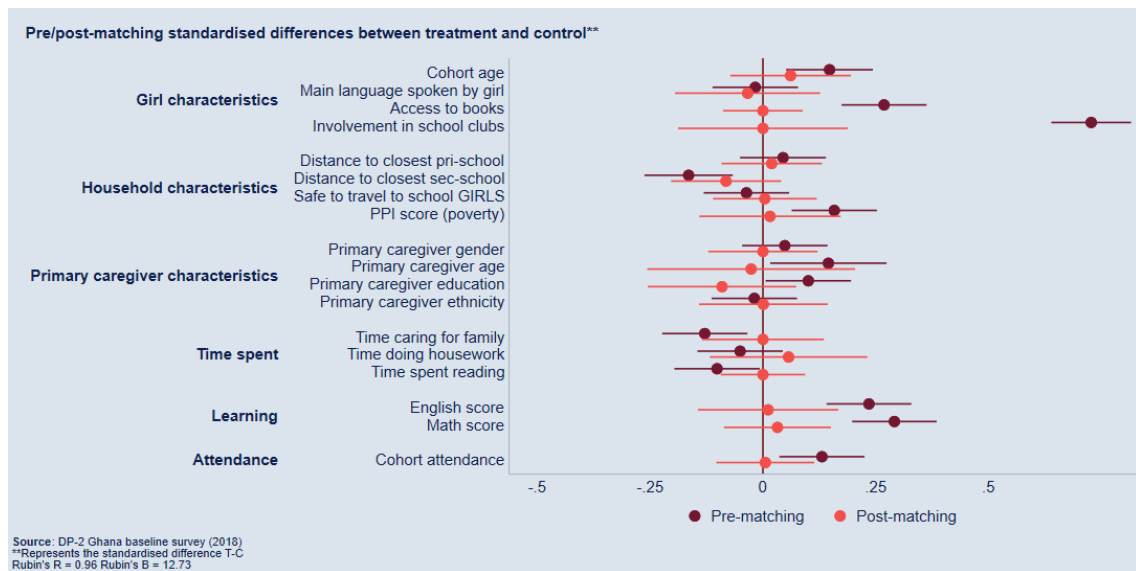


Figure 6. CEM teacher level - Ghana

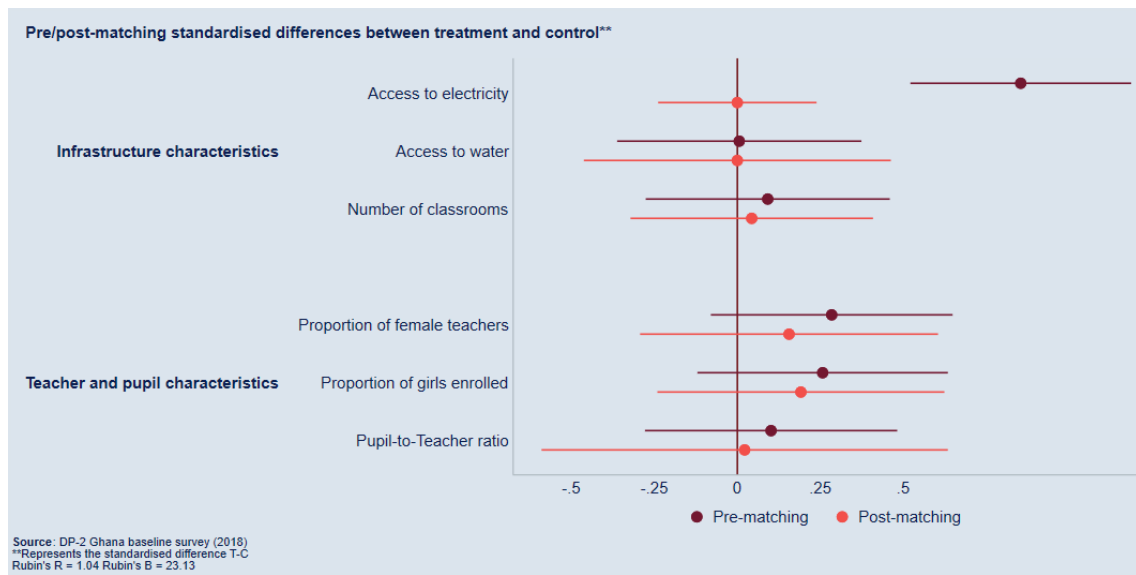


Figure 7. CEM girl level learning cohort - Kenya

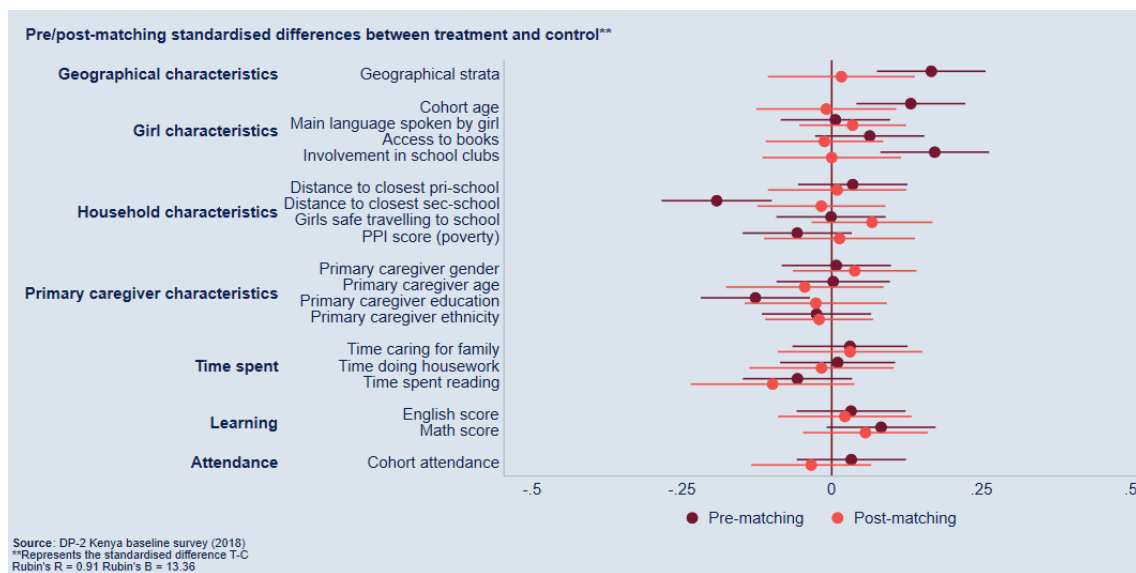


Figure 8. CEM girl level transition cohort - Kenya

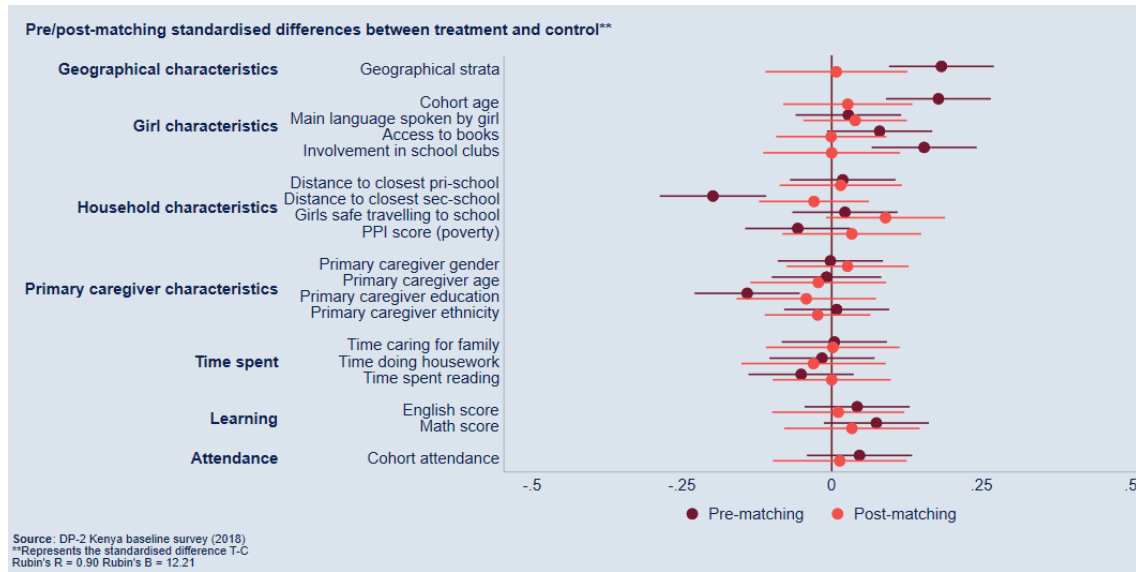


Figure 9. CEM teacher level - Kenya

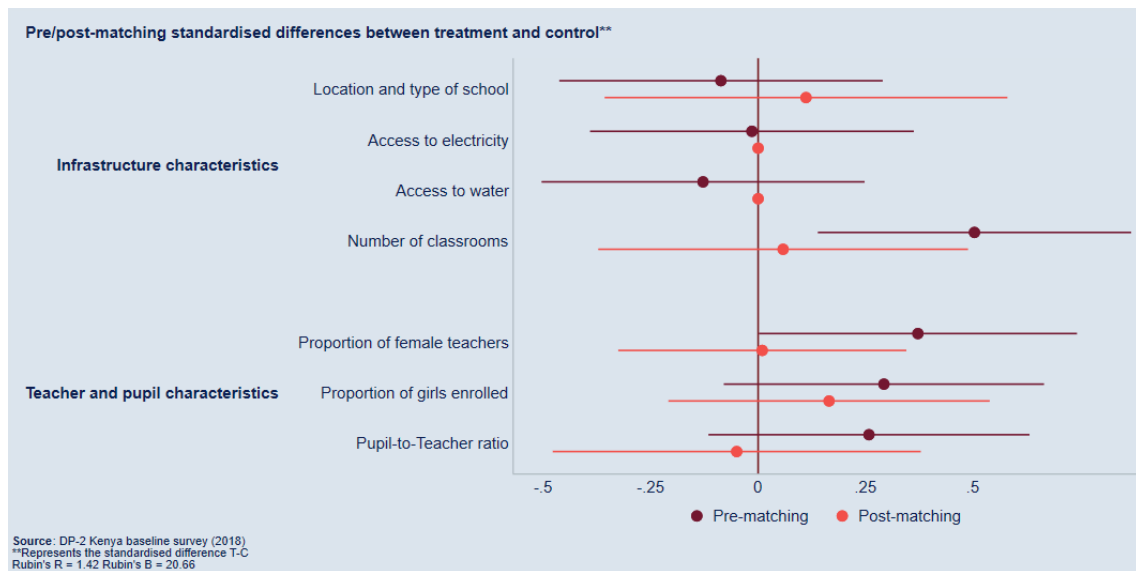


Figure 10. CEM girl level learning cohort - Nigeria

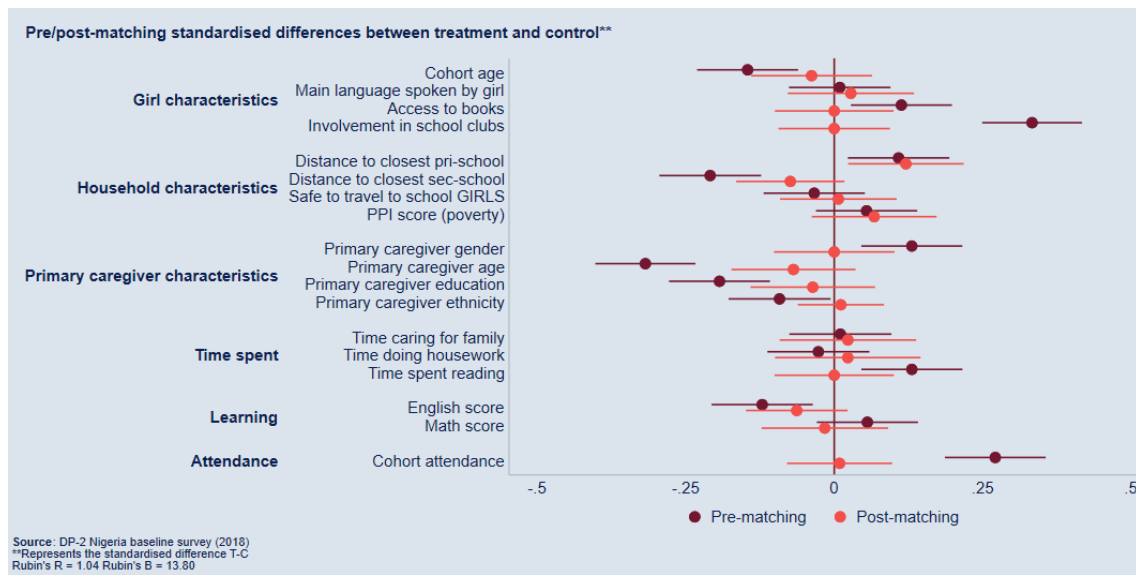


Figure 11. CEM girl level transition cohort - Nigeria

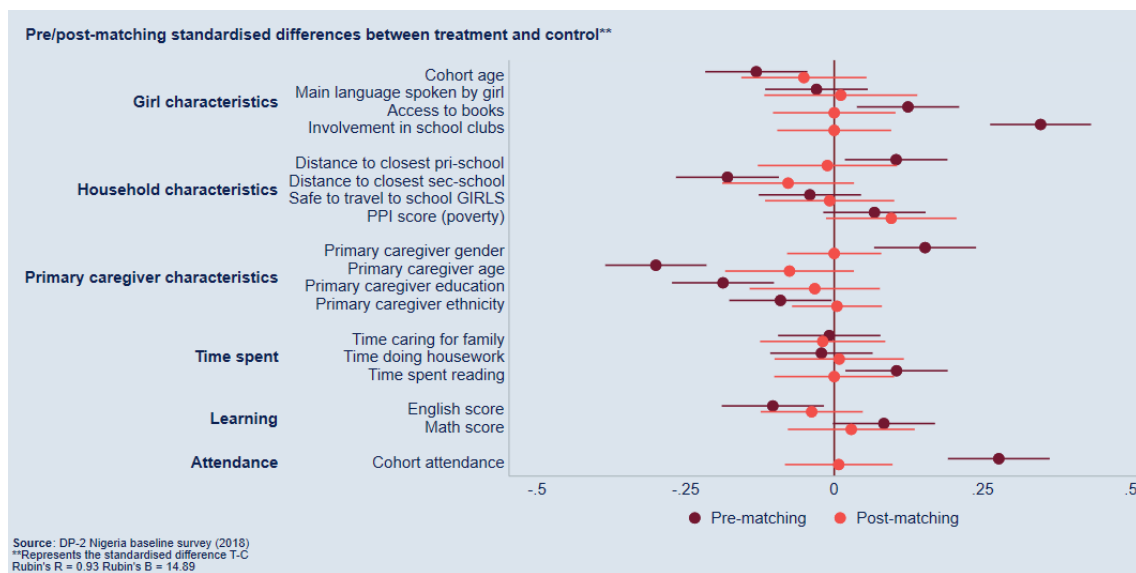
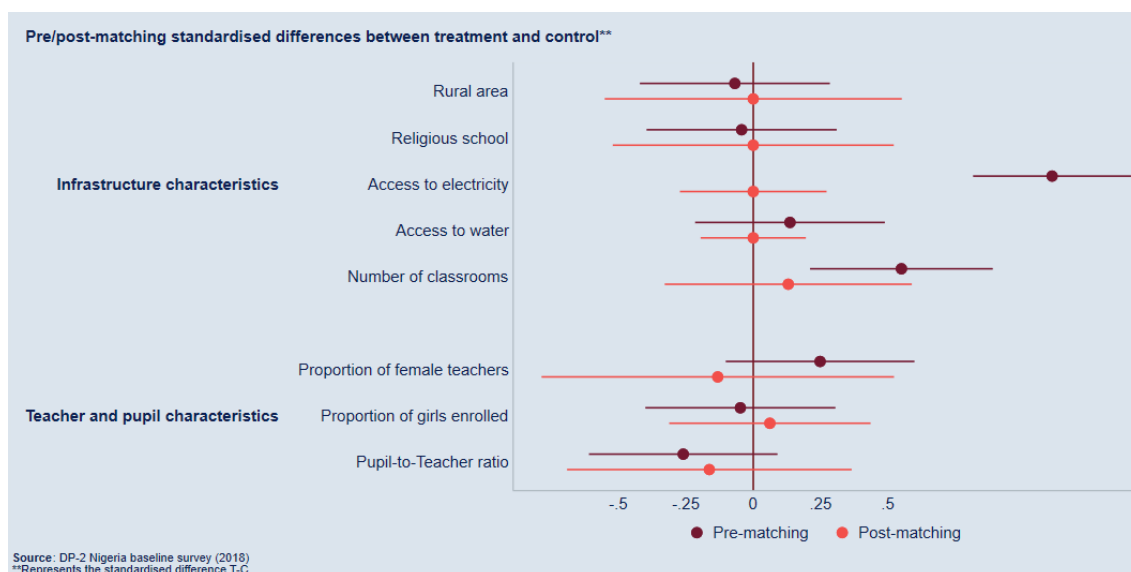


Figure 12. CEM teacher level - Nigeria



3.5.4 Sample size by region, grade, age and disability status

The tables below show the sample size by region, grade, age and disability status. These tables are based on the matched sample for the learning cohort. It is important to state that the sample for this evaluation was designed to be balanced overall rather than to be balanced within each subgroup.

Table 23. Evaluation sample breakdown by region at midline

Region	Intervention (Baseline)	Control (Baseline)
Ghana: Sample breakdown by district (% of sample)		
Central Gonja	7.3	3.7
East Gonja	11.6	3.8
Karaga	6.7	1.3
Sagnarigu	11.6	23.6
Savelugu	10.3	13.4
Tamale Metro	22.4	24.9
Tolon	8.6	3.7
West Mamprusi	11.6	19.6
Yendi	9.8	6.0
Total (sample size)	100 (N = 687)	100 (N = 640)
Kenya: Sample breakdown by county (% of sample)		
Kajiado	6.9	11.4
Kiambu	6.0	5.3
Machakos	5.4	4.5
Nairobi	53.4	55.1
Wajir	28.2	23.8
Total (sample size)	100 (N = 893)	100 (N = 817)
Nigeria: Sample breakdown by LGA (% of sample)		
Bagwai	6.3	5.3
Bebeji	6.0	7.0
Dala	14.3	5.7
Dawakin Kudu	7.4	8.6

Region	Intervention (Baseline)	Control (Baseline)
Gabasawa	6.5	9.4
Garko	2.7	2.3
Kano Municipal	9.2	16.0
Kibiya	7.8	5.1
Kura	3.3	5.1
Rano	7.5	5.4
Rimin Gado	8.4	6.5
Takai	2.9	6.1
Tarauni	3.5	6.7
Tofa	3.2	5.3
Ungogo	10.8	5.5
Total (sample size)	100 (N = 930)	100 (N = 914)

Cohort girls for the quantitative survey were selected randomly from among all girls in Primary 5 in their school and were therefore all in Primary 5 at baseline. Table 23 shows the grade of the girls in the learning cohort at midline. As expected, the majority of girls have progressed to Primary 6. Some girls were found to be repeating Primary 5, and in the case of Nigeria, there were a few girls who had been demoted to a grade lower than Primary 5. Grade repetition rates were highest in Nigeria, particularly in the control group.

In addition, in Nigeria, 13% of girls in the control group and 11% of girls in the treatment group were in JSS1, meaning that they transferred to JSS1 after the end of their Primary 5 year without completing Primary 6. In Ghana, a much smaller proportion of girls (1.5% in the control group, 2.0% in the treatment group) had transferred to JHS1 after the end of their Primary 5 year.

Table 24. Evaluation sample breakdown by grade at midline

Grade	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Primary 3	0.0	0.0	0.0	0.0	0.2	0.1
Primary 4	0.0	0.1	0.0	0.1	0.3	0.3
Primary 5	2.0	1.9	1.8	0.7	9.0	3.1
Primary 6	96.5	95.9	97.5	98.7	77.3	85.3
Primary 7 / JSS1 / JHS1	1.5	2.0	0.5	0.1	13.2	11.1
JSS2 / JHS2	0.0	0.0	0.2	0.4	0.0	0.1
Missing	0.1	0.0	0.0	0.0	0.0	0.0
N	640	687	817	893	914	930

At midline, the girls in the learning cohort are a year older than at baseline. The majority of respondents in Kenya and Nigeria were between nine and 13 years of age, although approximately a fifth of girls are older than this (Table 24). In Ghana, there were a larger proportion of older girls with most girls being between 12 and 15 years of age at midline.

Table 25. Evaluation sample breakdown by age at midline

Age (years)	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment

Age (years)	Ghana		Kenya		Nigeria	
Age 6 - 8	0.2	0.0	0.0	0.0	0.4	1.2
Age 9 - 11	16.6	11.8	32.9	38.3	37.1	34.7
Age 12 - 13	39.7	42.9	50.2	43.4	38.9	43.1
Age 14 - 15	35.6	37.6	16.0	16.2	17.5	17.3
Age 16 - 17	7.1	5.7	0.9	2.0	4.9	3.2
Age 18 - 19	0.1	1.7	0.0	0.0	1.1	0.3
Missing	0.2	0.0	0.0	0.0	0.1	0.1
N	640	687	817	893	914	930

Source: DP-2 girls' survey and household survey 2018 and 2019

Notes: Age is self-reported by the girl, except in cases where the girl did not know her age. In those cases, age is reported by the caregiver. Age is taken to be the girl's age at baseline plus one year where age was reported at baseline. Where age was not reported at baseline, the midline age was used.

Table 25 shows the proportion of girls in the sample that reported having a disability at baseline and midline based on the definition shown above. Disability rates have remained similar to baseline and most of the differences are not statistically different from each other. We discuss this further in Chapter 2 of the DP-2 midline report.

Table 26. Proportion of girls who reported having a disability at BL and ML

Disability (%)	Ghana		Kenya		Nigeria	
	Control ML (BL)	Treatment ML (BL)	Control ML (BL)	Treatment ML (BL)	Control ML (BL)	Treatment ML (BL)
Has at least one type of disability	8.1 (6.1)	10.2 (8.7)	4.5 (4.1)	7.5 (5.9)	3.2 (2.8)	1.6 (2.6)
Vision impairment	0.2 (0.5)	1.7 (0.7)*	1 (1.4)	3.2 (2.5)	0.4 (0.4)	0.5 (1.1)
Hearing impairment	0.7 (0.3)	0.7 (0.9)	0.3 (0.5)	1 (0.9)	0.2 (0.3)	0 (0.2)
Mobility impairment	0.5 (0)**	0.9 (0.7)	0.5 (0)*	0.7 (0.3)	0.7 (0.8)	0.3 (0.6)
Cognitive impairment	6.1 (5)	7.9 (6.4)	1.1 (1.3)	2 (1.7)	1.4 (0.7)	0.4 (0.8)
Selfcare impairment	0.1 (0.2)	0 (0)	0.1 (0.2)	0.6 (0.4)	0.8 (0.7)	0.2 (0.9)*
Communication impairment	0.9 (0.4)	0.7 (0.4)	1.7 (0.7)	2 (0.8)**	0.7 (0)*	0.2 (0.2)
N	640	687	817	893	914	930

Source: DP-2 girls' survey 2018 (BL) and 2019 (ML)

Notes: Respondents identified as having a disability include those with difficulty in at least one domain recorded as 'a lot of difficulty' or 'cannot do at all'. Asterisks indicate that means between baseline and midline differ significantly from one another at the following levels: *** p<.001, ** p<.05, * p<.01.

3.6 Contamination and compliance

Compliance and exposure

School status

We examine exposure at the school, teacher and girl level. At the school level, all schools in Kenya and Nigeria receive the full intervention package. In Ghana, there are three different types of treatment schools in the sample as shown in Table 26.

Table 27. Status of Ghana treatment schools in sample

Status	Nr of schools in sample	Description of intervention received
DP2 / ALP / MBW	38	These schools receive the full intervention package
DP2 / ALP	12	These schools do not receive targeted support for the MBW curriculum. While schools have been provided with the MBW materials, they do not receive additional support to implement the curriculum.
DP2	12	These schools do not receive targeted support for the MBW curriculum. While schools have been provided with the MBW materials, they do not receive additional support to implement the curriculum. In addition, these schools are not part of the Accelerated Learning Programme, and therefore do not have remedial classes.

The main analyses presented in the main report are based on the full sample of schools. The status of the schools in Ghana was, however, taken into account in the subgroup analyses. In particular, the subgroup analyses of learning outcomes for remedial students and any description of the implementation of remedial classes is limited to DP2/ALP and DP2/ALP/MBW schools. The subgroup analysis for the self-efficacy outcome for girls' club members and any description of the implementation of girls' clubs is limited to DP2/ALP/MBW schools.

Exposure of teachers to teacher training

In Ghana, head teachers from all treatment schools reported that at least one teacher from the school had attended each of the four direct DP-2 teacher trainings. In Nigeria, for the Literacy I, Literacy II and Numeracy II trainings, one school in each case reported not having sent any teachers to the training. All schools reported having sent teachers to the Numeracy I training. In Kenya, all schools reported sending at least one teacher to the Literacy I training, one school reported not sending any teachers to the Literacy II training, two schools reported not sending any teachers to the Numeracy I training and one school reported not sending any teachers to the Numeracy II training. Schools sent on average between 4 – 6 teachers to the direct trainings. Schools were therefore compliant with the direct teacher training.

Exposure of teachers to multiple trainings and delivery of the stepdown training are discussed in section 6.2 of the main DP-2 Midline Report, where we discuss the implementation of the teacher training in detail.

Exposure to the learning centre

In Kenya, all schools reported having a TV and DVD set but the enumerators could not verify the presence of the equipment in seven out of 59 schools. In Nigeria, two out of 65 schools reported not having a TV and DVD set, and the presence of the equipment could not be verified in another two schools. In Ghana, five out of 62 schools reported not having a TV and DVD set, and the presence of the equipment could not be verified in another two schools.

In terms of girls' self-reported exposure to the learning centre, 91% of girls in Ghana reported having watched a video during their regular classes in the current school year, compared to 61% of girls in Kenya and 67% of girls in Nigeria.

Exposure to remedial classes

Remedial classes are intended to be targeted at a subset of DP-2's direct beneficiaries as they are targeted at girls (and boys) who are poor academic performers and require additional remedial support. Selection into remedial classes is described in section 3.1.4 of the DP-2 Midline Report. However, we find that quite large proportions of cohort girls in the treatment group have been exposed to DP-2 supported remedial classes. At the time of the midline survey, 85% of cohort girls in Ghana reported currently attending remedial classes, compared to 52% of girls in Kenya and 70% of girls in Nigeria. In addition, it is likely that some girls may have attended remedial classes in the past but are not attending them now. This is the case particularly in Nigeria where learning levels are very low and the vast majority of pupils need additional remedial support. As a result, attendance at remedial classes is rotated in Nigeria to ensure that as many pupils as possible can participate in these classes.

Exposure to girls' clubs

Similarly, DP-2 girls' clubs are intended to be targeted at a subset of DP-2's direct beneficiaries because schools can choose to run girls' clubs and girls can choose to participate in them if they have time and the clubs are of interest to them. In practice, as discussed in section 6.4 of the DP-2 Midline Report, schools sometimes have certain conditions for girls' club membership based on the girls' ages, grades, performance or ability to pay a contribution. Girls' club membership is particularly high in Ghana where 79% of girls interviewed during the quantitative survey reported that they were a member of a girls' club. Membership of DP-2 girls' clubs was lower in Kenya and Nigeria, though still substantial with 60% and 61% of girls respectively reporting that they were a member of a girls' club.

Contamination

Table 27 list some of the education programmes currently operating in Nigeria, Kenya and Ghana. All the programmes listed below aim at improving the education experience of children, particularly girls. Although the means of achieving it range from video campaigns to teacher training and providing sanitary pads to girls, the combination of the varying activities are highly likely to contribute to improved school attendance and learning in one way or another.

Table 28: List of other education programmes operating in Nigeria, Kenya and Ghana

Programme	Objective	Activity	Status
Nigeria			
Jolly Phonics	To enable children to become fluent readers	Learning provides Jolly Phonics products (books, software, audio, DVDs, flashcards, teacher handbooks with lesson plans, activities and games for reading and spelling) that use the synthetic phonics method of teaching letter sounds in a way that is multi-sensory and fun	Ongoing

Programme	Objective	Activity	Status
Education Sector Support Programme in Nigeria (ESSPIN)	To improve the delivery of education services	Education technology, infrastructure, M&E, teacher and head teacher support and materials development. ESSPIN was implemented in all public primary schools in Kano state.	Completed
Dabazarmu	To raise awareness around girls education through storytelling on radio and videos	Schools were provided with radios, SD cards with different stories showcasing the challenges that girls face in pursuit of education	Ongoing
Global Partnership for Education	To improve the education system	Financial support to school, e.g. sponsorship of N50,000 for female teachers to acquire the minimum qualification for teaching	Ongoing
Teacher Development Programme	To provide teacher training on the use of low-cost materials and supply of lesson plan to schools	Teacher training, materials for pupils and teachers, teacher support, access to audio-visual resources through low-cost technology, ongoing support to teachers	Ongoing
Kenya			
Tusome Early Grade Reading Activity	To improve early grade education across Kenya by 2019	Support teachers' capacity to effectively deliver classroom instruction, improving schools' access to appropriate books and other learning materials, enhancing instructional support and supervision and collaboration with other stakeholders. Tusome is a government initiative that reaches all public primary schools. It particularly targets the lower primary grades.	Ongoing
Girl Power Clubs Africa initiative	To empower women to gain self-esteem and make decisions for themselves through sports be leaders by	Training teenage girls to become agents of positive change through sport, culture, art and dance, currently targeting in 42 schools in Kenya	
U-Tena	To mentor and empower girls through afterschool activities	After-school support to provide information on HIV transmission and encourage young people to get tested and treated, to use a condom, discuss family planning, sexual and reproductive health	
The Plan projects with needy children and girls	To help 'needy students'	Sponsoring needy student; Providing girls with sanitary towels – this complements the government initiative to provide sanitary towels to adolescent girls in Kenyan public schools.	Ongoing; complete
School feeding programme	To provide children with food at school	Food supplies are provided by NGOs such as the World Food Programme, and money for firewood is provided by parents to sustain the school feeding programme in schools	

Programme	Objective	Activity	Status
World Vision	To provide children with medical assistance; To enrol and re-enrol out of school children in Wajir and	Identifying children with eye infections and taking them to a hospital; Sensitising communities, running community enrolment drives and building community child protection and education structures.	Ongoing
Save the Children	To increase enrolment of girls in Wajir		
Individual donors and CSR initiatives such as MICATO	To help students in greatest need of support to prevent their dropouts	Sponsoring school fees or extra-curricular fees, or books, pens etc.	
Ghana			
Learning Project/ Early Grade Learning Project (USAID)	The project seeks to enable children how to read in their mother tongue as their first language. It is for KG and P1 class and focuses on the use of sounds in teaching basic literacy skills	Provide the school with TLMs, providing training to teachers in workshops to enhance teaching techniques	Ongoing
Campaign for Female Education (CAMFED)	Promoting girl child education by providing some basic needs of the girl child in school.	By providing them with uniforms, exercise books, footwear etc. Also collaborated with bursary programme. CAMFED is not currently working in any primary schools in the DP-2 target districts, except in a small number of treatment schools through a specific partnership with DP-2.	Completed
Oxfam IBIS	The target of this initiative are students from seven years to ten years who are out of school. The programme focuses on how get them back to school.	Training focusing on leadership and team building working with teachers	Ongoing
School for Life	The purpose (of the training) was to integrate the School for Life concept into the mainstream school.		Completed
Right to Play	Incorporating games into learning, to ensure children are learning through playing and games.	Teacher training, use of games to teach	Ongoing

Programme	Objective	Activity	Status
Football for Wash	Encouraging and allowing students to play football and other games to keep children in school, and to exercise to keep fit. Also teaches life skills	Use of games, teacher training, provision of materials, teaching life skills	Ongoing
National Literacy Acceleration Programme (NALAP)	Focusing on literacy for KG to Class 3 i.e. on how the children can start with the mother tongue.	Teacher training to help improve literacy skills	Completed
JEPEK	Assisting the schools in terms of finances towards improving infrastructure and well-being of the school	Financial support	Completed
Capitation Project (Government)	The Capitation project provided money to school to cater for inadequate/ broken furniture.	Financial support and funds to fix structural problems in the school	Ongoing
Forney Education (USA)	Training on pronunciation of vowels and consonants to improve English skills	Teacher training to improve literacy	Completed

To further examine contamination, we explore exposure to key aspects of the DP-2 intervention across both treatment and control groups to understand to what extent schools and girls in control groups may be receiving similar support. Table 28 shows treatment and control girls' exposure to remedial classes, clubs and videos.

Remedial classes are extremely rare in Nigeria, with only 2.9% of girls in control schools reporting that they currently attend remedial classes. In Ghana, remedial classes are somewhat more common in control schools, while they are much more common in Kenya. In addition to schools offering remedial classes in Kenya, the practice of extra paid tuition classes in Kenya also appears to be widespread despite a government ban on the practice. In 2011, Uwezo reported that 57% of students in Primary 6 in public schools in Kenya were receiving paid extra tuition, with this proportion rising to 73% of students in Primary 8.²³ Similarly, findings from the 2007 SACMEQ study showed that 46% of Primary 6 students in Kenya were receiving paid tuition.²⁴

In Ghana and Kenya, it is therefore somewhat difficult to disentangle the impact of DP-2 supported remedial classes because some girls receive remedial support that is not provided by DP-2. This means that a) the effect of DP-2 would be over and above other remedial support that girls may receive and b) it may have been difficult for girls

²³ Uwezo Kenya (2011) Are your children learning? Annual learning assessment report.

²⁴ Paviot, L. (2010). How widespread is the provision of paid tuition in school subjects?. SACMEQ III, Policy Issue Series

to differentiate whether the remedial support that they are receiving is coming from DP-2.

Moving to involvement in clubs, only 2.7% of girls in control schools in Nigeria reported that they were involved in any kind of club or organisation at their school. Involvement in clubs was somewhat more common in control schools in Ghana and much more common in control schools in Kenya. It is difficult to know to what extent other clubs or organisations would be targeting similar outcomes to the DP-2 girls' clubs, and therefore difficult to assess the extent of this contamination.

In terms of videos, the proportion of girls in control schools that reported having watched a video during their regular classes at school in the current term is low across the three countries, suggesting that DP-2's provision of the educational media equipment is likely to be quite unique compared to other organisations.

Table 29. Treatment and control girls' exposure to remedial classes, clubs and videos

	Ghana		Kenya		Nigeria	
	Treatment	Control	Treatment	Control	Treatment	Control
Girl attends remedial classes	84.6%	18.4%	52.1%	36.3%	70.0%	2.9%
DP-2 Girls club member (treatment) / member of any club or organisation at school (control)	79.0%	19.0%	60.4%	41.8%	59.9%	2.7%
Girl has watched a video in school this year	90.7%	5.5%	61.3%	10.6%	66.8%	1.8%

In addition, we find that treatment and control teachers' have had similar levels of exposure to teacher training that is not provided by DP-2. Other types of teacher training are least common in Nigeria and most common in Kenya. However, teachers in Nigeria are most likely to have received training on literacy and numeracy content from sources other than DP-2, while teachers in Ghana also commonly received training on literacy. The differences between treatment and control groups are not statistically significant.

Table 30. Treatment and control teachers' exposure to teacher training (school report)

	Ghana		Kenya		Nigeria	
	Treatment	Control	Treatment	Control	Treatment	Control
Teachers received non-DP-2 training	73.7%	85.6%	83.0%	91.6%	58.3%	60.5%
non-DP-2 training on literacy methods [^]	61.9%	61.6%	33.3%	18.9%	78.6%	84.1%
non-DP-2 training on numeracy methods [^]	38.1%	36.0%	23.1%	17.0%	60.7%	72.1%
non-DP-2 training on gender-responsive teaching [^]	26.2%	9.1%	7.7%	9.1%	3.6%	1.8%
non-DP-2 training on technology in the classroom [^]	11.9%	14.4%	20.5%	16.3%	0.0%	1.8%

3.7 Learning and transition outcomes estimation

For each outcome of indicator of interest three models are implemented each of which is weighted by the CEM weights, w_i as discussed in Section 3.5.3, with the impact of DP-2 given by the coefficient on the interaction between the time and treatment dummies, β_3 :

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \varepsilon_{it} \dots \dots \dots \text{Model 1}$$

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \sum_1^k \gamma_{ik} G_{ikt} + \varphi_{it} \dots \dots \dots \text{Model 2}$$

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \sum_1^k \gamma_{ik} G_{ikt} + \sum_1^q \delta_{iq} S_{iqt} + \epsilon_{it} \dots \dots \dots \text{Model 3}$$

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \sum_1^q \delta_{iq} S_{iqt} + \tau_{it} \dots \dots \dots \text{Model 4}$$

Model 1 is the basic difference-in-difference specification that includes no covariates. Model 2 includes a set of k girl level covariates, G_k . Model 3 also includes the girl level covariates but in addition includes a set of q school level covariates, S_q . Model 4 includes a set of q level school covariates. Table 30 presents the various girl and school level covariates included in each specification of the estimation model.

Table 31 List of covariates included in each model specification

	Model 1 No covariates	Model 2 Girl covariates only	Model 3 Girl and school covariates	Model 4 School covariates only
Girl level covariates				
Age		✓	✓	
Girl perceives travel to school to be unsafe		✓	✓	
Girl perceives school environment to be unsafe		✓	✓	
Girl spends time reading		✓	✓	
Girl has access to learning materials at home		✓	✓	
School level covariates				
Number of days without electricity			✓	✓
Access to drinking water			✓	✓
No access to toilet			✓	✓
No separate toilets for girls			✓	✓
Proportion of teachers who are qualified			✓	✓
Proportion of teachers who are female			✓	✓

The tables below show the outputs from the various models for the learning outcomes (numeracy, literacy, self-efficacy) and for transition. In the main body of the report all estimates of programme impact for learning outcomes (numeracy, literacy, and self-

efficacy) are based on **Model 3**. Estimates of programme impact for transition are based on **Model 4**, as the transition status of girls that had dropped out of school was clarified telephonically, but the full girl survey was not applied. As a result, we do not have midline covariates collected as part of the girl survey for the full transition sample.

There are a number of advantages of using the Model 3 and 4 specifications which includes both girl and school level covariates, and school level covariates respectively. Firstly, the inclusion of covariates reduces the noise we observe in the error term (ϵ_{it} for Model 3; and τ_{it} for Model 4) as the inclusion of covariates explains more of the variation in the outcome of interest. This allows us to estimate the impact of DP-2 measured by β_3 with greater precision, further reducing the Minimum Detectable Effect and thereby increasing the power of the evaluation sample. Secondly, the inclusion of covariates further controls for any remaining differences in the uncoarsened observed covariates between treatment and counterfactual units, further increasing the robustness of reported results.

Difference-in-difference controls as applied controls for fixed effects, in other words it controls for differences observed between treatment and counterfactual units that do not change over time. For example, the gender of an individual teacher does not change over time and so should not be included in a list of covariates in a DID model. As such we include covariates, in addition to the reasons given above, that we suspect may change over time and that pre-matching were shown to be different across treatment and counterfactual units.

Table 32. Results from impact estimation models for the literacy outcome

Model	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline	Baseline literacy control	Midline literacy control	Difference baseline to midline	Difference in difference (treatment – control difference)
Ghana							
1. No covariates	23.87	32.41	8.5***	24.35	31.35	7***	1.53
2. Girl covariates only	23.86	32.42	9.16***	24.43	31.38	8.07***	0.76
3. Girl and school covariates	23.89	31.91	9.09***	24.43	31.38	10.7***	-1.11
Kenya							
1. No covariates	56.4	61.07	4.67***	55.97	60.44	4.47***	0.2
2. Girl covariates only	56.33	61.04	4.51***	55.94	60.45	4.12***	0.35
3. Girl and school covariates	56.33	61.04	5.53***	55.94	60.43	3.15***	0.7
Nigeria							
1. No covariates	2.14	7.75	5.61***	2.58	5.11	2.53***	3.08***
2. Girl covariates only	2.14	7.77	5.97***	2.59	5.12	3.29***	3.06***

Model	Baseline literacy treatment	Midline literacy treatment	Difference baseline to midline	Baseline literacy control	Midline literacy control	Difference baseline to midline	Difference in difference (treatment – control difference)
3. Girl and school covariates	2.14	7.77	6.39***	2.59	5.12	3.03***	3.75***

Table 33. Results from impact estimation models for the numeracy outcome

Model	Baseline numeracy treatment	Midline numeracy treatment	Difference baseline to midline	Baseline numeracy control	Midline numeracy control	Difference baseline to midline	Difference in difference (treatment – control difference)
Ghana							
1. No covariates	57.03	62.41	5.37***	57.17	61.11	3.93***	1.44
2. Girl covariates only	57.05	62.44	5.86***	57.23	61.18	4.79***	1.03
3. Girl and school covariates	57.13	62.18	5.63***	57.23	61.18	6.16***	0.26
Kenya							
1. No covariates	51.9	58.83	6.93***	50.85	57.03	6.17***	0.75
2. Girl covariates only	51.87	58.87	6.78***	50.82	57.04	5.82***	0.89
3. Girl and school covariates	51.87	58.87	6.9***	50.82	57.03	5.08***	1.05
Nigeria							
1. No covariates	33.34	46.95	13.61***	33.74	38.69	4.94***	8.67***
2. Girl covariates only	33.34	47	15.09***	33.8	38.73	7.13***	8.66***
3. Girl and school covariates	33.34	47	15***	33.8	38.73	5.74***	9.32***

Table 34. Results from impact estimation models for the self-efficacy outcome

Model	Baseline self-efficacy treatment	Midline self-efficacy treatment	Difference baseline to midline	Baseline self-efficacy control	Midline self-efficacy control	Difference baseline to midline	Difference in difference (treatment – control difference)
Ghana							
1. No covariates	64.76	66.08	1.33	67.77	64.73	-3.03*	4.36**
2. Girl covariates only	64.77	66.14	1.5	67.79	64.79	-1.54	3.3*
3. Girl and school covariates	64.6	66.22	1.74	67.79	64.79	-1.7	3.66*
Kenya							
1. No covariates	61.18	63.77	2.59***	61.43	64.73	3.3**	-0.71
2. Girl covariates only	61.23	63.87	2.52***	61.45	64.75	3.29***	-0.65
3. Girl and school covariates	61.23	63.87	2.17**	61.45	64.7	3.79***	-0.64
Nigeria							
1. No covariates	67.31	72.85	5.54***	65.81	71.19	5.38***	0.15
2. Girl covariates only	67.31	72.91	6.09***	65.83	71.18	6.25***	-0.04
3. Girl and school covariates	67.31	72.91	6.66***	65.83	71.18	6.05***	0.55

Table 35. Results from impact estimation models for the transition outcome

Model	Baseline transition treatment	Midline transition treatment	Difference baseline to midline	Baseline transition control	Midline transition control	Difference baseline to midline	Difference in difference (treatment – control difference)
Ghana							
1. No covariates	86.97	95.61	8.64***	88.25	97.18	8.93***	-0.29
4. School covariates only	86.69	95.50	8.67***	88.25	97.18	9.60***	-0.25
Kenya							
1. No covariates	86.83	96.98	10.15***	89.46	95.46	6.01***	4.15**
4. School covariates only	86.83	96.98	10.55***	89.46	96.00	6.08***	3.33

Model	Baseline transition treatment	Midline transition treatment	Difference baseline to midline	Baseline transition control	Midline transition control	Difference baseline to midline	Difference in difference (treatment – control difference)
Nigeria							
1. No covariates	89.01	95.15	6.15***	88.12	90.62	2.5	3.65
4. School covariates only	89.01	95.15	6***	88.12	90.62	1.65	3.68

3.8 Changes to learning and transition outcomes means and targets between baseline and midline

At baseline, treatment and control groups were matched and means were calculated for these groups and presented in the DP-2 Baseline Report. Because of attrition, a new matching was conducted at midline. This means that the sample analysed at midline differs from that analysed at baseline, and as a result, the means at baseline presented in the DP-2 Midline Report differ from the means presented in the DP-2 Baseline Report.

In addition to this, the subtasks that are administered in the learning assessment changed at midline. As a result, new summary scores were calculated for the baseline literacy and numeracy learning outcomes, including only the subtasks that are used for the baseline – midline comparison. This is explained further in Annex 14.

Furthermore, DP-2's definition of successful transition changed after the submission of the DP-2 Baseline Report. When the DP-2 Baseline Report was written, grade repetition was considered to be successful transition; this has since been revised and grade repetition is now no longer considered to be successful. As a result, the transition rate in the baseline sample was recalculated based on the updated definition. This is discussed further in section 4.1.

The table below presents the baseline means for treatment and control groups presented in the DP-2 Baseline Report for the literacy, numeracy, self-efficacy and transition outcomes, and the baseline means for treatment and control groups as they are presented in the DP-2 Midline Report.

The table also shows the targets for literacy, numeracy and transition outcomes as calculated at baseline, and how these targets were updated at midline. Literacy and numeracy targets are calculated by OPM. They represent a 0.25 standard deviation DID target based on the performance of a benchmarking group of pupils interviewed at baseline. The approach for updated the literacy and numeracy targets at midline is discussed further in Annex 14.

Targets for transition are percentage point DID targets. Transition targets are calculated through the outcome spreadsheet. In the DP-2 Baseline Report, OPM proposed alternative targets for the transition outcome. DLA and the FM discussed the

transition targets and agreed on a 1 percentage point DID target in each country for midline (this is shown as the

Table 36. Changes to learning and transition outcome means and targets

	DP-2 Baseline Report		DP-2 Midline Report		DP-2 Baseline Report		DP-2 Midline Report	
	Treatment mean	Control mean	Treatment mean	Control mean	ML target	EL target	ML target	EL target
Ghana								
Literacy	23.3	21.2	23.9	24.4	5.0	5.1	6.0	5.5
Numeracy	62.6	61.6	57.1	57.2	3.4	2.6	3.7	2.9
Self-efficacy	64.4	64.9	64.6	67.8	n/a	n/a	n/a	n/a
Transition	100	100	86.7	88.3	5 ^a	7 ^a	1 ^b	8 ^c
Kenya								
Literacy	56.4	56.1	56.3	55.9	3.8	3.5	4.4	3.5
Numeracy	70.4	69.6	51.9	50.8	2.9	2.7	4.2	4.1
Self-efficacy	61.0	60.6	61.2	61.5	n/a	n/a	n/a	n/a
Transition	100	100	86.8	89.5	4 ^a	5 ^a	1 ^b	5 ^c
Nigeria								
Literacy	2.3	2.9	2.1	2.6	2.0	2.8	2.0	2.8
Numeracy	33.6	32.7	33.3	33.8	6.2	5.7	6.2	5.7
Self-efficacy	67.1	66.1	67.3	65.8	n/a	n/a	n/a	n/a
Transition	100	100	89.0	88.1	7 ^a	7 ^a	1 ^b	7 ^c

Note: a) These targets were generated by the outcome spreadsheet at baseline. b) The ML target that is used in Chapter 4 of this report to evaluate performance on transition at midline was agreed between DLA and the FM. c) This target is generated by the outcome spreadsheet at midline. In section 4.4 of this report, OPM has proposed alternative EL targets.

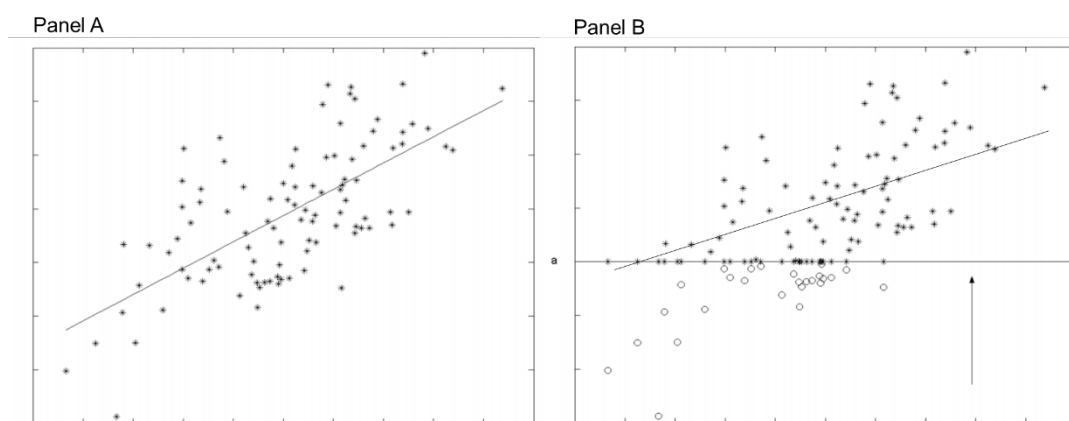
3.9 Nigeria learning outcomes and censoring

Given the poor baseline performance observed against learning outcomes in Nigeria, and against literacy in particular, there are concerns that censoring may lead to bias in the OLS estimate of impact described in Section 3.7 above. Censoring is a condition in which the value of an observation, in this case learning outcomes, is only partially known. In the case of Nigeria this of potential concern in this case because at baseline 54% of the matched treatment sample could not answer a single question correctly on the EGRA learning assessment. This means that for students who scored a 0 on the test we do not know if they would have been able to answer easier questions, if these

had been included in the test or not – i.e. their ability to answer questions easier than the test applied is censored. This is less of a concern for the EGMA learning assessment were just 4% of the matched treatment sample could not answer a single question at baseline.

Figure 13 presents the implication of censoring. In Panel A we present an example of OLS results in the case where there is no censoring of learning outcomes, with the OLS providing unbiased estimates. Panel B presents the case where learning outcomes are censored at a – in the case of Nigeria where students score a 0 on the test. This means that we do not know the potential performance of students who score a 0, if they had been assessed on an easier test. As a result standard OLS estimates would produce biased results as the fail to account for the difference between censored and continuous observations.

Figure 13 Implications of censoring



To some extent fears regarding the potential for censoring in Nigeria are mitigated due to the nature of the EGMA learning assessment applied, i.e. that it included the most basic of possible English literacy questions, and in particular the ability to identify letters. This would suggest a child scoring 0 on the EGMA learning assessment is likely to have no measureable ability in English literacy.

Nonetheless, it is important to test whether or not the use of OLS regressions to estimate the impact of DP-2 on learning outcomes in Nigeria will lead result in bias. In order to do this we implement a Tobit regression model which is designed to estimate relationships between variables in the presence of censoring, and in this case the presence of left censoring (i.e. learning outcomes censored at a score of 0), and compare these to OLS estimates of impact.

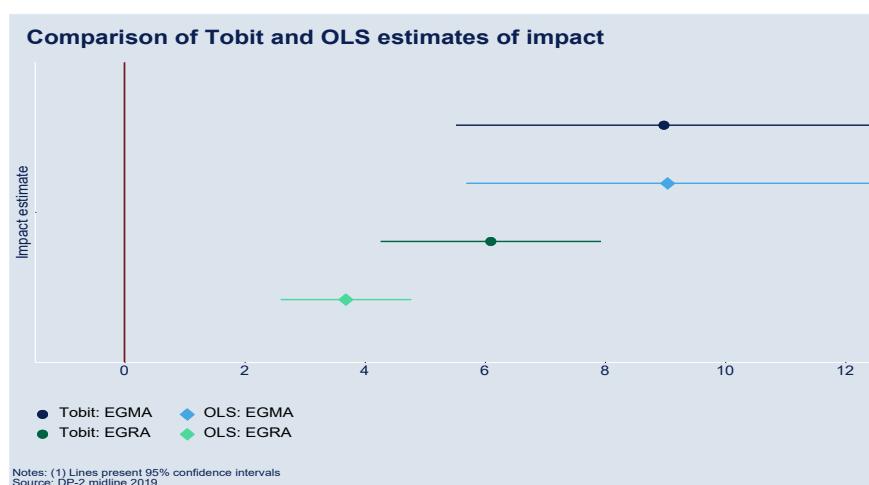
Table 35 reports the impact estimates on numeracy and literacy learning outcomes in a Tobit setting using the same specifications as reported in Section 3.7 above. That is: no covariates; girl covariates; and girl and school covariates. Against numeracy, as expected, we do not observe distinguishable differences between the Tobit and OLS impact estimation specifications, either in terms of magnitude nor statistical significance.

Table 37 Results from Tobit Impact Estimations: Learning Outcomes Nigeria

Model	Baseline treatment	Midline treatment	Difference baseline to midline	Baseline control	Midline control	Difference baseline to midline	Difference in difference (treatment – control difference)
Numeracy							
1. No covariates	33.34	46.95	13.61***	33.74	38.69	4.94***	8.64***
2. Girl covariates only	33.34	47	15.09***	33.8	38.73	7.13***	8.70***
3. Girl and school covariates	33.34	47	15***	33.8	38.73	5.74***	8.98***
Literacy							
1. No covariates	2.14	7.75	5.61***	2.58	5.11	2.53***	5.36***
2. Girl covariates only	2.14	7.77	5.97***	2.59	5.12	3.29***	5.41***
3. Girl and school covariates	2.14	7.77	6.39***	2.59	5.12	3.03***	6.09***

An initial review of the results presented Table 35 indicates the potential for OLS results to be biased, with the Tobit estimates of impact suggesting an impact on the literacy outcome in Nigeria that is 2.3% points higher than those delivered by a standard OLS specification. However, it is important to test the difference between models statistically. Figure 14 reports the results, reporting the estimates of impact delivered by both OLS and Tobit specifications, along with the confidence interval of those impact estimates. This reports that there is no statistically significant difference in the estimates of impact delivered by the OLS and Tobit specifications for either numeracy or literacy learning outcomes, suggesting that the OLS specification does not provide biased estimates of impact.

Figure 14 Testing the difference in Tobit and OLS estimates of impact



Annex 4. Characteristics and barriers

Table 36 presents the characteristics of cohort girls at midline in treatment and control groups based on the matched sample for the learning cohort. The table shows means at midline, while means at baseline are shown in brackets. Asterisks indicate whether there are significant differences between the means at baseline and midline.

Because no household survey was conducted at midline, we do not have information on girls' household characteristics at midline.

Table 38. Characteristics of cohort girls at midline in treatment and control groups

	Ghana		Kenya		Nigeria	
	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)
Home / community level						
Safety and distance to school						
Doesn't feel safe travelling to/from school (girl report)	10.2 (6.0)*	10.6 (7.1)**	5.3 (8.5)**	5.7 (8.3)**	5.2 (5.5)	7.2 (7.5)
School level						
Safety at school						
Doesn't feel safe at school	3.5 (3.3)	6.8 (3.5)***	1.2 (3.8)**	1.0 (3.4)***	1.8 (4.7)***	1.9 (6.9)***
Experienced physical punishment from a teacher	18.9	15.0	22.9	18.7	19.6	19.0
Sample size (N)	687	640	893	817	930	914

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that means between midline and baseline differ significantly from one another at the following levels: *** $p < .001$, ** $p < .05$, * $p < .01$. Experience of physical punishment was measured at midline only.

Table 37 presents the characteristics of cohort girls by sampling strata in Kenya at midline in treatment and control groups based on the matched sample for the learning cohort.

Table 39. Characteristics of cohort girls by sampling strata in Kenya at midline in treatment and control groups

	Formal schools		Non-formal schools		Arid / semi-arid regions	
	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)
Home / community level						
Safety and distance to school						
Doesn't feel safe travelling to/from school (girl report)	6.5% (7.1%)	5.7% (8.3%)	8.4% (7.7%)	3.9% (10.2%)***	1.6% (10.6%)***	4.5% (6.4%)
School level						
Safety at school						
Doesn't feel safe at school	1.5% (2%)	2% (3.9%)	0.3% (1.2%)	0.4% (2.8%)**	1.5% (7.8%)**	1% (5.1%)***

	Formal schools		Non-formal schools		Arid / semi-arid regions	
Experienced physical punishment from a teacher	21.6%	18.3%	28.0%	23.8%	20.2%	14.8%
Sample size (N)	331	324	254	255	232	314

Source: DP-2 midline girl survey (2019) and DP-2 baseline girl survey (2018)

Notes: Asterisks indicate that means between midline and baseline differ significantly from one another at the following levels: *** p<.001, ** p<.05, * p<.01. Experience of physical punishment was measured at midline only.

Table 38 shows the characteristics of schools at baseline and midline in treatment and control groups.

Table 40. Characteristics of schools at baseline and midline in treatment and control groups

	Ghana		Kenya		Nigeria	
	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)
No separate toilets for girls	30.8 (21.2)	17.5 (14)	3.9 (0.8)	2.1 (0)	34.7 (55.3)	37.5 (27.1)
No access to water	16.2 (8.8)	12.3 (8.8)	0 (0)	2.1 (0)	13.8 (6.2)	14.6 (6.3)
No access to electricity	17.4 (12.3)	7.0 (12.3)	11.7 (0)*	6.4 (0)*	56.7 (14.6)***	31.3 (14.6)*
PTR over 40	40.5 (20.7)	38.6 (21.4)**	29.3 (32.2)	37 (34)	79.8 (72.0)	57.8 (68.9)
School has no female teachers	19.0 (16.4)	17.5 (7)*	1.0 (2.1)	2.1 (2.1)	44.1 (47.2)	39.6 (43.8)
Proportion of teachers lacking basic teaching qualification	1.7 (7.7)***	2.1 (5.5)**	8. (8.8%)	7.4 (9.3)	8.7 (11.1)	7.3 (8.7)
Sample size	45	57	55	53	51	48

Table 39 shows the characteristics of schools by sampling strata in Kenya at baseline and midline in treatment and control groups. Note that sample sizes for each stratum are very small and estimates therefore need to be interpreted with caution.

Table 41. Characteristics of schools by sampling strata in Kenya at baseline and midline in treatment and control groups

School level	Formal schools		Non-formal schools		Arid / semi-arid regions	
	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)	Control ML (BL) (%)	Treatment ML (BL) (%)
PTR over 40	58.6% (65.3%)	73.7% (57.9%)	3.4% (0%)	6.3% (0%)	0% (1.9%)	18.2% (45.5%)
School has no female teachers	0% (0%)	0% (0%)	0% (0%)	0% (0%)	4.5% (9.1%)	9.1% (9.1%)
No separate toilets for girls	0% (0%)	0% (0%)	13.9% (0%)	5.9% (0%)	0.8% (3.5%)	0% (0%)
No access to water	0% (0%)	5.3% (0%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)

School level	Formal schools		Non-formal schools		Arid / semi-arid regions	
No access to electricity	3.1% (0%)	0% (0%)	10.5% (0%)	5.9% (0%)	31.6% (0%)	18.2% (0%)
Proportion of staff lacking basic teaching qualification	2.5% (2.8%)	0.7% (0.6%)	22.2% (21%)	13.4% (19.2%)	3.3% (7.3%)	9.6% (8.9%)
N	19	19	15	17	20	11

Annex 5. Logframe

The latest approved version of the logframe is attached below:



DP2 Logframe
Final-Midline.xlsx

Annex 6. Outcome spreadsheet

Outcome spreadsheets are submitted separately.

Annex 7. Project design and intervention

Table 40 describes the key elements of the project design and intervention.

Table 42. Project design and intervention

Intervention types	What is the intervention?	What output will the intervention contribute to?	What Intermediate Outcome will the intervention will contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
Capacity Building – Teachers	Literacy and numeracy training for teachers, including mentoring and support of teachers afterwards including direct support from Cell-Ed	Output 1: Teachers gain requisite confidence, skills, and resources to teach literacy and numeracy inclusively and effectively	<i>IO2: Access to Higher Quality Instruction</i> The primary intervention of the project, the training of teachers will directly impact the quality of instruction in project schools. Further support and mentoring ensure that the skills and practices taught in training continue to be applied correctly, including a new initiative that uses teacher's personal cell phones as a means of reinforcing learned skills (Cell-Ed).	One of the primary thrusts of the TOC is that one of the largest barriers to girls' learning and transition is an inadequate level of capacity on the part of teachers. DP-2's training specifically addresses this by giving teachers the tools and skills that they may not have previously had access to.
Provision of Educational Materials	Distribution of literacy and numeracy video lessons	Output 1: Teachers gain requisite confidence, skills, and resources to teach literacy and numeracy inclusively and effectively	<i>IO2: Access to Higher Quality Instruction</i> By providing videos targeted for teaching literacy and numeracy (in addition to an extensive video library in other subjects already distributed in DP-1), teachers have powerful tools to assist in the learning of basic skills.	Baseline testing done as part of the DP2 evaluation found that students in DP schools often lack even the most basic skills in numeracy and literacy. The project is addressing this by providing materials that focus on these skills.
Capacity Building - Teachers/ Learning Support	Training and support to teachers to conduct remedial lessons (Accelerated Learning Program – ALP) and (Ghana only) additional training and support from partner Camfed	Output 1: Teachers gain requisite confidence, skills, and resources to teach literacy and numeracy inclusively and effectively	<i>IO2: Access to Higher Quality Instruction</i> The ALP is specifically targeted to give teachers the tools to address learning for those students struggling the most, focusing on making sure that these students are able to understand basic skills in literacy and numeracy.	The ALP is specifically targeted at addressing the needs of the most vulnerable and in-need students. After these girls are identified (through a mix of school level testing and grades) they are provided with targeted support in these most basic skills, which are foundational to improving their overall competence in literacy and numeracy.
Capacity Building – Club Mentors	Training of club mentors in the My Better World (MBW) curriculum including	Output 3: Girls and boys gain life skills training, mentoring support, and	<i>IO3: Life Skills</i> Club mentors are given skills to specifically foster life skills in their charges including leadership, self-confidence, self-worth, and others. The	DLA's TOC is clear that only addressing barriers to education in the classroom is insufficient to keeping girls engaged in school and continuing their education. Not only are girls with these life

Intervention types	What is the intervention?	What output will the intervention contribute to?	What Intermediate Outcome will the intervention will contribute to and how?	How will the intervention contribute to achieving the learning, transition and sustainability outcomes?
	follow-up support	access to resources	training is designed to work in conjunction with the MBW curriculum and provide mentors with a framework of how best to engage and teach these skills.	skills given the tools and confidence to engage with both their teachers and peers, it also gives them confidence and skills to advocate for themselves both at home and in the classroom.
Provision of Educational Materials	Distribution of MBW materials including videos	Output 3: Girls and boys gain life skills training, mentoring support, and access to resources	<i>IO3: Life Skills</i> The MBW curriculum has been specifically tailored to provide girls and boys with life skills. The curriculum itself focuses on several skills and the videos bring these lessons to life in a way that resonates beyond the written page. In conjunction with trained mentors, these materials give girls the tools to improve their own life skills	As noted above, girls and boys require additional life skills to overcome barriers to learning and transition. Not only are girls with these life skills given the tools and confidence to engage with both their teachers and peers, it also gives them confidence and skills to advocate for themselves both at home and in the classroom.
Capacity Building - Community	Training for teachers and community leaders to implement Community Action Plans (CAPs), including follow up support and mentoring	Output 2: Communities take action to support local schools	<i>IO1: Attendance; IO4: Attitudes and Perceptions</i> As with clubs, CAPs are a means by which the project can address barriers to education and transition that are not strictly in the classroom. Workshops encourage community leaders to come up with tailored solutions to specifically address attendance, learning, and transition while fostering a greater sense of community ownership of schools and the education of girls.	As with the intermediate outcomes, communities are encouraged to specifically address learning and transition barriers for girls in the community. Each CAP is tailored to the specific needs of that community in order to best address the challenges girls face in that area, making the interventions more effective than an overly prescriptive set of activities.
Capacity Building - Government	Integration of MOE officials into training and monitoring	Output 4: School and government partners take the lead on integration, monitoring, and follow-up support	<i>All IOs</i> The project considers the involvement of local government partners critical to the achievement of success. Accordingly by including MOE officials in the trainings and actual monitoring and coaching of teachers, the project assures that MOE officials are not only aware of project activities and benefits, but able to be a part of them and continue on supporting the project after the life of the project.	This activity is essential towards the goal of the key outcome on sustainability. By involving the MOE in the project at all levels, DLA assures buy-in and gives MOEs the opportunity to engage meaningfully with schools to see first-hand the challenges and successes faced by schools in DP-2. This integration provides a direct roadmap for government officials to implement continued support to teachers and schools and ensure that project activities and local government priorities are aligned.

Annex 8. Key findings on output indicators

The Evaluator should hand over any output-related data to the project to enable the project to populate the following tables.

Fill in the table below with every Output Indicator, means of verification/sources, and the frequency of data collection. Please include output indicators for which data collection has not yet taken place and state when data collection for these will take place.

Table 43. Output indicators

Logframe Output Indicator	Means of verification/sources	Collection frequency
Number and Indicator wording	List all sources used.	E.g. monthly, quarterly, annually. NB: For indicators without data collection to date, please indicate when data collection will take place.
Output 1: wording		
Output 1.1: wording		
Output 1.2: wording		
...		
Output 2: wording		
Output 2.1: wording		
Output 2.2: wording		
...		
INSERT ROWS AS NEEDED		

Report on the midline values/midline status of each Output Indicator in the table below. Reflect on the relevancy of the Output Indicator for your Intermediate Outcomes and Outcomes and the wider Theory of Change based on the data collected so far. Are the indicators measuring the right things? What do the midline values/midline status mean for the implementation of your activities?

Table 44. Midline status of output indicators

Logframe Output Indicator	Midline status/midline values Relevance of the indicator for the project ToC	Midline status/midline values
Number and Indicator wording	What is the contribution of this indicator for the project ToC, IOs, and Outcomes? What does the midline value/status mean for your activities? Is the indicator measuring the right things? Should a revision be considered? Provide short narrative.	What is the midline value/status of this indicator? Provide short narrative.
Output 1: wording		

Logframe Output Indicator	Midline status/midline values Relevance of the indicator for the project ToC	Midline status/midline values
Output 1.1: wording		
Output 1.2: wording		
...		
Output 2: wording		
Output 2.1: wording		
Output 2.2: wording		
...		
INSERT ROWS AS NEEDED		

List all issues with the means of verification/sources or the frequency of data collection which require changes or additions.

Table 45. Output indicator issues

Logframe Output Indicator	Issues with the means of verification/sources and the collection frequency, or the indicator in general?	Changes/additions
Number and Indicator wording	E.g. inappropriate wording, irrelevant sources, or wrong assumptions etc. Was data collection too frequent or too far between? Or no issues?	E.g. change wording, add or remove sources, increase/decrease frequency of data collection; or leave as is.
Output 1: wording		
Output 1.1: wording		
Output 1.2: wording		
Output 2: wording		
Output 2.1: wording		
Output 2.2: wording		
...		
INSERT ROWS AS NEEDED		

Annex 9. Beneficiary tables

The tables below present the beneficiary numbers as provided by DLA. At midline OPM has verified these numbers, where possible, using enrolment data collected during the school survey. Estimates of total beneficiary numbers for direct beneficiaries and indirect beneficiary numbers for boy learners were imputed by taking a total weighted population of these two groups. This was achieved by using the sample selection probability weights based on the original sampling of schools. Sample weights were calculated as follows:

$$w = 1/p$$

Where:

W = probability weight

P = probability of school being selected i.e. the number of treatment schools in the sample divided by the total number of schools in which DP-2 is being implemented

For both direct beneficiaries (girl learners) and indirect beneficiaries (boy learners) we have verified that beneficiary numbers produced by DLA are within 95% confidence intervals of our beneficiary number estimates. This is demonstrated in Figure 15 which presents the estimated learning beneficiary numbers for both boys and girls, along with their 95% confidence interval. When compared against learner beneficiary numbers reported by DP-2 in Table 44 and Table 45 we find that there is no statistically significant difference to the total learning beneficiary numbers estimated from the evaluation sample. As such the totals presented in Table 44 and Table 45 can be considered to be verified by the evaluation sample.

Figure 15 Estimated total learning beneficiary numbers

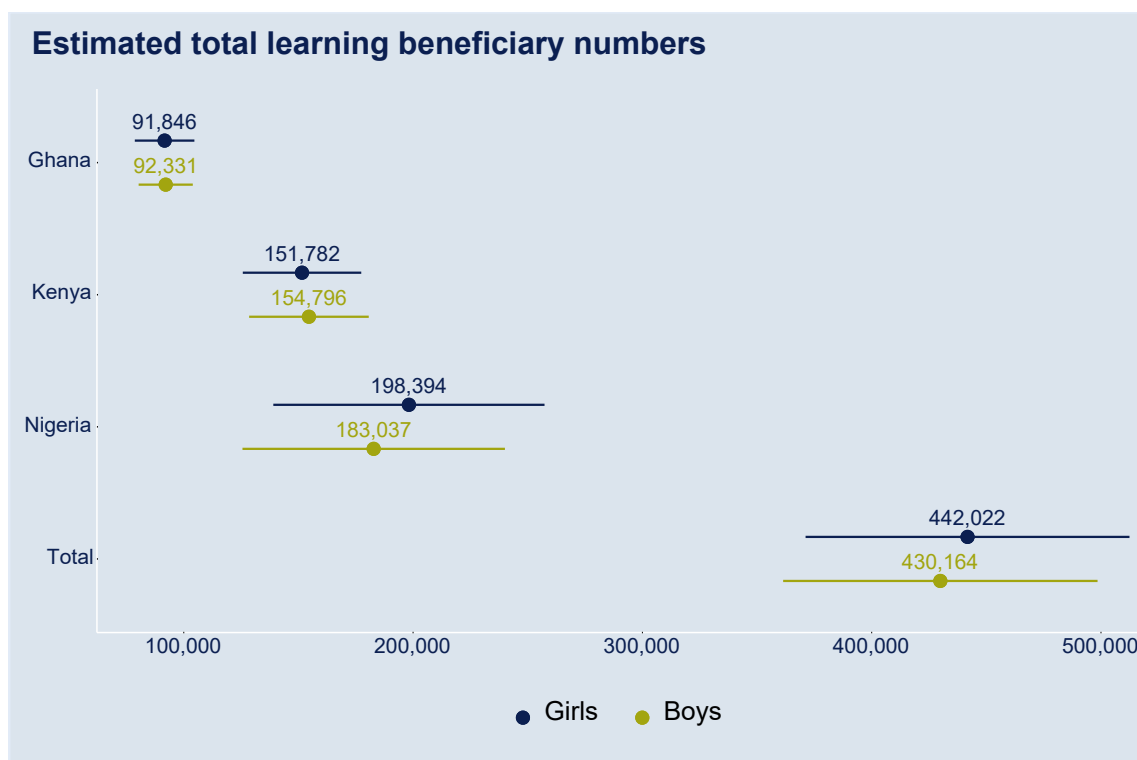


Table 46. Direct beneficiaries

Beneficiary type	Total project number	Total number of girls targeted for learning outcomes that the project has reached by Endline	Comments
Direct learning beneficiaries (girls) – girls in the intervention group who are specifically expected to achieve learning outcomes in line with targets. If relevant, please disaggregate girls with disabilities in this overall number.	461,351 -Nigeria: 204,031 -Ghana: 104,365 -Kenya: 152,955	TBD	The number of beneficiaries for the project is defined as those girls in schools where DP2 is active. While the project does attempt to focus on girls in grades 5-6-7, the reality is that teachers in these schools teach all grades and subjects, using materials provided.

Table 47. Other beneficiaries

Beneficiary type	Number	Comments
Learning beneficiaries (boys) – as above, but specifically counting boys who will get the same exposure and therefore be expected to also achieve learning gains, if applicable.	408,935 -Nigeria: 144,445 -Ghana: 111,697 -Kenya: 152,798	Boys in DP2 schools learn along with the girls in their school and are exposed to the same benefits of improved teaching practices and materials provided by the project. Accordingly, all boys in these schools can be said to benefit directly from the project.
Broader student beneficiaries (boys) – boys who will benefit from the interventions in a less direct way, and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	12,557	This number consists entirely of boys in grades 9-10 in Kenya as these schools receive only a portion of the full intervention, specifically support for clubs and provision of materials, but not the full suite of training for the project.
Broader student beneficiaries (girls) – girls who will benefit from the interventions in a less direct way, and therefore may benefit from aspects such as attitudinal change, etc. but not necessarily achieve improvements in learning outcomes.	20,750	These girls as with the boys mentioned above are exclusively concentrated in Secondary schools in Kenya. And considered secondary for the same reasons noted above.
Teacher beneficiaries – number of teachers who benefit from training or related interventions. If possible /applicable, please disaggregate by gender and type of training, with the comments	10,000 (estimated)	This number includes teachers that have gone through the project's numeracy and literacy training only. It does not include the larger number of teachers that may receive additional training

Beneficiary type	Number	Comments
box used to describe the type of training provided.		and support from both DLA and DLA-trained teachers.
Broader community beneficiaries (adults) – adults who benefit from broader interventions, such as community messaging / dialogues, community advocacy, economic empowerment interventions, etc.	TBD	While the project does include interventions in the community, there are no exact figures to provide in this space. Counts of those participating in Community Workshops would be misleading as these participants (which include teachers and school administrators) are directed to in turn reach out to the broader community. This number may be revisited at later points in the evaluation as more data becomes available.

Table 48. Target groups - by school

School Age	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at baseline
Lower primary	X	231,137	
Upper primary	X	154,091	3,369
Lower secondary	X	76,123	
Upper secondary			
Total:		461,351	

Table 49. Target groups - by age

Age Groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at baseline
Aged 6-8 (% aged 6-8)	X	-Nigeria: 91,357, -Ghana: 37,406 -Kenya: 68,922	-Nigeria: 38 -Ghana: 4 -Kenya: 2
Aged 9-11 (% aged 9-11)	X	-Nigeria: 51,552 -Ghana: 24,209 -Kenya: 38,375	-Nigeria: 617 -Ghana: 225 -Kenya: 771
Aged 12-13 (% aged 12-13)	X	-Nigeria: 37,350 -Ghana: 24,065 -Kenya: 31,213	-Nigeria: 368 -Ghana: 505 -Kenya: 368
Aged 14-15 (% aged 14-15)	X	-Nigeria: 14,119 -Ghana: 11,065 -Kenya: 13,858	-Nigeria: 101 -Ghana: 216 -Kenya: 81
Aged 16-17 (%aged 16-17)	X	-Nigeria: 10,020 -Ghana: 7,840	-Nigeria: 14 -Ghana: 33

Age Groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at baseline
		-Kenya: 0	-Kenya: 2
Aged 18-19 (%aged 18-19)			-Nigeria: 0 -Ghana: 4 -Kenya: 0
Unknown			-Nigeria: 2 -Ghana: 16 -Kenya: 2
Total:		461,351	

Table 50. Target groups - by sub group

Social Groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Disabled girls (please disaggregate by disability type)	NA	NA	
Orphaned girls	NA	NA	
Pastoralist girls	NA	NA	
Child labourers	NA	NA	
Poor girls	NA	NA	
Other (please describe)	NA	NA	
Total:			

Table 51. Target groups - by school status

Educational sub-groups	Project definition of target group (Tick where appropriate)	Number targeted through project interventions	Sample size of target group at Baseline
Out-of-school girls: have never attended school			
Out-of-school girls: have attended school, but dropped out			
Girls in-school	x	461,351	3,369
Total:		461,351	3,369

Table 52. Beneficiaries matrix

	Direct beneficiaries				Indirect beneficiaries		
	Phase 1 Primary Schools	Phase 2 Primary Schools	Junior Secondary Schools (Ghana & Nigeria)	Boys in DP-2 schools	Boys and girls in secondary Schools (Kenya)	Teachers in DP-2 schools	Community members
Teacher training and coaching in use of media, including student-centered approaches, GRP, etc.	✓	✓	✓	✓		✓	
Intensive LIT & NUM Teacher Training	✓	✓		✓		✓	
Follow-up LIT/NUM teacher coaching and mentoring	✓	✓		✓		✓	
Educational media via sustainable technology (including new LIT/NUM and life skills content)	✓	✓	✓	✓	✓	✓	✓
Accelerated learning / remedial classes	✓	✓					
School leadership and community engagement (action plans focused on learning and transition)	✓	✓	✓			✓	✓
Club mentor training and follow-up monitoring and support (scaled back to pilot schools for MBW rollout)	✓	✓	✓	✓	✓		
Government capacity strengthening and accompaniment	✓	✓	✓	✓	✓	✓	✓

Note: Phase II is dependent on approval from DFID and the FM.

Annex 10. MEL framework

Attached is the latest MEL framework.



MEL framework.docx

Annex 11. Inception report

Attached below is the inception report.



DP-2_Inception
Report_SUBMITTED.docx

Annex 12. Data collection tools used for midline

The data collection tools used for midline are attached separately.

Annex 13. Datasets, codebooks and programmes

Datasets and codebooks are attached separately.

Annex 14. Learning test pilot and calibration

14.1 Design of the learning assessments

As per the GEC-T MEL guidance document, the following learning assessment tools were designed for the DP-2 evaluation for each country:

- three versions of the Early Grade Math Assessment (EGMA) for each country (Version A, Version B and Version C)
- three versions of the Early Grade Reading Assessment (EGRA) for each country (Version A, Version B and Version C)
- three versions of the Secondary Early Grade Math Assessment (SeGMA) for each country (Version A, Version B and Version C)
- three versions of the Secondary Early Grade Reading Assessment (SeGRA) for each country (Version A, Version B and Version C)

14.2 Subtasks administered

The second column in Table 51 shows the subtasks that were administered at baseline. The selection of these subtasks was based on the pilot of the learning assessments conducted before the baseline data collection. While more difficult subtasks were initially designed for each country, some of these subtasks were not administered at baseline because the pilot showed that the subtasks were too difficult for the students targeted in the evaluation.

As agreed with the FM, subtasks that had showed ceiling effects at baseline were not administered at midline. This is because performance on these subtasks was already very high at baseline, which means that there is limited room for improvement as girls get older. The decision not to administer these subtasks at midline was taken together with the project and the FM.

In addition, in Ghana and Kenya, more difficult subtasks (i.e. SeGRA subtask 1 in Ghana and SeGRA subtask 1 and 3 in Kenya) were introduced at midline. Because these subtasks were not administered at baseline, they were not used for the baseline – midline comparison presented in the main DP-2 Midline Report. The subtasks will however be included in the midline – endline comparison.

Table 51 shows the subtasks administered in each evaluation round.

Table 53. Subtasks administered in each evaluation round

	Tests taken at BL	Tests taken at ML	Tests taken at EL (to be reviewed after ML)
Nigeria numeracy	EGMA subtasks 1 – 6 (Version A)	EGMA subtasks 1 – 6 (Version B)	EGMA subtasks 1 – 6 (Version C)
Nigeria literacy	EGRA subtasks 1 – 5 (Version A)	EGRA subtasks 1 – 5 (Version B)	EGRA subtasks 1 – 5 (Version C)

	Tests taken at BL	Tests taken at ML	Tests taken at EL (to be reviewed after ML)
Kenya numeracy	EGMA subtasks 1 – 6 (Version A)	EGMA subtasks 3, 5, 6 (Version C)	EGMA subtasks 3, 5, 6 (Version B)
	SEGMA subtask 1 (Version A)	SEGMA subtask 1 (Version B)	SEGMA subtask 1 (Version C)
Kenya literacy	EGRA subtasks 1 – 5 (Version A)	EGRA subtasks 1 – 5 (Version C)	EGRA subtasks 1 – 5 (Version B)
		SEGRA subtask 1 (Version B)	SEGRA subtask 1 (Version A)
		SEGRA subtask 3 (Version A)	SEGRA subtask 3 (Version B)
Ghana numeracy	EGMA subtasks 1 – 6 (Version A)	EGMA subtasks 2 – 6 (Version C)	EGMA subtasks 2 – 6 (Version B)
	SEGMA subtask 1 (Version A)	SEGMA subtask 1 (Version B)	SEGMA subtask 1 (Version C)
Ghana literacy	EGRA subtasks 1 – 5 (Version A)	EGRA subtasks 1 – 5 (Version B)	EGRA subtasks 1 – 5 (Version C)
		SEGRA subtask 1 (Version A)	SEGRA subtask 1 (Version B)

The baseline to midline comparison of literacy and numeracy scores is based on the subtasks that were administered at both baseline and midline as follows.

The following literacy subtasks are used for the baseline – midline comparison in each country:

- **All countries:** EGRA subtasks 1 – 5 (five subtasks, equally weighted)

The following numeracy subtasks are used for the baseline – midline comparison in each country:

- **Ghana:** EGMA subtasks 2 – 6 + SEGMA subtask 1 (six subtasks, equally weighted)
- **Kenya:** EGMA subtasks 3, 5, 6 + SEGMA subtask 1 (four subtasks, equally weighted)
- **Nigeria:** EGMA subtasks 1 – 6 (six subtasks, equally weighted)

14.3 Calibration and pilot testing of the assessments

Before the baseline data collection, the following assessments had already been piloted as described in the DP-2 Baseline Report:

- Version A and Version B of EGRA had been piloted in all three countries and found to be equivalent following small revisions to question phrasing / marking schemes in some instances.
- Version A and Version B of EGMA had been piloted in all three countries and found to be equivalent following small revisions to question phrasing / marking schemes in some instances.
- Version A of SeGMA subtask 1 and SeGRA subtask 1 were piloted in Ghana and Kenya. In addition, Version A of SeGRA subtask 3 was piloted in Kenya. Based on the performance on the pilot, some changes were made to the assessments, particularly to SeGMA subtask 1 to make the task easier.

Ahead of the midline data collection, additional versions of the learning assessments were piloted and calibrated in Ghana and Kenya. In Nigeria, the endline versions of the assessment were piloted after the midline data collection was completed.²⁵ The purpose of this round of the piloting was to:

- Ensure that the new versions of the assessments are essentially equivalent to the versions of the assessments that have already been piloted
- For the new version of the assessment, ensure that there is no confusion or misunderstanding of question phrasing and to develop clear and unambiguous marking schemes

The pilot focused only on the agreed subtasks to be administered at midline and endline as shown in the table above. Subtasks that were dropped after the baseline data collection were not piloted. For EGRA, only subtasks 4 and 5 were piloted. EGRA subtask 1 – 3 Version A was already piloted during the first round of piloting. Different versions of EGRA subtask 1 – 3 are not required to be piloted, because the order of the letters / words / non-words from Version A is simply switched around in Version B and Version C.

As per the guidance and the approach followed in the first pilot we administered each version of the test with about 75-100 students across 10 primary schools, and across an additional 10 JSSs in Ghana and Nigeria. The students were chosen from across a range of grades to ensure a broad distribution of scores.

To minimise testing times per student, different sets of students took different versions of the assessments. In Kenya, in each school, approximately 9 students took Versions A, B and C of EGRA, while approximately 9 different students took Versions A, B and C of EGMA.

In addition, because the full version of EGMA takes approximately 20 minutes to administer, it would have been too taxing on a student to take all three versions of the full EGMA assessment (subtasks 1 – 6). Because of this, in Ghana and Nigeria, where all or most EGMA subtasks are administered, approximately 9 students per school took Version A and C, while a further approximately 9 students per school took Version B and C.

²⁵ In Nigeria, all versions of the learning assessments that were needed for the midline data collection had already been piloted before baseline, which meant that the pilot of the endline versions could take place after the midline data collection had been completed.

To account for any practice effects and/or fatigue/repetition effects that might occur from a student taking similar types of exercises multiple times, the order in which the student takes the different versions of the test was varied, that is some students took version A first, some version B, some version C, and so on.

The pilot had the following results:

- Version A, Version B and Version C of EGMA were found to be equivalent in all countries. Minor changes to Version B of EGMA were made in Ghana and Kenya following the pilot.
- Version A, Version B and Version C of EGRA were found to be equivalent in Nigeria. In Kenya, minor changes were made to the text and comprehension questions of Version B and Version C of EGRA. In Ghana, minor changes were made to one comprehension item of Version B and Version C following the pilot.
- Version A, Version B and Version C of SeGMA subtask 1 were found to be equivalent in Ghana and Kenya.
- Version B of SeGRA subtask 1 was found to be harder than Version A in Ghana. Revisions have been made to Version B and an additional short pilot of the version is being considered. Version A of SeGRA subtask 1 was found to be harder than Version B in Kenya. Revisions have been made to Version A and an additional short pilot of the version is being considered.
- Version A and Version B of SeGRA subtask 3 were found to be equivalent in Kenya.

The full piloting analysis for each country is described in the piloting reports attached below.



equatingreportApril19Ghana1.0.pdf



equatingreportApril19Kenya1.3.pdf



equatingreportAugustNigeria1.1.pdf

14.4 Description of the learning assessments used at midline

Learning assessments for English literacy and numeracy consist of several subtasks that measure different domains of learning. Table 52 describes these subtasks, including the skill area assessed, a description of the subtask, early stop rules and how the subtask was scored. Subtasks that assess reading were scored by creating a WPM score of the number of letters or words read correctly per minute. Other subtasks were scored as the percentage of questions answered correctly. Different combinations of these subtasks were administered in each country. The subtasks administered in each country are described in the section below.

Table 54: English literacy and numeracy subtasks administered at midline

Number	Skill area	Description of task	Scoring
English literacy			

Number	Skill area	Description of task	Scoring
EGRA Subtask 1	Letter sound / name identification	Students were shown 100 upper-case and lower-case letters and were instructed to sound out / name as many as they could in one minute. Early stop rule if first 10 letters read incorrectly.	Correct letter sounds / names per minute
EGRA Subtask 2	Familiar word reading	Students were shown 50 common, familiar words and were instructed to read as many as they could in one minute. Early stop rule if first 5 words are read incorrectly.	Correct WPM
EGRA Subtask 3	Invented word reading	Students were shown 50 one- and two-syllable invented words and were instructed to read as many as they could in one minute. Early stop rule if first 5 words are read incorrectly.	Correct WPM
EGRA Subtask 4	Oral reading fluency	Students were instructed to read a short passage (approx. 240 words) in a time limit of four minutes. Early stop rule if first row of words is read entirely incorrectly.	Correct WPM
EGRA Subtask 5	Comprehension	Students were orally asked five comprehension questions about the passage, including simple recall and at least one inferential question. Questions are only asked if the student read the part of the story that the question refers to.	% correct
SeGRA Subtask 1	Comprehension	Students are asked to read a passage and answer comprehension questions on the passage in writing including recall and simple inferential questions. The assessment is marked based on a marking scheme.	% correct
SeGRA Subtask 3	Writing	Students are asked to write a short essay of approximately 150 words on a given topic. Marking criteria assess content, structure, vocabulary, and grammar and punctuation.	% score out of 16.
Numeracy			
EGMA subtask 1	Number identification	Students were asked to orally identify 20 one-, two-, and three-digit numbers	% correct
EGMA subtask 2	Number discrimination	Students were shown 10 sets of two numbers and asked to name the bigger of the two. Stop rule if 4 consecutive items are answered incorrectly.	% correct
EGMA subtask 3	Number pattern recognition	Students are shown 10 patterns of four numbers, one of which is missing, and are asked to identify the missing number. Stop rule if 4 consecutive items are answered incorrectly.	% correct
EGMA subtask 4	Addition	Students are asked to complete 25 addition problems. Stop rule if 4 consecutive items are answered incorrectly.	% correct
EGMA subtask 5	Subtraction	Students are asked to complete 25 subtraction problems. Stop rule if 4 consecutive items are answered incorrectly.	% correct
EGMA subtask 6	Word problems	Students are asked to answer five word problems that are read out orally to the student. Stop rule if 4 consecutive items are answered incorrectly.	% correct
SeGMA subtask 1	Advanced number operations (multiplication, division, etc.)	Students answer procedural questions on multiplication and division, fractions and proportions, and geometry and measurement in writing. The assessment is marked based on a marking scheme.	% correct

Notes: (1) EGRA subtask 1 was a letter sound identification subtask in Nigeria and Ghana, but a letter name identification subtask in Kenya. The task was changed in Kenya after the piloting because it was observed that the cohort students had not been taught letter sounds. (2) As per the GEC-T guidance, WPM scores are capped at 100.

14.5 Methodology for marking the assessments

Marking of EGRA/EGMA

Marking of EGRA: The four reading subtasks are 'marked' using a reading speed indicator - number of letters / words correctly read per minute (Words Per Minute (WPM)), which is calculated as follows:

$$WPM = \frac{\text{Number of words read correctly}}{\text{Time allowed for the subtask (seconds)} - \text{Time remaining(seconds)}} \times 60$$

Where 'Time remaining' is the time remaining in a subtask if a student finished the task before the allotted time had expired. The WPM score does not cap naturally at any value. As per the guidance provided, the WPM scores were capped at 100, which is any WPMs higher than 100 were set to 100.

The fifth subtask (reading comprehension) consisted of five comprehension questions. Students' answers were scored according to a marking scheme. Questions were multi-mark questions and answer schemes gave explicit instructions for how part marks should be awarded. The overall score for the subtask was calculated by adding up the total marks scored on the comprehension questions and dividing by the total number of available marks.

Marking of EGMA: Within each subtask, one mark is given for each question answered correctly. The score for each subtask is obtained as the total of correct answers over the total number of questions.

Treatment of non-response: 'Non-response' is treated as incorrect on all subtests. In EGRA/EGMA, most non-response occurs because of early-stop rules in the tests. Early-stop rules instruct the enumerator to move on to the next subtask if a student has answered a fixed number of previous questions incorrectly. Questions within subtasks in the EGRA/EGMA assessments increase in difficulty. In the EGMA addition questions for example, the addition sums gradually become more difficult. It is therefore likely that if a student cannot answer a certain number of consecutive questions correctly, they will be unlikely to answer any further questions in the subtask.

Marking of SEGRA/SEGMA

SEGRA and SEGMA are written tests that are completed by a student in a classroom setting. After administration, SEGRA/SEGMA were scored by trained enumerators with prior teaching experience. Detailed marking schemes for SEGRA/SEGMA were developed by the test designers, and enumerators were trained on how to apply these. For SeGMA, more difficult questions are assigned more marks (marks per question range between 1 and 4), and partial credit is awarded to answers with correct working but an incorrect or missing final answer. For SeGRA, the subtask included multi-mark questions (marks per questions range between 1 and 4), and the marking scheme was explicit on how to assign part marks. In the marking scheme, non-response (i.e. a question that was left blank and not attempted by the student) was coded as -1 while an incorrect answer was coded as 0. The purpose of this was for the analyst to be able to gain an understanding of the proportion of questions that were attempted but

answered incorrectly, as opposed to the proportion of questions that were not attempted at all. In calculating the final learning score, non-response is treated as incorrect and is assigned a score of 0. Summary scores on each of the SEGRA/SEGMA subtasks are converted into a percentage score before weighting. The full SEGRA/SEGMA tools and the marking schemes are attached in Annex 12.

Weighting of subtasks

As per the guidance provided, in creating an overall aggregate score for English literacy and for numeracy, all subtasks were weighted equally. Only the subtasks used for the baseline – midline comparison are used in creating the aggregate score.

There were no challenges with enumeration, data collection, data uploading and cleaning.

14.6 Calculation of targets for the project

At baseline, targets were calculated for impact at midline and endline based on the performance of a benchmarking group who were interviewed at baseline. The benchmarking group interviewed to set the midline target were girls who were in Primary 6 in the treatment schools at baseline. Similarly, the endline target was set based on the performance of girls who were in Primary 7 / JHS1 / JSS1 in the treatment schools at baseline. The target was calculated to represent an effect size of 0.25 standard deviations (SD) for each year of intervention.

For English literacy, it was not clear at baseline whether and how the SeGRA subtasks that were administered in Ghana and Kenya would be taken into account in the calculation of the aggregate score at midline and endline. The targets were recalculated as follows:

- The BL – ML target in Ghana and Kenya is based on the aggregate score on EGRA subtasks 1 – 5 in the Primary 6 benchmarking group at baseline.
- The ML – EL target in Ghana is based on the aggregate score on EGRA subtasks 1 – 5 + SeGRA subtask 1 in the JHS1 benchmarking group at baseline.
- The ML – EL target in Kenya is based on the aggregate score on EGRA subtasks 1 – 5 + SeGRA subtasks 1 and 3 in the Primary 7 benchmarking group at baseline.

The literacy targets for Nigeria have not changed. Table 53 shows the recalculated literacy targets.

Table 55. Literacy targets for midline and endline

Round	Subtasks that target is based on	Benchmarking group mean	Standard deviation in the benchmarking group	Target impact (T=0.25sd)
Ghana				

Midline	EGRA 1 – 5	29.6	24.049	6.0
Endline	EGRA 1 – 5 + SeGRA1	35.5	21.816	5.5
Kenya				
Midline	EGRA 1 – 5	64.4	17.409	4.4
Endline	EGRA 1 – 5 + SeGRA1 + SeGRA3	59.8	14.115	3.5
Nigeria				
Midline	EGRA 1 – 5	4.2	8.047	2.0
Endline	EGRA 1 - 5	8.1	11.078	2.8

For numeracy, as discussed above, certain subtasks were dropped for Ghana and Kenya following a review of the baseline performance. The targets were recalculated taking this into account. The targets were recalculated as follows:

- The BL – ML target and ML – EL target in Ghana is based on the aggregate score on EGMA subtasks 2 – 6 + SeGMA subtask 1 in the Primary 6 (for BL – ML) and JHS1 (for ML – EL) benchmarking groups at baseline.
- The BL – ML target and ML – EL target in Kenya is based on the aggregate score on EGMA subtasks 3, 5, 6 + SeGMA subtask 1 in the Primary 6 (for BL – ML) and Primary 7 (for ML – EL) benchmarking groups at baseline.

The targets for Nigeria have not changed since baseline.

Table 56. Numeracy targets for midline and endline

Grade	Subtasks that target is based on	Benchmarking group mean	Standard deviation in the benchmarking group	Target impact (T=0.25sd)
Ghana				
Midline	EGMA 2 – 6 + SeGMA1	60.7	14.869	3.7
Endline	EGMA 2 – 6 + SeGMA1	63.3	11.789	2.9
Kenya				
Midline	EGMA 3, 5, 6 + SeGMA1	56.4	16.601	4.2
Endline	EGMA 3, 5, 6 + SeGMA1	62.4	16.331	4.1
Nigeria				
Midline	EGMA 1 – 6	43.5	24.839	6.2
Endline	EGMA 1 – 6	52.0	22.878	5.7

14.7 Use of learning assessments at endline

Ahead of the endline, we are planning to conduct the following activities.

- As was the case after baseline, we are proposing to review the subtasks to be administered at endline with the project and the FM. While none of the subtasks have severe ceiling effects at midline, it remains important to review the length of the assessments and consider whether a shorter version of the assessment can deliver similar information in terms of what girls can or cannot do.
- We will also review the revisions that have been made to SeGRA subtask 1 in Ghana (Version B) and Kenya (Version A) and decide whether it would be beneficial to conduct an additional pilot of these assessments ahead of the endline data collection.
- All other assessments are ready for use at endline.

Annex 15. Sampling framework

The final sample at midline is provided below.



Sampling framework
midline.xlsx

Annex 16. External evaluator declaration

Name of Project: Discovery Project – 2

Name of External Evaluator: Oxford Policy Management

Contact Information for External Evaluator:

Point of contact: Sean OLeary

Address: Clarendon House, Level 3, 52 Cornmarket Street, Oxford, OX1 3HJ United Kingdom

Telephone: [+44 \(0\)1865 207 300](tel:+442071865207300)

Email: Sean.OLeary@opml.co.uk

Names of all members of the evaluation team:

Sean O’Leary (OPM), Project director and quantitative lead

Katharina Keck (OPM), Project manager

Georgina Palmer (OPM), Assistant project manager

Saltanat Rasulova (OPM), Qualitative lead

Ayesha Khurshid (OPM), Quantitative analyst

Martina Garcia (external), Quantitative analyst

Gabriella Elte (OPM), Quantitative analyst

Pietro Franchi (OPM), Quantitative analyst

Peter-Sam Hill (OPM), Classroom observation analyst

Andres Arau (OPM), Survey specialist

Stephen Tayo Ajala (OPM), Data manager

Mehjabeen Jagmag (OPM), Qualitative analyst

Joy Banda (OPM), Qualitative analyst

Pooja Singh (OPM), Qualitative analyst

Gloria Olisenekwu (OPM), Qualitative analyst

Kobby Optson (external), Qualitative research assistant

Joseph Adero (external), Qualitative research assistant

Stephanie Bockerhoff (OPM), Process evaluation lead

Madhav Vaidyanathan (OPM), Process evaluation analyst

Nicola Ruddle (OPM), VFM specialist

Reg Allen (external), Education Specialist (Learning Assessment Expert)

Denise Stuckenbruck (OPM), Child Protection Specialist

Patrick Ward (OPM), Quality assurance – Evaluation specialist

Zara Majeed (OPM), Quality assurance – Education specialist

Marlene Buchy (OPM), Quality assurance – Qualitative evaluation specialist

OPM Nigeria Office – Nigeria Data Collection Firm

Femi Adegoke (OPM) – Project manager, Nigeria
Ekundayo Arogundade (OPM) – Survey manager, Nigeria
Eunice Atajiri (OPM) – Fieldwork manager, Nigeria
Research Guide Africa (RGA) – Kenya Data Collection Firm
Tony Wandera (RGA) – Survey manager, Kenya
Philip Gor (RGA) – Operations manager, Kenya
John Chege (RGA) – Fieldwork manager, Kenya
Kantar Public Ghana (TNS) – Ghana Data Collection Firm
Ruth Essuman (TNS) – Survey manager, Ghana
Jonathan Addie (TNS) – Fieldwork manager, Ghana
Iddrisu Mohammed (TNS) – Qualitative fieldwork manager, Ghana

I, Sean O'Leary certify that the independent evaluation has been conducted in line with the Terms of Reference and other requirements received.

Specifically:

- All of the quantitative data was collected independently ((Initials: SOL)
- All data analysis was conducted independently and provides a fair and consistent representation of progress (Initials: SOL)
- Data quality assurance and verification mechanisms agreed in the terms of reference with the project have been soundly followed (Initials: SOL)
- The recipient has not fundamentally altered or misrepresented the nature of the analysis originally provided by RGA, TNS and OPM Nigeria (Company) (Initials: SOL)
- All child protection protocols and guidance have been followed ((initials: SOL)
- Data has been anonymised, treated confidentially and stored safely, in line with the GEC data protection and ethics protocols (Initials: SOL)

____Sean O'Leary_____

(Name)

____Oxford Policy Management_____

(Company)

Annex 17. Project management response

This annex should be completed by the project.

I. Overview

DLA accepts the overall quality and content of the midline evaluation as produced by OPM. The overall findings in outcomes and intermediate outcomes are well presented and the project is largely in agreement with them as laid out in the body of the report. In general, findings are as the project expects, including the conclusion that there is evidence supporting significant project impact on intermediate outcomes and on learning and transition, especially in Nigeria. Having said that, there are a few important exceptions related to problems with implementation and limited progress on certain outcomes. In the project management response, DLA will address most of the larger findings of the midline evaluation and provide responses accordingly. First, the project will reflect on how the findings either confirm or challenge the DP2 theory of change. The project finds that, while there are areas for improvement, the overall TOC remains sound. The paper will then address several of the main findings and recommendations outlined in the report and provide DLA's response, including whether there are further adaptations that need to be implemented to improve results by endline. Finally, the paper will briefly address issues regarding the logframe in light of these findings and whether changes in the overall monitoring and evaluation approach need to be addressed. Note the format of this paper differs slightly from the template put out by the FM. This was done to improve readability by keeping findings and responses together.

II. Review of TOC in the context of the midline report

Summary of Project Theory of Change

Building on results and learning to date and with a continued bundling of teacher professional development, educational and social impact media, and new technological innovations, the overall goal of DP2 is to increase girls' self-esteem, aspirations, and academic and life skills, which, combined with an increasingly enabling environment will facilitate girls' learning, their completion of primary and junior secondary cycles of education, and their pursuit of educational and life goals. By improving the quality of education in partnership with governments and shifting individual and community attitudes and actions in favour of girls' education, DP2 will create lasting, sustainable change that will impact girls (and boys) now and for years to come.

Girls in all three countries face major barriers to learning and transition, especially as they reach adolescence toward the end of the primary cycle and look to transition to

junior secondary. Barriers are especially pronounced in nomadic, pastoral and remote rural communities, where poverty is typically more extreme. Key transition points include the upper primary years, during which there is growing pressure on parents or guardians to put their children to work – in and outside of the home – and girls disproportionately are often pulled out of school for socio-cultural reasons as well. For those who do complete primary, their mastery of basic knowledge and skills is often lacking and transition to junior secondary is far from automatic even for those who pass the national exams. Space is limited, costs are more significant, and distance can be a major impediment. In light of these contextual realities, progression during the later primary years is also a central focus of DP2, better enabling an increasing number of girls to successfully complete the primary cycle and continue on to secondary with confidence and determination.

DP2's theory of change works with all stakeholders to address key barriers to girls' foundational learning and continuing education. A 360-degree initiative is imperative. If a girl has basic math and reading and an unsupportive home and community, she is not likely to transition. If she has a supportive home and community, but the quality of education is so poor it's of little practical value, she also is not likely to progress. A combination of academic skills, life skills, and enabling environment is essential. DP2 activities include:

- Extending sustainable technology, educational content and teacher professional development (TPD) to improve the quality and gender-inclusiveness of education for girls at the junior secondary level.
- Focusing primary school TPD and content for the classroom more deliberately on the literacy and numeracy challenge (new complementary teacher training and video segments specifically focused on building foundational math and reading skills) while reinforcing child-centred, GESI-responsive approaches that develop critical thinking, creativity, collaboration and communications skills.
- Supporting the implementation of remedial classes by school communities to complement teaching and learning improvement efforts in the classroom for mid-to-upper primary school children who are performing well below grade level in English and Mathematics.
- Investing in vibrant girls' and boys' clubs with a range of support and mentoring opportunities including producing new life skills video programming, created in collaboration with Camfed and their My Better World curriculum, to develop a range of practical knowledge and real-world skills for clubs, schools, and communities.²⁶
- Engaging communities and further supporting them to address persistent barriers to girls' learning, progression and transition including through

²⁶ DLA's "My Better World" video series features a unique, part-animation, part-documentary format combining entertaining storylines on topics and designed to equip girls (and their male peers) with specific life skills through engaging, scripted stories and real-life role models across Africa.

working more closely with school governance bodies in their leadership roles and focusing communities on the most relevant barriers in context.

Taken together, at the output level these activities will:

- Increase teacher confidence, skills and resources to engage all students and accelerate their learning;
- Expand marginalised girls' access to learning opportunities, support and resources;
- Shift community attitudes and generate concrete action by school communities to address major barriers to girls' education; and, increasingly over time,
- Put school and government partners in the lead on project activities.

Ultimately, progress in these output areas will lead to sustainable progress in the project's intermediate and final outcomes, namely further improvements in learning (literacy and numeracy and across all core subjects), self-esteem and self-efficacy, and primary completion and secondary transition rates through improved quality of teaching and learning, gains in girls' life skills, and shifting boys, parents and wider community attitudes and behaviours in support of girls' education. By improving girls' learning, developing their aspirations and important life skills, and mobilizing support from their families, male and female peers, schools and communities, girls will be equipped with the mind-set, skills and resiliency to pursue their education and succeed in life.

The DP2 theory of change sets out a number of assumptions at various levels. In its baseline report, OPM identified three main causal assumptions for desired learning and transition outcomes:

- i. Teacher professional development and educational media, for both in-school and after-school remedial classes, lead to better school attendance and improved teaching and learning outcomes;
- ii. Girls' (and boys') clubs, with new My Better World media content, lead to girls having improved self-confidence, life skills, and educational and life aspirations, along with increased mentor and peer support. These contribute to increased self-efficacy, which in turn improves girls' school attendance, retention, and learning outcomes; and
- iii. Parent and community engagement in schools and involvement in action planning to identify and address barriers to girls' learning and transition lead to changed attitudes and beliefs on the part of community members and concrete actions in support of girls' education. These, in turn, increase girls' abilities to enrol, attend, learn, and continue with their schooling.

As pointed out by OPM, “although these assumptions are presented as a linear process, these pathways are of course far from being so and are affected by a range of factors that hinder or promote the assumed results”.

Assumptions underpinning causal pathways

Teacher professional development is dependent on 1) teachers having minimum qualifications, 2) teacher motivation and supportive school leadership, 3) quality of teacher training and relevance/alignment with curriculum, 4) a critical mass of teachers in each school who access the project’s full teacher training package, 5) trained teachers step-down training and modelling good practice, 6) regular, high-quality follow-up teacher coaching and support by project staff, 7) regular access to project-provided teaching and learning content, and 8) limited pace and magnitude of teacher transfers.

Parent and community engagement and supportive, enabling home and community contexts are dependent on 1) school leadership commitment to community involvement, including supportive governance bodies, 2) appropriate, GESI-balanced parent and community representation in community and leadership action planning processes, 3) action plans that are informed by data, locally owned and designed, and focused on feasible steps to address key barriers, and 4) shared school-community ownership of action plan implementation, including periodic review/revision and updating.

Girls’ club participation and benefits are dependent on 1) supportive school leadership, 2) appropriate, trained mentors supported to serve as role models and provide overall supervision and facilitation of a safe space for peer dialogue and support on sensitive topics, 3) enabling girls’ club members to take leading roles in club plans and activities, 4) all-inclusive club membership and a focus on ensuring the most vulnerable/marginalized girls have access and can participate, 5) appropriate, relevant and impactful life skills resources, and 6) an environment that is conducive to girls acting on what they decide are priorities within their contexts (including supportive male peers discussing similar topics in their own clubs toward attitudes more supportive of the girls).

Attendance and transition improvements are dependent on 1) teaching and learning improvements, 2) role models, peer support and learner self-esteem, life skills and motivation, 3) safe, friendly and inclusive school environments, 4) supportive home and community environments.

Learning improvements are dependent on 1) teaching improvements, 2) role models, peer support and learner self-esteem, life skills and motivation, 3) remedial class success in terms of correct identification and placement of learners into small classes,

appropriate schemes of learning for each level with continuous assessment of learner progress, full schedule of classes with regular attendance, and strong stakeholder monitoring and support, 4) safe, friendly and inclusive school environments, and 5) a supportive home environment.

Finally, it is worth restating in line with OPM's baseline report that poverty in DP2 regions of operation, in some areas extreme, remains a major limiting factor vis-à-vis these project outcomes. Although addressing poverty obviously goes well beyond the mandate and resources of DP2, as stated previously DLA believes the project can have significant impact even in the face of poverty. At the same time, DLA recognises that poverty limits progress, especially among the most vulnerable and marginalised girls in project areas. As reported previously, DP2 seeks to address barriers to girls' learning²⁷ and targeting the most marginalised in a number of ways, but there is little doubt that some barriers remain hard to overcome for many highly marginalised girls in project areas. Significant efforts are being made to ensure project benefits reach the most marginalised girls, including working with local partners and stakeholders to offer supplementary remedial classes for mid-to-upper primary girls (and boys) who are not yet literate and numerate. In addition, the DP2 community and leadership action planning processes specifically walk participants through a data-driven analysis of the most vulnerable and at-risk children and how best to support them to more regularly attend and succeed in school. Project monitoring to date and the midline evaluation show that these are leading to meaningful actions and results in most project areas. Finally, girls' clubs were designed to include girls most at risk of failing and dropping out of school, even though putting an inclusive approach into practice has been challenging in some schools.

Reflecting on DP2's Theory of Change in relation to Midline Findings

DLA does not believe that the midline evaluation results call for significant modifications to the project's theory of change as the theory remains sound in the view of project management. This is supported by OPM's assessment of the validity of the DP2 theory of change in section 7.2 of their report. The achievement of learning and transition outcomes, even if in part, indicates that the overall project does have a path forward if certain conditions are met. While there were shortcomings in Ghana and Kenya, the fact that Nigeria was able to demonstrate significant learning and transition gains on the back of significant improvements in teaching quality, girls' self-confidence and life skills, and parent and community attitudes and behaviours – as predicted by the theory of change – indicates there is merit to the overall logic of DP2's design. Admittedly, external impediments and resulting implementation challenges have frustrated progress at the IO and outcome levels in some project areas, not least of which is the limited time scale given to manifest learning gains. **The next step for the**

²⁷ According to the baseline, factors impeding girls' learning include not only poverty and geographic isolation but also heavy chore/labour burdens, high pupil-teacher ratios, lack of female and qualified teachers, parents that do not speak English at home, lack of parental involvement, and low self-efficacy. These confirm DLA's understanding of the multi-layered barriers to many marginalized girls' being in school, engaging academically and actually learning.

project, however, is not to revise the underlying theory of change but rather to fine-tune approaches for greater effect, in context, and to address as much as possible implementation challenges.

In fact, the midline does highlight significant contextual challenges while raising a number of concerns related to project implementation as well as the direction of project effects. Some of these were already being addressed by DP2 prior to the midline report (from ongoing project monitoring and learning) while others were not. In the following section, relevant midline findings are mapped against key assumptions that lie behind the main causal assumptions in our theory of change, articulated above, with comments on adaptations that may be needed.

III. Response to the Main Findings and Conclusions

Learning Outcomes

Learning gains were significant in Nigeria (far surpassing targets) and in Wajir County, Kenya, not in Ghana and Kenya as a whole. See country by country responses, below. Barriers to learning continue to be myriad and challenging to overcome, and in just one year of DP2 implementation focused on the teaching and learning of English literacy and mathematics, midline results are encouraging, in part at least. Importantly, the midline also confirms across all three countries that DP2 teacher professional development and remedial classes are linked to learning improvements even if these have not materialized yet in some project areas.

Response to Learning Outcomes in Nigeria

The project is very pleased to see that learning gains in Nigeria far exceeded their targets and wants to make sure that this foundation of success at midline is further strengthened. While progress relative to control is encouraging, the biggest concern remains the large gap between girls' performance on these simple tests and where they should be given their grade level. The project acknowledges this ongoing challenge and is committed to working with all stakeholders to drive further learning gains in primary schools by endline in addition to supporting learning outcomes for girls now starting the first year of junior secondary school. Going forward, the project is working on the following adaptations:

- The team in Nigeria is looking at specific sub-task data supplied by the evaluation and using the findings as a roadmap to home in on those areas in which teachers should focus their efforts. This is to be done in conjunction with teacher support visits by both the project team and its partners, specifically

SUBEB and the LGEAs. The project will also continue to use learner checks administered by teacher trainers as another means of checking on performance in these areas and ensuring that the most critical areas are addressed.

- One area of concern is the large size of remedial classes in Nigeria as they should have been capped at 25 students, maximum. The project is working to make sure that these classes remain small while making sure that all in need of foundational literacy and numeracy remedial support are reached, including working with government counterparts to determine how they can best support these groups in larger schools.
- As noted, a major concern is the overall low level of performance despite girls being in primary year 6 at midline. This will be a particular challenge as girls enter Junior Secondary School. The project is currently working on refining its teaching and learning strategy for the JSS level – within current workplan and budget – to make sure girls still lacking in foundational skills are supported once they have transitioned.

Response to Learning Outcomes in Ghana

It seems the cohort in Ghana has not yet met the learning targets for literacy and numeracy. That said, the project is heartened to see strong impact already on girls' self-efficacy and on teaching quality, and feels, that significant learning improvements by endline are achievable. That said, the project has identified many of the issues that may have resulted in the lack of progress in Ghana. Some of these issues include, but are not limited to:

- There are other projects in the same geographic area that are aimed at improving learning gains in primary schools. The most notable are the Star Project in Tolon, Savelugu, and Karaga, as well as the USAID Learning project in Yendi. It may be that these projects had some effect on girls in control schools, making comparisons more difficult.
- In addition, many schools in the area also are offering remedial support to girls, further making comparisons difficult. Parents in urban areas near Tamale are also more likely to pay for extra tutoring for their children.
- As in all countries, it is worth noting that the overall time of implementation, one year at midline, is a very ambitious timeline in which to see significant learning gains. More time is needed for improved teaching and a more supportive environment to translate into girls fully learning these basic skills and retaining them over time.
- The project was disappointed to see the finding that students in remedial courses in project schools were not always those in most need of support. This has been noted and steps have already been taken to address these concerns.

As above, the project has identified several adaptations to address these gaps and improve the overall performance of the project in terms of literacy and numeracy.

- As in Nigeria, the project will also use the subtask findings to better target interventions to address those areas in most need of support. This will be supplemented by the project's work with diagnostic and learner checks to further target support to schools and teachers in these areas.
- Also as in Nigeria, the project is concerned with girls going into JHS as standards are higher there and girls may face greater challenges. The project will continue to work with these schools, as already planned and budgeted, to support teachers in these schools (especially JHS1 English and Mathematics teachers) with targeted approaches to address remaining gaps.
- For remedial classes, as agreed in the RAM4 process, the project is working with GES counterparts and schools to improve the process of selection and placement of remedial learners, ensuring that only students in need are given support and at the level they need it. Specifically, the project is working with schools to conduct improved diagnostic testing ahead of selection and placement into levelled remedial classes for this next phase of implementation.

Response to Learning Outcomes in Kenya

It seems the cohort in Kenya as a whole has not met the learning targets for literacy and numeracy. There are several implementation challenges that may have impeded learning gains and the project is taking appropriate steps to address these. Although the sample size in the county was limited, **it is worth highlighting that the midline evaluation does show significant learning gains in Wajir**, suggesting the project can be very effective in areas that are more marginalized and in which DLA has significant government and school community-level engagement and support. Nevertheless, many challenges existed across the country. Some of the challenges include:

- The barriers on training of teachers during school hours as mandated by the Kenyan government. This limited the effectiveness of training workshops as they were necessarily drawn out over longer periods of time and slotted into weekends or over school breaks, limiting teacher attendance and the effect on teachers who did participate.
- The effect of delayed training was exacerbated by the fact that many teachers invited to attend 2-part trainings (i.e. for Literacy 1 and Literacy 2, or Numeracy 1 and Numeracy 2) did not come to both workshops. This was a result of many Head Teachers disregarding project team instructions and assigning different teachers to go to different trainings, along with the fact that teachers have limited time for training outside of the normal work week. With several months separating part 2 from part 1 trainings, this is likely also a result of teacher transfers (especially where part 1 and part 2 workshops straddled academic years).

- Additionally, the provision of the ALP was hindered by similar restrictions as remedial classes were slotted in after school (alongside other extracurricular activities), with only limited time available for both students and teachers. Government regulations also prohibited financial assistance to teachers (a significant incentive in West Africa), making the recruitment and motivation of teachers more difficult. This was exacerbated by the fact that in Kenya, there is long-standing practice of “tuition”, i.e. parents paying for extra classes for students (even if technically not legal), resulting in many cases in the more experienced resource teachers trained by the project opting to pursue paid after school teaching opportunities in lieu of teaching the project-supported remedial classes.
- With tuition widespread, at least in Nairobi and surrounding counties, children in general (including in control schools) are benefiting from remedial and/or extra academic support, making comparisons difficult.
- There are a number of other external factors in Kenya that may have adversely effected implementation. One of these may be the recent roll-out of a new curriculum in the country. This roll-out has occupied local MOE officials and limited further the time available for DP2 teacher training.

In order to accelerate learning gains and achieve endline goals, the project has identified several adaptations.

- To improve the efficacy of the ALP, the project will work with schools to better target students in need of remedial support, including through the use of diagnostic testing. Going forward, the ALP will focus both on foundational skills and competencies for both Lit & Num as well as grade specific gaps of the learners.
- As in Nigeria and Ghana, the project will use the subtask findings to better target interventions to address those areas in most need of support. This will be supplemented by the project’s work with diagnostic and learner checks to further target support to schools and teachers in these areas.
- The ALP Phase 1 review process already has led to significant proposed adaptations in the project’s remedial classes for this next phase, refinements specifically geared toward increasing impact on learning. This also includes a new schedule for classes that should lend itself to higher rates of attendance and an approach to boost teacher engagement with strong school leadership monitoring and support.
- The project will further address these issues by continuing to work with the MOE, in each county, to better promote their oversight and engagement at the school level and find ways to support both teacher training and remediation within the rules and regulations set out by the MOE. DP2 has a) sought MOE assistance in designating additional teachers to supervise remediation, b) agreed with MOE to increase joint monitoring in the schools, and c) worked with MOE officials and teachers to update remedial teaching and learning materials.

Response to Findings on Self-Efficacy

Although significant change in self-efficacy takes time, the project was pleased to see that self-efficacy already improved markedly in Ghana, although not yet in Kenya or Nigeria. It is the position of the project that this is likely due to more time between the implementation of the MBW curriculum (DLA-produced MBW video content plus club mentor training, guidance and support) and data collection in Ghana. Girls in Ghana were exposed to more of this intervention and thus its expected effects. While the project partnered with CAMFED and their Learner Guide intervention in 5 districts, self-efficacy gains were achieved across all 9 project districts so it is unclear how the partnership may have contributed to changes.

In both Nigeria and Kenya, the schedule for training and distribution of MBW materials occurred much closer to midline data collection than in Ghana, which may explain the project's lack of impact on self-efficacy at midline outside of Ghana. The project was pleased, all the same, to see that midline findings point to strongly positive responses to the MBW curriculum in all three countries. With evidence of girls gaining practical knowledge, skills, advice and role models leading to heightened aspirations, the midline supports continued investment in girls' clubs and a continuing focus on MBW within the clubs. This is in addition to improvements in life skills noted in both Kenya and Nigeria, which also point to potential gains in self-efficacy down the road. Proposed adaptations for self-efficacy focus primarily on implementation of MBW in girls' clubs and are addressed in the life skills section below.

Finally, the project is pleased by the finding that self-efficacy continues to be associated with improved learning more generally, meaning the investments in community action in support of girls' education and in MBW through girls' and boys' clubs are important within the project's overall theory of change.

Transition Outcomes

The evaluation found that targets for transition were successfully met in Kenya and Nigeria, with rates of 97% and 95%, respectively. While Ghana did not meet midline targets, transition rates there are also extremely high at 96% (and OPM concludes that the target for Ghana was inappropriately ambitious in hindsight). The key contextual barriers to successful transition across the three countries continue to be poverty, early marriage and pregnancy.

Response to Findings on Transition

The project is generally pleased with the findings on transition noting that the overall levels are high, in line with benchmarking from baseline. Nevertheless, the project is aware that the transition from primary to junior secondary schools in West Africa is more challenging and could result in significantly lower rates at endline. To address this, the project is working in Nigeria and Ghana, as planned, to support JSSs in the coming year, particularly to help ensure that girls are able to perform in the classroom, stay in school, and thrive in the long run. DP2 teams will also focus on continuing to support catch-up learning for girls still lacking in foundational reading and mathematics skills in first year of junior secondary school. This element of the strategy is taking final shape now in both countries, where DLA anticipated this need already and has allocated resources for it within the current budget.

Sustainability Outcomes

Progress toward sustainability is significant and is especially impressive in Nigeria. There is still room for improvement in all three countries. Sustainability will be a mounting focus for DP2 – both to reinforce and in some cases reinvigorate school and community ownership, on the one hand, as well as increasingly to contribute to broader efforts to strengthen the education system – as the project approaches its end date in September 2020. See country by country responses below.

Response to Findings on Sustainability in Nigeria

DP2 is pleased with the overall findings and scores at midline, indicating that Fitila is “becoming established” in terms of sustainability indicators at all three (school, community and system) levels. Progress included increased community engagement of a diverse range of local stakeholders via the CAP process and school-level commitment and ownership of ongoing teacher professional development and remedial instruction. The project is especially proud of progress made on sustainability at the system level, i.e. the very close partnership that has been forged with SUBEB and the LGEAs now accompanied by successful engagement with other state government bodies such as the Ministry of Budget and Planning. The groundwork has been laid for Kano State government to adopt and roll out more widely accelerated learning and other interventions that have demonstrated impact.

There is always room for improvement, of course, and the project will focus girls’ association monitoring on potential ongoing charging of fees or contributions that may be impeding the most vulnerable and marginalized girls’ participation and also on working with school and community leaders to address challenges, where they persist, in fueling generators for the use of media equipment enabling access to the project’s educational videos.

Building on a base of real achievement to date, the team has identified several potential areas where further progress can be made. For instance, within ongoing school and community workshops, participants are reminded of their commitments and encouraged to continue to invest in all children's access to school and a quality education once there (through SBMCs, PTAs and traditional institutions). The project will also continue to work with SUBEB to take the lead in working with communities so they hear the message directly from the government. In addition to SUBEB and LGEAs, the project will also work with the Ministry of Budget and Planning to further solidify government funding for the long-term sustainability of successful project interventions.

Response to Findings on Sustainability in Kenya

The project acknowledges that sustainability in Kenya is still “emerging” and that there are challenges to improving sustainability. At the system level, the midline points to many other organizations and education sector projects and initiatives that compete for attention from both schools and government offices. Tusome, although recently concluded, has taken much of the focus from local MOE officials. In addition, more recently, there is also the implementation of the new curriculum which has proven contentious and, again, taken focus away from regular, direct engagement with DP2.

Contrary to the midline report, however, the team in Kenya does have a plan for government engagement, including regular meetings with key counterparts and annual workshops – bringing together county and national level representatives – to reflect on project results, learning and adaptations going forward, including agreeing specific actions for government partners in support of the project. The project does feel that strong MOE relationships in the counties, particularly in Kajiado, Kiambu, Machakos and Wajir, do paint a better picture going forward. In Wajir, especially, the local MOE has established a desk officer for the project, which has created a strong connection. The biggest issue in terms of cooperation there is the capacity of local staff rather than their commitment, something the project as designed is working to address.

In spite of the challenges, DLA is confident good working relationships with government at all levels will continue and project investments in government capacities and systems for school monitoring and support will pay dividends. The project will increase efforts going forward to deepen its strong, long-standing relationship with the national government, including more regular meetings with key counterparts and further engagement of the Teacher Service Commission for teacher accreditation (for competencies gained via DP2 training) to motivate teachers and enhance sustainability of project teaching and learning efforts at the school level.

At the school and community levels, DLA was concerned by the finding that attendance at teacher training workshops was found to be so inconsistent (with so many teachers failing to complete both parts of the project's Literacy or Numeracy trainings), as well as by the findings that, as in Nigeria, girls' clubs may be requiring payments from

members to cover costs and that school heads and community leaders are not engaging fully in the CAP process. While not totally surprising to the project (for example the length of time between part 1 and part 2 training workshops coupled with the rate of teacher transfers does impede continuity of the teachers being trained from each school), the extent to which these issues came out in the midline is troubling.

In light of these findings, the project does propose several specific interventions including working more closely with schools to identify better times and schedules for training. Although the bulk of teacher training is completed, this also includes on-site support to resource teachers to further train them and strengthen their performance in the classroom, as well as their capacity and means to conduct step-down training for their peers. This will improve the dissemination of knowledge and skills and ensure that as many teachers as possible are exposed to adequate levels of project training and TLMs. Also, the project's monitoring of girls' clubs will continue to focus on how inclusive they are, with a particular eye on potential ongoing charging of fees or contributions that may be impeding the most vulnerable and marginalized girls' participation.

At the community level, the project was disappointed by the finding that roughly one-third of project schools do not have CAPs. Project monitoring data lead the team to believe that the situation is better than that but, with the midline data in hand, is following up on this as a matter of priority. Even where original action plans have been implemented in full, the project promotes development of new ones for school communities to take further action to address barriers to girls' learning and transition. Beyond active CAPs, the team will continue to work with all members of the community, but especially Head Teachers and community leaders (on the BOM) to ensure that they are fully integrated into the process and, if not leading it, at least made fully aware and supportive.

Response to Findings on Sustainability in Ghana

DLA is pleased with the findings that the project has moved from a latent to emerging level of sustainability, although further improvements will be needed for sustainability to become more established. The scoring, largely based on improvements at the school level, and notably strong community support toward running costs of the media equipment and girls' clubs found to be inclusive, well-functioning and broadly engaging with MBW content, point to a project maturing in implementation. That said, the project is concerned by the recent government directive preventing parent/community fundraising for school activities, specifically to the extent it could diminish support for the media centers, and the project is pro-actively working with government partners to ensure that communities are allowed to support media centers without running afoul of the new regulations.

Areas for improvement going forward include working with school leaders to strengthen further the teams of resource teachers at project schools, including their efforts to step

down project training to their peers. The team will prioritize this in upcoming school monitoring and support visits. In addition, at the system level, the project will build on progress found at midline to develop further GES support and engagement in project activities and, over time, to consider how successful project interventions can be integrated into government plans and systems for improving teaching and learning, GESI in education, etc.

Response to Findings on Attendance

The project appreciates the findings regarding attendance, particularly high in Ghana and Kenya (where targets were met). The project also agrees that, as OPM reports, progress is especially challenging in Nigeria, where systemic challenges are pervasive – see below.

Related Midline Findings –

1. The evaluation found that targets for attendance were successfully met in Ghana and Kenya, where attendance rates remain very high at 94% and 96%, respectively. The target for attendance in Nigeria was not met, although attendance rates remain moderately high at 80%.
2. Barriers to attendance outside of the project's control may explain why attendance targets have not been met in Nigeria. Poverty is one, as OPM found statistically significant differences in the attendance rates of the poorest children. The lack of female teachers, high pupil-teacher ratios and the lack of basic school infrastructure are all linked with statistically significant lower attendance rates in Nigeria as well.
3. The midline pointed to persistent physical punishment / shaming for late arrival at school (when girls' tardiness was often unavoidable due to a high chore burden at home). In Ghana especially, there was an increased perception of insecurity for girls traveling to and from and while at school.
4. The evaluation found that the CAP process encouraged attendance in Ghana and Nigeria by influencing communities' attitudes towards schooling and the workload of girls. In Ghana, this was realised by focussing attention on the monitoring of student attendance, as well as sensitisation around how time spent on household chores and economic activities affects attendance. In Nigeria, this was realised by schools working closely with parents through the CAP process to ease constraints around the payment of school fees, as well as sensitisation through announcements in local mosques.

For adaptations, the project will work with schools and communities to ensure that CAP contributions to addressing attendance challenges are appreciated and continue to receive DLA support, especially to see whether attendance can be boosted in Nigeria. The prevalence of physical punishment and shaming by teachers for those arriving late

at school is an area that DP2 teams will focus in on as part of fostering safe, inclusive classroom environments through monitoring and continuous engagement with teachers and school heads.

Response to Findings on Teaching Quality

The project is heartened by the overall improvement in teaching and stresses the importance of teacher development in the theory of change. DP2 agrees with the findings related to teaching quality. The effects of the project's overall approach were decidedly positive in Ghana and Nigeria. This was especially the case in Nigeria, lending credence to the theory that improved teaching leads to learning gains. There was also improvement in Kenya, though not as robust.

Related Midline Findings –

1. In Nigeria, the evaluation found evidence that all teaching quality targets were met. This included strong improvement in the proportion of teaching strategies that were successful in English, the provision of a safe and inclusive environment in the classroom, the number of formative assessment strategies implemented and the proportion of formative assessment strategies that were implemented to a high standard.
2. In Ghana, the evaluation found evidence that all teaching quality targets were met, except the proportion of teaching strategies that were successful in English. Areas of relative strength were in the proportion of teaching strategies successfully implemented in Mathematics, the provision of a safe and inclusive environment in the classroom, and the proportion of formative strategies that were implemented to a high standard.
3. In Kenya, the evaluation found evidence that two teaching quality targets were met, for the number of teaching approaches implemented and the proportion of teaching strategies that were successful in English. Other targets were not met, though the slow rollout of project training for teachers (numeracy training was ongoing at the time of the midline) may have contributed to this, linked to government restrictions on teacher training while school is in session.
4. In Kenya, teacher turnover is particularly high (2x the rate in West Africa, per the midline findings). This no doubt contributed to inconsistent participation of resource teachers (RTs) in the project's Literacy and Numeracy teacher training workshops (different English or Math teachers coming to the part 2 training, typically several months later, compared to those who came for part 1). To illustrate, OPM found that only 34 percent of teachers receiving DP2 Literacy training in Kenya received both Part 1 and Part 2 and only 27 percent receiving Numeracy training received both parts of that training.
5. In Ghana and Kenya, the midline evaluation raised questions around the intensity of follow-up teacher monitoring and support (79% and 70% of teachers reported visits from DP2 staff in the past term, compared to 91% in Nigeria). In Ghana, it was observed that DP-2 trainers were the least likely across the three

countries to provide support such as feedback on lessons, refresher training, model lessons, or one-to-one meetings.

6. In Nigeria, there are typically 1-8 hours of step-down training taking place, with most schools reporting 4 or fewer hours, on average, in Ghana and Kenya, or even informal sharing of training content as opposed to meaningful training. Informal sharing is especially common in Kenya with government limitations on teacher training workshops undoubtedly a factor. More often than not, no one person is taking ownership and responsibility for step-down training at the individual school level.
7. Access to DLA content including the DLL is lower than expected, particularly in schools struggling to power project-supplied media equipment, especially in Nigeria and rural Kenya.

In response to these challenges, the project notes that improvements in teaching quality are still significant, especially in West Africa. The next phase of implementation of teaching and learning interventions will remain focused on supporting resource teachers through observation and coaching time on site, with a focus on those schools and specific teachers in the greatest need (per monitoring data). In Ghana, extra focus will be given to working with teachers on their strategies for teaching English literacy and the team will be held even more accountable for ensuring that school visits more systematically invest in teacher coaching. Similarly, in Kenya, even more emphasis will be placed on formative assessment and working with Mathematics teachers on their strategies for teaching numeracy. Challenges facing the project in Kenya are more significant and the DP2 team there will need to work with government partners and individual schools to more fully realize teaching improvements. This will include more directed and increased teacher observation and coaching. In all three countries, the DP2 team will work with school leaders and RTs to make sure DLA literacy and numeracy focused content is in practice accessible to English and Mathematics teachers and assign individual responsibility for step-down training, while reiterating what is expected in order for all teachers to benefit from substantial replication of DLA's own direct teacher training workshops and following up to make sure such training is taking place more systematically.

Response to Findings on Community Attitudes and Perceptions

DP2 attempts to involve the community as much as possible, but primarily focuses on the Community Action Plan (CAP) process to ensure that communities are working with schools to promote girls' education, with a focus on the most vulnerable and marginalised. The project is encouraged by midline findings that are supportive of CAP contributions toward achievement of project outcomes, notably in helping to advance girls' attendance and retention, and also the finding that parental attitudes and behaviours in support of girls' education appear to be improving. At the same time, the project does acknowledge room for improvement in the CAP process in Ghana and Kenya. The fact that the CAP process appears to be working well in Nigeria, again lends credence to the DP2 TOC in that all aspects of the project seem to be working as intended in the same place where learning gains were strongest.

Related Midline Findings –

1. In Nigeria, the community action planning process is working particularly well. The vast majority of community action plans (CAPs) are in place in Nigeria (96% of schools), and there is a large degree of buy-in to the process from a wide range of stakeholders, including from communities and parents.
2. In Ghana, the CAP process is working moderately well. Most schools have a CAP in place (88%) and most participants in the CAP process have met, though not to the same degree as observed in Nigeria. In fact, the involvement of community members and parents was approximately half the level observed in Nigeria.
3. In Kenya, the CAP process is not working as well. Per the midline findings, one-third of schools have no CAP and only half could produce the CAP itself. Participation of head teachers, community members and parents is low, e.g. only 10% of CAPs had community involvement.
4. Where CAP processes are functioning, participants in all three countries are able to articulate how concrete actions have been taken to reduce drop-out rates or improve attendance of girls facing barriers to education.
5. OPM found evidence of project impact on the aspirations of girls to complete education, particularly in Nigeria and to some extent, Kenya.
6. Across all three countries, qualitative research finds positive parental attitudes toward girls' education, with parents able to articulate the benefits of education of girls and supportive of eliminating barriers that girls face such as excessive household chores or working outside their homes.

In terms of adaptations, in Ghana and Kenya, the DP2 team will work with school leaders to strengthen CAP and related Leadership Action Planning processes, including identifying ways to bolster GESI-responsive community and parent participation. In Kenya especially, while the challenges of building school-community ties in the Nairobi context have been there since the outset, the team is reflecting on why community participation in the CAP process in so many project schools needs to be strengthened and, learning from school communities where the process has worked as intended, how parent and community engagement can be boosted. This is a top priority for the team going forward.

Response to Findings on Life Skills

While not surprising, midline findings on the positive effects of girls' clubs – on life skills and self-efficacy – are encouraging and should increase in the midline to endline period with greater exposure to MBW. The project accepts the overall findings of improved impact on Life Skills in Kenya and Nigeria. DP2 is concerned by the lack of improvement in Ghana but notes that the significant improvement of girls' self-efficacy in Ghana is reassuring. Improvements in both life skills and self-efficacy are still expected in all three countries by endline, especially as the MBW intervention in girls' clubs has time to roll out to full effect.

Related Midline Findings –

1. Girls' clubs across all three countries offer girls a space to develop manual skills, raise their understanding and awareness of issues around personal hygiene, and have time and space to collectively discuss relevant issues. Qualitative research suggests that girls' clubs have contributed positively to girls' self-confidence, with the MBW curriculum's use of 'role models' identified as being particularly supportive in helping girls to realise that their aspirations are real and achievable.
2. In Ghana, the midline found a strong impact on self-efficacy, with the impact almost double in magnitude for girls who attend girls' clubs. In Kenya and Nigeria, there is a positive impact on life skills, and the impact is stronger on girls who have attended girls' clubs.
3. Membership in the girls' clubs is highest in Ghana (roughly 80% versus 60% in the other two countries). The midline found effective barriers to entry for clubs/associations for the most vulnerable / marginalised girls, including persistent charging of fees or parent contributions as a condition of club membership in Kenya and Nigeria.

DLA will once again focus on barriers to entry in clubs, to the extent these persist, particularly in Kenya and Nigeria. Specifically, the DP2 teams in those countries are working with schools to identify concrete steps they can take to address barriers to entry for clubs, where applicable, while allowing for creative solutions to sustaining clubs other than charging fees or parent contributions. Additionally, DLA will continue to work with mentors to assess the response to the MBW curriculum and use that information to better tailor support and direction to clubs.

IV. Response to Recommendations

Recommendations for teacher training

DP-2 should review the implementation of the direct training component of its teacher training intervention. While we understand that the direct training component is now completed, in Kenya in particular our evaluation found that relatively high proportions of teachers were only attending either the first or second of the literacy or numeracy training workshops. Given the cascade model of training adopted by DP-2, it is expected that these teachers will pass on their knowledge and skills to new teachers. As some teachers will not have received the full complement of training, this represents a real threat to the potential success of this approach. DP-2 should, therefore, consider providing systematic identification of teachers who did not receive the full training expected, and undertake catch-up training.

The project agrees with this recommendation and, in fact, the Kenya team already had recognised this issue prior to midline and taken measures to provide additional training

above and beyond scheduled workshops to make sure English and Mathematics resource teachers at each school were getting fully trained and were supported to cascade train their peers as much as possible within an environment inhospitable to cascade training (due to MOE restrictions).

DP-2 should review the implementation of the stepdown component of its teacher training intervention. Each direct training workshop is implemented over a period of two days, while we found that the majority of stepdown training implemented thus far is either informal in nature (for example, given in staff meetings) or delivered in short sessions which cumulatively delivered training in one to four hours. The apparent lack of structure to stepdown training implies that the full teacher training courses are not being fully imparted through stepdown training as intended by DP-2.

The project already has reviewed step-down training implementation and, like OPM, found it uneven (though, per the midline, the way it is characterized here is true of Kenya only; in West Africa, formal training, though condensed, was the norm). Efforts already have been made to bolster RT teams' implementation of their commitments to train their peers, including through material support, school-based refresher training and follow-up monitoring. While these have worked to a degree, the midline does confirm significant shortcomings and the project agrees on the need to support more robust implementation. At the same time, the project recognises that school schedules and limits on in-service teacher training make this difficult. The project also takes issue with the "lack of structure" comment, given that RTs map out a plan with guidance and resources provided by the project.

Stepdown training could be improved by actively identifying suitable stepdown training champions within DP-2 schools, which would retain active responsibility for providing training to other teachers in the school who did not receive direct training or are new. Accompanied by regular ongoing support and materials from DP-2 to strengthen the ability of 'champions' is likely to increase the efficacy of stepdown training.

DP-2 is currently providing ongoing support, which could be further strengthened by ensuring that these support visits, for example, ensure that lesson observations by DP-2 are always accompanied by lesson feedback. This is necessary to address the key assumption behind the 'cascade training model' that DP-2 has adopted—that the training of trainers is of sufficiently high quality to enable the content of teacher training to cascade to other teachers in a manner that is intended by DP-2 and provides content and quality as similar as possible to the original direct training. This should be considered a critical activity given the high observed rates of teacher turnover, which will necessitate the regular provision of stepdown training if the positive impacts on teaching quality observed in this evaluation (in particular for Ghana and Nigeria) are to be preserved beyond the lifetime of the project.

The project accepts this first recommendation, i.e. that having a single champion in each school to lead step-down training efforts from among the cadre of RTs directly trained by the project would be helpful. In fact, country teams report this has happened

already, in some project areas, but country teams will promote this across the board going forward.

With regard to the second recommendation, this is already standard practice of DP2 teacher trainer-coaches, who visit schools first and foremost to observe and coach teachers. This is ongoing and will continue as a major priority for the duration of the project, with the aim of improving teaching and learning outcomes further by endline and also of positioning schools to continue teacher professional development efforts beyond the life of the project (as emphasized here).

Recommendations for remedial classes

DP-2 should review its remedial class offer in Kenya, where the practice of already providing remedial classes is relatively high compared to other countries. In particular, and at odds with Government of Kenya policy, it is reported that the practice of charging a fee for these other remedial classes is common. This may cause teachers to prioritise remedial classes where they can charge a fee, which would then prioritise students who are able to afford these fees rather than those targeted by DP-2. DP-2 should consider the possibility of getting commitment from MOE and head teachers to allocate resource teachers to DP-2 remedial classes.

The project is already doing this, per the agreement reached with the MOE in June for the next phase of the ALP's rollout. This is a key adaptation put forward in the RAM4 process and, though it will be challenging to implement for the reasons stated, greater progress on learning depends heavily on MOE, TSC and school leadership all taking measures to direct and motivate all RTs to teach project-supported remedial classes.

Recommendations for use of video and digital content

DP-2 should consider external threats to the use of its learning/media centres, in particular access to electricity. The midline research observed a large increase in the proportion of schools that do not have access to electricity, most notably in Nigeria and to some extent in Kenya. In Nigeria, this has been associated with a decrease in the proportion of girls who reported watching learning centre videos. There is the potential for this to be resolved through funds generated through the CAP process, for example through the purchase of generators or solar panels.

Access to power was identified as a threat at the design stage of the GEC1 project (DP1), given the partners' shared desire to go to highly marginalised areas in all three project countries. To address this, the project provided schools with generators while still relying on schools and surrounding communities, within their own LC/project management and sustainability plans, to figure out ways to fuel and otherwise maintain their media equipment and library of content provided by the project (in line with commitments made in DLA-school MOUs). This is all part of DLA's model that has been proven to work over decades in harsh environments across the developing world.

All that said, the recommendation here (and finding behind it) is noted and resonates for country teams, and especially in Nigeria. There, the situation has become increasingly challenging with the lack of public investment to cover basic material costs in schools in Kano coupled with recent restrictions the government has placed on collecting contributions from parents (through PTA levies). The project is engaging with SUBEB, at one level, and with school and community leaders directly in areas struggling to power their media equipment. Reference is being made to existing MOUs in which schools commit to securing, caring for and actively using these resources, and the team will work with all stakeholders to identify and implement solutions, potentially as part of the process of reviewing and updating CAPs, as suggested here.

Recommendations for the CAP process

DP-2 should learn from the positive experience of the implementation of the CAP process in Nigeria, in particular to learn how Nigeria has successfully engendered high ownership among critical stakeholders, including head teachers, community members, and parents, who have the biggest stakes in the success of activities supported by the CAP. Community and parent participation and ownership appears to be a driving force behind the success of the CAP process in Nigeria. Active engagement and ownership by a broader set of stakeholders is also likely to make it more sustainable and resilient to changes in key personnel, for example if the head teacher retires or moves to a different school.

The project agrees with this recommendation and such discussions are already underway as part of 3-country review and discussion of the midline results.

DP-2 should more clearly insist on a fixed membership of the CAP process. While DP-2 provides guidance on the preferred membership of the CAP process, which encourages the participation of a variety of stakeholders but ideally including head teachers, parents, and community representatives, this evaluation has found that this broad participation has not occurred in many cases. As demonstrated in Nigeria, the CAP process is most successful when there is broad engagement from a range of stakeholders, notably community members and parents. Not making this explicit threatens engagement with the stakeholders for whom the success of CAP activities is most relevant.

The project fully supports this recommendation and already provides explicit guidance related to diverse stakeholder participation in the CAP process (and complementary leadership planning workshop as well). The project agrees it is essential to have a diverse group of CAP participants in order to ensure a wide and critical lens on identifying barriers and needs and to determine actions that will best bring about important changes for girls and especially vulnerable and marginalised children in general. The project needs to have a better understanding of the gap identified here. It may be that while a diverse group was brought together to identify barriers and needs and begin to develop the school-community action plan at DP-2 led workshops, that finalisation of the CAP and management and oversight of implementation post-workshop have not included those same members. This may be due to the fact that many community representatives have families and full-time work to attend to, and thus ongoing management and oversight is placed with a smaller group comprised of the

school and PTA administration. The project is committed to better understanding the situation in Ghana and especially Kenya in order to determine the best way forward.

A literature review conducted at baseline suggests that community-based monitoring has the potential to improve attendance and school quality. The CAP process potentially offers a suitable vehicle by which schools might be held accountable to the communities that they serve. This potentially low-cost activity might support the continued implementation of DP-2 activities such as learning centres, teacher training, and remedial class implementation by actively engaging parents and the community in monitoring the performance of schools against their delivery, increasing the sustainability of activities in which CAP participants place value.

The project does seek to cultivate joint school-community monitoring of attendance, drop-outs and learning over time. As an example, participants at the CW-1 workshops are reminded that any attendance improvement initiative must involve the community through sensitization of the school and wider community, with an emphasis on what the community can do to support an attendance improvement plan. In addition, key data on school attendance, drop-outs and learning are part of the planning and review processes (both for Community/CAP Workshops and the Leadership for Change Workshop). In fact, the midline itself found evidence that this is happening within the context of the CAPs, e.g. monitoring of school attendance in Ghana (and project monitoring data indicate the same in other countries as well). As a good practice, this will be promoted by project teams as they undertake school visits in the months ahead.

Recommendations for girls' clubs

DP-2 should review how widespread the practice of charging fees for girls' club membership is in Kenya and Nigeria, which was observed as common in the qualitative research albeit from just the six schools visited per country. This has the potential to exclude the most marginalised of girls (although we did not find evidence of systematic exclusion of the poorest quintile), and (as we saw in Ghana) where fees are not charged there is the highest engagement in girls' clubs in terms of the proportion of girls who attend. There is the potential to link this to other project activities, such as the CAP process, which has the potential to provide support to the most marginalised of girls if the practice of charging fees in Kenya and Nigeria remains necessary.

The project's own monitoring data does not show this practice to be prevalent but, given the midline finding on fees for club participation, the project very much agrees with this recommendation and is following up on it already. In fact, routine monitoring of the clubs – through the club checklist and GESI tracker that have been in place since before the midline – already looks closely at potential issues of exclusion. Going forward, project staff monitoring and supporting the clubs will remain on the lookout for any such practices that might be impeding anyone's participation and especially those who are most vulnerable/marginalized. Moreover, project management will track this extra closely, as a matter of priority, with field teams and ensure that any potential issues are addressed with school leaders and club mentors.

Response to GESI Conclusions and Recommendations

DP2 appreciates OPM's conclusion that the project has the potential to be transformative in the way that some activities target inequitable gender norms. The midline report points to CAP processes that are generating greater awareness and concrete actions to address barriers to girls' education, including engaging parents and guardians on how detrimental excessive household chores and economic activities outside of the home are to school performance, leading to changes in behavior in response. It also refers to girls' clubs implementing the My Better World video series and facilitator guide with its potential to equip and empower girls in contextually appropriate ways (while also shifting attitudes of boys and overall contributing to a more supportive environment in school and at home). The project very much agrees with the transformative potential of these interventions.

OPM's comments on how the project could be more transformative are limited and in fact are repeating the concerns related to clubs charging fees and the scheduling of after-school activities (clubs as well as remedial classes) at times that might exclude the most vulnerable/marginalized girls. These are concerns that are already points of focus for the project and will continue to be, using existing project monitoring tools and systems to identify GESI and CP issues and follow up on them responsibly. We are pleased, given the effort that DP2 has devoted to ensuring the most marginalized girls benefit from clubs, that per the midline the poorest quintiles are not systematically excluded.

V. A Note on the Logframe

The DP2 project underwent a substantial logframe review and revision immediately preceding the execution of midline data collection. This included significant updates to most outputs as well as the sustainability metrics, all agreed to by the FM. Given the recent revision, the indicators reported on in the midline are very much in line with project expectations. Nevertheless, the project does anticipate conducting a review prior to endline data collection to ensure that all indicators and targets are appropriate. It is not expected that any more than minor revisions would be proposed in wording or targets ahead of that.

Annex 18. Supplementary data on pupil learning

18.1 Regression models predicting change in learning outcomes

The tables below present the regression models predicting change in learning outcomes in the three countries. These models are referenced in section '3.1.4 Contributors to learning outcomes' of the DP-2 midline report.

Table 57. Model predicting change in literacy outcomes - Ghana

Variables	Coefficient	Std err	T-stat	P-value
School status ALP (vs neither)	-0.606	1.304	-0.465	0.642
School status ALP + MBW (vs neither)	1.005	1.048	0.959	0.338
Age	0.138	0.225	0.612	0.540
Girl has disability	-3.918	1.123	-3.489	0.001
Girl feels unsafe travelling to school	2.196	1.483	1.480	0.139
Girl does not receive support to stay in school	3.080	1.525	2.020	0.044
Girl does not feel safe at school	-1.242	1.719	-0.723	0.470
Lol is different from mothertongue*	-0.490	1.969	-0.249	0.803
Girl experienced physical punishment in last week	-1.194	0.971	-1.230	0.219
Girl spends time reading	2.474	0.966	2.562	0.011
Girl has access to learning materials	0.662	1.254	0.528	0.598
Self-efficacy	0.008	0.023	0.365	0.716
Girl receives help with homework	-0.594	0.826	-0.719	0.472
Single orphan*	0.337	1.513	0.223	0.824
Living without parents*	0.288	0.988	0.292	0.771
Girl speaks English at home*	-0.351	0.857	-0.410	0.682

Variables	Coefficient	Std err	T-stat	P-value
Household head has no education*	-1.808	0.877	-2.061	0.040
High chore burden*	0.009	0.783	0.012	0.991
Involvement in labour activities*	0.408	1.010	0.404	0.687
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.064	0.037	-1.751	0.081
PTR over 40	-0.064	0.037	-1.751	0.081
School has no female teachers	-0.612	0.961	-0.638	0.524
% of unqualified teachers	-0.419	1.148	-0.365	0.715
Girl attends remedial classes	-5.894	6.638	-0.888	0.375
Girl is a girls' club member	2.287	0.884	2.587	0.010
Girl watched a video in class this year	0.438	0.930	0.471	0.638
% of trained maths and English teachers	-0.135	1.072	-0.126	0.900
<i>constant</i>	-0.941	2.338	-0.402	0.688
$R^2 = 0.1141$				

Note: (1) The dependent variable is the change in literacy outcome between baseline and midline with positive values indicating higher rates of improvement. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used. (3) Model also includes dummies for each district, coefficients not shown.

Table 58. Model predicting change in numeracy outcomes - Ghana

Variables	Coefficient	Std err	T-stat	P-value
School status ALP (vs neither)	0.188	1.728	0.109	0.913
School status ALP + MBW (vs neither)	1.187	1.227	0.967	0.334
Age	0.211	0.226	0.933	0.351
Girl has disability	0.196	1.227	0.160	0.873
Girl feels unsafe travelling to school	1.603	1.326	1.209	0.227
Girl does not receive support to stay in school	1.771	1.579	1.121	0.263

Variables	Coefficient	Std err	T-stat	P-value
Girl does not feel safe at school	-0.752	2.373	-0.317	0.751
Lol is different from mothertongue*	-0.961	1.557	-0.617	0.537
Girl experienced physical punishment in last week	2.889	1.132	2.553	0.011
Girl spends time reading	-1.307	1.207	-1.083	0.279
Girl has access to learning materials	3.123	1.054	2.964	0.003
Self-efficacy	-0.026	0.022	-1.150	0.251
Girl receives help with homework	1.194	0.765	1.561	0.119
Single orphan*	0.939	1.332	0.705	0.481
Living without parents*	-1.411	0.830	-1.700	0.090
Girl speaks English at home*	-2.360	0.886	-2.663	0.008
Household head has no education*	-0.250	0.831	-0.301	0.764
High chore burden*	-0.426	0.849	-0.501	0.616
Involvement in labour activities*	-0.371	0.951	-0.390	0.697
Likelihood of living in extreme poverty (\$1.90 PPI)*	0.041	0.042	0.964	0.336
PTR over 40	-1.264	1.038	-1.218	0.224
School has no female teachers	1.350	1.514	0.892	0.373
% of unqualified teachers	-3.057	6.947	-0.440	0.660
Girl attends remedial classes	0.080	0.967	0.083	0.934
Girl is a girls' club member	-0.522	0.997	-0.524	0.600
Girl watched a video in class this year	-0.547	1.026	-0.533	0.594
% of trained maths and English teachers	3.029	1.923	1.576	0.116
constant	14.232	4.885	2.913	0.004
$R^2 = 0.1725$				

Note: (1) The dependent variable is the change in numeracy outcome between baseline and midline with positive values indicating higher rates of improvement. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used. (3) Model also includes dummies for each district, coefficients not shown.

Table 59. Model predicting change in literacy outcomes - Kenya

Variables	Coefficient	Std err	T-stat	P-value
Non-formal schools (vs formal schools in Nairobi and surrounds)	0.168	0.892	0.189	0.851
Arid/semi-arid regions (vs formal schools in Nairobi and surrounds)	-0.472	1.129	-0.418	0.676
Age	0.173	0.271	0.639	0.523
Girl has disability	-0.827	1.042	-0.794	0.427
Girl feels unsafe travelling to school	1.454	1.216	1.196	0.232
Girl does not receive support to stay in school	-1.808	2.267	-0.798	0.425
Girl does not feel safe at school	0.711	2.047	0.347	0.728
Lol is different from mothertongue*	2.757	1.021	2.699	0.007
Girl experienced physical punishment in last week	-1.598	0.669	-2.387	0.017
Girl spends time reading	-0.973	1.115	-0.873	0.383
Girl has access to learning materials	-0.120	0.977	-0.123	0.902
Self-efficacy	-0.019	0.018	-1.020	0.308
Girl receives help with homework	0.509	0.701	0.726	0.468
Single orphan*	0.961	1.023	0.940	0.348
Living without parents*	0.691	1.303	0.531	0.596
Girl speaks English at home*	-0.639	0.678	-0.942	0.347
Household head has no education*	-0.421	1.258	-0.334	0.738
High chore burden*	-0.298	0.725	-0.411	0.681

Variables	Coefficient	Std err	T-stat	P-value
Involvement in labour activities*	0.468	0.811	0.577	0.564
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.008	0.018	-0.417	0.677
Age of household head	-0.050	0.030	-1.631	0.104
PTR over 40	0.123	0.731	0.168	0.867
School has no female teachers	0.012	2.037	0.006	0.995
% of unqualified teachers	1.276	2.908	0.439	0.661
Girl attends remedial classes	2.902	0.617	4.707	0.000
Girl is a girls' club member	-0.383	0.628	-0.609	0.542
Girl watched a video in class this year	0.403	0.608	0.662	0.508
% of trained maths and English teachers	2.111	1.020	2.070	0.039
<i>constant</i>	5.507	3.873	1.422	0.156
<i>R</i> ² = 0.070				

Note: (1) The dependent variable is the change in literacy outcome between baseline and midline with positive values indicating higher rates of improvement. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

Table 60. Model predicting change in numeracy outcomes - Kenya

Variables	Coefficient	Std err	T-stat	P-value
Non-formal schools (vs formal schools in Nairobi and surrounds)	0.008	1.058	0.007	0.994
Arid/semi-arid regions (vs formal schools in Nairobi and surrounds)	-0.244	1.334	-0.183	0.855
Age	0.032	0.371	0.086	0.931
Girl has disability	-2.565	1.317	-1.947	0.052
Girl feels unsafe travelling to school	0.343	1.841	0.186	0.852
Girl does not receive support to stay in school	-3.962	2.629	-1.507	0.132
Girl does not feel safe at school	-2.026	3.306	-0.613	0.540

Variables	Coefficient	Std err	T-stat	P-value
Lol is different from mothertongue*	-1.686	1.720	-0.980	0.328
Girl experienced physical punishment in last week	1.109	0.895	1.240	0.216
Girl spends time reading	0.795	1.206	0.659	0.510
Girl has access to learning materials	-0.680	1.249	-0.544	0.587
Self-efficacy	-0.004	0.024	-0.152	0.879
Girl receives help with homework	0.821	0.858	0.957	0.339
Single orphan*	1.694	1.369	1.237	0.217
Living without parents*	2.040	1.617	1.262	0.208
Girl speaks English at home*	-1.351	0.820	-1.648	0.100
Household head has no education*	0.001	1.516	0.000	1.000
High chore burden*	-0.082	1.034	-0.079	0.937
Involvement in labour activities*	-0.800	1.049	-0.762	0.446
Likelihood of living in extreme poverty (\$1.90 PPI)*	0.022	0.021	1.046	0.296
Age of household head	-0.015	0.037	-0.402	0.688
PTR over 40	0.445	0.925	0.482	0.630
School has no female teachers	2.236	4.084	0.547	0.584
% of unqualified teachers	1.123	4.541	0.247	0.805
Girl attends remedial classes	-0.515	0.735	-0.701	0.484
Girl is a girls' club member	-0.547	0.811	-0.675	0.500
Girl watched a video in class this year	1.006	0.737	1.366	0.172
% of trained maths and English teachers	1.933	1.201	1.610	0.108
<i>constant</i>	10.536	5.487	1.920	0.055
<i>R² = 0.054</i>				

Note: (1) The dependent variable is the change in numeracy outcome between baseline and midline with positive values indicating higher rates of improvement. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

Table 61. Model predicting change in literacy outcomes - Nigeria

Variables	Coefficient	Std err	T-stat	P-value
Rural location	0.662	0.836	0.792	0.428
Islamiyya school	-0.159	0.555	-0.287	0.774
Age	0.395	0.173	2.279	0.023
Girl has disability	6.592	2.804	2.351	0.019
Girl feels unsafe travelling to school	0.971	0.993	0.978	0.328
Girl does not receive support to stay in school	-0.680	0.876	-0.777	0.438
Girl does not feel safe at school	-0.919	2.062	-0.446	0.656
Lol is different from mothertongue*	0.793	0.832	0.953	0.341
Girl experienced physical punishment in last week	-0.778	0.608	-1.279	0.201
Girl spends time reading	1.341	0.522	2.569	0.010
Girl has access to learning materials	-0.858	0.659	-1.303	0.193
Self-efficacy	0.070	0.017	4.190	0.000
Girl receives help with homework	0.073	0.790	0.092	0.927
Single orphan*	0.084	0.854	0.098	0.922
Living without parents*	-0.106	1.245	-0.085	0.932
Girl speaks English at home*	6.697	5.366	1.248	0.212
Household head has no education*	-0.894	0.545	-1.640	0.102
High chore burden*	-0.424	0.505	-0.839	0.402
Involvement in labour activities*	-1.173	0.686	-1.711	0.088
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.057	0.014	-4.075	0.000
Age of household head	0.062	0.025	2.494	0.013

Variables	Coefficient	Std err	T-stat	P-value
PTR over 40	0.160	0.667	0.240	0.810
School has no female teachers	-3.242	0.669	-4.849	0.000
% of unqualified teachers	-2.953	1.898	-1.556	0.120
School has only basic infrastructure	-0.096	0.610	-0.158	0.874
Girl attends remedial classes	0.704	0.626	1.125	0.261
Girl is a girls' club member	0.618	0.559	1.106	0.269
Girl watched a video in class this year	0.639	0.574	1.113	0.266
% of trained maths and English teachers	4.065	0.821	4.950	0.000
<i>constant</i>	-8.884	3.044	-2.919	0.004
$R^2 = 0.2263$				

Note: (1) The dependent variable is the change in literacy outcome between baseline and midline with positive values indicating higher rates of improvement. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

Table 62. Model predicting change in numeracy outcomes - Nigeria

Variables	Coefficient	Std err	T-stat	P-value
Rural location	4.781	1.541	3.103	0.002
Islamiyya school	1.056	1.196	0.882	0.378
Age	-0.901	0.375	-2.399	0.017
Girl has disability	-4.354	4.949	-0.880	0.379
Girl feels unsafe travelling to school	2.002	2.137	0.937	0.349
Girl does not receive support to stay in school	-4.988	1.708	-2.920	0.004
Girl does not feel safe at school	0.775	4.419	0.175	0.861
Lol is different from mothertongue*	3.124	1.499	2.084	0.038
Girl experienced physical punishment in last week	0.112	1.333	0.084	0.933
Girl spends time reading	2.254	1.082	2.082	0.038

Variables	Coefficient	Std err	T-stat	P-value
Girl has access to learning materials	0.300	1.296	0.231	0.817
Self-efficacy	0.052	0.037	1.382	0.167
Girl receives help with homework	1.236	1.341	0.922	0.357
Single orphan*	-0.492	1.769	-0.278	0.781
Living without parents*	-3.126	1.673	-1.868	0.062
Girl speaks English at home*	-8.299	4.558	-1.821	0.069
Household head has no education*	-1.926	1.133	-1.699	0.090
High chore burden*	-2.241	1.050	-2.135	0.033
Involvement in labour activities*	0.830	1.246	0.666	0.506
Likelihood of living in extreme poverty (\$1.90 PPI)*	0.014	0.030	0.459	0.647
Age of household head	0.011	0.044	0.250	0.803
PTR over 40	0.513	1.204	0.426	0.670
School has no female teachers	-2.085	1.634	-1.277	0.202
% of unqualified teachers	-0.601	2.985	-0.201	0.841
School has only basic infrastructure	2.024	1.533	1.321	0.187
Girl attends remedial classes	2.895	1.137	2.547	0.011
Girl is a girls' club member	-2.309	1.172	-1.970	0.049
Girl watched a video in class this year	1.837	1.146	1.602	0.110
% of trained maths and English teachers	5.343	2.507	2.131	0.033
<i>constant</i>	11.499	6.081	1.891	0.059
$R^2 = 0.1100$				

Note: (1) The dependent variable is the change in numeracy outcome between baseline and midline with positive values indicating higher rates of improvement. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

18.2 Regression models predicting learning achievement

The tables below present the regression models predicting learning achievement in literacy and numeracy at midline in the three countries. These models are referenced in section '3.1.5 Subgroup analysis of learning outcomes' of the DP-2 midline report.

Table 63. Model predicting literacy achievement at midline - Ghana

Variables	Coefficient	Std err	T-stat	P-value
School status ALP (vs neither)	0.005	0.045	0.114	0.910
School status ALP + MBW (vs neither)	0.056	0.049	1.161	0.246
Age	-0.101	0.035	-2.914	0.004
Girl has disability	-0.109	0.039	-2.775	0.006
Girl feels unsafe travelling to school	0.012	0.041	0.288	0.773
Girl does not receive support to stay in school	-0.009	0.035	-0.272	0.786
Girl does not feel safe at school	-0.067	0.038	-1.760	0.079
Lol is different from mothertongue*	0.003	0.037	0.069	0.945
Girl experienced physical punishment in last week	-0.041	0.040	-1.035	0.301
Girl spends time reading	0.220	0.031	7.076	0.000
Girl has access to learning materials	0.043	0.030	1.422	0.156
Self-efficacy	0.025	0.038	0.652	0.515
Girl receives help with homework	-0.033	0.037	-0.888	0.375
Single orphan*	-0.020	0.034	-0.587	0.558
Living without parents*	0.051	0.040	1.266	0.206
Girl speaks English at home*	0.134	0.041	3.279	0.001
Household head has no education*	-0.108	0.042	-2.553	0.011
High chore burden*	0.024	0.042	0.567	0.571
Involvement in labour activities*	-0.104	0.041	-2.519	0.012

Variables	Coefficient	Std err	T-stat	P-value
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.037	0.039	-0.955	0.340
PTR over 40	0.093	0.049	1.879	0.061
School has no female teachers	-0.118	0.033	-3.529	0.000
% of unqualified teachers	-0.054	0.042	-1.281	0.201
<i>constant</i>	0.056	0.036	1.555	0.121
$R^2 = 0.3714$				

Note: (1) The dependent variable is the literacy score at midline. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used. (3) Model also includes dummies for each district, coefficients not shown.

Table 64. Model predicting numeracy achievement at midline - Ghana

Variables	Coefficient	Std err	T-stat	P-value
School status ALP (vs neither)	0.050	0.049	1.031	0.303
School status ALP + MBW (vs neither)	0.085	0.051	1.671	0.095
Age	-0.097	0.043	-2.256	0.024
Girl has disability	-0.091	0.043	-2.104	0.036
Girl feels unsafe travelling to school	-0.030	0.050	-0.592	0.554
Girl does not receive support to stay in school	0.007	0.040	0.183	0.855
Girl does not feel safe at school	-0.052	0.046	-1.127	0.260
Lol is different from mothertongue*	0.028	0.039	0.721	0.471
Girl experienced physical punishment in last week	0.013	0.043	0.299	0.765
Girl spends time reading	0.203	0.042	4.883	0.000
Girl has access to learning materials	0.066	0.037	1.792	0.074
Self-efficacy	0.057	0.047	1.232	0.218
Girl receives help with homework	-0.040	0.040	-1.000	0.318

Variables	Coefficient	Std err	T-stat	P-value
Single orphan*	0.024	0.027	0.897	0.370
Living without parents*	0.026	0.036	0.734	0.464
Girl speaks English at home*	0.084	0.039	2.168	0.031
Household head has no education*	-0.010	0.040	-0.240	0.810
High chore burden*	0.000	0.044	0.009	0.993
Involvement in labour activities*	-0.127	0.036	-3.520	0.000
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.033	0.046	-0.719	0.473
PTR over 40	-0.062	0.056	-1.104	0.270
School has no female teachers	-0.069	0.042	-1.657	0.098
% of unqualified teachers	-0.031	0.047	-0.670	0.503
<i>constant</i>	0.068	0.039	1.750	0.081
$R^2 = 0.1733$				

Note: (1) The dependent variable is the numeracy score at midline. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used. (3) Model also includes dummies for each district, coefficients not shown.

Table 65. Model predicting literacy achievement at midline - Kenya

Variables	Coefficient	Std err	T-stat	P-value
Non-formal schools (vs formal schools in Nairobi and surrounds)	3.753	1.845	2.034	0.042
Arid/semi-arid regions (vs formal schools in Nairobi and surrounds)	-2.901	2.190	-1.324	0.186
Age	-1.261	0.630	-2.001	0.046
Girl has disability	-6.747	3.026	-2.230	0.026
Girl feels unsafe travelling to school	1.162	2.638	0.440	0.660
Girl does not receive support to stay in school	1.355	5.828	0.232	0.816
Girl does not feel safe at school	3.576	6.964	0.513	0.608

Variables	Coefficient	Std err	T-stat	P-value
Lol is different from mothertongue*	4.116	2.596	1.586	0.113
Girl experienced physical punishment in last week	-6.271	1.792	-3.499	0.001
Girl spends time reading	1.977	2.234	0.885	0.377
Girl has access to learning materials	-1.636	2.338	-0.700	0.484
Self-efficacy	0.007	0.043	0.162	0.871
Girl receives help with homework	-0.492	1.337	-0.368	0.713
Single orphan*	-0.220	1.999	-0.110	0.912
Living without parents*	0.705	2.426	0.291	0.771
Girl speaks English at home*	2.047	1.322	1.549	0.122
Household head has no education*	-5.925	2.821	-2.101	0.036
High chore burden*	-1.691	1.925	-0.879	0.380
Involvement in labour activities*	-2.062	1.918	-1.075	0.283
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.091	0.041	-2.212	0.027
Age of household head	-0.044	0.072	-0.607	0.544
PTR over 40	-1.496	1.475	-1.014	0.311
School has no female teachers	-10.109	6.162	-1.640	0.101
% of unqualified teachers	-16.396	7.382	-2.221	0.027
<i>constant</i>	81.525	9.531	8.554	0.000
$R^2 = 0.2924$				

Note: (1) The dependent variable is the literacy score at midline. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

Table 66. Model predicting numeracy achievement at midline - Kenya

Variables	Coefficient	Std err	T-stat	P-value
Non-formal schools (vs formal schools in Nairobi and surrounds)	3.152	1.931	1.632	0.103
Arid/semi-arid regions (vs formal schools in Nairobi and surrounds)	-1.071	2.321	-0.461	0.645
Age	-0.060	0.613	-0.099	0.921
Girl has disability	-6.147	2.419	-2.541	0.011
Girl feels unsafe travelling to school	-4.012	2.728	-1.471	0.142
Girl does not receive support to stay in school	-1.974	4.908	-0.402	0.688
Girl does not feel safe at school	5.912	4.083	1.448	0.148
Lol is different from mothertongue*	3.256	2.156	1.510	0.132
Girl experienced physical punishment in last week	-0.572	1.671	-0.342	0.732
Girl spends time reading	2.034	2.294	0.887	0.376
Girl has access to learning materials	2.324	2.065	1.125	0.261
Self-efficacy	0.031	0.039	0.801	0.423
Girl receives help with homework	2.125	1.359	1.564	0.118
Single orphan*	-0.053	2.087	-0.025	0.980
Living without parents*	-1.058	2.423	-0.437	0.662
Girl speaks English at home*	2.561	1.381	1.854	0.064
Household head has no education*	-3.295	2.909	-1.133	0.258
High chore burden*	2.527	1.626	1.554	0.121
Involvement in labour activities*	-3.421	1.864	-1.835	0.067
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.075	0.039	-1.902	0.058
Age of household head	0.055	0.069	0.797	0.426

Variables	Coefficient	Std err	T-stat	P-value
PTR over 40	0.843	1.514	0.557	0.578
School has no female teachers	-2.994	5.446	-0.550	0.583
% of unqualified teachers	-22.959	7.267	-3.159	0.002
<i>constant</i>	50.329	8.654	5.815	0.000
$R^2 = 0.1684$				

Note: (1) The dependent variable is the numeracy score at midline. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

Table 67. Model predicting literacy achievement at midline - Nigeria

Variables	Coefficient	Std err	T-stat	P-value
Rural location	-0.598	1.118	-0.535	0.593
Islamiyya school	-1.913	0.756	-2.531	0.012
Age	0.952	0.216	4.414	0.000
Girl has disability	11.320	7.591	1.491	0.136
Girl feels unsafe travelling to school	0.356	1.347	0.264	0.792
Girl does not receive support to stay in school	-1.175	1.207	-0.974	0.331
Girl does not feel safe at school	-4.775	2.130	-2.242	0.025
Lol is different from mothertongue*	1.232	1.385	0.889	0.374
Girl experienced physical punishment in last week	-1.311	0.853	-1.537	0.125
Girl spends time reading	2.179	0.680	3.204	0.001
Girl has access to learning materials	-0.802	0.834	-0.962	0.337
Self-efficacy	0.104	0.021	4.923	0.000
Girl receives help with homework	1.279	0.853	1.500	0.134
Single orphan*	-0.178	1.175	-0.151	0.880
Living without parents*	0.538	2.061	0.261	0.794

Variables	Coefficient	Std err	T-stat	P-value
Girl speaks English at home*	10.506	2.481	4.235	0.000
Household head has no education*	-1.345	0.711	-1.891	0.059
High chore burden*	-1.082	0.677	-1.600	0.110
Involvement in labour activities*	-1.267	0.969	-1.307	0.192
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.097	0.019	-5.096	0.000
Age of household head	0.086	0.033	2.638	0.009
PTR over 40	-1.551	0.889	-1.745	0.081
School has no female teachers	-2.599	0.774	-3.355	0.001
% of unqualified teachers	-5.903	2.463	-2.396	0.017
School has only basic infrastructure	-0.443	0.686	-0.645	0.519
<i>constant</i>	-9.844	3.611	-2.726	0.007
$R^2 = 0.2828$				

Note: (1) The dependent variable is the literacy score at midline. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

Table 68. Model predicting numeracy achievement at midline - Nigeria

Variables	Coefficient	Std err	T-stat	P-value
Rural location	-2.565	2.485	-1.032	0.302
Islamiyya school	-1.836	1.784	-1.029	0.304
Age	2.606	0.525	4.961	0.000
Girl has disability	5.276	8.478	0.622	0.534
Girl feels unsafe travelling to school	-2.628	3.264	-0.805	0.421
Girl does not receive support to stay in school	-7.208	3.594	-2.005	0.045
Girl does not feel safe at school	-5.972	4.723	-1.264	0.206
Lol is different from mothertongue*	3.746	2.479	1.511	0.131

Variables	Coefficient	Std err	T-stat	P-value
Girl experienced physical punishment in last week	-1.734	2.073	-0.836	0.403
Girl spends time reading	6.720	1.738	3.867	0.000
Girl has access to learning materials	2.518	1.902	1.324	0.186
Self-efficacy	0.271	0.057	4.743	0.000
Girl receives help with homework	5.486	2.286	2.400	0.017
Single orphan*	3.821	2.706	1.412	0.158
Living without parents*	-6.237	3.741	-1.667	0.096
Girl speaks English at home*	-1.827	3.790	-0.482	0.630
Household head has no education*	-5.175	1.827	-2.833	0.005
High chore burden*	-0.820	1.731	-0.473	0.636
Involvement in labour activities*	-3.681	1.966	-1.872	0.062
Likelihood of living in extreme poverty (\$1.90 PPI)*	-0.074	0.053	-1.392	0.164
Age of household head	0.180	0.072	2.491	0.013
PTR over 40	-4.102	2.128	-1.927	0.054
School has no female teachers	-9.598	2.480	-3.870	0.000
% of unqualified teachers	-6.864	6.928	-0.991	0.322
School has only basic infrastructure	-1.056	2.249	-0.470	0.639
<i>constant</i>	-8.288	8.773	-0.945	0.345
$R^2 = 0.3322$				

Note: (1) The dependent variable is the numeracy score at midline. (2) Variables with a * are lagged variables, meaning the baseline value of the variable is used. For other variables, the midline value of the variable is used.

18.3 Impact results on self-efficacy outcome for CAMFED supported Ghanaian schools

Table 67 presents the impact of DP-2 on self-efficacy for the sub-set of schools in Ghana in which CAMFED is supporting DP-2.

Table 69 Impact of DP-2 on self-efficacy (CAMFED supported schools)

Baseline self-efficacy score treatment	Midline self-efficacy score treatment	Difference baseline to midline treatment	Baseline self-efficacy score control	Midline self-efficacy score control	Difference baseline to midline control	DID (treatment-control difference)
Ghana: CAMFED schools						
65.5	66.9	1.7*	67.2	65.5	-1.7*	3.6*
Ghana CAMFED schools & girls' club						
65.2	67.3	2.1**	67.9	66.0	-1.94*	4.7*

Source: DP-2 girl surveys (2018; 2019)

Note: Asterisks indicate where means differ significantly from one another at the following levels: *** $p < .01$, ** $p < .05$, * $p < .1$.

Annex 19. Key results by sampling strata in Kenya

The tables in this annex present the impact of DP-2 on the key outcome and intermediate outcome indicators for the three sampling strata in Kenya: for formal schools in Nairobi and the surrounding counties (Kiambu and Machakos), for non-formal schools in Nairobi, and for formal schools in the arid and semi-arid regions (Kajiado and Wajir).

In addition, tables present findings for Wajir county only. The impact analysis was conducted specifically for Wajir because the findings from the qualitative research and process evaluation suggest that Wajir presents a context for implementation that may be different to Kajiado. This was also supported by DLA's own monitoring data. Results reported for Wajir should be treated with caution. The original sample design was not intended to provide adequate sample power for the Wajir sample by itself. Following the application of matching via the CEM approach, there is a sample of 314 matched girls that was used for analysis.

Table 70. Impact of DP-2 on self-efficacy scores in Kenya, by sampling strata and in Wajir

Cohort	Baseline self-efficacy treatment	Midline self-efficacy treatment	Difference baseline to midline treatment	Baseline self-efficacy control	Midline self-efficacy control	Difference baseline to midline control	DID (treatment – control difference)
Kenya – formal schools in Nairobi and surrounding counties							
Grade 5	61.6	64.0	1.6	59.7	64.7	6.3***	-3.1
Kenya – non-formal schools							
Grade 5	60.9	63.9	2.8*	61.3	66.9	5.3***	-2.9
Kenya – arid and semi-arid regions							
Grade 5	61.1	63.7	2.4	63.6	63.1	-0.2	1.9
Kenya – Wajir only							
Grade 5	59.9	65.2	7.1***	67.2	63.3	-8.6	11.1**

Table 71. Impact of DP-2 on attendance in Kenya, by sampling strata and in Wajir

Cohort	Baseline attendance treatment	Midline attendance treatment	Difference baseline to midline treatment	Baseline attendance control	Midline attendance control	Difference baseline to midline control	DID (treatment – control difference)
Kenya – formal schools in Nairobi and surrounding counties							
Grade 5	96.9	97.0	1.1***	96.7	96.7	0.4	0.3
Kenya – non-formal schools							
Grade 5	95.4	96.1	0.8	95.4	96.4	0.9	-0.5
Kenya – arid and semi-arid regions							
Grade 5	95.7	95.9	0.4	96.3	97.3	1.3	-0.6
Kenya – Wajir only							
Grade 5	95.8	95.8	0	97.8	96.3	-1.7	0.6

Table 72. Impact of DP-2 on life skills in Kenya, by sampling strata and in Wajir

Cohort	Baseline life skills treatment	Midline life skills treatment	Difference baseline to midline treatment	Baseline life skills control	Midline life skills control	Difference baseline to midline control	DID (treatment – control difference)
Kenya – formal schools in Nairobi and surrounding counties							
Grade 5	83.7	85.0	1.3	83.5	84.7	0.9	-0.2
Kenya – non-formal schools							
Grade 5	81.8	84.3	2.2**	83.8	85.0	1.3	0.9
Kenya – arid and semi-arid regions							
Grade 5	82.7	82.0	-1.4	84.5	80.1	-2.6*	2.4
Kenya – Wajir only							
Grade 5	81.0	81.6	0.04	83.2	78.3	-5.3**	5.5**