Project Evaluation Report

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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.

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Discovery Project 2 (DP-2): Endline Evaluation Report

Oxford Policy Management

Final Report

November 2020

Oxford Policy Management

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Executive summary

Oxford Policy Management (OPM) has been contracted by Impact(Ed) to undertake an impact evaluation of its Discovery Project 2 (DP-2) project. This report presents the findings of the endline evaluation of DP-2, which was carried out between February 2020 and September 2020, and reflects on findings gathered throughout the evaluation.

The DP-2 project

The DP-2 project (July 2017–November 2020) has been implemented by Impact(Ed) in northern Ghana (Northern Region), northern Nigeria (Kano State), and Kenya (Kajiado, Kiambu, Machakos, Nairobi, and Wajir counties). The project aims to increase girls' learning outcomes in numeracy and English literacy, their self-esteem and self-efficacy, and their successful completion of the primary cycle and transition into junior secondary school. DP-2 is funded by the UK Foreign, Commonwealth and Development Office (FCDO) through its Girls' Education Challenge (GEC) fund, with match funding from Impact(Ed). The Fund Manager (FM) of the GEC fund is a consortium led by PwC UK. DP-2 is a follow-on from the first phase of the project (DP-1), with changes in design compared to the first phase.

DP-2 involves the following core activities.

- DP-2 provides **sustainable technology, educational content, and teacher professional development (TPD) to primary schools**. Unlike in DP-1, TPD during DP-2 focuses on literacy and numeracy, while reinforcing child-centred, gender equality and social inclusion (GESI)-responsive approaches (targeted during DP-1) that contribute to safe, inclusive classrooms and develop children's critical thinking, creativity, collaboration, and communications skills.
- During DP-2, sustainable technology, educational content, and TPD to improve the quality and gender-inclusiveness of education for girls are **extended to the junior secondary level** in Ghana and Nigeria.
- As agreed, coming out of the design review in the start-up phase, DP-2 delivers an **accelerated learning programme (ALP) through supporting small-size remedial classes** for mid-to-upper primary school children who are performing well below grade level in English and mathematics.
- DP-2 invests in **vibrant girls' and boys' clubs** with a print and visual life skills curriculum and training, and support for club mentors. As part of DP-2, Impact(Ed), in collaboration with Campaign for Female Education (CAMFED), has created a new multi-media life skills series, called **My Better World (MBW)**, to develop a range of practical knowledge and real-world skills for clubs, schools, and communities.
- DP-2 **engages school and community leaders and supports them to address persistent barriers to girls' attendance, learning, and transition**, including through working closely with school governance bodies in their leadership roles, and focusing communities on the most relevant barriers in the context.

Theory of Change

Girls in all three countries face barriers to learning and transition, especially as they reach adolescence towards the end of the primary cycle and look to transition to and through junior secondary school. **DP-2's Theory of Change (TOC) considers that the activities listed above holistically address key barriers to girls' foundational learning and continuing education**, thereby leading to improvements in learning outcomes and self-efficacy, and improved rates of transition.

DP-2 targets the following outcomes and intermediate outcomes:

- final outcomes: improvements in learning outcomes (literacy, numeracy, self-efficacy), increased rates of successful transition, sustainability of project activities;
- intermediate outcomes: attendance, teaching quality, life skills, and community attitudes and perceptions.

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

1. TPD and educational media for regular teaching and for additional remedial lessons lead to improved teaching quality, which in turn leads to better school attendance, better learning outcomes, and higher transition rates.
2. Girls' clubs, with MBW content, improve girls' life skills and self-efficacy, which in turn lead to better school attendance, better learning outcomes, and higher transition rates.
3. Joint school leadership and community involvement in community action planning (CAP) to identify and address barriers to girls' learning and transition leads to changed attitudes and perceptions on the part of community members, and to concrete actions in support of girls' education. These in turn lead to better school attendance, better learning outcomes, and higher transition rates.
4. Remedial lessons for students who are falling behind lead to improved learning outcomes for those students, a narrower gap in learning outcomes between these students and others, and higher transition rates among these students.

It is worth mentioning that although these assumptions are presented as a linear process, the pathways are affected by a range of factors that hinder or promote the results assumed. Analysis of the existing literature presented in the DP-2 Baseline Report shows that the TOC is plausible in the sense that it is supported by prior evidence, suggesting that the activities, if implemented, will lead to the desired results (with a few exceptions that are supported only by weak evidence).

The onset of the COVID-19 pandemic is an exceptional and unforeseen event that inevitably changes the context of implementation completely, given the prolonged school closures. The evaluation predominantly focuses on DP-2 implementation prior to COVID-19 and evaluates findings against the TOC with the original project design. However, data collection was largely conducted after the COVID-19 outbreak and respondents' attitudes, perceptions, and behaviour regarding project outcomes will therefore have been affected by COVID-19.

Evaluation methods

Evaluation design

The impact evaluation is a theory-based, mixed-methods, quasi-experimental evaluation with a complimentary quantitative and qualitative design.

- **Quantitative impact evaluation design:** We use a quasi-experimental impact evaluation design known as coarsened exact matching with difference-in-difference estimation. The quantitative impact evaluation is designed to provide robust estimates of the impact that DP-2 has achieved.
- **Qualitative impact evaluation design:** The purpose of the qualitative evaluation is to clarify 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.

The theory-based design means that we use the project's TOC as the foundation of the evaluation, and aim to unpick the linkages between project activities, outputs, intermediate

outcomes, and final outcomes to the extent that this is possible, given the project's design and resource constraints. The evaluation includes data collection over three rounds: a baseline in 2018, a midline in 2019, and an endline in 2020.

Changes to the design at endline due to COVID-19

At endline, due to the COVID-19 pandemic and the resulting school closures and physical distancing measures, it was not possible to conduct school visits and face-to-face research. Given that DP-2 ends in November 2020 and the endline evaluation had to be completed within this timeframe, **the scope of the endline evaluation was revised, and limited to information that could be collected through remote data collection and the analysis of project monitoring data**. To redesign the endline evaluation, a new research scope was defined in consultation with Impact(Ed) and the FM.

Table 12 shows a summary of the key evaluation questions at endline, and whether we can report on DP-2's impact on the outcome or intermediate outcome at endline. We continue to report on the impact of DP-2 on self-efficacy and transition in line with the original evaluation design.[1] For literacy and numeracy, teaching quality, life skills, and community attitudes and perceptions, we do not have quantitative measures of impact available at endline, and instead report on qualitative perceptions of the effectiveness of these components. Attendance is not measured at endline because attendance records were not available, and a purely qualitative assessment of attendance was not a priority for the evaluation, given the high attendance rates observed at midline.

Table 1: Key evaluation questions

Outcome / intermediate outcome	Research question	Can we report on impact on the outcome / intermediate outcome?
Learning (literacy, numeracy)	What progress have girls made in their learning in the last year, prior to the COVID-19 outbreak, including girls taking part in remedial lessons?	Learning assessments could not be conducted at endline, so the endline evaluation does not report on impact on learning outcomes, only on perceptions of progress.
	Were activities related to the ALP component implemented as expected and to scale?	
	How has learning been disrupted by COVID-19?	
Self-efficacy and life skills	What is the impact of DP-2 on self-efficacy? What are changes in girls' attitudes to schooling and behaviour as well as their life skills as result of them attending girls' clubs (and especially because of the MBW content)?	The endline evaluation reports only on the quantitative impact on self-efficacy. The life skills index was not administered at endline due to the shorter nature of the phone interview.
	Have girls' clubs and MBW activities been implemented as expected and at scale?	
Transition	What is the impact of DP-2 on transition?	No change[2]
	Will the COVID-19 pandemic change the transition status of girls who had transitioned successfully?	
Teaching quality	What DP-2 teacher training and support activities did teachers find most useful and why?	Lesson observations could not be conducted at endline, so the endline evaluation does not report on impact on teaching quality, only on perceptions of what teachers have found most useful about the DP-2 TPD component.
	Were activities designed to improve teaching quality implemented as expected and to scale?	

[1] However, there are some differences in the quantitative impact estimation approach used at endline; these are described in Annex 1. There are also limitations to the breadth and depth of the qualitative assessment of these indicators.

[2] However, at midline, both school records and self-reports were used to establish girls' transition status. At endline, school records were not available, and we relied only on self-reports.

Outcome / intermediate outcome	Research question	Can we report on impact on the outcome / intermediate outcome?
Community attitudes and perceptions	What has been the impact of DP-2 on community members' attitudes towards girls' education?	This intermediate outcome was predominantly assessed qualitatively in the original design. The logframe included a quantitative assessment of the *percentage of girls who aspire to complete secondary or higher education (provided no constraints)*. Given the ongoing COVID-19 situation, the data on this indicator is unlikely to be comparable to midline findings as it would be difficult (and unrealistic) for girls to imagine a situation where COVID-19 does not pose a potential constraint to their education.
	Have CAP activities been implemented as expected and to scale?	
Sustainability	Community level: Have a critical mass of communities, through CAP, demonstrated the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education?	Sustainability is assessed against the sustainability scorecard (see Annex 1), as in previous rounds of the evaluation, but the assessment is not based on as rich a set of evidence as originally intended.
	School level: Have a critical mass of schools established girls' clubs which are self-sustained and functioning on a regular basis using the MBW content?	
	School level: Do a critical mass of schools demonstrate the implementation of effective DP-2 teacher training and effective ALP?	
	School level: Do a critical mass of schools demonstrate the continuous use of educational media, and have they developed and enacted plans to sustain the active use of educational media?	
	System level: Does the Ministry of Education (MOE) have fully fledged education plans furthering project-related teacher development and school support? Are these plans fully funded?	

Sources of data at endline

The evaluation drew on the following sources of data at endline:

- quantitative data collected through phone interviews in all three countries;
- qualitative data collected through phone interviews in all three countries;
- qualitative data collected through face-to-face interviews in Nigeria; and
- monitoring data from all three countries.

In-person qualitative data collection in Nigeria was completed in line with the original evaluation design prior to COVID-19. Shorter follow-up interviews with the same respondents were conducted over the phone to answer research questions; these included a focus on COVID-19, and how the pandemic has changed respondents' perceptions around learning, self-efficacy, and transition. Quantitative data collection in Nigeria, and all data collection in Ghana and Kenya, was conducted remotely through phone interviews.

Limitations to the evaluation design at endline

The following key limitations should be kept in mind when interpreting the results from the endline evaluation:

- **Attributing impact:** The changes in the evaluation design as a result of COVID-19 mean that we do not have robust quantitative measures of impact on several of the project's outcomes (literacy and numeracy) and intermediate outcomes (attendance, teaching quality, life skills) at endline. This limits the extent to which the evaluation can provide robust mixed-methods evidence on the impact that DP-2 has had on these outcomes, and means that the impact on these outcomes cannot be quantified. It also means that the breadth of evidence that is available for making judgements about the sustainability of the project and the validity of the TOC is more limited.
- **Perceptions of effectiveness come from a small number of high-performing schools:** The sampling strategy for the qualitative research from baseline was to select high-performing schools. The reason for this was that these schools are particularly likely to be responsive to the intervention. Sampling schools where there is a higher likelihood of change allows us to explore the mechanism of these changes in greater detail. This was a strength of the evaluation approach when combined with robust quantitative impact data collected across a representative sample of schools. However, at endline, greater emphasis is placed on qualitative perceptions of effectiveness, in some cases in the absence of quantitative data. It therefore needs to be kept in mind that the qualitative analysis reflects whether and how stakeholders perceive that DP-2 activities can contribute to changes in outcomes in contexts where these activities are likely to be well implemented, and where schools and communities are likely to be responsive to change.
- **Implications of COVID-19:** Schools closed as a result of COVID-19 in mid-March 2020 in all three countries. This means that cohort girls at endline had approximately two to three months less exposure to the DP-2 activities than was originally expected. This means that it is possible that the potential effects of DP-2 activities could have been wearing off during this period, particularly because girls may not have as many opportunities to put skills related to learning and self-efficacy to use during this period. Instead, girls may have been affected by the pandemic. Their learning will have been severely disrupted, and some girls may be experiencing increased levels of anxiety and stress. This may have affected how girls feel about their learning and self-efficacy.

Sampling strategy and exposure of cohort girls to DP-2 activities

At baseline, girls were randomly sampled for the quantitative survey from among all girls from Primary 5 who were present on the day of the visit in treatment and control schools. At endline, our analysis is based on the panel of girls who could be successfully surveyed in all three rounds of the evaluation.

DP-2 delivers a more intensive intervention package in primary schools. Girls in all three countries were exposed to this intervention package between baseline (May/June 2018) and midline (May/June 2019). In Ghana and Nigeria, most of these girls transitioned to junior secondary schools in September 2019. Since DP-2 delivers a lighter touch package in these schools, most girls in Ghana and Nigeria did not have exposure to interventions such as the remedial lessons and the girls' clubs with MBW content for most of the period between midline and endline. In Kenya, girls remained in primary school after the midline evaluation and continued to be exposed to the full set of DP-2 activities.

Barriers to learning and transition

Our analysis shows that poverty is the key driver of educational marginalisation. It affects girls' attendance at school, their ability to fully participate in lessons and in extracurricular activities, and their ability to concentrate during their lessons. In addition, **poor school infrastructure and the lack of qualified teachers and female teachers pose barriers to learning** most strongly in Nigeria, but also in Ghana and to a lesser extent in Kenya. DP-2's CAP process aims to tackle some of these barriers by asking communities to identify the specific local barriers and develop solutions to them. However, communities are

of course themselves financially constrained and therefore cannot tackle all barriers related to structural poverty and persistent barriers within the educational system.

In some cases, contextual factors may pose specific direct barriers to girls taking up or participating in specific DP-2 activities. In particular, concerns about distance and safe travel to school, as well as the need for girls to carry out household chores and support their household economically, mean that parents may be reluctant to let girls take part in activities that take place outside of the regular school timetable.

Learning outcomes

What progress have girls made in their learning (literacy and numeracy)?

At midline, DP-2 had made a large, positive impact on literacy and numeracy outcomes in Nigeria. No evidence was found that DP-2 had made an impact on learning outcomes in Ghana and Kenya at midline (with the exception of Wajir, where we found evidence of a positive impact of DP-2 on numeracy outcomes at midline). Improvements in learning outcomes may be slow to emerge, because they are expected to be, in part, a result of improvements across various intermediate outcome indicators, such as teaching quality, attendance, self-efficacy, and support from girls' families and communities.

Findings from the qualitative research at endline show that DP-2 is changing perceptions towards learning positively in all countries. Girls felt that they are learning better, interacting more with their teachers and with each other, and feeling more confident to participate in class. Head teachers and teachers reported observing improvements in students' learning when teachers use strategies from the training in their lessons. However, given that we could not directly measure learning outcomes through learning assessments at endline, we are unable to report on whether the impact on learning outcomes in Nigeria observed at midline has been sustained, and whether any impact on learning outcomes in Ghana and Kenya had emerged by endline.

Have remedial lessons contributed to improvements in learning outcomes?

Remedial lessons are perceived positively, and findings from midline and endline suggest that they are addressing foundational literacy and numeracy skills gaps. In Nigeria, there is evidence from midline that participating in remedial lessons contributed to the overall impact that DP-2 had on learning outcomes. The midline evaluation also found some quantitative evidence that participating in remedial lessons was associated with improvements in literacy in Ghana and Kenya. At endline, girls attending remedial lessons in Nigeria have improved substantially in their foundational literacy and numeracy skills over a short period of four months, based on monitoring data (Learner Checks) conducted by the project. In Ghana, reports from information collected by teachers during the remedial lessons suggested that girls attending the second phase of remedial lessons were also showing improvements. Data was not available in Kenya at endline. **The qualitative research at endline finds that girls and RTs across all three countries feel that the remedial lessons are beneficial and are contributing to improved learning.** The smaller class sizes during remedial lessons allow teachers to engage more intensively with each individual student and their specific needs and enable students to participate more actively in lessons than is possible in regular lessons with larger class sizes. With smaller class sizes, RTs can spend more time on teaching compared to classroom management.

Have remedial lessons been implemented as planned?

A first phase of remedial lessons ran from July 2018 until July 2019. In Ghana, the first phase of remedial classes only started in October 2018. There was a delay in rolling out the second phase of remedial lessons while the FM decided whether the project would scale up the component to the rest of the DP-2 primary schools. Ultimately, the decision was taken not to scale up at midline. The second phase of remedial lessons started in late November 2019 in Ghana and Nigeria, and in late January 2020 in Kenya. The second phase of remedial lessons was therefore cut short by COVID-19.

At midline, we found that students who performed more poorly in literacy were selected to participate in the remedial lessons across all countries. For numeracy, students in Nigeria who participated in remedial classes performed more poorly prior to the remedial lessons than other students, but no differences in performance were found in Ghana and Kenya. DP-2 reports that the process for selecting students into remedial classes was more standardised for the second phase of classes that started before the endline evaluation. Findings from the qualitative research at endline confirm that the selection process for the second phase of the remedial lessons was based on a diagnostic test conducted by DP-2 in all countries.

While remedial lessons have been implemented as per design, it has been challenging to integrate remedial lessons fully into the normal functioning of the schools. At midline in Ghana and Nigeria, remedial lessons were usually held outside of regular school hours, which prevented participation of some students. By endline, DP-2 had made efforts to ensure the integration of remedial lessons within the official school schedule (aided, in part, by the extension of the official school day in Ghana). Nevertheless, since remedial lessons usually took place in the afternoon after the morning session, some children were tired and hungry while others missed the lessons to support their parents at home or to attend Islamic classes. In Kenya, remedial lessons take place during periods allocated for extracurricular activities in the timetable, but teachers find it challenging to make time for them, given other competing school activities. Across the three countries, teacher motivation to teach the remedial lessons was low. In Kenya, teachers cannot be paid to deliver remedial lessons, and subsequently lack motivation. In Nigeria, the stipend that teachers were paid for delivering these lessons had been reduced when payments were taken over by the government, which led to reduced motivation to teach these classes at endline. In Ghana, DP-2 continued to pay stipends until the end of project implementation, but respondents indicated that teachers would not be motivated to continue teaching remedial lessons if they no longer receive a stipend.

How has learning been disrupted by COVID-19?

The outbreak of COVID-19 and the subsequent closure of schools and media centres has substantially disrupted education for girls in all three countries. Parents are concerned about girls losing what they have learnt, and therefore engage older siblings or private tutors to teacher their children when they can afford it. Access to educational resources provided by the government is low in Nigeria, Ghana, and in the semi-arid/arid regions in Kenya. In Nairobi and surrounding areas, most girls have access to educational programmes on television, but some parents struggle to afford the subscription. As a response to the COVID-19 pandemic in Kenya and Nigeria, DP-2 provided students with access to English and mathematics courses through the Cell-Ed platform, which students can access through their parents' phones. Engagement with these courses has been very low in Nigeria and low in Kenya. However, it should be noted that this response was rolled out as a quick, low-cost activity that was feasible within the last months of project implementation and engagement was not expected to be very high. In addition, the platform also served an additional purpose of sharing public health and child protection messages along with information on learning opportunities, which have been received by a far greater number of households.

Self-efficacy and life skills

Has DP-2 had an impact on self-efficacy?

Interpreting the evidence produced by this evaluation against self-efficacy, and in particular at endline, should take into account two factors: the specific context in which the endline evaluation was conducted; and differences in what aspects of self-efficacy are measured by the quantitative and qualitative components of the evaluation. With regards to the context there are two key considerations. The first relates to the fact that the majority of cohort girls in Ghana and Nigeria had transitioned to junior secondary school by the time of our endline evaluation, meaning that they had not been

exposed to some interventions related to self-efficacy (in particular girls' clubs and MBW content) for some time. The second relates to the COVID-19 pandemic and acknowledging that respondents had not been in school for a several months, and hence not exposed to DP-2 interventions. In addition, it is reasonable to assume that many girls in our sample had been exposed to a range of additional hardships as a result of the pandemic, including extra anxiety and stress, which may have affected their self-efficacy.

Self-efficacy as a concept is not something that lends itself easily to being measured by a single indicator. As such, we use both quantitative and qualitative approaches to the measurement of self-efficacy, and it is the combination and triangulation of these findings that is used to track progress against this outcome throughout the evaluation. The quantitative measure is based on the Generalised Self-Efficacy (GSE) psychometric scale that records responses against a fixed set of statements that can be summarised as relating to whether a respondent feels that they can accomplish their goals or overcome problems that they are faced with. On the other hand, the very nature of qualitative research allows a broader exploration of self-efficacy as perceived by girls themselves and may uncover aspects of self-efficacy that have improved that are not captured by the GSE psychometric scale.

Table 2 shows the findings from the impact analysis of the impact that DP-2 has had on self-efficacy over the full duration of the project (BL-EL), as well as between baseline and midline (BL-ML) and between midline and endline (ML-EL).

Table 2: Impact of DP-2 on self-efficacy

Baseline		Midline		Endline		DID			Targets		
Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL	BL-EL target^	BL-ML target	ML-EL target^^
Ghana											
63.6	65.5	65.9	63.8	66.3	65.2	3.0	4.0	-1.0	2	1	1
Kenya											
60.3	59.5	63.5	62.6	68.7	70.0	-2.1	0.2	-2.3	2	1	1
Nigeria											
66.6	65.3	73.8	72.2	80.8	81.7	-2.1	0.3	-2.4	2	1	1

Source: DP-2 girl surveys (2018; 2019; 2020)
Notes: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1. ^ The BL-EL target is the sum of the BL-ML target and the ML-EL target. ^^ At midline, DP-2 had not set specific logframe targets for self-efficacy but was expecting an improvement in scores. To allow a full evaluation of performance against targets across the duration of the project, we have assumed here a BL-ML target of the same magnitude as that set for the ML-EL evaluation. Green shows that the logframe target has been met, orange shows that the target has not been met. Care should be taken in the interpretation of the targets given the specific circumstances during which self-efficacy was measured for the endline evaluation.

Overall the quantitative findings suggest that DP-2 has had a positive impact on the self-efficacy of girls in Ghana over the course of its implementation, but that this impact was primarily generated in the first year of implementation[3] when the majority of girls in our evaluation sample were directly involved in girls' clubs. In addition, results from regression analysis find that attending a school that is supported by DP-2's partner, CAMFED, is associated with a greater positive change in self-efficacy between baseline and endline. CAMFED offers additional support to DP-2 supported schools by training Learner Guides to deliver life skills content and to support the delivery of the MBW content in primary schools, and to lead study groups in JHS.

[3] In the DP-2 Midline Report, we reported that DP-2 had a statistically significant impact on girls' self-efficacy in Ghana between baseline and midline. At endline, the findings from the differences-in-differences model presented here are tending towards statistical significance, but do not reach statistical significance. However, in Annex 1, we present alternative model specifications conducted as robustness checks, where the impact estimate is statistically significant. Overall, we consider that there is good evidence that DP-2 has had a positive impact on self-efficacy in Ghana between baseline and midline.

The quantitative results, in Ghana, indicate that DP-2 was not able to generate further impact once girls transitioned to junior secondary schools and stopped attending the girls' clubs, and the impact that DP-2 had when girls were directly exposed to the girls' clubs had started to decline by endline. In Kenya and in Nigeria, we did not detect an impact of DP-2 on girls' self-efficacy at any point in the evaluation. These findings remain similar when we restrict our analysis to girls' club members only. As noted above, the effect of the pandemic may have affected girls' self-efficacy[4], and it is therefore possible that this contributed to the dilution of programme impact in Ghana and to the lack of impact observed in Nigeria and Kenya.

Qualitative findings have reported a steady increase in self-efficacy based on a broader sense of self-efficacy as defined by girls themselves from baseline to endline. These improvements are shown in girls being more active in the classroom, being more aware of their environment, being more assertive with their parents, and building stronger relationships with their siblings and friends. As explained in the next section, the qualitative research finds that engagement in girls' clubs and MBW content was clearly linked to the reported improvements in self-efficacy.

Have girls' clubs and MBW content contributed to improvements in self-efficacy?

Between midline and endline, qualitative findings indicate a strong link between participating in the girls' club and watching MBW videos to an increase in self-efficacy. This finding is based on girls' perceptions of increased confidence, examples of being able to negotiate for themselves and communicate their goals and desires clearly and effectively with the research team as well as their parents and teachers, and setting short and long-term goals for themselves. In addition, girls across all three countries are able to articulate how the find the MBW content relatable to their own experience and how this relatability has supported them to understand new ideas or encourage them to explore their own biases about gender further. These views were corroborated by parent, club mentor and teacher interviews at endline, which increase our confidence in the findings.

Other factors that may have influenced this perception of improving self-efficacy include girls growing older and being tasked with greater responsibility at home. Parents' reactions to their child's achievement – their praise, motivation and validation were reported by girls as a crucial contribution to their pride and self-esteem. Girls say that when they received kind words from parents, friends, and relatives, they felt loved and cared for, such as when parents had bought gifts for them during festive periods or provided a change of uniform or school supplies.

Constraints in the endline evaluation mean that we are limited in our ability to explain the discrepancy between the quantitative and qualitative findings on girls' self-efficacy. One possibility is that self-efficacy is very context-dependent, and while girls recall how girls' clubs and MBW have positively influenced their life in the past, this might not be reflected in quantitative measures of self-efficacy at the present time where COVID-19 has substantially changed many girls' circumstances. **Nonetheless, the evidence suggests that when girls' clubs are functioning, and when girls have watched MBW content and discussed this with their mentors and peers, there appears to be a link between girls' clubs, MBW content, and improvements in self-efficacy.**

Transition

Has DP-2 had an impact on transition?

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. At endline, many girls in Ghana and

[4] For example, a study on Spanish university students found significant negative correlations between stressful events – focussing on the pandemic – and perceptions of academic self-efficacy. See Alemany-Arrebola et. al. (2020) *"Influence of COVID-19 on the perception of academic self-efficacy, state anxiety, and trait anxiety in college students"* Frontiers in Psychology, Vol 11, 2020.

Nigeria transitioned between primary school and junior secondary school, representing an important milestone. In Kenya, girls continued to transition within primary school between midline and endline, with most girls transitioning from Primary 6 to Primary 7.

Table 3 shows the findings from the impact analysis of the impact that DP-2 has had on transition over the full duration of the project (BL-EL), as well as between baseline and midline (BL-ML) and between midline and endline (ML-EL).

Table 3: Impact of DP-2 on transition

Baseline		Midline		Endline		DID			Target		
Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL	BL-EL target^	BL-ML target	ML-EL target
Ghana											
89.9	90.0	94.9	98.0	89.3	91.9	-2.5	-3.0	0.5	1	1	0
Kenya											
88.3	88.3	97.0	95.4	95.9	95.0	1.0	1.6	-0.6	1	1	0
Nigeria											
94.2	94.2	96.8	90.1	78.3	73.4	4.9	6.8*	-1.8	2	1	1

Source: DP-2 household and girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1 ^ The BL-EL target is the sum of the BL-ML target and the ML-EL target. Green shows that the logframe target has been met, orange shows that the target has not been met. Care should be taken in the interpretation of the targets given the specific circumstances during which self-efficacy was measured for the endline evaluation.

The evaluation does not find any evidence that DP-2 has had an impact on transition in Ghana and Kenya at any point in the evaluation. Transition rates in these two countries were very high at the start of the project, and this limited the ability to which DP-2 could reasonably be expected to generate any impact against successful transition. This was reflected in the logframe target between midline and endline, where the target for the project in Ghana and Kenya was to maintain transition rates relative to the control group. This target has therefore been achieved.

In Nigeria, between baseline and endline, DP-2 has led to a five-percentage-point improvement in successful transition over the control group. While this estimate of impact was not statistically significant, the sample may have been underpowered to detect an effect of this size, and it is likely that there is a positive change in transition attributable to DP-2 over the full course of implementation. Between baseline and midline, DP-2 had a significant impact on transition, and this impact was largely sustained between midline and endline.

These findings suggest that DP-2 has had a positive impact on the transition of girls over the course of its implementation in Nigeria, but that this impact was primarily generated in the first year of implementation, when the majority of girls in our evaluation sample were transitioning between grades in primary school. This interpretation is supported by findings from the qualitative research which provide strong links between remedial lessons and improved learning which likely support lower repetition rates. Furthermore, we find evidence of an association between the CAP and transition, with regression analysis finding that where there is particularly high engagement with the CAP process, this is associated positively with transition. On the other hand, at endline, at a moment when the majority of girls were at the stage of transitioning between primary and junior secondary school, we do not find any quantitative evidence that DP-2 is supporting this transition. This suggests that DP-2 has not overcome some of the barriers to transition to junior secondary school. This points to persistent structural barriers to transition to junior secondary school, which our evidence suggests are linked to financial barriers, social norms around early marriage, as well as persistently low levels of learning and high repetition rates in Primary 6.

Will the COVID-19 pandemic change the transition status of girls who had transitioned successfully?

The full effects of the COVID-19 pandemic on the transition status of cohort girls are uncertain. Almost all parents (98%) in all three countries reported that they intend to send their daughters back to school when they re-open. However, parents have raised concerns about the economic realities of the pandemic, and whether they will still be able to afford to send their children to school given that some parents have lost their jobs during the pandemic and many girls in all three countries are engaged economically, either working for pay or supporting their parents to run a family business.

Sustainability

Throughout this evaluation sustainability has been measured on a four-point scale that measures a continuum of sustainability:

1. **Latent** – representing developed knowledge and changes in attitudes in key stakeholders
2. **Emerging** – representing that some stakeholders have begun to change behaviour and put project activities into practice
3. **Becoming established** – representing that a critical mass of stakeholders are driving implementation of project activities with minimal support from DP-2
4. **Established** – representing that changes in attitudes, practices and approaches are institutionalised and are being implemented without support of DP-2

Table 4 provides a summary of sustainability scores for each of the key project activities, across each round of research colour-coded to reflect whether target scores have been achieved. By endline, most sustainability targets had been achieved in both Ghana and Nigeria, whilst the majority of sustainability targets had been missed in Kenya with the exception of girls' clubs. In Nigeria, two project activities achieved the highest level of sustainability, with activities at the community level and the TPD and remedial activities at the school level being rated at an *Established* level of sustainability.

Table 4: Sustainability score summary

Sustainability indicator	Ghana			Kenya			Nigeria		
	BL	ML	EL	BL	ML	EL	BL	ML	EL
Community level	2	2	2	2	1	2	2	3	4
Learning centres	1	2	2	2	2	2	2	2	2
TPD and remedial	1	2	3	2	2	2	2	3	4
Girls' clubs	1	2	3	2	2	3	2	2	2
System level	1	2	3	1	1	2	2	3	3
Overall score	**1**	**2**	**3**	**2**	**2**	**2**	**2**	**3**	**3**
Key									
Met or exceeded target									
Did not meet target									

It should be noted that COVID-19 has had a significant impact on sustainability plans across the three countries, though this has manifested itself in different ways. In Nigeria and Ghana, concerns expressed by both DP-2 staff and government respondents mainly centred around how COVID-19 might affect plans in place to secure funding for the continuation of project activities, specifically given that the economic impact of the pandemic might divert funding away from supporting project activities towards recovery efforts. In all

three countries, but in particular in Ghana and Kenya, the pandemic also interrupted efforts to hand over project activities to governments counterparts, who have been understandably overwhelmed with their own COVID-19 response measures, although DP-2 continued to make efforts to maintain engagement with government counterparts throughout this period.

At the community level, the sustainability of the CAP process has always relied crucially on the success of engaging the head teacher and community. Where this was most successful, in Nigeria, this was based on a consistent engagement with a diverse group of school and community stakeholders, including not only those directly related to a child's education (e.g. teachers and parents), but also prominent or influential community members who could support the mobilisation of resources to respond to barriers identified by the CAP planning. In Kenya and to a smaller degree in Ghana, progress on CAP and community and head teacher ownership of the process has been slow in some schools, which could threaten sustainable CAP practice.

At the school level, the sustainability of project activities is more likely when two factors are present. The first is when the success (in terms of changing outcomes as learning outcomes) is tangible and when the added value of the project activity (as distinct from other projects being implemented) is clearest. This is most clearly demonstrated with the teacher training and ALP in Nigeria and Ghana, where stakeholders at different levels, including those at the school and in government, have reported that they see these activities as making a distinct and important contribution to improved learning outcomes. The second factor relates to this in terms of sustained engagement with government counterparts to both persuade and convince them of the efficacy of the activity, and to support them in thinking about how such activities can be aligned with ongoing government programming. Efforts in this regard have been consistent in Nigeria since baseline, where a systematic approach to government engagement has been in place for the full cycle of DP-2 implementation. Ghana has increased its efforts in this regard since midline, which was reported to be particularly influenced by the team's recruitment of the Senior Technical Lead with specific responsibility to engage with government counterparts. In Kenya, engagement with government has also increased since midline, at a senior level with the MOE and TSC, with specific departments such as the MOE's quality assurance department, and at local level with county technical committees.

At the school level, the sustainability of project activities is less likely when there is the perception that the continuation of project activities requires the investment of resources that may be outside of the capability of the school, and when these will not be supported by government structures. This is most noticeable with the learning centre in all three countries. A running theme in all three countries has been concerns around the ability of schools to secure funds to both power and maintain the equipment, a finding that finds some support from the DP-2 MIS which suggests that just over 10% of schools in all three countries do not have either a functioning video player or TV to use in the classroom.

Sustainability at the system level appears to be related to two key factors: systematic efforts to engage government at different levels; and the ability of DP-2 to demonstrate the tangible added value of project activities. Nigeria, in particular, demonstrates the value of continued engagement with government counterparts with certain project activities being incorporated into State Development Plans and being entrenched in SUBEB planning. This is more powerful when combined with an ability to demonstrate the success of project activities tangibly with a clear vision of how these activities present an added value over and above what is already occurring in schools. This is clearly seen with the ALP and TPD components, which have received government buy-in in Ghana and especially in Nigeria as an improvement on the status quo. In Kenya, the DP-2 supported remedial lessons were perceived by government counterparts as being one among many remedial classes on offer. Government counterparts in Kenya reported that there was an intention to continue the TPD component through an integration into existing government teacher training and support practices. However, they also reported that no additional budget

had been allocated to support this and expressed concerns that this presented a risk to the sustainability of the TPD approach given other pressures on existing budgets.

Teaching quality

What DP-2 teacher training and support activities did teachers find most useful and why?

Findings from the midline evaluation largely provided proof of concept of the DP-2 TPD component. The findings found strong evidence that DP-2 teacher training and support leads to improved teaching quality in Nigeria, and some evidence that DP-2 teacher training and support leads to improved teaching quality in Ghana and Kenya in at least some domains.

At endline, qualitative research provides further support to the midline findings. RTs at endline could clearly recall what they had learnt from the DP-2 trainings, and this aligns broadly to the expected content of the training. RTs recalled substantial technical detail around strategies for teaching literacy, such as decoding, blending, and segmenting. Overall, RTs recalled the numeracy strategies taught during the training least clearly but reported that they use general child-centred approaches and teaching aids to engage students in the learning of mathematics.

Teachers across the three countries also reported using strategies that they have learnt in the DP-2 trainings and reported that they perceived this to improve student learning outcomes as a result. RTs reported using literacy strategies, teaching aids, a range of assessment strategies, and a range of child-centred approaches that they had learnt from the DP-2 training at endline. Teachers reported that adapting their teaching strategies to different types of students, engaging both boys and girls in different subjects, encouraging students to ask more questions in class, and being mindful of not belittling them if they get answers wrong has helped to build girls' confidence and enabled more active participation in the class. Teachers believed that the academic performance of children in their classes has improved by virtue of increased participation and the practice of children working with each other. The findings from head teachers and RTs were also corroborated by girls sampled for the qualitative study at endline. Girls across countries provided examples of how teachers had created an environment where they felt comfortable to ask questions, to make mistakes, or to admit that they have not yet understood something.

While the qualitative research at endline provides further evidence that teachers have found the DP-2 TPD useful and report implementing strategies that they have learnt, the evaluation is limited by the lack of lesson observations at endline to measure the impact of DP-2 on teaching quality at endline. This limitation means that we are unable to report on whether the impact that we have observed at midline has been sustained or enhanced at endline.

Were activities designed to improve teaching quality implemented as expected and to scale?

Respondents across the three countries report significant teacher turnover at their schools, due to high levels of teacher transfers or because of the presence of voluntary teachers. In addition, the direct DP-2 training is delivered to only a subset of English and mathematics teachers in most schools. **This suggests that step-down training is important to ensure that all teachers learn new teaching strategies, and all students in DP-2 schools benefit from improvements in teaching quality. However, the evaluation finds that there are some concerns around the implementation of the step-down training.** DP-2 monitoring data shows that large proportions of schools in Ghana and Nigeria have not implemented step-down training in the last 90 days, and the numbers of teachers receiving step-down training is low in all three countries. Given that our midline evaluation found that not all teachers had received direct training and found relatively high rates of teacher turnover following training (ranging from approximately 10% in Ghana to 25% in Kenya) it is likely that not all teachers are being reached through the step-down training. In addition, the

findings at midline showed that much less time is set aside for step-down training than for direct training, implying that the content from the direct training would not be stepped down to other teachers with the same level of detail or quality as the original training. This limits the impact of the DP-2 TPD on a broader range of teachers and students, and also poses questions regarding long-term sustainability.

Teacher's uptake of the Cell-Ed platform varied across the three countries. In 2020, approximately 40% of teachers in Nigeria and Kenya who have been onboarded onto the platform used it, compared to only 20% of teachers in Ghana. Of the teachers who had accessed the platform, teachers in all countries had spent less than an hour on it, and very few had completed a full course. Impact(Ed)'s own reporting noted a number of adaptations that were implemented to encourage the use of the platform. These included ensuring a zero-cost solution for teachers, enhancing trust in the platform through pre-existing relationships with teachers built on engagement through DP-2 direct training, and ensuring that training content was relevant and aligned to ministry-approved curriculum.

Community attitudes and perceptions

Has DP-2 had an impact on community attitudes and perceptions?

DP-2's monitoring data shows that the majority of schools and communities that were monitored during the 2020 school year had taken steps to implement their action plans at endline. **This is corroborated by the qualitative study at endline, which finds that there has been a considerable increase in CAP members' participation in the school and community, and self-reported data that CAP participants have been implementing activities as per their plans.** There have been notable improvements in Kenya, as CAP participants' engagement increased after the first year and was reported to be high at endline.

In all three countries, CAP activities centre around raising awareness about the importance of schooling, and against early marriage and child labour. CAP participants have also worked on decreasing barriers to attendance and learning by addressing concerns related to sanitary hygiene and encouraging student performance by hosting award ceremonies for both teachers and students. CAP participants also claim to have made several improvements to the school infrastructure as part of their action plans.

Have CAP activities been implemented as expected?

At endline, we have limited information on action plans, as we could not verify the availability and development of plans in person.

Findings at endline show that in Kenya CAP participants have conducted more awareness-raising activities, held one-to-one meetings with parents, and worked closely with the community to raise resources for their work since midline. In Ghana, CAP participants continue to sensitise parents about the importance of attending school; this had led to a modest reduction in children's household chores and involvement in local business, consistent with the findings at midline. In Nigeria, CAPs report that they are active in their communities, and have novel solutions to ensure their efforts are successful – such as ensuring a diverse membership, which has led to the successful mobilisation of resources for school improvement and development, and women's participation in their children's schooling.

The attendance and participation of head teachers has been variable in the CAP process, which may threaten the sustainability of CAP in the school in the future. At endline, we find that existing CAP members are actively training new members in Ghana and inducting SBMC members in Nigeria to replace former members. Limited data on recruiting new members was available in Kenya, where the head teacher is expected to replace members and CAP members are tasking with orienting new members.

Reflections against the TOC

This evaluation defines four main causal statements for the desired learning and transition outcomes. Below we reflect on how well these have held based on evidence collected throughout the evaluation.

Teacher professional development and educational media

The first causal statement reads, *'TPD and educational media for regular teaching and for ALP remedial lessons lead to improved teaching quality, which in turn leads to better school attendance, better learning outcomes and higher transition rates.'*

The midline findings provided strong evidence that links TPD with improved teaching quality and better learning outcomes, where TPD was well implemented. Endline qualitative research provides encouraging signs that this pathway continues to hold with teachers being able to clearly articulate the aspects of training that they are using in classrooms. Step-down training is delivered for a shorter duration than the full, direct training, and irregularly or informally in some schools. It would therefore be expected that the impact of the DP-2 training is more limited for teachers who have only received step-down training. We were not able to conduct lesson observations at endline, which limits our ability to measure improvements in teaching quality for teachers who have received step-down training. Government respondents indicate that governments expect to integrate aspects of the DP-2 training into in-service teacher training, but that this is likely to be limited to some aspects of the training delivered over a shorter duration than the DP-2 direct training. It is unclear to what extent similar improvements in teaching quality to those found in this evaluation would be expected with a diluted version of the training.

The evaluation finds evidence linking TPD to positive changes in transition in Nigeria, but not in Ghana and Kenya. The finding in Nigeria is likely driven by improved teaching quality supporting improved learning outcomes and thereby reducing grade repetition rates.

The evaluation finds no evidence to support a link between TPD and attendance.

Girls' clubs and MBW content

The second causal statement reads, *'Girls' clubs, with MBW content, improve girls' life skills and self-efficacy, which in turn leads to better school attendance, better learning outcomes and higher transition rates.'*

The evaluation finds evidence that girls' clubs and exposure to MBW content support positive change in self-efficacy and life skills. This is a finding driven primarily by qualitative research collected at endline, where girls reported an increase in confidence, their ability to negotiate for themselves, and their ability to set goals for themselves and communicate these effectively. Girls across all three countries were able to articulate how they found the MBW content relatable to their own experience, and how this relatability supported them to understand new ideas or encouraged them to explore their own biases about gender further. The evaluation finds that improvements in self-efficacy are likely to require sustained engagement of girls in girls' clubs and with MBW content.

The evaluation finds some evidence in Nigeria that supports the link between improved self-efficacy and learning outcomes, but no evidence in Ghana and Kenya. Qualitative research indicates that positive change in learning outcomes are more closely linked to changes TPD and remedial lessons, and respondents did not link self-efficacy to learning outcomes. However, regression analysis conducted at midline shows a positive association between self-efficacy and learning outcomes in Nigeria.

The evaluation finds no evidence of a link between improved self-efficacy and attendance or transition.

School leadership and community involvement in action planning

The third causal statement reads, *'Joint school leadership and community involvement in community action planning (CAP) to identify and address barriers to girls' learning and transition leads to changed attitudes and perceptions on the part of community members and to concrete actions in support of girls' education. These, in turn, lead to better school attendance, better learning outcomes, and higher transition rates.'*

This evaluation finds strong evidence in support of the first step in this causal statement, i.e. that CAP activities to identify and address barriers to girls' education leads to changed attitudes and to concrete plans in support of girls' education. The majority of CAPs had taken concrete steps to implement action plans, with qualitative evidence suggesting that there has been a considerable increase in the diversity of membership in the CAP process as well as in efforts to implement action plans. These efforts included the sensitisation of parents on factors that might hinder favourable learning outcomes such as hawking, with respondents in all three countries reporting some forms of behaviour change. Efforts also included the mobilisation of community resources to address specific barriers such as improvements to school infrastructure in Ghana and Nigeria or providing access to sanitary pads and the donation of books in Kenya.

The evaluation finds some evidence in Nigeria only that supports the link of the CAP process and changes in community attitudes to transition. In Nigeria, we find evidence that DP-2 has led to a positive change in transition rates, though the evidence suggests that DP-2 has predominantly supported progression between grades in primary school. Regression analysis suggests that a greater likelihood of successful transition is associated with the presence of an engaged CAP process.

The evaluation finds some evidence that supports the link of the CAP process and changes in community attitudes to improved learning outcomes, but the evidence is not available to fully test this link in the TOC. Sensitisation efforts conducted through the CAP process have increased parents' interest in girls' education. There is evidence that parents, in particular in Ghana and Nigeria, have taken concrete steps to reduce the burden placed on their daughters, such as reducing their involvement in hawking or household chores, to allow their daughters to arrive at school on time and well rested.

The evaluation finds no evidence that supports the link of the CAP process and changes in community attitudes to increased attendance, although attendance rates have remained high in all three countries at baseline and midline rounds when this was assessed.

Remedial lessons

The fourth causal statement reads, *'Remedial lessons for students who are falling behind lead to improved learning outcomes for those students, a narrower gap in learning outcomes between these students and others, and higher transition rates amongst these students.'*

Midline findings provide strong evidence that links remedial classes with improved learning, where remedial classes are well implemented and innovative. This is most clearly seen in the case of Nigeria where, prior to DP-2 implementation, very few children had been exposed to remedial classes. In Nigeria, we found that improvements in numeracy that are directly attributable to DP-2 were higher for girls who had attended remedial classes. Furthermore, although there were no positive changes in learning outcomes overall directly attributable to DP-2 in Ghana and Kenya at midline, attendance at remedial classes was positively associated with improvements in literacy outcomes.

At endline we find that teachers interviewed in all three countries are able to articulate how they perceive remedial classes to have improved learning outcomes. Evidence suggests that teachers in all three countries reported that remedial lessons allowed teachers to provide teaching that is specific and targeted at students' needs. This was facilitated in particular by smaller class sizes, which allowed students to receive more individual attention,

facilitated greater active student participation, and reduced the time teachers spent on classroom management. This suggests that the causal pathway continues to hold.

As with the causal pathway related to teacher training, we find some evidence that links remedial classes to improved transition rates in Nigeria and no evidence that this holds in Ghana and Kenya.

Recommendations

Recommendations for governments taking forward DP-2 project activities

Teacher training and support

Government institutions taking the teacher training forward should attempt to ensure that the full package of DP-2 training is delivered, as it is likely that gains to teaching quality will be diminished by a 'diluted' level of training. Teacher training is likely to continue in some form in all three countries. In Ghana and Nigeria, this is particularly promising as a variety of stakeholders, including government officials, are committed to the integration of aspects of the DP-2-supported training into regular programming and are taking steps to secure funding to make this a reality. In Kenya, DP-2 training is expected to be integrated into regular activities, though government stakeholders have articulated concerns that this will put pressure on already constrained budgets. Across the three countries, there are early signs that this implementation will be abridged relative to the direct training provided by DP-2; this relates, in particular, to the amount of time allocated to training in a step-down form. The DP-2 package includes an initial nine-day direct training, supported by step-down training of teachers who are not directly trained and refresher training for trained teachers, as well as ongoing observation, coaching and mentoring. Ensuring fidelity to this original design will be imperative to ensure that positive gains to teaching quality continue.

Remedial lessons

The efficacy of remedial lessons can be enhanced by formal integration into the school timetable. While this can be difficult to manage, this evaluation has provided evidence that scheduling remedial classes either after school hours in the afternoon or at weekends can present a barrier to the attendance of girls who have, for example, expressed concerns related to their own safety when having to return from school later than normal. In Ghana and Nigeria, MOEs have adjusted the school timetable and established co-curricular slots for remedial lessons in the last year.

How teachers can be compensated for teaching remedial lessons in line with government guidelines should be considered. In Nigeria, teaching remedial classes is done on top of existing contractual obligations, and as a result they have been compensated for this effort with stipends throughout the course of DP-2. This is expected to continue as the implementation of remedial classes is integrated into normal government programming. In Kenya, where teachers are contractually obligated to deliver remedial lessons, the evaluation finds evidence that teachers are overworked and find it difficult to deliver remedial lessons on top of their other responsibilities.

Recommendations for Impact(Ed) and FCDO for the future implementation of similar education projects

Ensure all activities are focused on need

While GEC-T has supported a range of different interventions with different approaches to tackling the barriers to girls' education, it has required all projects to address a standard set of perceived constraints. This includes, for example, a requirement to focus energy, time, and resources on addressing barriers to transition and attendance. In this evaluation, we have found high existing rates of transition and attendance, in particular in Ghana and Kenya. The requirement to focus efforts on

addressing attendance and transition in these countries will have no doubt diverted energy, time, and resources away from activities that may have delivered greater added value in terms of improving girls' access to education and improvements in learning outcomes. As such, it is recommended that future programming avoids blanket requirements and instead allows greater space for more tailored interventions that address the specific needs relevant to the context.

Teacher training and support

Future programmes should pay special attention to supporting the institutions and stakeholders at school and government level that are expected to take over project activities; efforts should be made to ensure that they have the right capacities to sustain project activities, so that these will continue with fidelity to original design. Sustainability requires not just that an activity will continue, but also that it retains sufficient fidelity to the original design. The indications are positive that teacher training will continue in Ghana and Nigeria and at scale. However, in both cases this will require changes to the way in which teacher training was originally delivered by DP-2, and in particular that it is expected that DP-2-supported training will be delivered in an abridged form. While it is still too early for this evaluation to state definitively the extent to which this will affect the outcomes generated, it is not unreasonable to expect that some of the efficacy in generating improvements in teaching quality will be lost.

Remedial classes

This evaluation has found strong evidence of the efficacy of remedial classes, but the need to implement and how to implement is dependent on context. Remedial classes have been shown to be most effective when they are not common practice, as was the case in Nigerian primary schools and potentially in Wajir, Kenya. In Nigeria, we find strong evidence supporting the link between remedial classes and improved learning outcomes, with part of this link being generated by DP-2 filling a missing gap in meeting the needs of more poorly performing students. In Kenya, on the other hand, remedial classes were much more likely to be offered in general with or without DP-2 support. In both Ghana and Kenya, paid tuition was offered fairly commonly but this was not always accessible to the most marginalised groups. Therefore, in order for remedial classes to be most effective, they should be free of charge and target the most vulnerable students by identifying those that lack economic, social, and familial support (all of which are identified as important barriers to education).

MBW content

There is sufficient evidence to support the continued implementation of MBW content in schools, and we recommend that this is accompanied by future evaluation of the impact of MBW content on self-efficacy, and other outcomes, such as self-confidence, life skills, learning outcomes and transition, to strengthen the evidence base that supports the efficacy of this intervention and to understand the conditions that need to be in place for governments to successfully scale up this intervention. The evaluation provides evidence that girls relate well to MBW content and that this is contributing to positive changes in self-esteem and self-efficacy. While there are some indications that this may contribute to literacy and numeracy outcomes, this evaluation has been limited in its ability to test these fully.

CAP process

The CAP process works best when there is a clear identification of 'champions of change' and where membership is diverse. This evaluation finds evidence that the CAP process can be effective in identifying and addressing barriers to education and bridging the gap between the school and the community. It works best when both school leadership and influential community members are engaged in the process. The former ensures a continuity of activity in CAP processes, and the latter support engagement of the community, as well as to mobilise resources in response to barriers identified. Further, it works best when

membership is diverse and, in particular, when its implementation is sensitive to the needs of marginalised parents, who, along with their daughters, may face particular barriers to engagement, as well as particular barriers to education. Implementation in Nigeria in particular offers an example of best practice, with high engagement from a diversity of stakeholders including school leadership, influential community members, and parents.

Educational media

While most teachers and students find the educational media content interesting and engaging, DP-2 should review its implementation of learning centres and media content in educationally marginalised contexts where regular and sustained use of the media content is found to be challenging. Throughout the course of the evaluation, we have identified a number of challenges to the use of media content. This is reflected in the endline evaluation finding evidence of just over 10% of schools in each of the three countries who do not have fully functional equipment for use in the classroom and a similar proportion of schools who do not have fully functional equipment for use by teachers for lesson preparation, and evidence of decreasing usage of the learning centre in all countries, though most noticeably in Nigeria. External challenges have contributed to this, in particular the midline evaluation findings found a decrease in access to electricity in Nigeria and Kenya, and DP-2 staff in Ghana and Nigeria report that there are challenges with securing donations to power generators. We find repeated concerns about the ability of schools, particularly more remote and rural schools or informal schools in Nairobi, to meet the expense of maintaining the equipment or powering generators. Furthermore, some teachers, most noticeably in Nigeria, report difficulties in using the content and in making it relatable to their lessons. This latter finding is in stark contrast to MBW content, which was viewed by all respondents as directly relatable to the real-life experiences of girls. In future projects Impact(Ed) should consider how learning centres are implemented, especially in more marginalised, resource-poor environments where it can be challenging for schools and surrounding communities, over time, to mobilise resources to secure, maintain and actively use media resources. Attention should be given to how to better enable this, including for example through sharing practices from schools that have succeeded with securing and maintaining equipment and regularly using content in such environments.

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List of tables, figures, and boxes

List of abbreviations

ALP	Accelerated Learning Programme
BOM	Board of Management
CAMFED	Campaign for Female Education
CAP	Community Action Planning
CCAM	Clubs and Community Action Mobilizer
DP-2	Discovery Project 2
ESSPIN	Education Sector Support Programme in Nigeria
FCDO	UK Foreign, Commonwealth and Development Office
FGC	Female Genital Cutting
FM	Fund Manager
GEC	Girls' Education Challenge
GEC-T	Girls' Education Challenge Transition window
GES	Ghana Education Service
GESI	Gender Equality and Social Inclusion
GSE	Generalised Self-Efficacy
JHS	Junior High School
JSS	Junior Secondary School
KICD	Kenya Institute for Curriculum Development
L4C	Leadership for Change
LGAs	Local Government Areas
MBW	My Better World
MIS	Management Information System
MOE	Ministry of Education
MOE	Ministry of Education
NGOs	Non-Governmental Organisations
OPM	Oxford Policy Management
PTA	Parent–Teacher Association
RTs	Remedial Teachers

SBMC	School-Based Management Committee
SMC	School Management Committee
SUBEB	State Universal Basic Education Bureau
TOC	Theory of Change
TPD	Teacher Professional Development
TSC	Teacher Service Commission
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation, and Hygiene

1 Introduction

OPM has been contracted by Impact(Ed) to undertake an impact evaluation of its Discovery Project 2. This report presents the findings of the endline evaluation of DP-2, which was carried out between February 2020 and September 2020.[5]

The DP-2 project (July 2017–November 2020) has been implemented by Impact(Ed) in northern Ghana (Northern Region), northern Nigeria (Kano State), and Kenya (Kajiado, Kiambu, Machakos, Nairobi, and Wajir counties). The project aims to increase girls' learning outcomes in numeracy and English literacy, their self-esteem and self-efficacy, and their successful completion of the primary cycle and transition into junior secondary school. DP-2 is funded by the UK FCDO through its GEC fund, with match funding from Impact(Ed). The FM of the GEC fund is a consortium led by PwC UK.

The impact evaluation includes data collection over three rounds: a baseline in 2018, a midline in 2019, and an endline in 2020. The evaluation was designed as a mixed-methods, quasi-experimental evaluation involving quantitative and qualitative interviews, and assessments in schools and communities. This approach was followed for the baseline and midline evaluation rounds. At endline, due to the COVID-19 pandemic and the resulting school closures and physical distancing measures, it was not possible to conduct school visits and face-to-face research. Given that DP-2 ends in November 2020 and the endline evaluation had to be completed within this timeframe, **the scope of the endline evaluation was revised; it was limited to information that could be collected through remote data collection and analysis of project monitoring data**. To redesign the endline evaluation, a new research scope was defined in consultation with Impact(Ed) and the FM.

1.1 Structure of the report

The report is structured as follows:

- The rest of Chapter 1 introduces the DP-2 project, its TOC, and the context in which DP-2 is implemented. It also summarises the endline evaluation approach. More details on the evaluation approach and methodology are presented in Annex 1.
- Chapter 2 describes the characteristics of the beneficiaries of the DP-2 project.
- Chapter 3 presents the findings around the learning outcome of the project, including perceptions of learning, and self-efficacy and life skills.
- Chapter 4 presents the findings around the transition outcome of the project.
- Chapter 5 presents the findings around the sustainability outcome of the project.
- Chapter 6 presents the findings against the intermediate outcome indicators, including teaching quality, and community attitude and behaviour change.
- Chapter 7 concludes by highlighting the key findings and recommendations from the evaluation.

1.2 The DP-2 project

The first phase of the project, DP-1, ran from 2013 to 2017. The evaluation focuses on the second phase of the project, DP-2, which builds on the achievements from the first phase and runs from April 2017 to November 2020. DP-2 has been implemented in primary schools and a limited number of junior secondary schools in Ghana that were already part of DP-1. In

[5] Note that the first version of this report was completed in September 2020, and references to project activities or country-specific circumstances were accurate at the time of writing but may have changed since then.

addition, DP-2 has also been implemented in additional junior secondary schools in Ghana and Nigeria, and to a limited extent in secondary schools in Kenya.

The overall goal of DP-2, as with DP-1, is to increase girls' self-esteem, aspirations, and academic and life skills; this, combined with an increasingly effective 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 by shifting individual and community attitudes and actions in favour of girls' education, DP-2 will create lasting, sustainable change. DP-2 does this through the following core activities.

- DP-2 provides **sustainable technology, educational content, and TPD to primary schools**. Unlike in DP-1, TPD during DP-2 focuses on literacy and numeracy, while reinforcing child-centred, GESI-responsive approaches (targeted during DP-1) that contribute to safe, inclusive classrooms and develop children's critical thinking, creativity, collaboration, and communications skills.
- During DP-2, sustainable technology, educational content, and TPD to improve the quality and gender-inclusiveness of education for girls are **extended to the junior secondary level** in Ghana and Nigeria.
- As agreed, coming out of the design review in the start-up phase, DP-2 delivers an **ALP through supporting small-size remedial classes** for mid-to-upper primary school children who are performing well below grade level in English and mathematics.
- DP-2 invests in **vibrant girls' and boys' clubs** with a print and visual life skills curriculum and training, and support for club mentors. As part of DP-2, Impact(Ed), in collaboration with CAMFED, created a new multi-media life skills series, **MBW**, to develop a range of practical knowledge and real-world skills for clubs, schools, and communities.[6]
- DP-2 **engages school and community leaders and supports them to address persistent barriers to girls' attendance, learning, and transition**, including through working closely with school governance bodies in their leadership roles and focusing communities on the most relevant barriers in the context.

1.2.1 TOC

Girls in all three countries face major barriers to learning and transition, especially as they reach adolescence towards the end of the primary cycle and look to transition to and through junior secondary school. 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 – inside and outside 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 the 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.

DP-2's TOC considers activities with all stakeholders to holistically address key barriers to girls' foundational learning and continuing education. The focus is on supporting girls to develop both academic and life skills and combining this with an enabling environment.

[6] Impact(Ed)'s 'My Better World' series features a unique, part-animation, part-documentary format combining entertaining storylines on topics to spark important conversations among adolescent girls and inspiring personal stories of courage from real-life African role models. It also targets TV distribution (and radio as part of the project's COVID-19 response) in the three project countries and beyond, with broadcasts now reaching national audiences in all three countries in the last year of DP-2 implementation.

DP-2 targets two final outcomes: improvements in learning outcomes (literacy, numeracy, and self-efficacy); and increased rates of successful transition. The central focus on literacy and numeracy teaching and learning was not part of the DP-1 design and is thus new to DP-2. Successful transition refers to progression to the next highest grade, or completion of primary school and enrolment in junior secondary school.

Sustainability is also considered as a final outcome of DP-2, highlighting the importance that DP-2 places on investing significant resources in working with schools, communities, and governments to ensure that improvements in learning and transition are sustained after the project ends.

Outputs are expected to lead to these final outcomes through four **intermediate outcomes** (attendance, teaching quality, life skills, and community attitudes and perceptions).

Figure 1 shows DP-2's TOC, which has been updated since baseline, 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	1. Improved attendance; 2. Improved quality of teaching and learning; 3. Increased girls' life skills; 4. 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	1. Teachers gain skills, resources and confidence; 2. Communities take action to advance girls' education and create an enabling environment; 3. Girls gain lie skills training, mentoring support and access to resources; 4. 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	1. Engage school and community leaders 2. Train and coach teachers with MOE partners 3. Install A/V technology and video content in JS schools; 4. Create new life skills content (with Camfed) 5. Support girls and boys club mentors with training and links to new school and community resources 6. 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	**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. **Supply:** need to improve quality of education through teacher training, etc. to ensure the actual value of education- why go if learning is limited?			

The TOC sets out a number of assumptions at various levels. For our analysis, we break these down and identify **four main causal assumptions for desired learning and transition outcomes**.[7]

1. TPD and educational media for regular teaching and for additional remedial lessons lead to improved teaching quality, which in turn leads to better school attendance, better learning outcomes and higher transition rates.
2. Girls' clubs, with MBW content, improve girls' life skills and self-efficacy, which in turn lead to better school attendance, better learning outcomes, and higher transition rates.

[7] At baseline and midline, we outlined only the first three causal pathways. However, Impact(Ed) has identified assumptions specific to the delivery of remedial lessons, and there is assumed to be a more direct link between such lessons and learning outcomes that is not fully captured by the first causal pathway. The fourth causal pathway has therefore been added.

3. Joint school leadership and community involvement in CAP to identify and address barriers to girls' learning and transition leads to changed attitudes and perceptions on the part of community members and to concrete actions in support of girls' education. These in turn lead to better school attendance, better learning outcomes, and higher transition rates.
4. Remedial lessons for students who are falling behind lead to improved learning outcomes for those students, a narrower gap in learning outcomes between these students and others, and higher transition rates among these students.

It is worth mentioning that although these assumptions are presented as a linear process, these pathways are affected by a range of factors that hinder or promote the results assumed.

In the DP-2 Baseline Report, we assessed the strength of the first three causal pathways through a review of existing literature on the subject. The review of the first causal pathway also included a review of accelerated learning/remedial programmes. Figure 2 summarises the evidence base. As shown, the causal links between teacher training and a reduction in student 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 evidence on the effect of girls' clubs on improving attendance in school and the effect of remedial classes in improving learning outcomes is 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 DP-2 Baseline Report shows that the TOC is plausible in the sense that it is supported by prior evidence, suggesting that the activities, if implemented, will lead to the desired results (with a few exceptions highlighted as having weak evidence in Figure 2). DP-2, as a multi-component project, is potentially able to improve both learning outcomes and transition because it can address multiple barriers to attending school and studying faced by marginalised households.

Table 5 sets out the assumptions that need to hold for each of four causal pathways to operate. Assumptions have been divided into contextual and implementation. An initial set of assumptions was identified by Impact(Ed), and OPM has added to these.

Table 5: Contextual and implementation assumptions

Causal pathway	Contextual assumptions	Implementation assumptions
TPD and educational media for regular teaching and for additional remedial lessons lead to improved teaching quality, which in turn leads to better school attendance, better learning outcomes, and higher transition rates.	1) teachers have minimum qualifications 2) teachers are motivated to attend training and use the skills in their lessons 3) the school leadership is supportive 4) limited pace and magnitude of teacher transfers 5) electricity is consistently available to allow the use of the educational media (either from the grid or alternative sources, including back-up generators provided by the project)	1) teacher training is high quality and aligned with the curriculum 2) a critical mass of teachers in each school can access the project's full teacher training package 3) trained teachers offer step-down training and model good practice 4) project staff provide regular, high-quality, follow-up teacher coaching and support 5) teachers have regular access to project-provided teaching and learning content 6) educational media equipment is safe and functioning 7) educational media equipment and content are regularly used 8) equipment is cared for and secured by the school, there are resources to replace or repair any items, and communities support schools in securing and maintaining these items 9) educational media is considered relevant and useful by teachers and students
Girls' clubs, with MBW content, improve girls' life skills and self-efficacy, which in turn leads to better school attendance, better learning outcomes, and higher transition rates.	1) school leadership is supportive 2) club mentors of the same sex are available and also supportive and committed to playing their roles responsibly 3) the environment 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 towards attitudes more supportive of the girls).	1) appropriate, trained mentors serve as role models and provide overall supervision and facilitation of a safe space for peer dialogue and support on sensitive topics 2) girls' club members take leading roles in club plans and activities 3) club membership is inclusive, and the most vulnerable/marginalised girls have access 4) life skills resources are appropriate, relevant, and impactful 5) clubs use the MBW content
Joint school leadership and community involvement in CAP to identify and address barriers to girls' learning and transition leads to changed attitudes and perceptions on the part of community members and to concrete actions in support of girls' education. These in turn	1) school leadership is committed to community involvement 2) communities are able and have mechanisms to keep schools accountable to deliver good teaching and improved learning outcomes 3) communities are generally cohesive, united, and integrated; there are generally good and close	1) representation in community and leadership action planning processes is appropriate and GESI-balanced 2) action plans are informed by data, locally owned, and designed, and focused on feasible steps to address key barriers 3) there is shared school-community ownership of action plan implementation,

Causal pathway	Contextual assumptions	Implementation assumptions
lead to better school attendance, better learning outcomes, and higher transition rates.	relationships between community leaders and schools	including periodic review/revision and updating
Remedial lessons for students who are falling behind lead to improved learning outcomes for these students, a narrower gap in learning outcomes between these students and others, and higher transition rates among these students.	1) remedial classes are not already widely spread 2) school leadership and parents/communities are supportive 3) a core group of teachers is committed to teaching remedial classes 4) remedial classes can be offered at a time when teachers and children needing remedial support can and will participate	1) students are correctly identified and placed into small classes 2) there are appropriate schemes of learning for each level 3) there is continuous assessment of learner progress 4) classes are delivered according to schedule and attendance is high 5) there is strong stakeholder monitoring and support 6) remedial classes are taught by DP-2-trained teachers who have received the full package of direct training 7) classes are free of charge 8) teachers are motivated to deliver remedial classes 9) classes are arranged in such a way that students can attend them
General assumptions not linked to particular pathways	1) student-to-teacher ratios are not too high 2) schools have basic infrastructure 3) schools have female teachers 4) household chores and income activities do not prevent children from attending school 5) children can concentrate (e.g. they are not hungry) 6) parents have the means to send their children to school (or government/non-government activities provide these means, e.g. through cash transfers, school feeding, etc.) 7) communities have enough junior secondary schools within an adequate distance that children can travel to safely 8) a reasonable level of safety and security prevails such that schools can stay open	

The onset of the COVID-19 pandemic is an exceptional and unforeseen event that inevitably changes the context of implementation completely, given prolonged school closures. The evaluation predominantly focuses on DP-2 implementation prior to COVID-19 and evaluates

findings against the TOC with the original project design. However, data collection was largely conducted after the COVID-19 outbreak and respondents' attitudes, perceptions, and behaviour regarding project outcomes will therefore have been affected by COVID-19.

1.2.2 Key activities and their implementation status

This section briefly summarises the key project activities and their implementation status. We include more detailed descriptions of the intervention components and a more detailed assessment of implementation fidelity in the remaining chapters of the report, linked to the outcomes that the activities most directly affect. Section 3.1, on perceptions of learning, includes details on the project-supported remedial lessons. Section 3.2, on self-efficacy and life skills, includes details on the implementation of the girls' clubs and MBW content. Section 6.1, on teaching quality, provides details on the TPD component, and Section 6.2, on community attitudes and perceptions, provides details on the CAP component.

We also discuss the disruptions and adaptations due to COVID-19. The implementation of project activities was due to end in Ghana and Kenya at the end of March 2020, so the COVID-19 pandemic disrupted only a few weeks of direct implementation; however, it affected ongoing activities in schools and communities that DP-2 has set up and supported, as well as activities aimed at sustainability and project closure that were due to be implemented between March and September 2020. In Nigeria, direct implementation was due to end in June 2020.

Groups of schools targeted by the intervention

The DP-2 intervention includes somewhat different activities or levels of intervention for different groups of schools:

- **Phase 1 ALP primary schools with MBW pilot:** These primary schools receive the full intervention package, including CAP, TPD, and educational media, support for remedial classes, and support for girls (and boys) clubs, including delivery of the MBW content and accompanying in-depth training for mentors.
- **Phase 1 ALP primary schools without MBW pilot:** These primary schools receive all interventions, except for the MBW content and accompanying training. Girls' clubs in these schools were not supported from January 2019 onwards.
- **Phase 2 primary schools:** These primary schools receive TPD and educational media, and CAP. They received support for girls' clubs and mentor training through December 2018. They do not receive direct support for remedial classes and teacher coaching, and monitoring visits are implemented at a lower frequency than in Phase 1 ALP primary schools.
- **JHS (Ghana) / JSS (Nigeria):** These schools receive TPD and educational media, and CAP. They received support for girls' clubs and mentor training through December 2018. The teacher training in these schools is of shorter duration and has a different focus to the teacher training in primary schools; its emphasis is not on teaching and learning of literacy and numeracy. Teacher coaching and monitoring visits are implemented at a lower frequency than in Phase 1 primary schools.
- **Secondary school (Kenya):** These schools receive educational media only and received support for girls' clubs, including mentor training, through December 2018.

The evaluation focuses on Phase 1 ALP primary schools with MBW pilot.[8] At baseline, girls who were in Primary 5 in Phase 1 ALP primary schools with MBW pilot were selected into the evaluation sample. By endline, girls in Ghana and Nigeria have largely transitioned into junior secondary school and would therefore also have been exposed to the DP-2 intervention in these schools. The rest of this section describes the project activities in Phase 1 ALP schools with the MBW pilot, and briefly describes the activities in junior secondary school.

TPD and educational media

Table 6 presents a summary of the TPD and educational media component.

Table 6: TPD and educational media design and implementation status

Design	Implementation status
Provision of educational media in Phase 1 primary schools: Schools were already provided with TVs, DVD sets, and educational videos during DP-1. During DP-2, the project produced and distributed additional video and digital content with a focus on literacy and numeracy.	**Ghana:** Distribution of videos was completed in November 2018 **Kenya:** Distribution of videos was completed in November 2018 **Nigeria:** Distribution of videos was completed in December 2018
TPD in Phase 1 primary schools: DP-2 provides training for teachers focusing on strategies for teaching foundational literacy skills (two sessions; five days in total) and foundational numeracy skills (two sessions; four days in total). A group of teachers from each school (primarily teachers who teach English and mathematics in the mid-to-upper primary grades) attend teacher training delivered directly by DP-2 project staff. Teachers who have received direct training are called remedial teachers (RTs). They are tasked with stepping down the training to other teachers in their schools and receive periodic refresher training and support. DP-2 project staff, with relevant government counterparts as much as possible, 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 help them put what they have learnt into practice. Through a partnership with Cell-Ed, teachers can access, free of charge, good practice reminders, tips, and refresher training courses through their (basic/non-smart) mobile phones.	**Ghana:** Roll-out of the two literacy training sessions and the two numeracy training sessions was completed in November 2018, and follow-up teacher observation and coaching visits were rolled out regularly thereafter. **Kenya:** Roll-out of the two literacy training sessions and the two numeracy training sessions was completed by September 2019. The roll-out of teacher training in Kenya was affected by a policy change that meant teacher training could take place only during the school holidays. Intensive follow-up observation and coaching visits have been ongoing. **Nigeria:** Roll-out of the two literacy training sessions and the two numeracy training sessions was completed in February 2019, and follow-up teacher observation and coaching visits were rolled out regularly thereafter. The roll-out of the Cell-Ed platform was delayed across the three countries because of challenges acquiring toll-free lines and network issues. Most teachers from Phase 1 primary schools had been 'onboarded' onto the platform by July 2019.
TPD and educational media in junior secondary school:	**Ghana:** The first teacher training took place in October–December 2017. Teacher training on literacy and numeracy was delivered between January and

[8] Because of a challenge in the selection of schools for different phases in Ghana, only 36 out of the 60 treatment schools receive the MBW pilot; a further 12 are Phase 1 ALP schools without the MBW pilot; and the remaining 12 are Phase 2 primary schools. In Nigeria, all 60 treatment schools were selected for the MBW pilot, but in practice, no suitable female club mentors could be identified in six schools, so the pilot was implemented only in 54 schools. This is discussed in more detail in Annex 1. In addition, at the request of the FM, the endline evaluation includes a small additional piece of research on Phase 2 primary schools, which is presented in Annex 2 as an addendum to the DP-2 Endline Evaluation Report.

Design	Implementation status
Schools were provided with TVs and DVD sets at the start of DP-2. Teachers received training on using education media, student-centred teaching, and gender-responsive pedagogy (this is an adaptation of the teacher training that the project delivered to primary schools during DP-1). DP-2 later added training on literacy and numeracy targeting 1st year junior secondary school English and mathematics teachers. junior secondary school teachers also have access to the Cell-Ed platform. In Ghana, JHS teachers were supported to form study groups of up to eight JHS1 students, where they work with students on their foundational literacy and numeracy using DP-2 scripted lesson plans and educational media content. In five districts, these groups are supported by Learner Guides trained by CAMFED.	March 2020. Onboarding onto the Cell-Ed platform was still ongoing by February 2020. **Nigeria:** The first teacher training took place in November 2017. Teacher training on literacy and numeracy was delivered in February 2020. Teachers had access to Cell-Ed by February 2020.

Disruption due to COVID-19: Provision of direct teacher training and linking teachers to the Cell-Ed platform had been completed at the time of the COVID-19 outbreak. School closures affected teachers' implementation of the training, continued use of the educational media, and ongoing step-down training and monitoring and support visits. Teachers continue to have access to the Cell-Ed platform (through June 2020 in Ghana, and through September 2020 in Nigeria and Kenya), and are encouraged to use this during the school closures. The planned roll-out of an English language course on Cell-Ed for teachers in Nigeria was completed after schools closed and has since been made available.

COVID-19 response: Girls in Nigeria and Kenya have been provided with access to English and mathematics courses on the Cell-Ed platform through their parents' mobile phones. TV lessons using Impact(Ed)'s video library and project-trained teachers started in September 2020 in Kenya and Nigeria but are not covered in this evaluation report as they were rolled out after data collection had been completed.

ALP remedial lessons

Table 7 presents a summary of the ALP remedial component. The remedial component is not implemented in junior secondary school.

Table 7: ALP remedial lessons design and implementation status

Design	Implementation status
Support for remedial lessons in Phase 1 primary schools: DP-2 supports teachers and school communities in setting up remedial classes for literacy and numeracy, targeted at the weakest students. Students are identified for these classes based on their performance in bespoke learning assessments implemented by DP-2 and based on their performance at school. The ALP was added to the original DP-2 design during the design review in the start-up phase of the project.	The first cycle of remedial lessons ran from July 2018 until June 2019. In Ghana, the first cycle of remedial classes started only in October 2018. The ALP was not scaled up to Phase 2 schools after the midline evaluation, as originally planned. There was a delay in rolling out the second cycle of remedial lessons while DFID and the FM deliberated before deciding whether to scale up. The second cycle of remedial lessons started in Phase 1 schools only in November–December 2019 in Ghana and Nigeria, and only in January 2020 in Kenya.

Disruption and adaptation due to COVID-19: Remedial classes were disrupted by the school closures.

Support for girls' clubs and MBW component

Table 8 presents a summary of the girls' clubs and MBW component. The MBW component is not implemented in junior secondary school. Girls' clubs in junior secondary school were supported by DP-2 through December 2018.

Table 8: Support to girls' clubs and MBW design and implementation status

Design	Implementation status
Support for girls' clubs and MBW component in Phase 1 primary schools: Most schools formed girls' clubs during DP-1, and others formed them during DP-2. Many schools also formed boys' clubs. Club mentors of girls' and boys' clubs received training to create safe spaces and foster life skills. Initial training in DP-2 included training in a micro-business toolkit. Subsequent training focused on the MBW component. DP-2 also provides schools with 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. While this was initially supposed to reach all project schools, a decision was taken in January 2019 to roll out the complete MBW series through a pilot approach of up to 60 primary schools per country (the Phase 1 ALP schools with MBW pilot). After the midline, DFID and the FM decided to retain the pilot approach in the project's final year.	**Ghana:** Initial club mentor training was completed in October 2017. The distribution of MBW materials and the training of club mentors in MBW content began in November 2018. **Kenya:** The training of club mentors in MBW content began in November 2018, and the distribution of MBW materials began in February 2019. **Nigeria:** Initial club mentor training was completed in August 2018. The distribution of MBW materials and the training of club mentors in MBW content began in November 2018. Training in facilitating girls' and boys' club sessions with the MBW materials was delivered to club mentors in all countries across multiple sessions, each focusing on certain episodes/sessions from the MBW materials. This process was ongoing at the time of the school closures, with some aspects of the MBW content still being rolled out.
MBW broadcast: DP-2 launched a broadcast of the MBW animated series.	In Kenya, the MBW broadcast started airing on Citizen TV in October 2019 and was broadcast every Saturday morning. In Nigeria and Ghana, the broadcast began airing after the start of the endline evaluation. In Kano, the series has aired in Hausa on Arewa24 TV, beginning in July 2020. The series is scheduled to launch in English on AIT TV in Nigeria and Tumpaani TV in Ghana in September 2020.

Disruption due to COVID-19: DP-2 training on the last set of MBW videos (hours 8 and 9 in Kenya and Ghana, and hours 7, 8, 9 and MBW leadership in Nigeria) were disrupted by the school closures, as was the implementation of the girls' clubs.

COVID-19 response: In Kenya, as an adaptation to COVID-19, the MBW broadcast started airing during the week as well, as a resource for children who were now at home during school hours. TV broadcasts of MBW started in September 2020 in Kano and are expected to launch more widely in Nigeria and Ghana by the end of September 2020. As part of the project's COVID-19 response for all three countries, MBW was adapted for radio. In Kenya, the radio version of the show has been aired in local languages in Wajir through two local

radio stations, beginning in June 2020. Radio broadcasts are starting in September 2020 in Kano and are also expected soon in Ghana.

CAP

Table 10 presents a summary of the CAP component.

Table 9: CAP design and implementation status

Design	Implementation status
CAP in all schools: DP-2 provides head teachers, teachers, community leaders, and community members with training in CAP, including facilitating the development of a CAP with specific objectives to address barriers to girls' learning and transition. There are two training sessions. Community Workshop I focuses on identifying barriers, mapping 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. In addition, DP-2 has added a new workshop called Leadership for Change (L4C), which brings together school and local 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.	**Ghana:** Roll-out of the first community workshop was completed in December 2017, and roll-out of the second community workshops was completed in July 2018. L4C training was delivered in July and August 2019. **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 completed by September 2019. **Nigeria:** Roll-out of the first community workshop was completed in December 2017 and roll-out of the second community workshops was completed in April 2018. L4C training was delivered in September and October 2018 for primary schools and in February 2020 for JSS.

Disruption and adaptation due to COVID-19: DP-2 training for communities and school leadership had been completed, but ongoing CAP activities were disrupted by the school closures. DP-2 is following up with CAP participants/leaders to guide and support them towards efforts to keep in touch with children, and especially marginalised girls, and support them as much as possible during the extended period of school closures.

Government engagement

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 the actual monitoring and coaching of teachers, the project ensures that MOE officials are not only aware of project activities and benefits, but are also able to be a part of them and to continue supporting worthwhile project-driven investments and activities after the life of the project.

1.2.3 Project beneficiaries

The 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 because 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 are not directly targeted and are not 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.[9]

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.

Table 10 shows the grades and age groups of the direct beneficiaries targeted by DP-2.

Table 10: Direct beneficiaries' grades and ages

	Description
Grade	**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 six 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 and supported 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 for 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 11 summarises the DP-2 project activities for the direct and indirect beneficiaries.

Table 11: Beneficiaries matrix

	Direct beneficiaries			Indirect beneficiaries			
	Phase 1 primary schools	Phase 2 primary schools	Junior secondary schools (Ghana and Nigeria)	Boys in DP-2 schools	Boys and girls in secondary schools (Kenya)	Teachers in DP-2 schools	Community members

[9] Definitions from 'Beneficiary numbers for GECE' (April 2018).

	Direct beneficiaries			Indirect beneficiaries			
Teacher training and coaching in use of media, including student-centred approaches and gender-responsive pedagogy	✓	✓	✓	✓		✓	
Intensive literacy and numeracy teacher training	✓	✓		✓		✓	
Follow-up teacher coaching and mentoring focused on literacy and numeracy	✓	✓		✓+		✓	
Educational media via sustainable technology (including new literacy and numeracy content)	✓	✓	✓	✓	✓	✓	✓
ALP remedial classes	✓			✓			
School leadership and community engagement (through CAP)	✓	✓	✓	✓	✓	✓	✓
Club mentor training and follow-up monitoring and support, including MBW content	✓^	✓*	✓*	✓	✓*	✓^	
Government capacity strengthening and accompaniment	✓	✓	✓	✓	✓	✓	✓

Note: + Boys in Phase 1 ALP schools. * Support to girls' clubs in Phase 2 schools, junior secondary schools (Ghana and Nigeria), and secondary schools (Kenya) was stopped after December 2018, so that resources could be directed towards the MBW pilot, and towards teacher training and remedial classes. ^ Only the 60 Phase 1 ALP schools with MBW pilot continued to receive this support from January 2019 onwards.

In previous rounds of the evaluation, we have verified the beneficiary numbers produced by Impact(Ed) based on the enrolment data that we collected in treatment schools during the school survey. Since we could not do a school survey at endline, we do not have any updated information on how school enrolment has changed between midline and endline, and cannot verify the beneficiary numbers. At midline, for both direct beneficiaries (girl students) and indirect beneficiaries (boy students) we verified that beneficiary numbers produced by Impact(Ed) were within 95% confidence intervals of our beneficiary number estimates.

1.3 Project context

This section gives a brief overview of the context in which the DP-2 project is implemented in each country.

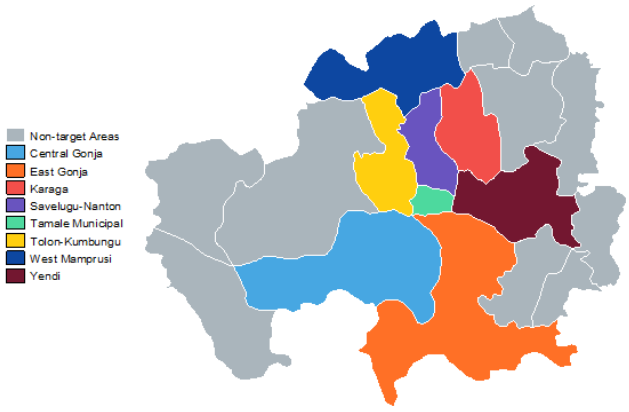
1.3.1 Ghana

General context

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). This 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%).[10]

Figure 3: DP-2 project areas in Ghana[11]



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 the 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

[10] 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].
[11] 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.

increases to one in three (34%).[12] 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 to establish a livelihood, 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 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. The Ghana Education Service (GES) reports that the inclusive education policy has been well received and has led to the increased enrolment of children with disabilities, but that the system capacity to support implementation has been constrained at times.[13]

Contextual changes during project implementation

Ghana launched a new primary school outcome-based curriculum for the start of 2019/20 school year, with training for this starting before the midline evaluation round.[14] As DP-2 focuses on foundational literacy and numeracy, strategies taught during the training will continue to be relevant. Nevertheless, the time that teachers have to focus on the use of media content and remedial classes may be more limited while they are adapting to a new curriculum. The introduction of the new curriculum also required DP-2 to revise some of their teacher training content and the schemes of learning for the remedial classes.

The introduction of the new curriculum also presented opportunities that supported DP-2 implementation. The revised school timetable included one session a week that could be used for remedial lessons during regular school hours. It also made provision for a dedicated time slot every Wednesday afternoon, along with one full day each academic term for TPD in schools, which supported the delivery of the DP-2 step-down training.

High rates of teacher transfers mean that DP-2-trained teachers are sometimes transferred out of DP-2-supported schools. In 2018, the GES introduced licensure examinations that recently graduated teachers need to take before they can work as teachers. The introduction of this policy contributed to high rates of teacher transfers. DP-2 engaged with District Directors of Education and received their commitment to limit teacher transfers and, where possible, transfer DP-2-trained teachers to other DP-2-supported schools.

COVID-19 and school closures

Ghana recorded its first case of COVID-19 on 12 March 2020, and schools closed on 15 March 2020. Some students in senior secondary school and in the last year of JHS (JHS3) returned to school at the end of June 2020. Girls in primary school and in JHS1 (who are the key respondents for this evaluation) have, however, not yet returned to school and are due to stay at home until January 2021.

The MOE through the GES, in collaboration with the Ministry of Communication through the Ghana Broadcasting Corporation, has been tasked with rolling out

[12] 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].
[13] See www.iiep.unesco.org/en/ghana-making-inclusive-education-reality-4564.
[14] National Council for Curriculum and Assessment, available at https://nacca.gov.gh/?p=9510.

distance learning programmes. Ghana Learning TV for primary school and JHS students launched on 6 May 2020 and offers two 35-minute lessons for each grade each weekday. Ghana Learning Radio launched on 15 June 2020, and broadcasts interactive reading lessons in one-hour slots three times a week, although the lessons are aimed at lower primary school grades. Broadcasts also include health and safety behaviour change messaging that focus on handwashing, social distancing, and child protection. There is also an online study platform (iCampus), but this is aimed at senior high school students.

The roll-out of remote learning resources by the GES was an opportunity for DP-2 because the project had developed existing content mapped to the curriculum and expertise in teacher-facilitated lessons using media on TV. After an initially enthusiastic response from the GES, they have not signed the licence agreement required for the content to be used and have put production of new educational programming on hold for everyone in the last few months.

1.3.2 Kenya

General context

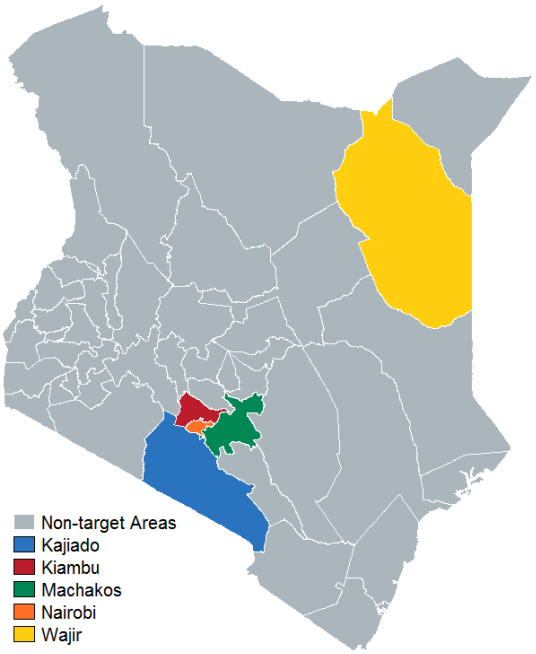
The Free Basic Education Policy of 2003 mandates compulsory free basic primary education for every child. In Kenya's education system, lower primary is three years (ages 6–8), followed by five years of upper primary (ages 9–13), and four years of secondary (ages 14–17, with the first two considered JSS).

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 fresh pasture. A consequence of this is 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. The Sector Policy for Students and Trainees with Disabilities Framework (2018) recognises the importance of inclusive education by emphasising the need for all students to learn together in an inclusive environment. In Kenya, each sub-county is supposed to have an educational assessment and resource centre, which focuses on the early identification, assessment, intervention, and placement of children with disabilities. Kenya's National Special Needs Education Policy Framework acknowledges that the mainstreaming of special needs education has faced several challenges due to range of factors, including inadequate facilities, lack of equipment, lack of capacity among teachers, and inadequate teaching and learning materials. The policy sets out ambitious strategies for improving this, including reviews of curriculum materials and assessment procedures, the provision of funding to make school facilities more accessible, and the provision of forums for children with disabilities to be integrated into co-curricular activities.

[15] UNICEF (2017) 'Annual Report—Kenya', UNICEF Kenya, available at www.unicef.org/about/annualreport/files/Kenya__2017_COAR.pdf [accessed 16 July 2018].

Figure 4: DP-2 project areas in Kenya



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

Contextual changes during project implementation

Project implementation in Kenya was delayed at the start of implementation in 2017 because of the disputed presidential election, and the resulting political violence and uncertainty, which kept many schools closed.

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] The Kenya National Union of Teachers has published its own research into the curriculum, concluding that the curriculum was poorly researched, roll-out was rushed, and training inadequate.[17] It was projected that 225,000 teachers would have been trained on the new curriculum by December 2019. While implementation has so far focused on the lower primary level, primary school teachers were 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 part in additional training if their time is being taken up adjusting to the new curriculum.

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 at the weekends or for the school holidays. In addition, teacher unions advocated against training at weekends, which meant that training had to mostly be conducted during the school holidays. This substantially delayed DP-2 activities, as the project has had to adjust its schedule for rolling out DP-2 training sessions and fit training sessions into a tighter schedule. It also means that schools

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

[17] Kenya National Union of Teachers (2019) 'Teacher preparedness for the implementation of the competency-based curriculum in pre-primary and lower primary grades in Kenya'.

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, meaning that they may have less time and energy to invest in DP-2 activities.

In addition, massive teacher transfers in Kenya have also affected the continuity of DP-2 activities. Teacher transfers occurred at the start of the academic year, as well as in May 2018 due to the introduction of a delocalisation policy aimed at transferring teachers who have served in one school for more than seven years. These were usually head teachers or senior teachers, who were often DP-2 RTs. Teacher transfers also occurred because of insecurity in Wajir, including massive transfers of non-local teachers to safer counties, given the terrorist attacks both in early 2018 and in December 2019/January 2020. In response to the latest teacher relocations, the Wajir County Government hired local secondary school graduates to fill these positions and DP-2 was working with these new teachers to provide additional TPD until the school closures caused by COVID-19. In such contexts, remedial sessions may not necessarily be conducted by DP-2 trained teachers who have received the full package of direct training.

Lastly, implementation in non-formal schools in Nairobi was at times challenged because of changes in ownership, the demolition of schools, and safety and security issues. In late 2019, the government inspected all non-formal schools and ordered the permanent closure of those that did not comply with minimum safety standards. This resulted in disruptions to DP-2 implementation as schools were preoccupied with the inspection, and teachers and students in some project schools moved to other schools deemed to be safer.

COVID-19 and school closures

Schools in Kenya closed on 16 March 2020 and will remain closed until the start of the new school year in January 2021 or as advised by the Cabinet Secretary. At the time of writing, all students are expected to remain in their current class in 2021.

The Government of Kenya has been offering instruction via TV, radio, and online. From 23 March 2020, four main platforms are being used to deliver educational programmes and resources to students. First, in partnership with the Kenya Broadcasting Corporation, radio programmes are being broadcast on all weekdays on multiple radio channels. Second, education television broadcasts have begun on the Edu Channel TV, which is owned by the Kenya Institute for Curriculum Development (KICD). Third, this television programming is made available as live stream as well as on-demand content via KICD's EduTV Kenya YouTube channel. Fourth, students can also access digital learning resources, including electronic copies of textbooks from the Kenya Education Cloud hosted and curated by KICD. The government has also supported initiatives to increase internet access, thereby extending online learning access in rural and remote communities.[18]

As mentioned above, this provided an opportunity for DP-2. As part of the COVID-19 response, the project is providing content and support to KICD and the Kenya Broadcasting Corporation for TV lessons using Impact(Ed)'s video library, and for TV and radio broadcasts featuring the MBW series.

From 12 August 2020, the government launched a community-based learning approach, in particular to support students who do not have access to the radio, TV, or the internet. All teachers employed by the TSC are mapped to no more than 15 students in their communities. Teachers are meant to meet with students face-to-face in community halls or open spaces for at least four hours a day at no charge, while adhering to public health protocols. They deliver learning and life skills activities.[19] Kenyan news outlets

[18] www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic
[19] https://arena.co.ke/tsc-launches-community-based-learning-officially-effective-12-8-2020/

reported that initially there was confusion about the programme, with teachers, parents, and students lacking detailed information on the programme, and full implementation has been postponed.[20]

School closures are likely to be particularly challenging for private schools, including the low-cost, non-formal schools that DP-2 supports in Nairobi, because they rely on fees to pay rent and the salaries of teachers and support staff. Many schools have already closed down or are at risk of doing so. Teachers from non-formal schools, who have had to look for alternative sources of income, may not return to the schools once they reopen.

1.3.3 Nigeria

General context

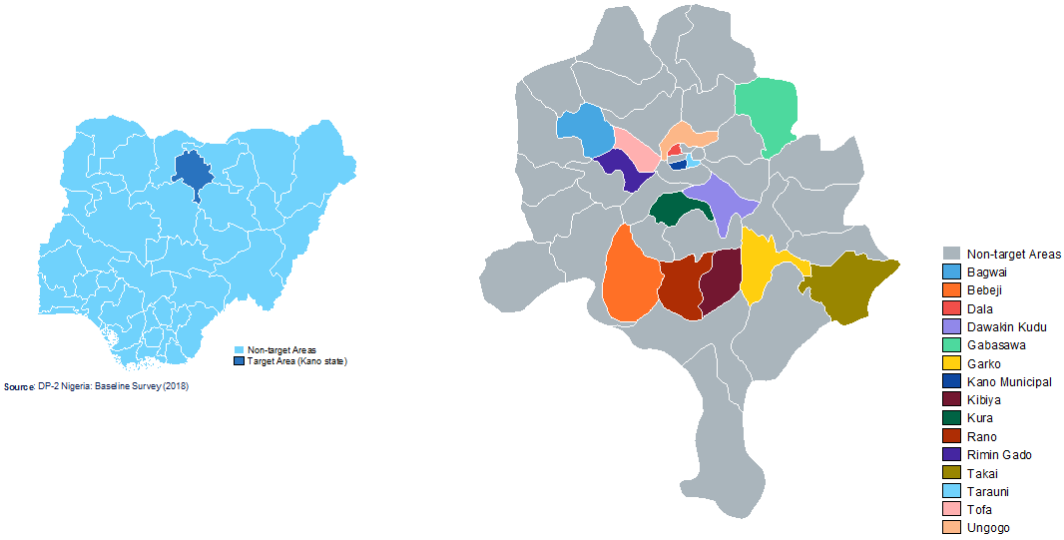
In Nigeria, 'basic education' includes six years of primary (children aged 6–11 years old) and three years of JSS education (ages 12–14). The Free Universal Basic Education Act of 2004 makes provisions for free and compulsory education for all school-aged children for nine full academic years of basic education.[21]

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), unlike many urban schools. Schools are also typically understaffed, with predominantly male teachers, and classrooms overcrowded, thereby affecting the quality and gender-inclusiveness of teaching and education. Although primary schooling is free in Nigeria, schools sometimes charge fees for exams, for parent-teacher associations (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 insufficient amounts of pocket money to buy food during the day.[22] 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 happening for most girls. There are also concerns about safety in reaching schools, which results in parents opting for their girl children to drop 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, few concrete steps to achieving this goal are outlined.

[20] https://allafrica.com/stories/202008130630.html
[21] International Labour Organization, available at http://nigeria-education.org/literature/compulsory-free-universal-basic-education-act-2004 [accessed 07 June 2018].
[22] 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.

Figure 5: DP-2 project areas in Nigeria: Kano State



Contextual changes during project implementation

In Nigeria, national elections took place in February and March 2019. This meant 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 have affected pupil attendance. DP-2 staff in Nigeria reported 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 meant that new staff have been appointed to the SUBEB, including a new SUBEB chairman and permanent secretary. New units and departments responsible for TPD and for monitoring were also created. The implication for DP-2 is that the existing close partnership with government needed to be renewed; some momentum gained towards ensuring the sustainability of the intervention was lost in the process.

As in the other two countries, large-scale teacher transfers affected the continuity of DP-2 activities, particularly in rural schools. DP-2 worked with SUBEB to agree that one to two DP-2 trained teachers would remain in DP-2 supported schools where large-scale teacher transfers were unavoidable.

The lack of teachers who are literate in English, and particularly the lack of literate female teachers, posed challenges for the implementation of some DP-2 activities. Firstly, the low levels of English knowledge among teachers affected the delivery of English lessons. Secondly, it was difficult for the project to identify female club mentors to support the delivery of the MBW content, especially in more remote, rural areas. MBW facilitation guides were translated into Hausa because some teachers did not speak English. In addition, no female club mentors could be identified in six out of the 60 MBW pilot schools, and some additional schools lost their mentors through teacher transfers and were not able to replace them.

COVID-19 and school closures

Schools in Nigeria closed on 26 March 2020 and have remained closed. It is unknown when schools are to reopen – possibly as early as September 2020 for the start of the 2020/2021 school year.

In Nigeria, the provision of distance learning or other learning support has largely been managed by the individual states. Kano State has implemented radio and TV lessons, but information on which grades are targeted was not available.

As in Kenya, this provided an opportunity for DP-2 in Nigeria. As part of the COVID-19 response, the project is providing content and support to Kano State TV and radio for teacher-facilitated lessons using Impact(Ed)'s video library, and for TV and radio broadcasts featuring the MBW series.

1.4 Endline evaluation approach

This section briefly describes the evaluation approach and methodology. The full evaluation approach and methodology are described in Annex 1.

1.4.1 Revision to the evaluation scope

The evaluation is longitudinal and spans three years, starting with a **baseline round in 2018, followed by a midline round in 2019, and finishing with an endline round in 2020**. This report presents the findings of the endline round and draws on findings collected throughout the evaluation.

The original evaluation design was a theory-based, mixed-methods evaluation that included a quantitative impact evaluation, facilitated by a large-scale survey with girls, parents, teachers, and head teachers; and a qualitative impact evaluation that followed a purposively selected cohort of girls, as well as parents and educators. **Due to the outbreak of the COVID-19 global pandemic and the resulting school closures, the original endline evaluation design was no longer viable.** In addition, because of the timeframe in which the DP-2 project will be completed, it was not possible to postpone the endline evaluation until a time where social distancing measures were eased, and school visits and face-to-face research would be feasible. **We therefore adjusted the endline evaluation design so that could be implemented through remote data collection and analysis of secondary data.** This necessarily required a review of the scope of the evaluation, as several of the questions that the evaluation had set out to answer at endline cannot be answered effectively through these data collection methodologies. Despite focusing on a more limited set of research questions, the endline evaluation aims to capture perceptions of project effectiveness and implementation in a timely manner, and to ensure that crucial learning useful for future implementation is not lost.

To redesign the endline evaluation, a new research scope was defined in consultation with Impact(Ed) and the FM. The research scope was defined with the following factors in mind:

- priorities for evidence to be produced by the endline evaluation;
- constraints on the modes of data collection that are possible in the current situation and resulting constraints on the types of evidence that can be produced; and
- the time required for a redesign of the approach, data collection, analysis, and reporting.

Following discussions with Impact(Ed) and the FM, it was agreed that the endline round of evaluation would focus on **two broad research themes**, which are listed in order of priority.

Research themes for the endline evaluation

1. **What progress has been made against outcomes and intermediate outcomes of DP-2 as it was designed and implemented before the COVID-19 outbreak, i.e. up until mid-March 2020?**
2. **How have outcomes and intermediate outcomes been affected by COVID-19?**

To address these research themes, the evaluation drew on the following sources of data:

- quantitative data collected through phone interviews in all three countries;
- qualitative data collected through phone interviews in all three countries;
- qualitative data collected through face-to-face interviews in Nigeria; and
- monitoring data from all three countries.

In-person qualitative data collection in Nigeria was completed in line with the original evaluation design prior to COVID-19. Shorter follow-up interviews with the same respondents were conducted over the phone to answer research questions that included a focus on COVID-19, and how the pandemic has changed respondents' perceptions around learning, self-efficacy, and transition. Quantitative data collection in Nigeria, and all data collection in Ghana and Kenya, was conducted remotely through phone interviews.

1.4.2 Changes to evaluation design due to COVID-19

In this section, we summarise the implications of the change in data collection methodology to remote interviewing on the types of data that we could collect for the endline evaluation. The main implications were:

- **Many of the impact and outcome indicators that the quantitative impact evaluation has been collecting data on need to be collected in schools or through face-to-face interviews.** This includes the measurement of learning outcomes through learning assessments that need to be conducted face-to-face, the measurement of teaching quality through lesson observations in schools, and the measurement of attendance at school through school records. This meant that quantitative data on these indicators could not be collected at endline, and we therefore do not have quantitative impact estimates for some of the key outcome and intermediate outcome indicators. We used DP-2 monitoring data at endline to understand the progress of implementation of DP-2 that has taken place since midline.
- For the quantitative impact evaluation, **a smaller sample of girls could be reached by the phone survey**. This is because some respondents do not have access to a phone, and because some respondents were not reachable during the survey. Phone surveys generally have lower response rates than face-to-face research. This meant that **the sample was not large enough to allow for impact analysis on different subgroups, as conducted at midline**. For example, we did not conduct a separate impact analysis for the different sampling strata in Kenya, or for schools with different exposure to the intervention in Ghana. Instead, we explored associations between these factors and the outcomes indicators through regression analysis.
- For the qualitative impact evaluation, **phone interviews do not allow the use of certain research techniques, in particular focus group discussions (FGDs)**, which had been a key research technique in the original design. FGDs had to be replaced with individual interviews.

- **Phone interviews are shorter than face-to-face interviews**, with previous experience suggesting that respondents are likely to lose concentration if interviews last longer than 30 minutes. This meant that we had to prioritise some of the questions and could not ask others. It also meant that some of the themes explored in the qualitative research could not be explored in as much depth as originally planned.
- When remote data collection took place, schools had been closed and project activities halted for several months. This meant **we had to be aware of recall bias** and could not expect respondents to remember as many precise details about their engagement with DP-2 as would have been the case with data collection that took place nearer the time. This meant that we could not collect as much detail about respondents' engagement in DP-2 as originally planned.

In summary, for the quantitative impact evaluation, the change to remote data collection and the shorter duration of the interviews meant that it was not possible to collect quantitative impact data on some of the indicators that the evaluation had set out to measure, and the smaller sample size meant that some subgroup analysis was not possible. For the qualitative impact evaluation, the change to remote data collection meant that certain research techniques were not possible, and that the breadth and depth of the data collected were more limited.

A major component of the original intended endline evaluation approach was an impact evaluation to assess the attributable impact of DP-2 on key outcomes and intermediate outcomes. **The revised quantitative impact evaluation is much more limited in nature, greatly reducing the ability of the evaluation to robustly measure the attributable impact of DP-2 on the full range of expected outcomes.**

The evaluation continued to make a quantitative assessment of the impact of DP-2 on self-efficacy and transition. However, for other indicators, **the endline round focused, by necessity, more strongly on a qualitative assessment of the factors that stakeholders perceive to be influential in driving change in outcomes, and on understanding how DP-2 activities are perceived to contribute to any perceived changes in outcomes**. For example, given that we could not conduct learning assessments remotely, our judgement of progress in this domain rested on two sources of evidence: (1) Learner Check instruments implemented by Impact(Ed) that assess progress, but only for treatment girls, and thus cannot determine whether progress is attributable to DP-2; and (2) a qualitative assessment of the perceptions held by teachers, parents, and girls of girls' learning progress and whether they perceive that this relates to DP-2.

1.4.3 Key evaluation questions

Table 12 shows a summary of the key evaluation questions at endline, and whether we can report on DP-2's impact on the outcome or intermediate outcome at endline. We continue to report on the impact of DP-2 on self-efficacy and transition in line with the original evaluation design.[23] For literacy and numeracy, teaching quality, life skills, and community attitudes and perceptions, we do not have quantitative measures of impact available at endline, and instead report on qualitative perceptions of the effectiveness of these components. Attendance is not measured at endline because attendance records were not available, and because a purely qualitative assessment of attendance was not a priority for the evaluation, given the high attendance rates observed at midline.

The detailed research matrix that shows the key evaluation questions, sub-questions, and sources of data is presented in Annex 1.

[23] However, there are some differences in the quantitative impact estimation approach used at endline; these are described in Annex 1. There are also limitations to the breadth and depth of the qualitative assessment of these indicators, as explained in the previous section.

Table 12: Key evaluation questions

Outcome / intermediate outcome	Research question	Can we report on impact on the outcome / intermediate outcome?
Learning (literacy, numeracy)	What progress have girls made in their learning in the last year, prior to the COVID-19 outbreak, including girls taking part in remedial lessons?	Learning assessments could not be conducted at endline, so the endline evaluation does not report on the impact on learning outcomes. Instead, at endline, we report on perceptions of changes in learning, and data from Learner Checks on the progress that students attending remedial lessons in treatment schools have made.
	Were activities related to the ALP component implemented as expected and to scale?	
Self-efficacy and life skills	What is the impact of DP-2 on self-efficacy? What are changes in girls' attitudes to schooling and behaviour, as well as their life skills, as a result of their attending girls' clubs (and especially because of the MBW content)?	The endline evaluation reports only on the quantitative impact on self-efficacy. The life skills index was not administered at endline due to the shorter nature of the phone interview.
	Have girls' clubs and MBW activities been implemented as expected and at scale?	
Transition	What is the impact of DP-2 on transition?	No change[24]
	Will the COVID-19 pandemic change the transition status of girls who had transitioned successfully?	
Teaching quality	What DP-2 teacher training and support activities did teachers find most useful, and why?	Lesson observations could not be conducted at endline so the endline evaluation does not report on impact on teaching quality, only on perceptions of what teachers have found most useful about the DP-2 TPD component.
	Were activities designed to improve teaching quality implemented as expected and to scale?	
Community attitudes and perceptions	What has been the impact of DP-2 on community members' attitudes towards girls' education?	This intermediate outcome was predominantly assessed qualitatively in the original design. The logframe included a quantitative assessment of the percentage of girls who aspire to complete secondary or higher education (provided no constraints). Given the ongoing COVID-19 situation, the data on this indicator is unlikely to be comparable to midline findings as it would be difficult (and unrealistic) for girls to imagine a situation where COVID-19 does not pose a potential constraint to their education.
	Have CAP activities been implemented as expected and to scale?	
	How have girls' views towards their education changed because of COVID-19?	
Sustainability	Community level: Has a critical mass of communities, through CAP, demonstrated the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education?	Sustainability is assessed against the sustainability scorecard (see Annex 1) as in previous rounds of the evaluation, but the assessment is not based on as rich a set of evidence as originally intended.
	School level: Has a critical mass of schools established girls' clubs which are self-sustained and functioning on a regular basis using the MBW content?	

[24] However, at midline, both school records and self-reports were used to establish girls' transition status. At endline, school records were not available, and we relied only on self-reports.

Outcome / intermediate outcome	Research question	Can we report on impact on the outcome / intermediate outcome?
	School level: Does a critical mass of schools demonstrate the implementation of effective DP-2 teacher training and effective ALP?	
	School level: Does a critical mass of schools demonstrate the continuous use of educational media, and has it developed and enacted plans to sustain the active use of educational media?	
	System level: Does the MOE have fully fledged education plans furthering project-related teacher development and school support? Are these plans fully funded?	

1.4.4 Evaluation approach at endline

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. We briefly discuss each method in turn, with more details presented in Annex 1.

- **Quantitative impact evaluation design:** We use a quasi-experimental impact evaluation design known as coarsened exact matching with difference-in-difference estimation. The quantitative impact evaluation is designed to provide robust estimates of the impact that DP-2 has had.
- **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 by identifying factors that stakeholders perceive to be influential, and to understand how the interventions may have contributed to the observed impact.

The original design of the endline evaluation intended that quantitative and qualitative methods would be integrated to ensure robustness, depth, and improved validity in the research findings. Each evaluation method targets stakeholders based on the strengths of the method to maximise the breadth of the data and would have enabled us to answer all key research questions. In addition, some research questions were expected to be addressed by both quantitative and qualitative methods; this would have enabled us to triangulate findings from different research methodologies and contextualise findings from the quantitative research.

This integration of methods was no longer possible at endline in all cases. For example, our assessment of teaching quality was no longer grounded in a robust assessment of the impact of DP-2 on various dimensions of teaching, but rather assessed through an understanding of what aspects of the training teachers have retained and what they plan to use in the future. This is supported by evidence that this evaluation has already generated in previous rounds.

We could also not collect detailed information on the implementation of the intervention at endline. Instead, we relied on project monitoring data to understand the reach and uptake of the intervention and combined this with qualitative data on the project activities.

In addition, **qualitative data collection in Nigeria was completed before COVID-19, while the remainder of the data was collected during the pandemic**. The difference in context is likely to affect answers to some questions, and this will need to be taken into consideration in terms of how we are able to triangulate findings from different research methodologies.

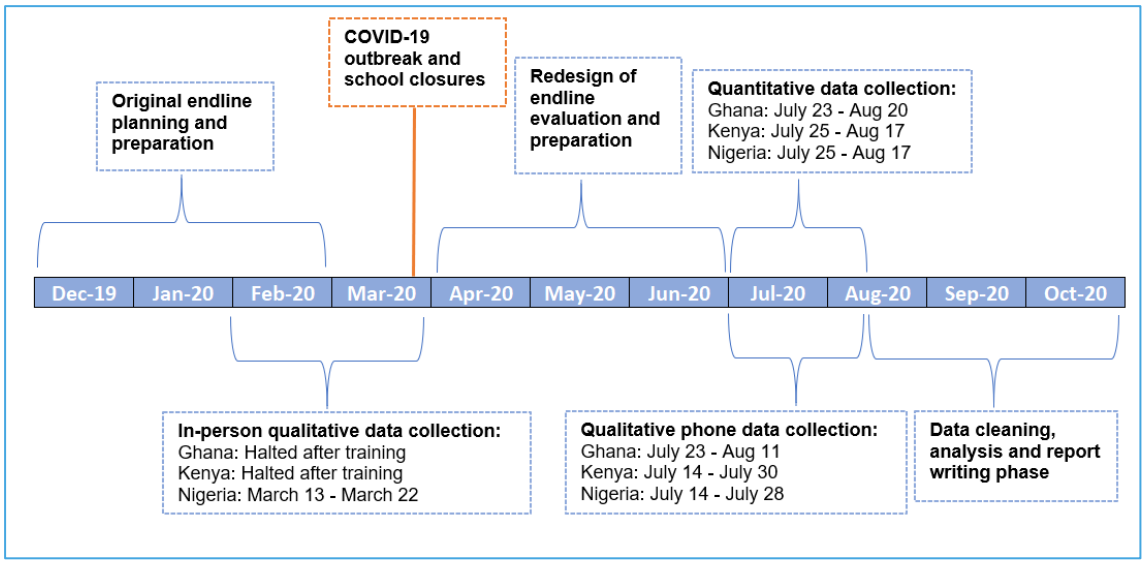
Despite these limitations to mixing methods, **the new data collection methodology has provided an opportunity to test a different approach to mixing methods through the use of blended questions**. COVID-19 has disrupted schooling and implementation plans, but more importantly, changed the process of learning for girls across Kenya, Nigeria, and Ghana. It has altered the context under which parents and girls are able to return or continue schooling, owing to a change in physical resources. To understand this contextual change, we used blended questions in the quantitative survey: a quantitative response prompted the interviewer to ask a more detailed, more probing question to get a qualitative response. This method provided us with additional information for a few important questions on the context of the cohort girls' lives. Specifically, blended questions were asked around whether girls plan to return to school, the reasons for girls dropping out of school, and what girls learnt from the MBW content (in Kenya). The responses to these questions were analysed against quantitative responses and written up together in the report.

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.

1.5 Endline data collection

Figure 6 shows the data collection timeline at endline.

Figure 6: Endline data collection timeline



1.5.1 Quantitative data collection

Sampling strategy

This evaluation is tracking a joint sample for both learning[25] 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. Given that DP-2 works with in-school children, these cohorts consisted only of in-school girls at baseline.

The evaluation is designed to track this cohort of girls over the course of the evaluation and measure their progress on the outcome and intermediate outcome indicators. At endline, we aimed to track all cohort girls in the treatment and control group who had been interviewed at midline. This included girls who were successfully re-interviewed at midline and those who were added to the sample at midline as part of the top-up to the sample. We did not attempt to track girls who had been lost from the sample at midline. The sample of girls that we attempted to re-contact at endline was limited to girls for whom we had phone numbers.

At midline, we tracked all girls who were interviewed at baseline. Where we could track girls successfully to a school that was part of the evaluation sample, we interviewed the girl and administered the self-efficacy scale, and determined her transition status through school records.[26] When we could not track a girl in a school that was part of the evaluation sample, we contacted the girl's caregiver by telephone and conducted a short interview with the caregiver to determine the girl's transition status (but we did not collect self-efficacy data for these girls because we did not interview them directly).

At midline, the learning cohort therefore consisted of all girls who could be successfully tracked to a school that was part of the evaluation sample and for whom self-efficacy data was available.

The transition cohort at midline consisted of all girls that were part of the learning cohort, plus girls who were no longer enrolled in a school that was part of the evaluation sample, but whose caregivers could be tracked through a telephone interview.

At endline, we tracked all girls who were successfully tracked at midline for the learning cohort and the transition cohort. Girls who had been dropped from the learning cohort at midline because we could not interview them face-to-face remained dropped from the learning cohort at endline. This is because we have no self-efficacy data for these girls at midline, and therefore cannot carry out a midline to endline analysis.

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

In addition to the learning cohort and transition cohort that were sampled at baseline, additional in-school girls were added to the sample at midline to increase the sample size (these are referred to as **top-up girls**). These girls were randomly sampled from among all girls from Primary 6 who were present on the day of the visit, and who were not already part of the evaluation sample. At endline, we continued to track these cohort girls. However, during the analysis stage, the decision was made not to include the top-up girls in the endline analysis. This is because information from top-up girls was available only at midline and endline, and the girls could therefore not be included in the analysis that covered the full

[25] The learning cohort is the cohort that was assessed for both literacy and numeracy assessments, and for self-efficacy. Therefore, while no learning assessments were administered at endline, the learning cohort represents the sample that is used for the analysis on the self-efficacy outcome.

[26] In Nigeria and Ghana, it was expected that some girls would have already transitioned into junior secondary school 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 interviewed the girl at this school.

duration of the evaluation. Calculations of sample power showed that the power for the analysis was not substantially reduced by excluding the top-up girls from the analysis. Removing these girls from the analysis simplified the analysis approach and meant that the impact analysis for midline to endline, and that from baseline to endline, could be run consistently over all three rounds of the panel.

Quantitative instruments

As has been described above, the scope of the quantitative research was substantially reduced because it was not feasible to conduct learning assessments or lesson observations, or to collect information specifically related to school records or school infrastructure remotely. As a result, we administered one quantitative phone interview, which included one module that was administered to the caregiver and one that was administered to the cohort girl (see Table 13).

Table 13: Quantitative tool for endline evaluation

Respondent	Content
Caregiver	• Transition • Change in transition status due to COVID-19 • Limited set of background characteristics
Cohort girl	• Perception of learning pre-COVID-19 • Self-efficacy • Implementation of MBW TV broadcast (Kenya only)

1.5.2 Qualitative data collection

Sampling strategy

The sampling approach at endline followed the sampling approach at baseline (and midline) to build a qualitative panel dataset, i.e. the same schools in each country, the same communities and the same cohort of girls were tracked. The qualitative cohort girls were in Primary 5 at baseline, and in Ghana and Nigeria, many had moved to junior secondary school by endline. In addition, not all cohort girls were part of the girls' clubs and remedial classes. Therefore, at endline, we also interviewed a new group of girls in primary schools who had received both the MBW and ALP interventions to explore the perceived changes that had taken place through both interventions. These girls were sampled from the same six schools in each country that form the qualitative panel.

At the request of the FM, as an addendum to the main endline evaluation report, we prepared a short note on the activities in Phase 2 schools based on data collection in a small number of these schools. We selected three Phase 2 schools in each country using monitoring data to identify schools that had average levels of engagement with DP-2.

Qualitative instruments

Table 14 shows the qualitative instruments and focus at endline.

Table 14: Qualitative instruments and focus at endline

Respondent and research method	Purpose
Interviews with head teachers in primary schools	• To understand the progress of the CAP and ALP implementation at school, and how the CAP and the ALP were useful in improving outcomes such as attendance, learning, and transition. Where relevant, reasons why the CAP may not be functioning • To understand what factors supported or hindered cohort girls' transition to secondary school (in Ghana and Nigeria) • To understand whether, how, and why the head teacher is likely to support and sustain interventions such as MBW, the media centre, CAP, and ALP in the school once the project ends
Interviews with RTs in primary schools who have been trained by the project	• To understand what DP-2 teacher training activities teachers found most useful, and why • To understand which of the skills taught during training teachers are most likely to retain upon returning to school, and why • To understand if teachers perceive it to be useful to continue the remedial lessons when schools reopen, and why or why not • To understand if teachers perceive an improvement in girls' learning in their classes, and why or why not
Interview with girls' club mentors in primary schools	• To understand how the MBW content in girls' clubs was last implemented at school level • To explore any changes in girls' attitudes to schooling and behaviour, as well as their self-efficacy because of their attending girls' clubs, and especially because of the MBW content • To understand whether, how, and why the club mentor is likely to support and sustain these interventions in the school once the project ends
Interviews with members who are part of the CAP process in primary schools	• To determine the progress of the CAP since the midline, and any barriers to progress, including challenges with regards to COVID-19 • To understand whether and why/why not the CAP activities/CAP processes are likely to be sustained once the project ends • To explore what barriers to continued education for girls are, including but not limited to COVID-19
Interviews with girls in primary schools (in clubs and remedial classes)	• To explore what girls last recall and found most useful as part of girls' club activities and how girls are using what they learnt in the club at home • To explore changes in girls' attitudes to schooling and behaviour as well as their self-efficacy as result of their attending girls' clubs and especially because of the MBW content • To understand what girls found most useful from their remedial classes, and why • To explore if girls have watched the MBW TV show at home and whether they perceive it to have helped their life skills. For those who do not watch the show, to explore the reasons why (in Kenya)
Interviews with cohort girls	• To understand girls' perceptions and attitudes to schooling and self-efficacy and if this has changed since midline, and why

Respondent and research method	Purpose
	• To explore perceptions of barriers to the continued education of girls (including but not limited to COVID-19) and explore how the project contributed to this change (if at all) • To understand how COVID-19 has changed the girls' learning, views towards education, and perceptions of their likelihood of returning to school
Interviews with parents of cohort girls	• To explore changes in parents' attitudes to girls' schooling and life skills • To understand what the main factors are that influence parents' support to education, and whether these have changed because of COVID-19 • To explore parents' perceptions of barriers to education (including but not limited to COVID-19) and explore how the project has contributed to this change (if at all)
Interviews with girls who have dropped out from school, and with the parents of such girls	• The revised endline design will not interview parents and girls who have dropped out
Interviews with head teachers in Phase 2 schools	• To understand the progress of CAP, and how the CAP was useful in improving outcomes such as attendance, learning, and transition; where relevant, to explore the reasons why the CAP may not be functioning • To explore which activities head teachers are most likely to retain upon returning to school, and why
Interviews with DP-2 trained teachers in Phase 2 schools	• To explore which teacher training and support activities teachers in Phase 2 schools found most useful, and why • To understand which skills taught during the training teachers are most likely to retain upon returning to school, and why
Interviews with MOE officials	• To understand whether, how, and why/why not the MOE is likely to support and sustain DP-2 activities once the project ends
Interviews with Impact(Ed) project staff	• To understand the activities undertaken to promote the long-term sustainability of the project • To understand whether and how project activities are likely be sustained once the project ends

2 Context, marginalisation, barriers, and characteristics

This chapter is divided into two sections. The first describes the characteristics of the girls that are part of this evaluation. At baseline, the cohort girls for the quantitative survey were sampled representatively from all Primary 5 girls that were present on the day that the data collection team visited the school.[27] For the qualitative research, girls were also sampled from Primary 5 at baseline and have been tracked over time. In addition, at endline, a new group of girls were interviewed. These are girls who are both members of the girls' club and take part in the remedial lessons in the primary schools forming the qualitative evaluation sample.

The second section describes the context in which these girls are living and in which DP-2 is working. The section illustrates the barriers to learning and transition that girls are facing in the communities where DP-2 is working. The project has factored these characteristics into the design and implementation approach in each country. In addition, some DP-2 activities, such as the CAP, are directly targeted at addressing some of these barriers.

2.1 Girls' characteristics at endline

The characteristics of girls from the quantitative survey described in this section are for girls from the learning cohort.[28]

Grade

Table 15 shows the grade that the cohort girls from the quantitative evaluation sample are in at endline before schools closed due to COVID-19. As mentioned above, all girls were in Primary 5 at baseline, meaning that most girls are expected to be in Primary 7 (Kenya) / JSS1 (Nigeria) / JHS1 (Ghana) by the time of the endline evaluation two years later if they have transitioned successfully. This is the case for the majority of girls in Ghana and Kenya. In Nigeria, 60% of girls in the treatment group are in JSS1, while 15% of girls are still in Primary 6 and 15% are already in JSS2. We reported in the midline evaluation that some girls in Nigeria, and a smaller proportion of girls in Ghana transferred to junior secondary school immediately after the end of their Primary 5 year without completing Primary 6. This is possible if girls have already passed the entrance examination for junior secondary school after the end of Primary 5. In Chapter 4, we examine transition pathways in more detail and report on DP-2's impact on transition.

Table 15: Learning cohort by grade at endline

Grade	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Primary 3 (%)	0.0	0.0	0.0	0.0	0.3	0.0
Primary 4 (%)	0.3	0.0	0.0	0.0	1.4	0.6
Primary 5 (%)	0.7	1.0	0.5	0.2	7.3	3.2
Primary 6 (%)	6.6	7.0	4.8	2.9	16.3	14.5
Primary 7/JSS1/JHS1 (%)	85.4	86.3	93.8	95.5	48.8	60.5
Primary 8/JSS2/JHS2 (%)	3.9	3.3	0.9	1.2	19.2	14.7
JSS3/JHS3 (%)	0.3	0.0	0.0	0.0	1.9	2.5

[27] Annex 1 describes the attrition from the sample since baseline, as well as the implications for the representativeness of the sample.
[28] The percentages across each group are slightly different for the transition cohort because the transition cohort includes additional girls.

Grade	Ghana		Kenya		Nigeria	
Not in school (%)	2.8	2.3	0.0	0.2	4.7	4.0
Sample size (*N*)	396	512	581	647	476	524

Source: DP-2 girls' survey (2020)

As part of the qualitative sample for endline, we found that a majority of the originally identified cohort girls had transitioned successfully across the three countries. This is discussed in further detail in Chapter 4. In addition, most of the new cohort girls who were identified and interviewed at endline were students currently enrolled in Primary 4–6 across the countries. The selection criteria for the new cohort girls included their being part of the girls' club in their school as well as being recipients of the remedial classes. Given the school closures and lockdowns at the time of data collection due to COVID-19, none of the students were going to school.

Age

Table 16 shows the age of the cohort girls. At endline, most girls are aged between 12 and 15 years. In Ghana, about a fifth of the girls are older (16 or 17 years old), while in Nigeria, 12% of girls are younger (9–11 years old).

Table 16: Learning cohort by age at endline

Age in years	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
6–8 (%)	0.0	0.0	0.2	0.0	0.0	0.2
9–11 (%)	2.3	2.3	3.7	3.7	12.6	11.8
12–13 (%)	19.8	20.7	59.7	62.3	39.4	46.9
14–15 (%)	53.7	55.1	33.3	28.6	36.6	32.8
16–17 (%)	21.7	18	2.9	5.1	9.1	7.4
18–20 (%)	1.9	3.7	0.2	0.3	2.2	0.8
Missing (%)	0.6	0.2	0.0	0.0	0.1	0.0
Sample size (*N*)	396	512	581	647	476	524

Source: DP-2 girls' survey and household survey (2018; 2019; 2020)

Note: 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 two years where age was reported at baseline. Where age was not reported at baseline, the midline age plus one year was used.

Disability

At midline, 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.

This information could not be collected at endline because of the shorter nature of the phone survey. In Table 17, we present the proportion of girls from the endline sample who reported having a disability when they were interviewed at midline. Cohort girls in Ghana were most likely to report having a disability (10% in the treatment group); this is driven by a large proportion of girls who report having difficulties remembering things or concentrating (cognitive impairment). We have noted in previous reports that given that these questions were administered to students while at school, it is also possible that the school context could have made difficulties in remembering or concentrating more salient, and these may not have always represented a cognitive disability due to health problems. In Kenya, there is also a high proportion of girls who report having a disability (8% in the treatment group), with difficulties seeing and difficulties remembering things or concentrating being the most common difficulties reported. In Nigeria, the disability rate is lower (1.3% in the treatment group). At baseline, we compared caregivers' reports of their daughter's disability status with girls' own reports and found that girls in all three countries were more likely to report having a disability compared to their caregivers. For example, while 10% of girls in the treatment groups in Ghana reported having a disability, only 2% of caregivers reported that their daughters had a disability. We noted at baseline that the 2011 World Report on Disability[29] notes that reporting of child disability by parents or caregivers may not always accurately represent the experience of the child. However, it is also possible that children may interpret answer categories such as *'some difficulty'* or *'a lot of difficulty'* differently to parents.

Table 17: Proportion of learning cohort girls who reported having a disability

Disability	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Has at least one type of disability (%)	5.7	10.0	5.7	7.9	3	1.3
Visual impairment (%)	0.1	1.0	1	3.2	0.2	0.6
Hearing impairment (%)	0.3	0.6	0.3	1.1	0.4	0
Mobility impairment (%)	0.5	0.8	0.4	1.1	1.1	0.2
Cognitive impairment (%)	4.4	7.6	1	2.2	1	0.4

[29] World Health Organization (2011) *World Report on Disability*. Accessed on 21 July 2018 from http://www.who.int/disabilities/world_report/2011/report.pdf

Disability	Ghana		Kenya		Nigeria	
Self-care impairment (%)	0.1	0	0.5	0.5	0	0.4
Communication impairment (%)	0.5	0.6	2.5	2.3	0.3	0
Sample size (*N*)	396	512	581	647	476	524

Source: DP-2 girls' survey (2019)

Note: 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'.

2.2 Educational marginalisation

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. In this section, we discuss the different ways in which girls in the communities where DP-2 works may be educationally marginalised, and how this marginalisation creates barriers to their learning and ability to transition. While we report findings for both treatment and control groups from the quantitative survey, the discussion focuses on the treatment group as this is the group of girls taking part in DP-2 activities. Because we did not visit schools and communities in person at endline, we have limited updated information on how barriers to education may have changed since then. Instead, this section focuses on describing the prominent barriers to education that emerged at baseline and midline, integrating data from endline where available.

Living arrangements

Table 18 shows information about girls' living arrangements, as reported by their caregivers at endline. The majority of girls in the sample live with at least one of their parents. Living arrangements in Kenya tend to be more diverse, with 23% of girls in the treatment group living in female-headed households and the same proportion living with only one parent. At baseline, the qualitative research found that in some cases in Kenya girls lived with their aunt or uncle to enable to them 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. In Ghana, a quarter of the treatment girls live without both parents. At midline and endline, the qualitative research found that it was common for parents to migrate to urban centres and for the children to stay with their grandparents or other relatives. In Nigeria, at midline and endline, some girls reported living with many siblings and in large families, and in some cases also with stepsiblings if their parents had remarried.

Table 18: Girls' living arrangements at endline

	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Single orphan (%)	10.1	14.6	11.3	7.7	4.5	7.8
Double orphan (%)	0.9	0.6	0.5	0.3	0.3	0.0
Living with one parent only (%)	15.6	18.9	28.7	23.3	7.3	9.4
Living without both parents (%)	21.6	24.6	4.5	5.4	2.5	3.1
Living in female-headed household (%)	11.0	8.0	31.4	23.3	6.8	11.8
Sample size (*N*)	396	512	581	647	476	524

Source: DP-2 household survey (2020). Learning cohort.

Note: All indicators are reported by caregivers.

Parental education

Table 19 shows the proportion of household heads and primary caregivers that have no formal education, as reported by caregivers at endline. **Primary caregivers in Ghana are least likely to have a formal education, with 61% of caregivers in the treatment group having no formal education. In Nigeria, 44% of caregivers have no formal education, compared to a fifth of caregivers in Kenya.** The proportion of household heads who have no formal education is similar to the proportion of primary caregivers without formal education in Ghana and Kenya. In Nigeria, household heads are more likely to have a formal education than primary caregivers.

Table 19: Level of education of household head and primary caregiver at endline

	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Head of household has no formal education (%)	70.1	64.7	23.1	23.1	29.1	32.5
Primary caregiver has no formal education (%)	65.0	60.7	23.5	24.0	41.5	43.7
Sample size (*N*)	396	512	581	647	476	524

Source: DP-2 household survey (2020). Learning cohort.

Note: All indicators are reported by caregivers.

In the qualitative research at midline, the lack of parental education was described by parents and community members as a barrier to engaging with children's academic performance and helping them with their studies. The qualitative evidence reflects a similar pattern at endline across the countries, but is especially pronounced in Ghana. In light of the school closures, many parents in Ghana stated then they were unable to support their daughters' studies directly as they did not have the requisite level of education to do so. They usually depended on older siblings in the cohort girls to offer this support.

Poverty

We collected data on household poverty at baseline but were not able to collect updated information at endline due to the shorter nature of the phone surveys. Poverty as a barrier to education was examined in the qualitative research at baseline and midline.

At baseline, around a quarter of households in both Nigeria and Kenya were extremely poor, with a further 30% of households in Nigeria and a further 20% of households in Kenya considered poor.[30] The poverty rate for the sample in Ghana was lower, with about a tenth of households considered extremely poor and a quarter considered poor.

The baseline analysis also 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 to send their children to school, particularly in Ghana and Kenya.

In Kenya, there were large regional differences in the poverty rate: over half the households surveyed in the semi-arid/arid regions (Kajiado and Wajir) were extremely poor, compared to about a tenth of households in the other counties. Despite the lower poverty rate in latter counties, households there were more likely to find it difficult to afford to send their child to school than households in the semi-arid/arid regions. This is because non-

[30] Household poverty was measured based on the Poverty Probability Index 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 rate is the proportion of households that live in extreme poverty, according to the International Poverty Line; this is set at $1.90/day at purchasing power parity at 2011 prices.

formal schools in Nairobi charge fees, and because the caregivers of girls from formal schools in Nairobi, Kiambu, and Machakos were more likely to pay some form of official or unofficial school fees or examination fees.

Our analysis in previous rounds, and further qualitative evidence from endline, show that poverty is the greatest barrier to learning and transition for girls. Given that the literature shows that poverty is the biggest barrier to girls' education, we can assume that DP-2 cohort girls living in poor households are at particular risk of dropping out or missing school.

Poverty affects girls' ability to attend school. The qualitative midline analysis found that girls were sometimes sent home from school when their parents had not paid school fees. In Kenya, the lack of money for sanitary and hygiene products, such as soap and napkins, affected girls' attendance. Poverty also affects girls' ability to attend school because of demands on their time to help with household chores or support the household economically. This is discussed further in the next section.

Poverty also affects girls' ability to fully participate in school because they cannot afford school supplies or contributions for extracurricular activities. The qualitative midline analysis found that financial constraints led to children facing challenges in procuring learning materials, such as storybooks, model exam papers, and reference books, as well as school supplies. In Kenya, specifically, financial constraints meant that some girls were excluded from extracurricular classes and clubs because they could not afford the financial contribution for these activities. At endline, we find that this is reflected in parents' inability to provide access to learning materials for the girls, such school fees, school supplies, and uniforms, and smartphones and TV subscriptions to support remote learning during the pandemic.

Poverty also affects girls' ability to concentrate in school. At baseline and midline, children often came to school without having eaten at home or sometimes without having been provided with lunch money, and girls reported that this affected their concentration levels. In addition, in Nigeria, a few children who had to go back home during break time to eat rarely returned to school afterwards. In Kenya and Ghana, teachers, and CAP participants at endline reported that some children still come to school on empty stomachs, or that they miss school because they have not eaten. At endline, while hunger remains a barrier to attendance and participation, we find some improvements since baseline and midline. There were reports of some children being provided with lunch money by teachers and CAP participants in Kenya, and some reports of CAP participants in Ghana encouraging parents to provide lunch money to their children.

Household chores and labour demands

Another poverty-related barrier to girls attending school and studying at home is demands on their time to help at home, and in some cases to support their households economically. We collected information on girls' involvement in household chores and economic activities in the quantitative household survey at baseline, and in the qualitative research at baseline and midline.

While children's involvement in household chores is not always considered harmful, research suggests that performing household chores for more than 21 hours each week (or three hours a day if spread across seven days) is likely to negatively affect school attendance and learning.[31] At baseline, a 'high chore burden' was defined as spending 'a quarter of the day / a few hours or more' each day on household chores, which roughly equates to 21 hours a week. **More than a third of girls in Ghana and Nigeria and about 16% of girls in Kenya at baseline had a high chore burden according to this definition.** At midline, we reported

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

that most girls wake up very early in the morning (between 4.00 and 5.00 am) to perform several chores before going to school. In Ghana, the qualitative midline analysis found that girls from large families, girls who were not staying with their parents, and girls who were the oldest were particularly likely to have very high chore burdens. In Nigeria, girls' involvement in household chores increased as they got older and were able to take on additional responsibilities.

In addition, at baseline, two thirds of children in Nigeria and 80% of children in Ghana were faced with labour demands in the form of agricultural work or work outside the home. The qualitative midline analysis found that in Nigeria and more prominently in Ghana, girls missed school when they had to support their households economically. For instance, in Ghana there were examples of high absenteeism during market days and farming seasons, when many girls also do the work of a *kayeye* (head porter).

The midline analysis showed that most girls and parents do not perceive girls' involvement in household chores as a burden on or a detriment to their education. Parents and girls felt that it was possible for girls to combine their chores and their schooling and homework. The exception to this was in Wajir, where girls tended to be older than girls in the other counties in Kenya. Here, girls often felt tired and found themselves unable to concentrate in class or on homework because they had too many chores. Despite girls and parents not viewing chores as a barrier to education, some girls in Ghana and Nigeria reported that they would arrive at school late because of the chores they needed to complete in the morning.

At endline, we find multiple cases across the three countries of children having responsibilities at home and outside the home to provide support to their families. This affects their ability to learn during school closures, as discussed further in Section 3.1.3. In Ghana and Nigeria, where the practice of hawking is quite common, we find examples of girls being asked to spend lesser time hawking at endline as parents were encouraged during the sensitization activities. However, in Ghana, school closures have had a clear influence on these behaviours. In the absence of regular school hours, girls have reported to spending time during their usual day to do more household chores, In the absence of regular school hours, girls have reported to spending time during their usual day to do more household chores, supporting their parents small hawking businesses in their community markets or learning new skills. Many girls reported going to the market to sell food such as tomatoes or kenkey, or learning new skills such as tailoring and hairdressing.

Distance to school and insecurity

Table 20 shows the proportion of households that live more than a thirty-minute walk from the closest primary school and secondary school[32], as reported by caregivers at endline. **The majority of households are located close to a primary school in all three countries. Secondary schools were reported to be further away, particularly in Ghana**, where over 50% of students have to walk further than 30 minutes to their closest secondary school. In Nigeria, despite many schools being in rural areas, only a quarter of households are located further than 30 minutes from a secondary school. In Kenya, particularly in Nairobi, it is likely that some girls use public transport or a school bus to reach their schools rather than walking.

Table 20: Distance of primary and secondary schools at endline

	Ghana		Kenya		Nigeria	
	Control	Treatment	Control	Treatment	Control	Treatment
Closest primary school is further than a 30-minute walk (%)	10.5	11.6	10.5	10.2	4.9	4.8

[32] To be consistent with the phrasing of the question at baseline, the question asked about 'secondary schools' generally so it is not possible to differentiate between junior secondary and senior secondary schools in Ghana and Nigeria.

	Ghana		Kenya		Nigeria	
Closest secondary school is further than a 30-minute walk (%)	46.4	53.8	30.5	30.5	27.0	24.5
Sample size (*N*)	396	512	581	647	476	524

Source: DP-2 household survey (2020)

Note: All indicators are reported by caregivers.

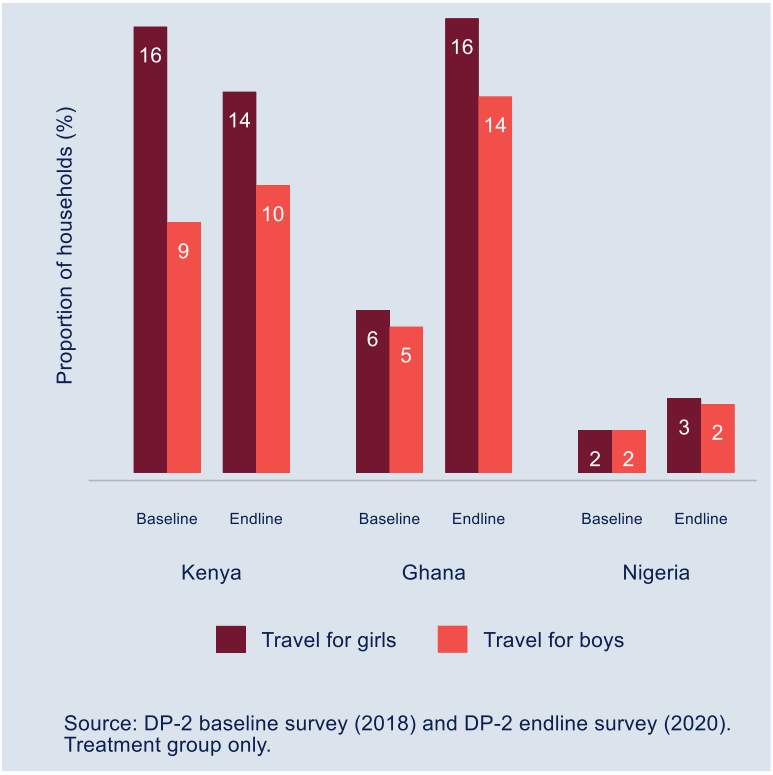
Figure 7 shows the proportion of caregivers who report that travel to school is unsafe or fairly unsafe for girls and boys, respectively, and at both baseline and endline. In Kenya, 16% of caregivers at baseline felt that travel to school was unsafe for girls; this dropped slightly to 14% at endline. In Nigeria, a small proportion of caregivers reported that travel of school is unsafe. In Ghana, the proportion of caregivers who feel that travel is unsafe has risen substantially, from 6% at baseline to 16% at endline. At baseline and midline, we also reported on girls' reports of feeling unsafe travelling to school.[33] These reports showed that the percentage of girls who felt unsafe travelling to school as well as the percentage of girls who feel unsafe at school increased significantly between baseline and midline (from 7% to 11% for feeling unsafe travelling to school, and 4% to 7% for feeling unsafe at school). It therefore seems that perceptions that the journey to school is unsafe have increased over each round of the evaluation in Ghana. It is not clear what has been driving this trend.

In Ghana and Nigeria, there are no large differences between how caregivers perceive safety of travel to school for girls and for boys. In Kenya, however, caregivers were more likely to report travel to school as being more unsafe for girls than for boys.

Perceptions of safety also differ across the sampling strata in Kenya (Figure 8). Caregivers were more likely to consider travel to school to be more unsafe in Nairobi and surrounding counties than in the semi-arid/arid regions, and particularly for non-formal schools. The difference between perceptions for girls and boys was largest in the formal schools.

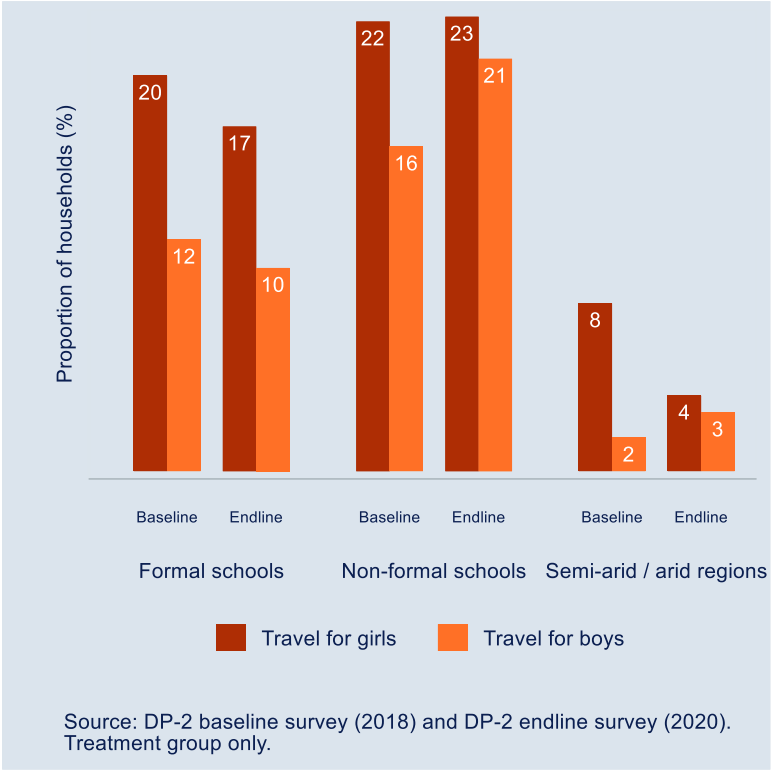
[33] Girls' reports of safety travelling to school are not available at endline because of the shorter duration of the phone survey.

Figure 7: Proportion of caregivers who report that travel to school is unsafe or fairly unsafe, for girls and boys, at baseline and endline



Source: DP-2 baseline survey (2018) and DP-2 endline survey (2020). Treatment group only.

Figure 8: Proportion of caregivers in Kenya who report that travel to school is unsafe or fairly unsafe, for girls and boys, at baseline and endline



Source: DP-2 baseline survey (2018) and DP-2 endline survey (2020). Treatment group only.

In the qualitative research at baseline and midline, there was concern about unsafe travel to school in all countries, although to different degrees. In Nairobi, parents felt that it was unsafe to send their girls to school at weekends or to have them stay back for

extracurricular or co-curricular activities, both when children were on school premises and 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. These factors were not highlighted at endline, perhaps because the girls had been unable to go to school for many months at the time of data collection.

Weather conditions

At midline, weather emerged as an important barrier affecting girls' attendance and learning, particularly in Kajiado in Kenya, which is subject to severe weather conditions. In Kajiado, but also in Ghana and Nigeria, some schools become inaccessible when it rains. In addition, Kajiado also experiences recurring droughts and famines, with associated challenges for going to school, as children and parents both go out to seek work and food. In Wajir in Kenya, the heat makes it unbearable for students to sit in the classroom and concentrate on their studies at certain times of the year. Often when they go home for lunch, they do not return to the school due to the heat.

Insufficient school facilities and the lack of female teachers

Information on primary school facilities was collected in the quantitative and qualitative research at baseline and midline. As schools were not visited at endline, no further information is available from endline. This also means that there is no information on the level of school facilities in junior secondary schools to which the majority of the cohort girls in Ghana and Nigeria have transitioned at endline.

Findings from baseline and midline showed that in Nigeria, and to a lesser extent in Ghana, a lack of adequate school infrastructure and facilities poses a challenge to learning in primary schools. In Nigeria, the majority of primary schools have a student-to-teacher ratio of more than 40, and over a third of schools had no separate toilets for girls. In addition, about a third of treatment schools reported not having access to electricity at midline, which is likely to affect the usage of the educational media provided by DP-2. In Ghana, infrastructural challenges also exist, but to a lesser degree: at midline, 39% of schools had a student-teacher ratio over 40; 18% had no separate toilets for girls; and 7% had no access to electricity. Respondents in the qualitative research in Nigeria and Ghana at midline also raised concerns about the lack of adequate infrastructure and the lack of clean toilet facilities. In Kenya, school infrastructure was generally less of a concern, although 37% of schools have a student-to-teacher ratio of over 40, and 6% of schools did not have access to electricity.

In the qualitative research at endline, the lack of sufficient infrastructure was reported to be a key challenge in Nigeria; one round of in-person data collection took place in the country before COVID-19, which meant that the infrastructure could also be physically observed. The directive of free basic education in Nigeria has recently been more strongly enforced, which has reportedly led to increases in enrolment, exacerbating infrastructural challenges. Schools in the rural areas struggled with overcrowding, some classrooms were reported to be without chairs, and students were seen sitting on mats while classes were going on. Some classrooms also do not have windows and doors, and floors and walls are in dire need of repair. In one of the schools, complaints about the lack of a playground for recreational activities had led the school to acquire land for expansion since baseline, but nothing had been done to establish the playground due to a lack of funds. CAP participants across all three countries were involved in addressing infrastructural challenges at endline.

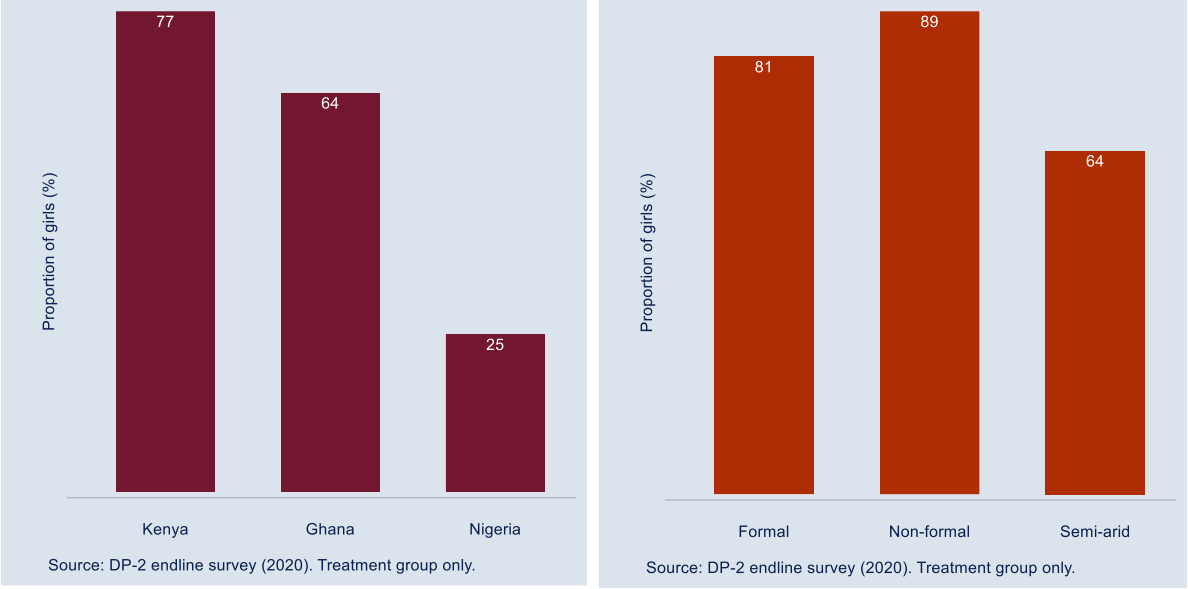
A lack of female teachers is also a concern in Nigeria, and to a lesser extent in Ghana. At midline, 40% of treatment schools in Nigeria had no female teacher, compared to 18% of schools in Ghana, and only 2% of schools in Kenya. This poses a challenge, particularly for the implementation of the girls' clubs, which are led by female mentors. As noted in Chapter 1, six schools in Nigeria could not implement girls' clubs because they could not identify a female mentor, while in some additional schools, implementation was affected when the only female teacher in the school was transferred to another school.

Inability to speak English

Figure 9 shows the proportion of girls who can confidently speak in English with other people at endline. **In all three countries, the language of instruction in upper primary school and junior secondary school is English, yet many girls do not feel confident speaking English.** In Nigeria, only a quarter of the girls reported that they can confidently speak to other people in English, compared to two thirds of girls in Ghana and two thirds of girls in the semi-arid/arid regions in Kenya. A higher proportion of girls in Nairobi and the surrounding areas report speaking English confidently. The fact that many girls, most noticeably in Nigeria but also to a lesser extent in Ghana and the semi-arid/arid regions of Kenya, do not speak English confidently poses a challenge to their learning as all of their classes are taught in English (although in Nigeria, some teachers are likely to be using Hausa as the de facto language of instruction because of both the students' and their own lacking ability to speak English fluently).

These findings also underscore the importance of the remedial lessons needed to build foundational English skills for these girls; it would be helpful for lessons to include a focus on spoken English. However, as reported in Chapter 1, DP-2 progress reports noted that English literacy is also a challenge among teachers in Nigeria, which may make it challenging for some teachers to deliver the remedial lessons effectively.

Figure 9: Proportion of girls who can confidently speak in English with other people, by country (left) and by sampling strata in Kenya (right)



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.

Across all countries, girls reported experiencing physical punishment as a result of arriving at school late or not having completed their schoolwork. In some cases, the threat of physical punishment may prevent children from going to school at all. However, we have no further up-do-date information on this at endline.

Early marriage and pregnancy

At baseline, the proportion of girls in our quantitative sample who were married or who were mothers was very low across the three countries. Due to the nature of the phone surveys, we were not able to capture up-to-date information on this. In the qualitative research, one girl in Ghana had fallen pregnant at the time of the midline evaluation.

However, parents and community members across the three countries noted that early marriage and pregnancy were barriers for girls' education in their communities at baseline and midline, though the ways in which this barrier manifested itself differed across the countries. 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 girls in other areas of Kenya in terms of getting married while still at school; this increases their vulnerability to dropping out of school. In Ghana, at baseline and midline, community members did not mention early marriage. However, in several communities, particularly in Sagnarigu and Savelugu, community members and parents were concerned about negative peer influences on girls that could contribute towards girls falling pregnant and dropping out of school at a young age. In Nigeria, while most parents were supportive of their daughters completing secondary school, they expected that their daughters would marry after this point and that the decision on whether their daughter would continue with any further education would then lie with her husband.

At endline, we find that community attitudes around these perceived barriers towards early marriage and pregnancy remain similar to baseline and midline. Despite sensitisation efforts, some of these beliefs are slow to change. In Nigeria, our findings revealed that none of the cohort girls had married, which is positive, given community and school's concerns about early marriage shared at baseline. Our findings also revealed that most primary school girls have siblings in secondary schools and tertiary institutions and believe their parents desire to see them through secondary school and tertiary education. In Ghana and Kenya, despite a general focus from parents to continue the education of their daughters, we found concerns from some parents and CAP participants about how spending too much time around boys could affect the girls' academic performance and focus, and might lead to them being negatively influenced and becoming pregnant. In Kenya, especially in Wajir, some CAP participants and parents were concerned because of their belief that girls fall in love and get pregnant because of access to mobile phones and social media. Due to this perception, parents place a strong focus on teaching them the Qur'an. Some students were reported to be absent from regular school to attend Islamic classes.

COVID-19

This chapter has summarised barriers to learning and transition as they related to the project's design and implementation up to the point of school closures. The COVID-19 pandemic is an unprecedented disruption to students' schooling. Learning and transition are severely affected in the short term. For example, as mentioned in Chapter 1, governments have rolled out remote learning programmes but many students are unlikely to have access to these and even those that do have far fewer hours of learning in a very different context

than they would at school. The disruption to learning is explored further in Section 3.1.3. In terms of transition, we have noted in Chapter 1, that all students in Kenya will be repeating their grade in the next academic year. With the economic impact of COVID-19, some parents may find it challenging to continue sending their children to school once they reopen. The effects of COVID-19 on transition are explored further in Section 4.7.

2.3 Conclusion

This chapter has presented an overview of the context in which DP-2 is being implemented and has highlighted the barriers that girls face to learning and transitioning through school.

It would be expected that a project working in these contexts would seek to address barriers to learning and transition as part of its strategy to achieving its long-term outcomes. At the same time, it needs to be acknowledged that some barriers to girls' education are structural; addressing them is beyond the scope of an educational intervention.

Our analysis shows that poverty is the key driver of educational marginalisation. It affects girls' attendance at school, their ability to fully participate in lessons and in extracurricular activities, and their ability to concentrate during their lessons. In addition, **poor school infrastructure and the lack of qualified teachers and female teachers pose barriers to learning**, most strongly in Nigeria, but also in Ghana and to a lesser extent in Kenya. DP-2's CAP process aims to tackle some of these barriers by asking communities to identify the specific local barriers and develop solutions to them, which many have done to one degree or another as reported in Chapter 6.2. However, communities are, of course, themselves financially constrained and therefore cannot tackle all barriers related to structural poverty and persistent barriers within the educational system.

In some cases, contextual factors may pose specific direct barriers to girls taking up or participating in specific DP-2 activities. In particular, concerns about distance and safe travel to school, as well as the need for girls to carry out household chores and support their household economically, mean that parents may be reluctant to let girls take part in activities that take place outside the regular school timetable. We discuss this further in relation to attending remedial lessons in Section 3.1.

Throughout the remainder of the report, we examine how DP-2 activities have addressed some barriers or made progress despite barriers, and how some other barriers continue to affect both implementation and the likelihood of achieving the project's intended outcomes.

3 Key outcome findings

3.1 Perceptions of changes in learning

One of the overall goals of DP-2 is to improve learning outcomes in literacy and numeracy. Training and coaching teachers to gain confidence and skills, and providing schools with media equipment and a library of educational video and digital content, is expected to improve the quality of teaching, 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 lessons to bridge gaps in foundational literacy and numeracy skills (Box 2 describes the design of the remedial lessons). 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 intervention package is expected to lead to improvements in learning outcomes through various interacting pathways.

Box 2: DP-2's design of remedial lessons

Remedial lessons are targeted at the weakest academic performers within each grade. In Ghana and Nigeria, these students are identified based on their performance on a diagnostic tool developed by Impact(Ed) (the Learner Check). In Ghana, students' performance on this assessment is also used to place them into three different levels. In Kenya, students are identified for remedial support based on their performance at school, but are given a diagnostic test to sort them into three levels. In Nigeria, all students are taught at one level.

Students are taught by teachers trained and supported by DP-2, 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 are provided with and follow schemes of work that are linked to the curriculum but concentrate on foundational reading and mathematics skills.

One cycle of remedial classes lasts approximately 12 weeks, although teachers are given some flexibility in the implementation of these cycles so that they can be adapted to the students' performance. After one cycle of remedial classes, students are reassessed: this results in them either 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.

3.1.1 Perceptions of changes in learning

By midline, DP-2 had made a large and statistically significant positive impact on learning outcomes in Nigeria. There was no evidence of an impact of DP-2 on learning outcomes in Ghana or Kenya (with the exception of Wajir, where we found evidence of a positive impact of DP-2 on numeracy outcomes at midline [34]). At endline, the evaluation collected data only on perceptions of changes in learning. As girls get older, they learn new skills in school, and one would therefore expect many girls to improve with each year that they are in school, irrespective of any intervention received. In line with this, in this section, we report that most stakeholders interviewed for the qualitative research reported an

[34] At midline, we found that DP-2 had a positive impact on numeracy outcomes in Wajir with an impact estimate of 5.5 points, which was statistically significant at the 10% level (p = 0.098). For literacy outcomes, the impact estimate was 3.5 points. The size of this impact estimate was larger than for the full sample in Kenya (0.7 points) but did not reach statistical significance (p = 0.389). 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 (see the DP-2 Midline Report).

improvement in students' learning across the three countries. In the second section, we explore the factors that respondents feel have contributed to improvements in learning, including how various components of DP-2 are perceived to have contributed.

While we asked girls to think about their performance before schools closed, in practice, it might be difficult for girls to remember how they felt several months previously, given the substantial disruption COVID-19 has caused to their learning. If girls are worried about the effect that COVID-19 is having on their learning, this might have been reflected in their responses.

Girls' general experience in school and during their lessons

Qualitative research findings from some old and new cohort girls, and RTs from the three countries, show that girls had a positive experience of attending school in the last year. As most students remarked, they enjoy practical lessons that make learning more engaging, doing well in exams, and attending extracurricular activities, such as field visits (in Kenya) and debate and quiz competitions. This was confirmed by some parents, who reported that they had noticed girls enjoying school.

Further, teachers also reported using engaging teaching aids and changing the way they teach; this contributed to girls' positive learning experiences at school. Therefore, at endline we see girls more engaged in the classroom and happy to learn.

> *Students are now more interested in learning activities because of the way I teach. I have noticed how excited they are in performing tasks and their love for new topics. As we are seated here, you will notice them telling a teacher that it is time to take their class even though it is not yet the time.*
>
> **Interview with RT, Nigeria**

Similarly, in Kenya, a girl spoke about how she enjoyed going on class trips, playing games during physical education class, and participating in interactive lessons.

> *I have fun when they are teaching us because I find it a little interesting. It is like practical because we even bring things and we count together. Another thing that makes me interested in mathematics is just the way the teacher explains, the way she gives the description and then she gives us tasks to do as a group.*
>
> **Interview with old cohort girl, Kajiado, Kenya**

Also, in Kenya, an RT reported that he had observed that the attitude of girls towards mathematics has changed. In the past, girls have viewed mathematics as a difficult subject. At baseline, teachers themselves suggested that girls were stronger at learning languages and weak at mathematics, thereby perpetuating a view that mastery over a subject was gender-specific. By endline, teachers and students reported that girls have been finding mathematics easier due to the remedial lessons.

Perceptions of changes in learning according to girls

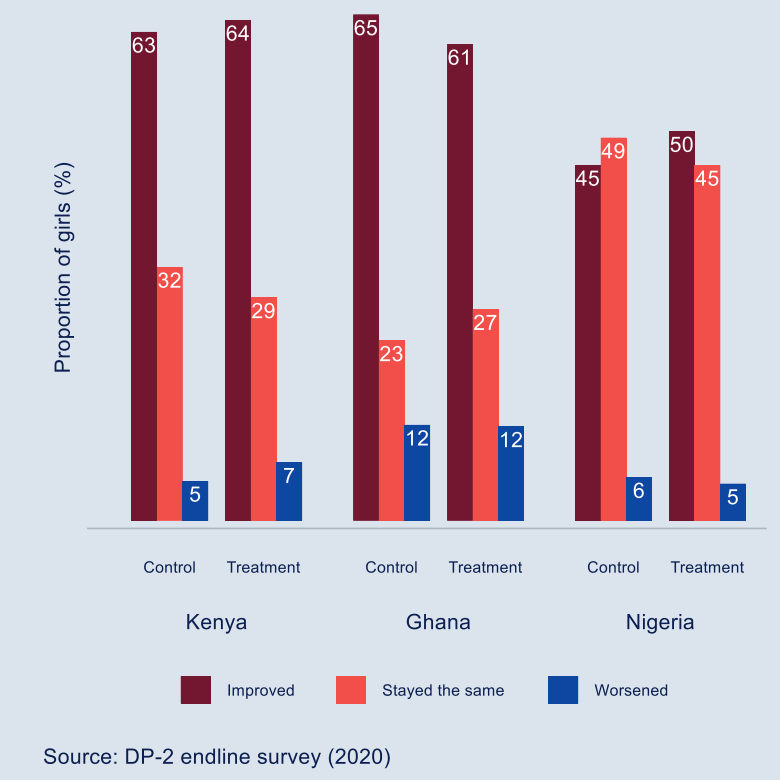
Findings from the quantitative survey show how cohort girls feel their performance in English and mathematics classes changed in the last year before schools closed (see Figure 10 and Figure 11).

In Kenya and Ghana, about two thirds of girls felt that their performance in English had improved, compared to only half the girls in Nigeria. The qualitative research finds that students think of improvement in their learning in different ways, including scoring better on tests, learning new skills, or being able to work more independently. Different girls are likely to have different views on what it means for them to have improved.

In addition, girls across the countries are starting from different starting points, which is likely to affect how they view improvement. Our findings at midline showed that girls across all countries had, on average, improved significantly in their literacy scores over time; girls in Nigeria had improved slightly more than girls in Kenya, while girls in Ghana had improved the most. However, girls in Nigeria are starting from an extremely low base, and for most girls, improving meant being able to read more letters of the alphabet or simple English words; this is still far removed from the ability to read English fluently. In Nigeria, actual curriculum expectations are much higher than girls' current abilities, so the types of improvements that we observed at midline may not feel as substantial or noticeable to them.

There were no statistically significant differences between treatment and control groups in girls' perceptions of the change in their performance at endline. It is important to remember that this does not imply that there were no differences in actual outcomes between treatment and control groups. As mentioned above, girls may have different perceptions of what they consider to represent an improvement.

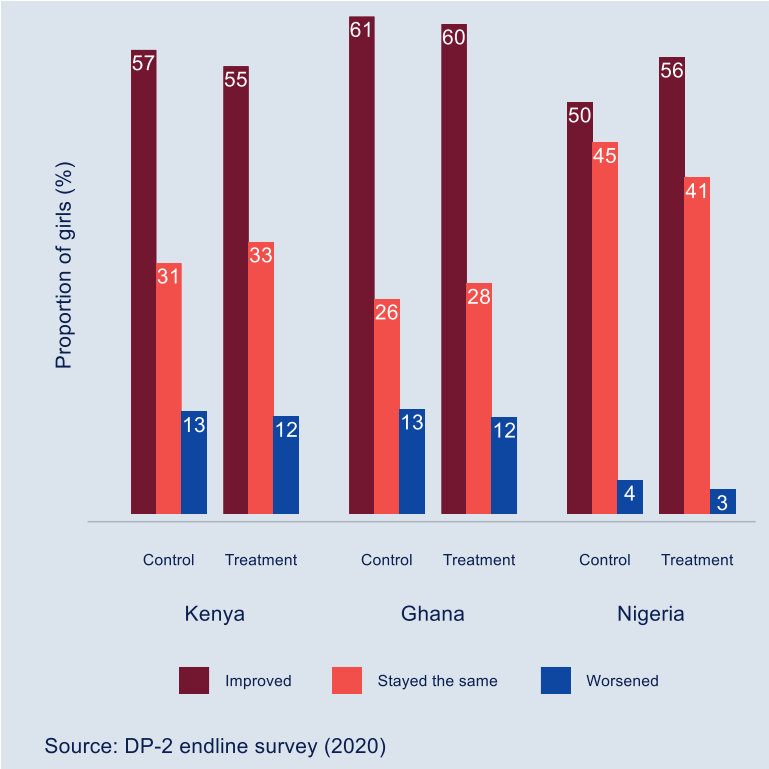
Figure 10: Perception of changes in English performance in the last year



Source: DP-2 endline survey (2020)

In Ghana and Nigeria, findings for mathematics are similar to those for English. In Kenya, fewer girls felt that their mathematics performance had improved, and more felt that it had worsened, compared to English. As for English, there were no statistically significant differences between treatment and control groups in girls' perceptions of the change in their performance in all countries.

Figure 11: Perception of changes in mathematics performance in the last year



Source: DP-2 endline survey (2020)

The perception of girls from the qualitative research about changes in learning was also mixed, although most girls felt that their performance had improved in the last year. The majority of girls felt that their performance was improving, and they could cite specific examples of improvement – for example, better outcomes in class assessments, quizzes, and examinations; the ability to write more legibly, apply mathematical concepts to solve problems, read and spell words, and complete assignments with minimal support.

In Kenya, slightly more than half of the cohort girls from the six schools sampled for the qualitative research reported that, overall, they had noticed an improvement in their performance in English and mathematics. Girls reported being able to solve assignments correctly and achieve good grades in their exams.

Several girls in Ghana and Nigeria who have transitioned to junior secondary school felt that they are doing well and are able to cope with their studies. Although they have more work to do and the subject matter is more demanding, they are following what is being taught in class. For instance, one cohort girl in Nigeria spoke about being able to cope with mathematics and English language at her school, despite the increased complexity, while another in Ghana spoke about her improvement in spelling.

> *How I know that my performance has increased compared to before in English and maths is because even though they have added so much to our studies in secondary school, I still understand what they are teaching me like I did in my previous school.*
>
> **Interview with old cohort girl, Nigeria**
>
> *I am able to spell words correctly by forming the sounds of the letters on my own.*
>
> **Interview with new cohort girl, Ghana**

A smaller number of girls in Ghana and Nigeria reported that they are not coping as well in junior secondary school and are concerned about their new school. The environment is unfamiliar, the workload is higher, and there is less time to play. They are anxious about overcrowded classrooms and a lack of facilities. In sum, these new and

unfamiliar experiences are likely to have a negative effect on their perception of learning. Therefore, we conclude that experiences are mixed and dependent on the girls' ability to cope with changes.

Bottlenecks reported in Ghana and Nigeria are similar to those at the primary level, but are exacerbated in junior secondary schools. Challenges that girls faced included corporal punishment, bullying, long distances between home and school, poor water, sanitation, and hygiene facilities, a lack of furniture and equipment, and a lack of libraries with relevant books. One example is of a girl who reports that because of the lack of furniture, they sit on windowsills or sometimes on planks when being taught. Teacher attrition also affected learning as girls developed a rapport with teachers and when those teachers moved to a different school, they found it difficult to adjust to a new teaching style. Despite these challenges, we find that girls are engaged and eager to come to school and learn.

Perceptions of changes in learning outcomes according to parents

Parents interviewed across the three countries reported that they had observed improvements in their children's performance in the last year, although the majority of them could not clearly articulate what these changes were, nor in which subjects girls had improved, except when they spoke of test or examination scores. This is largely driven by a generally low level of formal education among parents (as was also discussed during the baseline and midline).

Most parents reported that their children were more committed and were investing more time in their studies than in previous years. In Nigeria, parents viewed their children's commitment to their academic work, their completion of homework, their willingness to help younger siblings study, and their desire to arrive at school early as indications of progress in learning. Observing this progress has also motivated parents to support their daughters' studies. As one parent noted:

> *I am actually impressed with her energy towards school and learning. Even when she is cooking, she is always with her books, reading. That is how I could tell that she was doing well. Because of this, I make sure I do not joke with her about school issues. Even, as a result of her zeal for school, I changed her secondary school to a better one and also paid a boy behind my house to take her in extra tutorial.*
>
> **Interview with parent, Nigeria**

Likewise, in Ghana, parents reported observing a change in their children's performance in the previous year, but they could not say how much has changed. This pattern was true both for girls who were currently in primary school, and cohort girls who had transitioned to JHS. Some parents reported that they found it difficult to articulate the reasons why they felt their daughters had improved because they had limited education themselves. An example of this is as given here:

> *Because I am not educated, I am not able to tell how she is performing except once in a while when I meet her teacher, then I ask him how she is doing in class and then he will tell me she is performing well.*
>
> **Interview with parent, East Gonja, Ghana**

In all six schools in the qualitative sample in Kenya, a majority of parents agreed with their daughters that their academic performance had improved. They stated that girls performed better in exams, were revising at home, were doing homework on time, were reading story books, and were working hard.

> *Her performance in mathematics and English has improved because she was working hard. As she goes to school, she learns something new every day and that is the reason behind her outstanding performance*.

Interview with parent, Wajir, Kenya

Perceptions of changes in learning outcomes according to teachers

As with the midline findings, most head teachers and RTs interviewed across all three countries believed that there had been an improvement in learning. They confirmed that students performed better in end-of-term examinations and in regular class assessments, and that there has been an improvement in their participation during class in the previous year. For example, teachers reported that students were able to read more fluently, could construct sentences better, had improved in their pronunciation of the English language, and were excelling in external competitions, such as quizzes or debates.

> *Oh, they are impressed because some of the students couldn't read but because of the remedial [lessons] they are able to read and able to perform especially on numeracy. So, they are the proof that they are doing well. I will say that even those who are not part of it are ready; they always want to join the class because of what they see their colleagues do.*
>
> **Interview with head teacher, Tamale, Ghana**

In a few instances, teachers noted that girls have improved more than boys, while others said that both girls and boys have improved and are performing at similar levels. An RT in Kenya reported that he had seen more and more girls being motivated to work hard and perform well. They focus in class and do not skip school, which improves their performance. He added that the improvement in girls' performance also motivated boys to work harder and perform better.

> *There is a great improvement because you find that in most of the classes boys used to do better and people used to think that boys were better than girls, but since we started having the remedial lessons, there has been a great improvement and the competition between girls and boys is strong.*
>
> **Interview with RT, Wajir, Kenya**

3.1.2 Contributions to changes in learning outcomes

In this section, we discuss how stakeholders perceive that DP-2's TPD package and the remedial lessons have contributed to improvements in learning. We also provide an overview of the implementation of the remedial lessons. Lastly, we discuss other factors that respondents felt contributed to improvements in learning.

Contributions of DP-2's TPD to improvements in learning

In Section 6.1, we provide evidence of how RTs have found the DP-2 teacher training and support useful and how they have been applying teaching strategies from the training in their classroom. Teachers across the three countries reported using a range of child-centred approaches that they had learnt from the DP-2 training at endline, using teaching aids to make their lessons interactive, and using specific literacy strategies to teach the sound structure of language. Teachers reported that adapting their teaching strategies to different types of students, engaging both boys and girls in different subjects, encouraging students to ask more questions in class, and being mindful that they do not belittle them if they get answers wrong has helped to build confidence and enabled more active participation in the class. **RTs and head teachers believed that the academic performance of children in their classes has improved by virtue of increased participation and the practice of children working with one another, which has been supported by the DP-2 teacher training. Some respondents noted particularly how the DP-2 TPD had supported improvements in learning for more poorly performing students.**

> *My feedback is that DP-2 has really changed a lot and I think some of which I have mentioned before, it has improved numeracy in the school particularly to those who were very, very low performing, going by their performance in assessments. But because of the constant training that we have had, we have been able to use the new skills to improve how students learn. Now they are able to learn better than they used to.*
>
> **Interview with head teacher, Nairobi, Kenya**

Girls in all three countries reported how the teaching strategies used by their teachers made them feel comfortable to express themselves and ask questions in class, and gave them increased confidence in their ability to complete assignments themselves. For example, a cohort girl in Ghana mentioned that teachers took their time to explain concepts well and encouraged students to feel free to approach them for further explanation if they encountered any difficulties. In Nigeria, cohort girls remarked that teachers had become friendlier, praised them more often, and sometimes gave out rewards when students did well. In Kenya, students also noted that teachers contributed to improving their performance as teachers were explaining better, giving them assignments, showing them how to do the work, and encouraging them to ask questions.

> *We are studying, we get time to study and teachers are also better, they repeat things if one does not understand, he gives us assignments to do and shows us how to do them.*
>
> **Interview with old cohort girl, Kajiado, Kenya**

One head teacher in Nigeria noted that these improvements had been emerging gradually because as teachers attend training and practice strategies from the training in class, they had gradually become better at teaching.

DP-2-supported remedial lessons: contributions to learning and implementation

Remedial lessons are an important component of the DP-2 project; they are intended to target students with weaker learning outcomes to bridge the gap in learning outcomes between these students and their classmates. In the TOC, there is a direct link between remedial lessons and learning outcomes for those students who attend the lessons. In this section, we first review whether and how respondents in the qualitative research perceive remedial lessons to have contributed to improvements in learning outcomes. Next, we describe the implementation of the remedial lessons, drawing on findings from midline and endline, DP-2 monitoring data, and DP-2 progress reports.

The contribution of remedial lessons to changes in learning

At midline, our analysis found that remedial classes have played a role in contributing to improvements in learning outcomes. In Nigeria, girls in treatment schools were much more likely to receive remedial support, compared to girls in control schools, and the impact of DP-2 on numeracy outcomes was slightly larger for girls who had attended remedial classes, compared to the sample overall. This means that it is likely that remedial support is contributing to the impact of DP-2 on learning outcomes that we observed in Nigeria at midline. In addition, regression analysis showed that participating in remedial lessons was associated with a greater change in learning outcomes between baseline and midline, for literacy in Ghana and Kenya, and for both literacy and numeracy in Nigeria.

At endline, data from the Learner Checks conducted by DP-2 shows that students are improving in their foundational literacy and numeracy skills in Nigeria. Learner Check data was available only in Nigeria because the administration of the checks in Ghana was disrupted by COVID-19. In Kenya, students are assessed through a different diagnostic tool,

but information from this was also not available for the endline evaluation. These checks were administered to a group of students in November 2019 and subsequently in March 2020. It is important to note that there are several limitations to the analysis of this data in the context of an evaluation, and the data is only being presented here to give some indication of how students attending remedial lessons in Nigeria have been improving over time in the absence of other learning data. Learner Checks assess the foundational skills that are taught in remedial lessons and that might not be directly taught during regular classes. Nevertheless, findings from the midline evaluation show that students in control schools also improve on these foundational skills over time. Therefore, in the absence of any data from control groups, the Learner Checks tell us only what students attending remedial classes are learning over a certain period – but not what they are learning relative to a control group. The checks were administered to a large number of students in November 2019, and subsequently to a much smaller number of students in March 2020. We limit our analysis to schools for which data is available for both rounds of the Learner Check. It was not possible to link data across rounds at the level of the individual student. We therefore only look at changes in overall average scores. This is a limitation because we do not know how similar the groups of students assessed in November 2019 and in March 2020 were to begin with.

Figure 12 and Figure 13 show the scores out of 100 that students achieved on average on the full Learner Check and on the individual sub-questions in November 2019 and March 2020. It is important to note that many of the sub-questions are made up of a very small number of items, meaning that only a few scores are possible. For example, there are only two word problems, so the only possible scores that an individual can achieve here are 0, 50, or 100. For this reason, we should be careful about comparing progress across different sub-questions.

The findings show that, overall, average student performance has improved in the literacy and numeracy Learner Check over a short period of time, between November 2019 and March 2020. In literacy, students found the dictation task the most challenging at both time points; this is the only task that required writing skills. The reading comprehension is made up of three multiple-choice questions. In November 2019, students answered on average fewer than one question correctly, while in March 2020 students answered on average between one and two questions correctly. In numeracy, students' average performance has increased across all sub-tasks, showing that students' ability to perform basic number operations seems to be generally improving. The Learner Checks assess foundational literacy and numeracy skills, and in general assess skills that are easier to acquire than those assessed in the learning assessments that have been administered for this evaluation.[35] Remedial lessons target these foundational skills. The midline results along with the Learner Checks results reported at endline indicate that students in Nigeria continue to have very low literacy levels and low numeracy levels. However, they also demonstrate encouraging improvements in these important foundational literacy and numeracy skills that are the building blocks for future learning. While we cannot compare the findings from the Learner Check to a control group, the findings show that students in the treatment group are continuing to improve in their foundational literacy and numeracy skills through attending remedial lessons. While the second round of the Learner Check could not be administered in Ghana because of the COVID-19 pandemic, Impact(Ed) reports that information gathered from regular formative assessments administered by the RTs indicates that students' performance on foundational literacy and numeracy tasks has improved over the course of the remedial lessons.

[35] For example, the addition questions in the Learner Check do not require students to apply the concept of carrying, which the addition questions in the Early Grade Mathematics Assessment (EGMA) administered for this evaluation do. The reading comprehension in the Learner Check is much shorter than the Early Grade Reading Assessment (EGRA) comprehension; it is read out to the student, and the comprehension questions do not require the student to make any inferences.

Figure 12: Average scores on the literacy Learner Check, overall and on individual questions, in November 2019 and March 2020

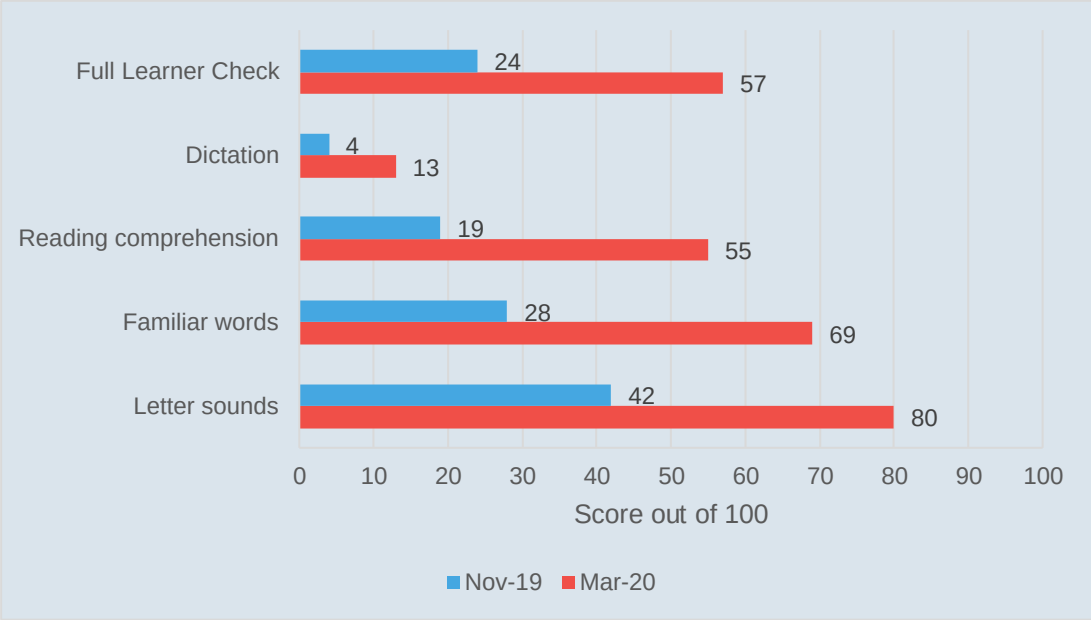
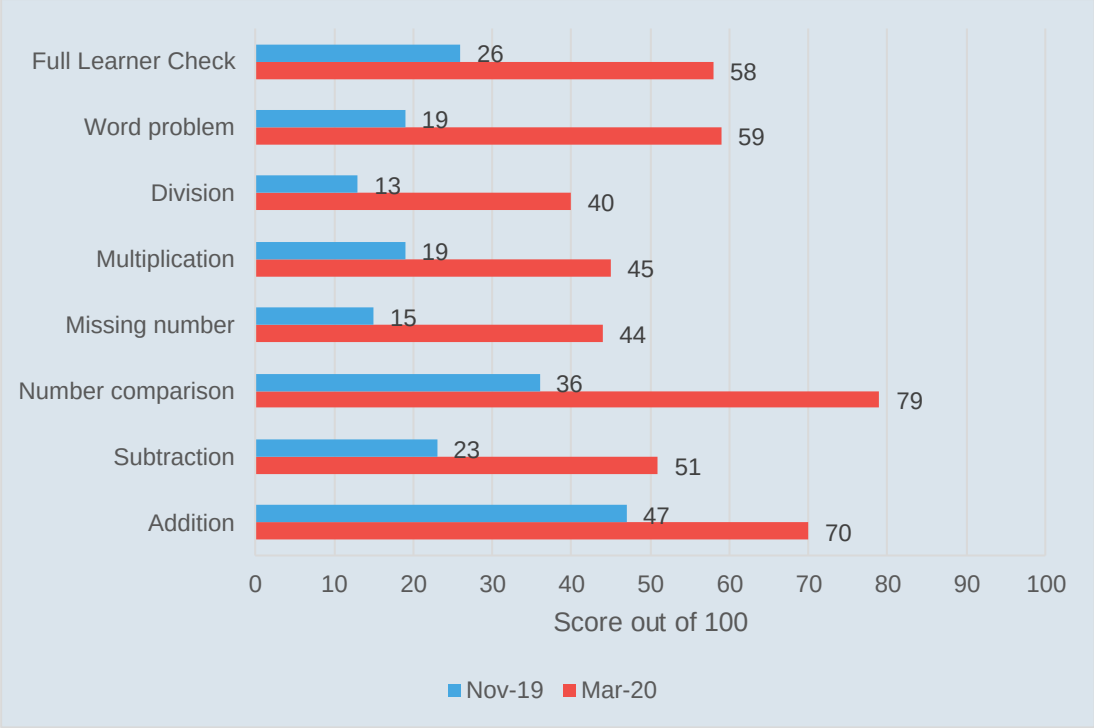


Figure 13: Average scores on the numeracy Learner Check, overall and on individual questions, in November 2019 and March 2020



Findings from the qualitative research at endline show that interviewed RTs who taught remedial lessons believed in all three countries that the lessons had contributed considerably to improving girls' learning because the teaching was specific and targeted at the students. One recurring reason why many respondents perceived that the remedial lessons were beneficial is the small class size and the level of student participation during lessons.

> *You realise you have a class of about 60, 70, some classes have 80, and during the normal class, the slow students are usually left behind because they are not able to catch up with other students. But during the remedial lesson, you know you are able*

> *to give each individual attention. This has motivated even the ones that are not able to answer the questions, they are now getting that confidence*.
>
> **Interview with remedial RT, Nairobi, Kenya**

RTs teaching remedial lessons reasoned that students talked and participated more in smaller classes, rather than listening passively. This also means that teachers were likely to spend less time on classroom management, leaving more time for instruction. For example, one remedial RT in Kenya mentioned that in large classes, slower students tended to get left behind, but in their remedial lessons, teachers were able to make sure such students are following the material. Two girls in Nigeria also indicated that the remedial environment was free from distractions and everyone had the opportunity to speak up more freely.

> *In our remedial lesson, if the teacher gives work and there are boys in the class and we do not know how to do it, he does not make us scared or embarrassed, he encourages us to try our best to say whatever we have issues with as everyone must say their mind. But now honestly there is no such fear even when I'm in my class, I ask questions and also respond as well.*
>
> **Interview with new girl, Nigeria**

In Kenya, a girl said that attending the remedial lessons supported her in performing well in her exams; in Ghana, a teacher said that children now spoke English fluently.

> *Children can now speak fluently. They can converse with their friends in the English language. They can also do mathematics which they could not do before. It made them very confident. Previously, some of them were shy to participate in mathematics lessons but now it has given them the confidence to participate. It is now a friendly atmosphere in the classroom, and they are free to express themselves.*
>
> **Interview with remedial RT, Tamale, Ghana**

Most parents who were interviewed in Nigeria and a few in Ghana were generally aware of their daughters attending these remedial lessons when they were in primary school. They remembered the remedial classes because these classes were held at the weekend, and because parents had to provide extra food and transport money in some cases for their children to attend.

In terms of how students performed as a result of the remedial lessons, parents in Nigeria seemed broadly positive and felt that the performance of their children had improved. As a result of this, some of them also enrolled their daughters who had transitioned to secondary school into paid tutorial classes to ensure that they excelled in their classes.

Most parents in Ghana and Kenya believed that the remedial classes were beneficial to their children but did not know much about the nature of the teaching and learning happening in the lessons. In addition, some parents and cohort girls interviewed in Kenya could not clearly separate the DP-2-supported remedial lessons from the private tutorial classes that they paid for. Some parents from Machakos, Nairobi and Kiambu reported that they paid for private tutorial classes, whereas others expressed a desire to enrol their daughters in private tutorial classes but could not do so because of financial constraints.

Implementation of the remedial lessons

The first phase of remedial lessons ran from July 2018 to July 2019 in Nigeria and Kenya. In Ghana, the first phase of remedial classes started only in October 2018. There was a delay in rolling out the second phase of remedial lessons while the FM and the project decided whether to scale up the component. Ultimately, the decision was taken not to scale up at midline. The second phase of remedial lessons started in late November 2019 in Ghana and

Nigeria, and in late January 2020 in Kenya. The implementation of the second phase of remedial lessons was therefore cut short by COVID-19.

Based on the monitoring database for remedial lessons, the vast majority of schools were implementing remedial lessons. All 165 Phase 1 schools in Ghana were implementing remedial lessons. Out of 150 Phase 1 schools in Nigeria, one school was recorded as not implementing remedial lessons, and four schools were not captured in the database, but all other schools were recorded as implementing remedial lessons. In Kenya, out of 119 Phase 1 schools, four schools were not captured in the database, but all others were recorded as implementing remedial lessons.

Selection into remedial classes and class sizes

At midline, we found that students who performed more poorly in literacy were selected to participate in the remedial lessons across all countries. For numeracy, students in Nigeria who participated in remedial classes performed more poorly prior to the remedial lessons than other students, but no differences in performance were found in Ghana and Kenya. While most students were selected based on diagnostic tests for the first phase of remedial lessons, there were some discrepancies, with some schools in Nigeria reporting that all students from a certain class were selected and some girls in Ghana believing that high-performing students were selected for remedial lessons.

In their progress reports, DP-2 reports that the process for selecting students into remedial classes was more standardised for the second phase of remedial lessons that started before the endline evaluation. Findings from the qualitative research at endline confirm that the selection process for the second phase of the remedial lessons was based on a diagnostic test conducted by DP-2 in all countries. In Ghana and Kenya, children were subsequently categorised into levels based on this assessment. In Nigeria, the diagnostic test was used to determine which students should attend the lessons, but no categorisation based on levels was done.

The findings at midline also showed that the class size of 25 students per class was often exceeded during the first phase of remedial lessons. In Ghana, 9% of RTs reported having class sizes of more than 25 students, compared to 34% of RTs in Kenya and 73% of RTs in Nigeria.[36] Quantitative information on the remedial class sizes during the second phase of remedial lessons is not available.

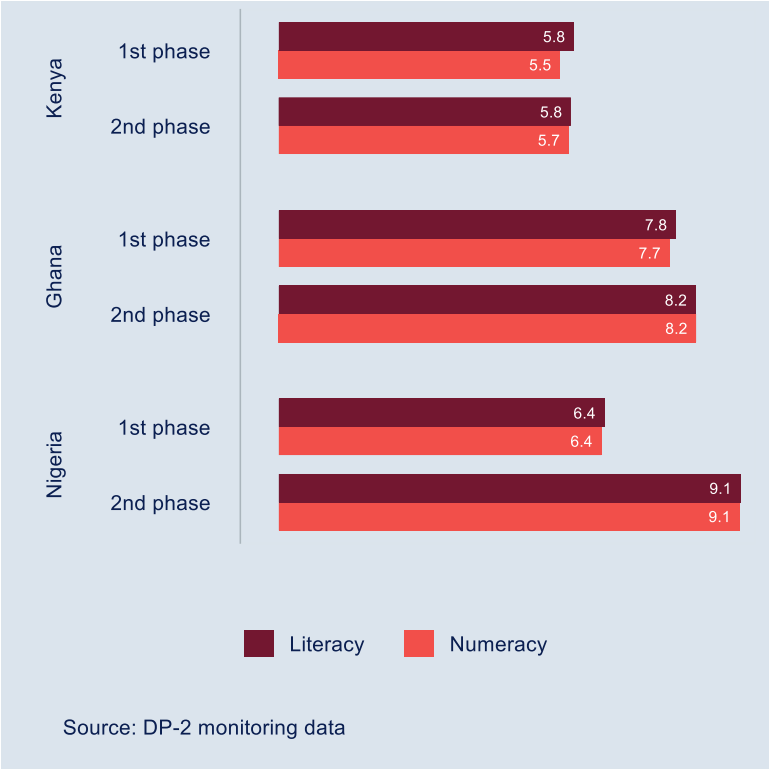
Schedule of remedial classes and attendance at classes

DP-2 monitoring data shows that the expected number of hours of remedial lessons (two hours of literacy lessons and two hours of numeracy lessons per week) were being delivered in Ghana and exceeded in Nigeria during the second phase of the remedial lessons. In Kenya, fewer hours than expected were being delivered on average. During the first phase of remedial lessons, DP-2 reported that in Kenya, competing school activities were limiting the time available for remedial lessons (DP-2 quarterly progress report 8), and it seems that this challenge had not yet been overcome during the second phase of remedial lessons. In the qualitative research at endline, teachers in Kenya complained how hard it was to find a period in the school timetable for them to conduct remedial lessons during the school day.[37] Another issue was that when classes were held in the afternoon, children sometimes did not come back for classes in time after lunch because of the hot weather.

[36] Across the countries, some teachers reported having between 25 and 35 students in their class (6% in Ghana, 15% in Kenya, 37% in Nigeria) and some reported having more than 35 students in their class (3% in Ghana, 19% in Kenya, 36% in Nigeria).

[37] According to Impact(Ed) remedial lessons in Kenya should have been conducted either before regular lessons, during free lesson time, lunch break and after class hours to address the crowded school timetable.

Figure 14: Average number of hours of remedial lessons per month



During the first phase, remedial lessons usually took place over the weekend in Nigeria and in the morning before school or in the afternoon after school in Ghana. During the second phase, remedial lessons were intended to be integrated into the school timetables in Nigeria and Ghana (DP-2 quarterly progress report 9). The change in schedule was recommended by DP-2 staff at midline, and staff expected that this would positively affect attendance.

The qualitative research at endline finds that, in Ghana and Nigeria, the remedial lessons in most of the schools were mostly being conducted in the afternoon. In some schools, both school administrators and girls reported that remedial lessons were being conducted after regular compulsory lessons had finished.[38] In other schools, remedial lessons were being conducted during free periods in the day or early in the morning for schools that run a double shift in Nigeria. No lessons were reported to be held at the weekend.

There continued to be some challenges with attendance and participation when remedial lessons were held in the afternoons. Some RTs and head teachers said that having children stay back for remedial lessons in the afternoon meant that students were not available to support their parents at home. While shifting lessons away from the weekend was helpful for some children, other parents continued to prevent their children from attending the classes. In Ghana, RTs as well as girls themselves talked about being tired and hungry when classes took place in the afternoon. CAP participants and parents also described children often being tired or hungry, and some parents had challenges providing adequate feeding money.

[38] In Ghana, the official school day was extended and now ends at 3pm compared to ending at 1:30pm during the midline data collection. The last two hours of the school day are reserved for extra- or co-curricular activities including remedial support. According to DP-2 project staff, some parents and girls are not yet aware of these official changes and this may have led to perceptions that remedial lessons were taking place 'after school', when in fact they were held during this extended official period in the afternoon. However, in the qualitative research at endline, some head teachers and teachers also reported that remedial lessons were held 'after regular school hours' suggesting that there continue to be some variations in implementation.

> *I didn't like that we had to close from school before we sit back for the extra classes. It prevented me from going back to the rest of my day's activities. I wished they'd done it in the morning.*
>
> **Interview with new girl, Yendi, Ghana**

In Nigeria, some RTs and CAP participants felt that students paid more attention to the remedial classes when they were being held at the weekend because they were well-rested and better able to take in new information than when lessons were held during school periods and in the afternoon. There was no mention of this in Ghana.

There were examples **in Nigeria and Kenya, especially in Wajir, where some students did not attend remedial lessons regularly because parents preferred to send them to Islamic centres** (Madrassa and Dukhi classes).

> *Some parents want their children to return home and help them out. For some, it is the desire for their children to attend Islamic centres after school which is being stalled by the remedial classes. The SBMC chairman has been reaching out to [parents when they meet] during prayers [to encourage them to send their children to remedial classes].*
>
> **Interview with remedial RT, Nigeria**

A prominent focus of the CAP activities in most schools in Ghana and Nigeria has been on sensitisation activities to convince parents to send their children for remedial lessons, minimise the burden of household chores, and reduce the time girls spend supporting their parents economically (for example, through hawking). This is discussed in more detail in Section 6.2.

Stipends for remedial lessons and teacher motivation

At midline, we reported that in Ghana and Nigeria, DP-2 paid a stipend for the delivery of remedial classes. However, given that many teachers in rural areas had to commute from nearby urban centres, these stipends in themselves were reported to not have much of an impact in motivating teachers to return to schools over the weekend. The integration of the remedial lessons into the regular school timetable for the second phase meant that in Nigeria, the stipends were taken over by government as part of their standard teacher compensation system (DP-2 quarterly progress report 9). In Ghana, DP-2 originally intended to stop paying stipends once remedial lessons were integrated into the regular school timetable, but continued to pay stipends until the end of project implementation in March 2020. In Kenya, DP-2 is not permitted to provide stipends; it relies on persuasion from government officials to motivate teachers to teach remedial lessons.

The qualitative research at endline shows that the main challenge that head teachers and remedial RTs disclosed as a factor causing teachers to be less motivated to deliver the remedial lessons was not being paid for their time and effort. Although head teachers in Nigeria confirmed that teachers were being paid a stipend, some teachers were disgruntled because the amount of the stipend had been reduced since the stipend had been integrated into the standard teacher compensation system. They felt that their workload had not reduced because whether classes take place during regular school hours or at the weekend, they invested the same energy to facilitate each class.

One head teacher in Ghana disclosed how a teacher had informed him that he was likely to stop teaching remedial lessons if he is no longer paid a stipend.

> *Of the financial support; he told me that if they do not add anything to his salary that he gets at the end of the month that he will stop. He complained that is too small so he keeps repeating that he wouldn't teach again.*

Interview with head teacher, Sagnarigu, Ghana

Since midline, DP-2 indicates in their progress reports that the project has been strengthening its engagement with the MOE and TSC in Kenya in the hopes of increasing the motivation among teachers to teach remedial lessons. This appears to have had some effect, although challenges with motivation remained. RTs interviewed in the qualitative research in Kenya believed that most teachers were reluctant to volunteer for remedial classes because it was additional work and they were not appreciated for the extra effort. In some schools, the Board of Management (BOM) pays a small stipend as a sign of appreciation for the teacher's extra work.

Other contributions to changes in learning outcome

Parental support

Qualitative findings indicate that parents' interest in supporting girls to excel in school has further increased compared to midline. The efforts of the CAP participants in sensitising community members and parents, specifically as it relates to their eliminating barriers to girls' education, such as street hawking and the burden of household chores, continue to influence parents' decisions to become more involved in the education of their children. For example, in Nigeria, the engagement with mothers through the mothers' association in schools (where they exist) contributes in motivating parents to support their daughters. Parents themselves also attributed the increased support to their desire to see that their children excel and the acknowledgement that the school workload will keep increasing as their children advance through the school grades. In addition, while parents were positive about improvements in the education of their daughters' education and their desire to see them perform well, they also admitted that their own education levels acted as a hindrance to their being able to fully gauge or support them. They usually relied either on their older children or other, more educated family members to make clearer assessments of the child's academic level.

In line with the baseline and midline findings, the focus on household chores remains an important one. These chores include a range of tasks, such as cooking, sweeping, washing utensils, and taking care of younger siblings, as well as activities outside the home, such as children hawking (e.g. selling snacks or working as porters) or learning trades (e.g. tailoring or hairdressing) after school. The level of household chores that girls were assigned to do was reported to have reduced between baseline and midline following sensitisation efforts by members of the CAP process. Given the school closures, there is the concern that girls' involvement in household chores and the activities outside the home may increase when schools reopen as many girls reported being currently engaged in several household and economic activities.

Girls' aspiration and personal effort

From the baseline, girls mentioned different career aspirations and goals that they wanted to pursue. Many of them at endline remarked that these were the motivation for the hard work they put in. Also, as they grew older, the girls have become more assertive and appreciate more clearly the consequences of bad actions, and have gained a deeper understanding of the need to make parents and other family members proud through academic success, a finding similar to that was reported for baseline and midline.

Cohort girls in Kenya and Nigeria also emphasised that they are spending time studying and revising, which improved their learning. The girls also said that following the encouragement from their teachers to work hard, they made changes in their lifestyle to improve their performance in school. This included learning from older siblings, paying attention in class, and attending tuition classes. However, there were a few girls who were unable to carve out time to study because they had to attend Islamic classes (especially in Nigeria and Kenya). This has remained unchanged from baseline to endline.

Improvements in the learning environment

Improvements in the physical learning environment and the availability of teaching and learning materials were also factors that were viewed as having contributed to improvements in learning. As discussed in Section 6.2, CAP participants across the three countries contributed to improving the school environment through renovations of classrooms, the provision of WASH facilities, and support with teaching and learning materials.

In a school in Nigeria, the community created a makeshift library from boxes, providing a variety of interesting storybooks both in English and in the local language. Teachers reported that this helped build the reading culture in the school. Since then, the library had, however, become largely disused and books had been worn out, but the benefits in terms of children having learnt to enjoy reading were reported to persist.

Support from other organisations

Some respondents mentioned the efforts of other developmental partners or organisations in supporting learning, including partners of DP-2. In Ghana, CAMFED was reported in a few interviews to have provided books, uniforms, and other school supplies. The contribution of the Education Sector Support Programme in Nigeria (ESSPIN, now ended) to the development of lesson plans continues to be influential in Nigeria. DP-2's schemes of learning are based on these lesson plans, thereby building on the investment of the ESSPIN programme. In Nigeria, teachers from one school mentioned that the United Nations Children's Fund (UNICEF) was providing training and supervision for teachers, while an NGO called Local Partners was supplying furniture in another school in Nigeria.

3.1.3 Disruption to learning caused by COVID-19

Following the lockdowns and school closures as a result of COVID-19, most parents and girls during the qualitative interview expressed concern about the potential learning loss these would have on children. Parents stated that they were worried that their children might forget many things that they had learnt, or that they would find it difficult to revise and clarify concepts on their own since they were no longer being given homework. Other parents said that they are also afraid that when schools resumed, there might be challenges regarding the pace at which children would be able to learn. One parent in Ghana laments the loss of learning for her child as a result of COVID-19 as follows:

> *This is very serious; I do not even know how to put it. As they are in the house most of them have forgotten what they learnt before. I realise that sometimes when she picks certain areas of what they had studied before, she finds it difficult to understand again, so it is really a problem.*
>
> **Interview with parent, Sagnarigu, Ghana**

How girls are learning during the COVID-19 pandemic

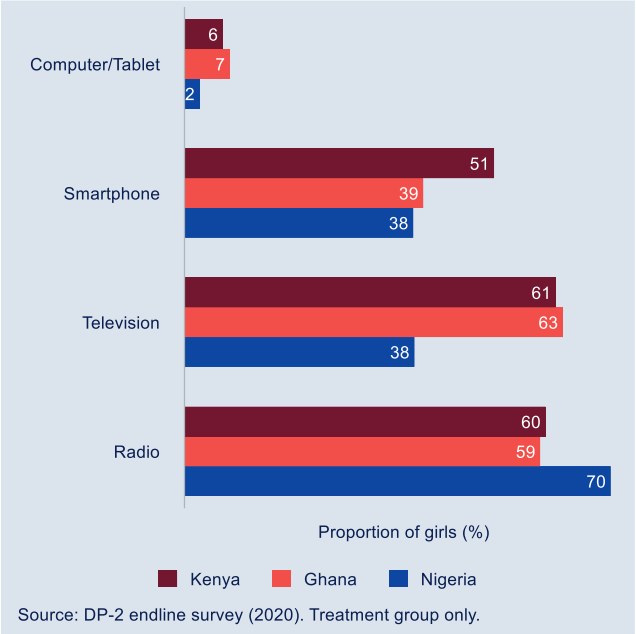
In Chapter 1, we reported that across the three countries, the government's response to the COVID-19 pandemic has been to try to make learning resources available to children through various media, particularly radio and television, as well as online programmes in Ghana and Kenya. However, many children might face challenges accessing these opportunities in practice. As part of the quantitative and qualitative data collected for the endline evaluation, we examined how children are accessing learning resources during COVID-19.

Data from the quantitative research show that, access to electronic devices differs by country. Figure 15 shows the proportion of households that own functioning computers or tablets, smartphones, televisions, and radios. In Nigeria, households are more likely to own a radio, with 70% of households owning one, but only about 40% of households own a

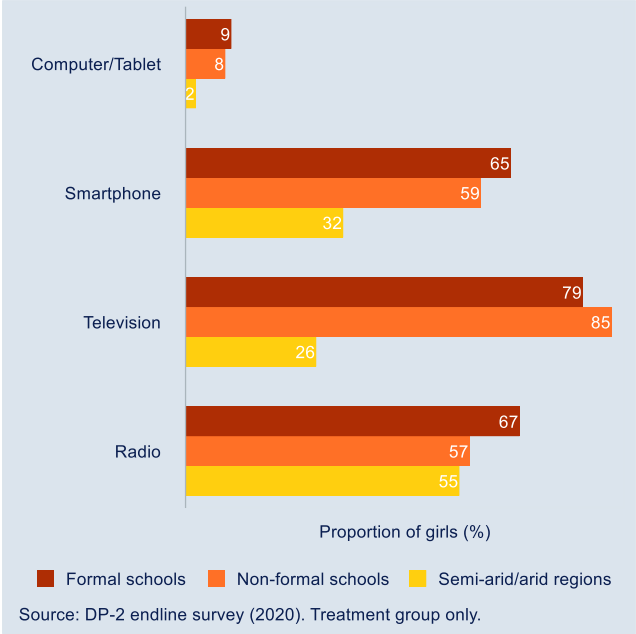
smartphone or a television. In Ghana, a similar proportion of households (about 60%) own a television or a radio, and about 40% own a smartphone. However, in Kenya, approximately half the households own a smartphone, which is the highest proportion across the three countries.

Ownership of electronic devices also differs across the sampling strata in Kenya. In the semi-arid and arid regions (Wajir and Kajiado), only 32% of households own a smartphone, compared to over 60% of households in Nairobi and the surrounding areas. Television ownership is even more skewed, with only 26% of households in the semi-arid and arid regions owning a television, compared to 79% of households of girls attending formal schools in Nairobi and surrounding areas, and 85% of households of girls attending non-formal schools.

Figure 15: Proportion of households that own electronic devices by country (left) and by sampling strata in Kenya (right)



Source: DP-2 endline survey (2020). Treatment group only.



Source: DP-2 endline survey (2020). Treatment group only.

These findings show that many children across the three countries are likely to be excluded from accessing the educational television and radio broadcasts the government has launched because their parents do not own these devices. Children in the semi-arid/arid regions are least likely to have access to these resources.

In addition to low levels of ownership of these devices, there are barriers to children using the devices for their learning, even when households own them. For example, data from the qualitative study in Kenya showed that financial constraints meant that some parents were not able to pay television subscription fees.

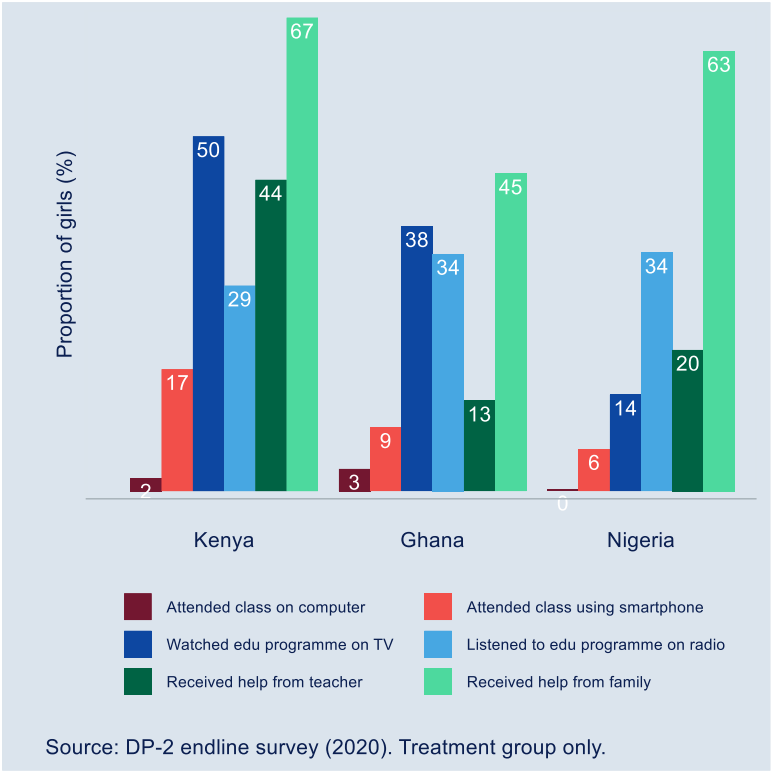
> *First of all I do not get money as I used to get so it is hard to pay for the television so that she can study with others, like today I was not able to pay so she has not studied anything, so if you could help me to get the smartphone that are used for studying. I have seen some children are using phones they are sent assignment through the phone and they continue with their studies. My problem is I have a feature [basic] phone, I do not have smartphone. That is why I try very hard to pay for the television so that they can learn through it.*
>
> **Interview with parent, Kajiado, Kenya**

Figure 16 and Figure 17 show how cohort girls are accessing learning resources during COVID-19; this differs by country and region. Across all three countries, it is most common for girls to have received support with their learning from their families, although less than half the girls in Ghana and half the girls in the semi-arid and arid regions in Kenya received support from their families. In Ghana and in Nairobi and surrounding areas in Kenya, the next most common way that girls have accessed learning resources is through watching an education programme on television. In Nigeria, many girls listened to an education programme on the radio, while in the semi-arid and arid regions in Kenya, many girls received help from their teachers.

Overall, relatively few girls have been able to access help from their teachers during this period. Accessing help from teachers is most common in non-formal schools in Kenya, where about half the cohort girls report having received homework or exercises from their teachers.

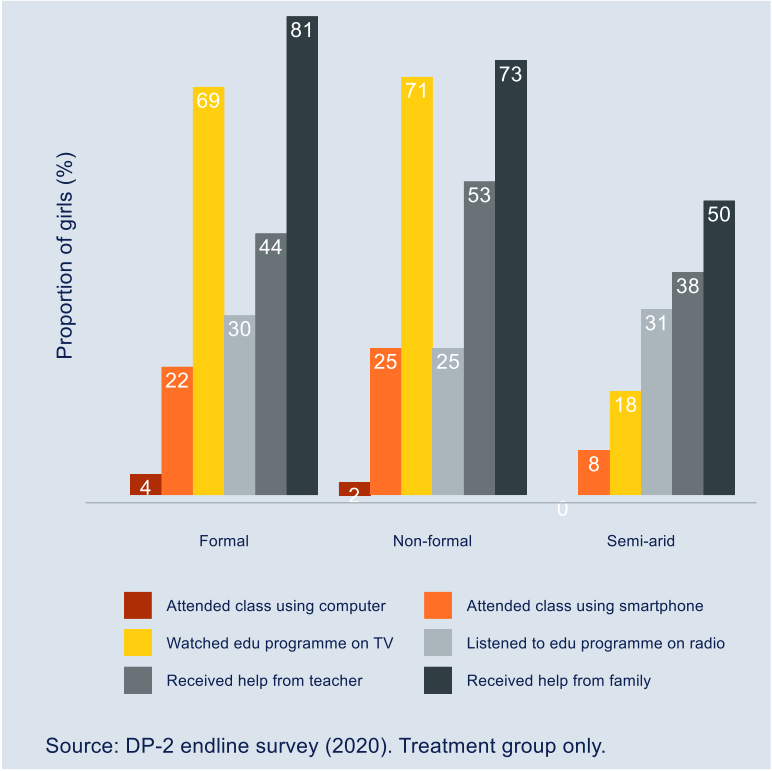
In addition, about a quarter of girls in Ghana, Nigeria, and the semi-arid and arid regions in Kenya have not been able to access any support with their learning. In formal and non-formal schools in Nairobi and the surrounding areas, only 4% of girls have not had access to any learning support.

Figure 16: How cohort girls are accessing learning during COVID-19 by country



Source: DP-2 endline survey (2020). Treatment group only.

Figure 17: How cohort girls are accessing learning during COVID-19 by sampling strata in Kenya



Source: DP-2 endline survey (2020). Treatment group only.

The findings from the qualitative study are aligned with those from the quantitative study. In Kenya, a few parents reported that their daughters were learning through education programmes on TV at home. In Nigeria, a few girls reported tuning in to the state-sponsored learning programme on radio. This is also confirmed by CAP participants, who said they had mobilised parents to encourage their daughters to tune in to the radio station daily. This is discussed in greater detail in Section 6.2. Some parents reported that these programmes seemed useful.

> *That is what even made them have a good performance because what they do through the television is more of practical. Yes, it is not like before that they could not see a real chicken or lion to understand it better. So, that has made her improve a lot.*
>
> **Interview with parent, Kajiado, Kenya**

However, more commonly, respondents in the qualitative research reported that children were receiving support from their families, including in the form of parents paying for private tuition. Most parents in all three countries mentioned that an older sibling, or in some cases a paid tutor, was teaching the children. An exacerbating factor is the low level of parental education (mentioned above, and outlined during the baseline and midline): this was often cited as hindrance for parents to teach their children directly.

> *I have personally seen some parents that have engaged some youths to teach their children at home during this lockdown.*
>
> **Interview with CAP participant, Nigeria**
>
> *Yes, her senior brother helps her with her studies at home but is not that intense, you know with children it can't be that intense like when they were in school.*
>
> **Interview with parent, East Gonja, Ghana**

Where the quantitative findings indicate that girls are receiving support from parents and teachers, this might refer to private tuition classes, paid for by the parents. In a few cases, parents and children indicated that children were continuing to go to Arabic school and were continuing their education in that:

> *She goes for Arabic school (Makaranta), and when she comes back, she goes to the market with her elder sisters, when they get back, she picks up her book and starts studying.*
>
> **Interview with parent, East Gonja, Ghana**

Support with learning through the DP-2 supported Cell-Ed platform

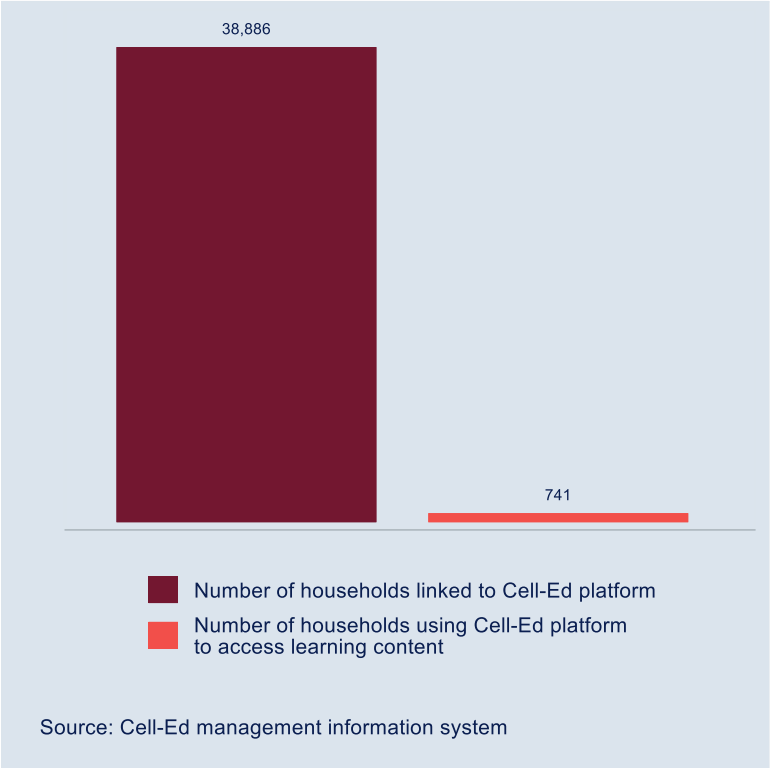
As a response to the COVID-19 pandemic, DP-2 has provided access to the Cell-Ed platform to students through their parents' phones in Kenya and Nigeria. According to Impact(Ed), implementation was not possible in Ghana due to the costly and lengthy process to gain government approval for Cell-Ed content so close to the project ending. On the platform, children can access various literacy and numeracy courses. We used data from the Cell-Ed MIS to establish how many households have been using the platform. At the time of data collection for the endline evaluation, while the process had started in Nigeria, at the time of the evaluation only 86 households had connected to the platform and only 33 had spent any time on at least one of the courses. We therefore limit the analysis here to households accessing the Cell-Ed platform in Kenya.

Figure 18 demonstrates that the Cell-Ed platform over the period May–July 2020 had been pushed to almost 40,000 phone numbers in Kenya. This represents the first stage of the project's strategy in the use of the Cell-Ed platform, during which the platform was used to send out simple text messages including public health, child protection and well-being messaging between May and July 2020. According to Impact(Ed), these messages have been sent to the almost 40,000 phone numbers available to DP-2.

In the second stage it was expected that the Cell-Ed platform would be made available to a substantially fewer number of households to support distance learning. This was accompanied by efforts to reach out to families through the network of teachers in DP-2 supported schools to make families aware of this learning opportunity. Whilst the data does not allow us to understand the total number of households to whom this opportunity was provided**,** by 14th July 2020, just 741 households in Kenya had actually accessed the platform (which we define as having spent any time accessing course material). The Cell-Ed learning platform was made available via WhatsApp and was therefore available to those who owned smartphones compatible with this application. Amongst our sample of cohort girls, approximately half are part of a household that owns a smart phone (see Figure 15).

It is also important to note that the Cell-Ed learning platform was pushed to households. As such whilst 741 households had accessed the platform, it may be the case that multiple children were accessing the platform within each household. Monitoring data is recorded by phone number so it is not possible to tell from the data how many children have been accessing the platform.

Figure 18: Cumulative number of households accessing the Cell-Ed platform (May–July 2020 in Kenya)



The MIS data provided by Cell-Ed covers the period 10 May 2020–14 July 2020. During this period, for the 741 children who had accessed the platform, it had been on average 59 days since the child first accessed the platform.

Figure 19 indicates that children who had accessed the platform spent on average 53 minutes of course time with the platform and had completed an average of 21 units of any course. The Cell-Ed platform offers a variety of literacy and numeracy courses for children to follow.[39] Each course is made up of a number of units, depending on the course, with up to 10 units per course.

[39] These include Reading 1, Reading 2, Maths – Addition & Subtraction, Maths – Division, Maths – Multiplication, English 1 and English 2.

Figure 19: Time spent on Cell-Ed platform and number of units completed (Kenya)

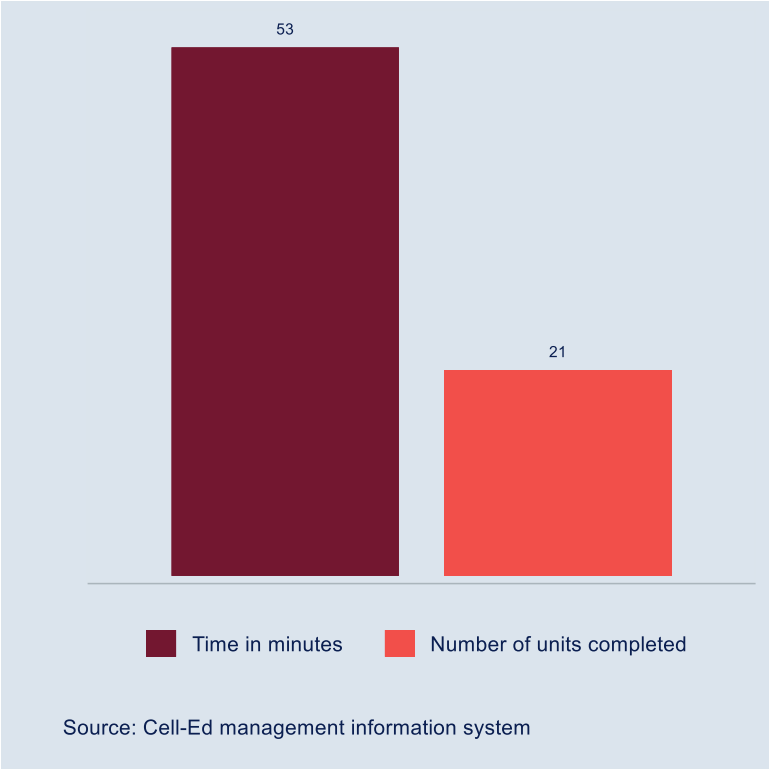
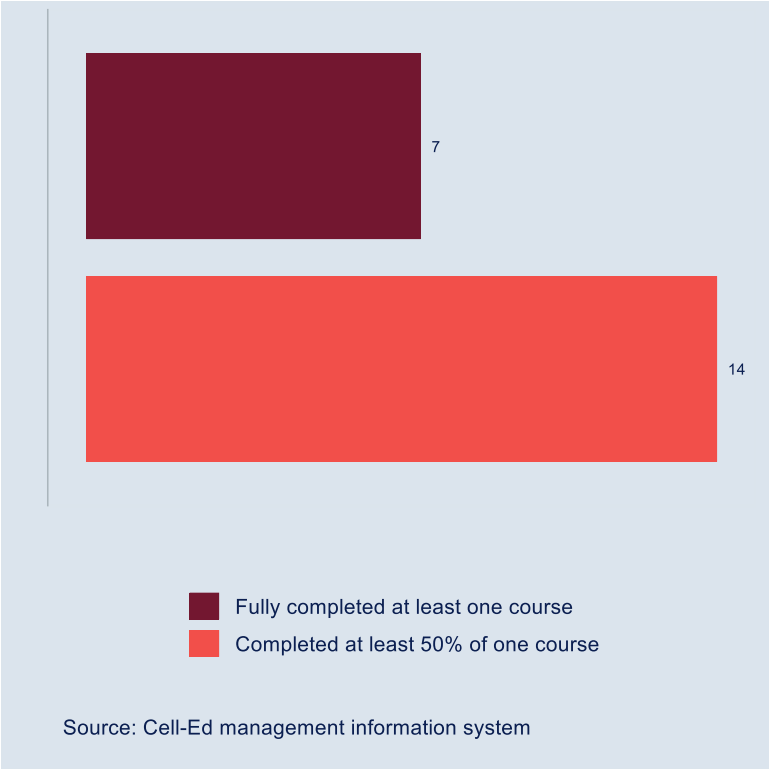


Figure 20 reports the proportion of children that have completed at least one of the seven courses available to them on the Cell-Ed platform. Few children (7% of those who have accessed the platform) have completed one course, and relatively few children (14%) have completed at least 50% of one course. This is despite the finding presented above showing that children had completed 21 units on average, suggesting that children are spending their time across multiple courses. Interpretations drawn from these results need to acknowledge that Cell-Ed was still in the process of implementing its communication strategy to encourage the use of the platform. Interpretations drawn from these results need to acknowledge that Cell-Ed and the project team in country were still in the process of implementing a communication strategy to encourage wider and deeper use of the platform.

Figure 20: Proportion of children who have completed at least one course (Kenya)



3.1.4 Conclusion

Quantitative findings at midline demonstrated a large, positive impact of DP-2 on learning outcomes in Nigeria. At midline, no evidence was found that DP-2 had had an impact on learning outcomes in Ghana and Kenya (with the exception of Wajir, where we found evidence of a positive impact of DP-2 on numeracy outcomes at midline). It might be expected that improvements in learning are slow to emerge, because they are a result of improvements across a range of intermediate outcome indicators such as improvement in teaching, attendance, self-efficacy and support from girls' family and community.

Findings from the qualitative research at endline show that DP-2 is changing perceptions towards learning in all countries. Girls feel that they are learning better, interacting more with their teachers and with each other, and feeling more confident to participate in class. Head teachers and teachers report observing improvements in students' learning when teachers use strategies from the training in their lessons. However, given the lack of learning assessments at endline, we are unable to report on whether the impact on learning outcomes in Nigeria observed at midline has been sustained, and whether any impact on learning outcomes in Ghana and Kenya had emerged by endline..

Remedial lessons are perceived positively, and findings from midline and endline suggest that they are addressing foundational literacy and numeracy skills gaps. In Nigeria, there is evidence from midline that participating in remedial lessons contributed to the overall impact that DP-2 had on learning outcomes. The midline evaluation also found some quantitative evidence that participating in remedial lessons was associated with improvements in literacy in Ghana and Kenya. At endline, girls attending the second phase of remedial lessons in Nigeria have improved substantially in their foundational literacy and numeracy skills over a short period of four months, based on monitoring data (Learner Checks) conducted by the project. In Ghana, reports from information collected by teachers during the remedial lessons suggested that girls attending the second phase of remedial lessons were also showing improvements. Data was not

available in Kenya at endline. The qualitative research finds that girls and RTs across all three countries feel that the remedial lessons are beneficial and are contributing to improved learning. The smaller class sizes during remedial lessons allow teachers to engage more intensively with each individual student and their specific needs and encourage students to participate in lessons more actively than is possible in regular lessons with larger class sizes. With smaller class sizes, RTs are able to spend more time on teaching compared to classroom management.

While remedial lessons have been implemented as per design, it has been challenging to integrate remedial lessons fully into the normal functioning of the schools. At midline in Ghana and Nigeria, remedial lessons were usually held outside of regular school hours, which prevented participation of some students. By endline, DP-2 had made efforts to ensure the integration of remedial lessons within the official school schedule (aided, in part, by a government policy to extend the official school day in Ghana). Nevertheless, since remedial lessons usually took place in the afternoon after the morning session, some children were tired and hungry while others missed the lessons to support their parents at home or to attend Islamic classes. In Kenya, remedial lessons take place during periods allocated for extracurricular activities in the timetable, but teachers find it challenging to make time for them, given other competing school activities. Across the three countries, teacher motivation to teach the remedial lessons was low. In Kenya, teachers cannot be paid to deliver remedial lessons, and subsequently lack motivation. In Nigeria, the stipend that teachers were paid for delivering these lessons had been reduced when payments were taken over by the government, which led to reduced motivation to teach these classes at endline. In Ghana, DP-2 continued to pay stipends until the end of project implementation, but respondents indicated that teachers would not be motivated to continue teaching remedial lessons if they no longer receive a stipend.

The outbreak of COVID-19 and the subsequent closure of schools and media centres has substantially disrupted education for girls in all three countries. Parents are concerned about girls losing what they have learnt, and therefore engage older siblings or private tutors to teacher their children when they can afford it. Access to educational resources provided by the government is low in Nigeria, Ghana, and in the semi-arid/arid regions in Kenya. In Nairobi and surrounding areas, most girls have access to educational programmes on television, but some parents struggle to afford the subscription. As a response to the COVID-19 pandemic in Kenya and Nigeria, DP-2 provided students with access to English and mathematics courses through the Cell-Ed platform, which students can access through their parents' phones. Engagement with these courses has been very low in Nigeria and low in Kenya. However, it should be noted that this response was rolled out as a quick, low-cost activity that was feasible within the last months of project implementation and engagement was not expected to be very high. In addition, the platform also served an additional purpose of sharing public health and child protection messages along with information on learning opportunities, which have been received by a far greater number of households.

3.2 Self-efficacy and life skills

DP-2 aims to improve girls' life skills and self-efficacy, primarily through girls' clubs. Girls' club mentors are trained to engage girls in activities that enable them to learn new life skills, build confidence and self-esteem, and develop or reinforce positive attitudes and behaviours related to their education and aspirations. These outcomes are in turn expected to lead to improved attendance, learning outcomes, and successful transition rates. Self-efficacy is a final outcome indicator of DP-2, because it is expected that girls' club activities that build life skills, more supportive and effective teachers, and a more conducive learning environment all contribute towards girls' self-efficacy. There is expected to be a mutually reinforcing relationship, where improvements in self-efficacy are expected to contribute to improvements

in learning outcomes, but improvements in learning outcomes may similarly contribute to improvements in self-efficacy. Box 3 describes the design of the DP-2 girls' clubs.

Box 3: DP-2's design of the girls' (and boys') clubs

DP-2 encourages schools to organise girls' clubs to enable girls to learn new life skills, build confidence and self-esteem, and develop or reinforce positive attitudes and behaviours related to their education and aspirations. Each club has a club mentor, who receives training on how to facilitate activities with the girls' club. The club mentors are invited to several workshops:

i. club start-up toolkit – how to run and sustain clubs and use the DP-2 media content;

ii. business/empowerment toolkit – how to start and support income-generating activities with a view to developing entrepreneurship skills; and

iii. MBW facilitation – how to facilitate learning from the MBW videos.

The project envisages that all clubs must be free of charge. Any girl studying at a DP-2 school can enrol in the girls' club, according to the DP-2 design. This is a major point of emphasis in the training and guidance provided to schools and club mentors.

Under DP-1, clubs were independent in terms of choosing and developing their activities, with general guidance being provided to club mentors on how to facilitate this. In response to feedback at the end of DP-1, DP-2 includes a more structured club curriculum. At the start of DP-2, club mentors were trained in the business toolkit, which provided guidance for girls' clubs to start income-generating activities, through which girls could learn hard skills such as making soap or beading. Since early 2019, girls' clubs have been provided with and trained in facilitating sessions using the MBW content. The MBW materials consist of video content and training guides for club mentors on how to facilitate sessions using the videos. The MBW videos are stories about a group of young boys and girls who learn different life lessons and skills, such as taking care of the environment, being hygienic, planning ahead, and being goal focused. Girls' clubs watch these videos, and club mentors then facilitate a discussion about the content of the videos.

DP-2 also encourages schools to organise boys' clubs that engage in similar activities to the girls' clubs.

DP-2 sees **self-efficacy** as an outcome that refers to improving the self-esteem, confidence, 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, in this section we present both quantitative and qualitative approaches to the measurement of self-efficacy, and it is the combination and triangulation of these findings that 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, midline, and endline, and present the qualitative findings to give more contextual details around the results presented.

3.2.1 Defining self-efficacy

Self-efficacy[40] 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.

[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.

[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.

The first is a **belief** about one's capability; this, 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 as 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 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 their 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 in 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 Schwarzer,[43] based on Bandura (1977), and was constructed specifically to measure personal agency – that is, the belief that 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 (see Table 21). For each statement, the respondent is asked whether she strongly agrees, agrees, disagrees, or strongly disagrees with the statement.

Table 21: 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.

[42] A. Bandura (1997) Self-Efficacy: The Exercise of Control, New York, Freeman.
[43] Jerusalem and Schwarzer (1981).

GSE scale statements
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 21 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 and endline, self-efficacy scores were calculated using the same scale as was constructed at baseline.

3.2.2 Impact of DP-2 on self-efficacy

Exposure of evaluation sample to DP-2 activities

In this section, we report on the impact of DP-2 on self-efficacy for the cohort of girls that we have been tracking since baseline. Before presenting these results, it is helpful to describe the exposure that these girls have had to DP-2 activities, and in particular, to the girls' clubs.

In the quantitative sample, all girls were in Primary 5 at baseline (May/June 2018). At midline (May/June 2019), large proportions of the cohort girls in the quantitative evaluation sample were girls' club members: 79% of girls in Ghana reported being members of the girls' club, compared to 60% of girls in Kenya and 61% of girls in Nigeria. In Kenya, cohort girls at endline continued to be in primary school, and the same proportion of girls as at midline (60%) reported that they were members of the girls' club before the schools closed.

In Ghana and Nigeria, most girls transitioned into junior secondary schools in September 2019, a few months after the midline evaluation. DP-2 does not support girls' clubs in junior secondary schools[44]; these schools do not have remedial classes, and teachers receive a more limited TPD package. These girls have therefore had limited exposure to DP-2 activities since midline, and in particular have had very limited exposure to the MBW materials. Therefore, between midline and endline, we would mainly want to understand whether DP-2 has a legacy effect, that is, whether any impact that DP-2 had on girls' self-efficacy during primary school can be sustained as girls transition into junior secondary school, even in the absence of many of the direct project activities.

Two groups of girls were interviewed for the qualitative study. Firstly, in line with the quantitative sample, the qualitative study has been following a cohort of girls who were in Primary 5 at baseline (referred to as 'old cohort girls'). In Ghana and Nigeria, these girls have also mostly transitioned to junior secondary schools at endline. In addition, not all girls from this cohort were girls' club members. Therefore, to examine girls' perceptions of the MBW component in more detail, a new group of girls (referred to as 'new cohort girls' and sampled

[44] It was agreed between Impact(Ed) and the FM at the time that the programme would focus on 60 pilot primary schools in each country for the MBW intervention. In Ghana, the JHSs received a small dose of the intervention - Hours 1 and 2 of MBW, along with the initial mentor training in late 2018/early 2019 but JSSs in Nigeria never received anything MBW related.

from Primary 4, 5 and 6) was added to the qualitative sample at endline. These were girls from the sampled primary schools who have all been girls' club members over the past year.

Lastly, it is important to note that most data on self-efficacy was collected after schools had been closed for several months. This means that even the girls who were part of the girls' clubs before the school closures (60% of our quantitative sample in Kenya, and the newly sampled girls for the qualitative research in Ghana and Kenya) had not participated in girls' club activities since mid-March 2020, which is likely to have affected their recall of these activities. In Nigeria, qualitative data collection with newly sampled girls took place in person before the school closures.

Therefore, due to the complexities of the DP-2 project and differences in schooling cycles across the three countries, but also because of the disruption caused by COVID-19, we have data from different groups of girls collected at different times points. This complicates the interpretation of the findings presented in the remainder of this chapter.

Impact of DP-2 on self-efficacy

Table 22 presents the self-efficacy scores in the treatment and control groups over the three rounds of the evaluation – at baseline, midline and endline. The table also shows the impact estimates from the quantitative analysis, which are estimated using the differences-in-differences estimation technique.[45] The impact analysis shows whether any changes in self-efficacy between rounds can be attributed to DP-2. We consider DP-2 to have had a positive impact on self-efficacy if we have statistical evidence that the change in the treatment group is larger in comparison to the control group.

We show three estimates of impact. The first column (BL-EL) shows the impact that DP-2 has had over the full duration of the project. BL-ML shows the impact that DP-2 has had between baseline and midline, while ML-EL shows the impact that DP-2 has had between midline and endline. It is important to understand that the ML-EL estimate shows what the project has achieved over and above any impact that was already established at midline. The GEC guidance recommends that at endline, the evaluation focuses on reporting the impact that the project has achieved between midline and endline. However, to get a full understanding of the impact of the project, it is also important to look at the impact the project has achieved over its complete duration.

At midline, the project had not set a specific logframe target but was expecting an improvement in scores. In order to allow a full evaluation of performance against targets across the duration of the project, we have assumed here a BL-ML target of the same magnitude as that set for the ML-EL evaluation. At endline, the project set a target of a one-point change in the treatment group relative to the control group. We compare the size of the impact estimate against the endline target set in the logframe. To meet the target, the change in self-efficacy in the treatment group between midline and endline would need to be higher than that in the control group by the target point change, i.e. by one point. We also show a BL-EL target, which is the sum of the BL-ML and ML-EL targets.

Table 22: Impact of DP-2 on self-efficacy

Baseline		Midline		Endline		DID			Targets		
Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL	BL-EL target^	BL-ML target	ML-EL target^^
Ghana											
63.6	65.5	65.9	63.8	66.3	65.2	3.0	4.0	-1.0	2	1	1
Kenya											
60.3	59.5	63.5	62.6	68.7	70.0	-2.1	0.2	-2.3	2	1	1

[45] Further information on the impact estimation is provided in Annex 1.

Baseline		Midline		Endline		DID			Targets		
Nigeria											
66.6	65.3	73.8	72.2	80.8	81.7	-2.1	0.3	-2.4	2	1	1

Source: DP-2 girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1. ^ The BL-EL target is the sum of the BL-ML target and the ML-EL target. ^^ At midline, DP-2 had not set specific logframe targets for self-efficacy but was expecting an improvement in scores. In order to allow a full evaluation of performance against targets across the duration of the project, we have assumed here a BL-ML target of the same magnitude as that set for the ML-EL evaluation. Green shows that the logframe target has been met, orange shows that the target has not been met. Care should be taken in the interpretation of the targets given the specific circumstances during which self-efficacy was measured for the endline evaluation.

Ghana

In Ghana, a positive impact of DP-2 on self-efficacy was detected between baseline and midline, with DP-2 leading to a four-point improvement in girls' average self-efficacy score.[46] This positive impact is not fully sustained between midline and endline. This can be seen by the self-efficacy scores having increased to a similar degree across both the treatment and control groups since midline. Therefore, we have no statistical evidence to suggest that DP-2 has contributed to an improvement in self-efficacy scores during the midline to endline period. Given the DP-2 impact detected in the baseline to midline period, the magnitude of the overall baseline to endline project effect on self-efficacy remains positive, with a three-point improvement in girls' average self-efficacy score relative to the control group. However, this too is not statistically significant.

These findings suggest that DP-2 has indeed had a positive impact on the self-efficacy of girls in Ghana over the course of its implementation, but that this impact was primarily generated in the first year of implementation, when the majority of girls in our evaluation sample were directly involved in girls' clubs. The results indicate that DP-2 was not able to generate further impact once girls transitioned to junior secondary schools and stopped attending the girls' clubs, and the impact that DP-2 had when girls were directly exposed to the girls' clubs had started to wear off by endline.

In terms of the logframe target, DP-2 did not achieve a one-point change in self-efficacy relative to the control group between midline and endline. However, as explained, it would not have been expected that DP-2 would generate further impact between midline and endline, given the reduced exposure to the project in that period. Across the full duration of the project, DP-2 generated a three-point improvement in self-efficacy relative to the control group, which meets our definition of the BL-EL target.

Kenya

In Kenya, we did not detect an impact of DP-2 on girls' self-efficacy between baseline to midline or midline to endline, and therefore also did not detect impact for the full baseline to endline period. In turn, the midline to endline logframe target was not met. Girls' levels of self-efficacy increased significantly between baseline and midline, and between midline and endline. However, this increase in self-efficacy is observed across both the treatment and control groups. Consequently, we are unable to attribute these gains to DP-2.

Nigeria

[46] In the DP-2 Midline Report, we reported that DP-2 had a statistically significant impact on girls' self-efficacy in Ghana between baseline and midline. At endline, the findings from the differences-in-differences model presented here are tending towards statistical significance, but do not reach statistical significance. However, in Annex 1, we present alternative model specifications conducted as robustness checks, where the impact estimate is statistically significant. Overall, we consider that there is good evidence that DP-2 has had a positive impact on self-efficacy in Ghana between baseline and midline.

As with Kenya, in Nigeria, we did not detect an impact of DP-2 on girls' self-efficacy between baseline to midline or midline to endline, and therefore also did not detect impact over the full baseline to endline period. Given that no impact of DP-2 on self-efficacy has emerged at midline, it would have been unlikely for the project to have generated any impact between midline and endline given that as the majority of the evaluation cohort transitioned to junior secondary school following the midline evaluation, their exposure to the project activities would have been reduced. The midline to endline logframe target was not met. As in Kenya, levels of self-efficacy increased significantly between baseline and midline, and between midline and endline, but this increase was similar across the treatment and control groups.

Improvements in self-efficacy over time

As described above, while there is no impact of DP-2 on self-efficacy in Kenya and Nigeria, findings from the quantitative survey show that girls' levels of self-efficacy have been increasing significantly over time, both between baseline and midline, and between midline and endline. In Ghana, there was a small but not statistically significant increase in self-efficacy over the full project, but self-efficacy levels did not change between midline and endline.

At endline, findings from the qualitative research point towards levels of self-efficacy increasing in all three countries. While our quantitative measure of self-efficacy measures the construct in its broadest sense, the qualitative analysis is able to examine in more detail how girls judge their own capabilities in different contexts and in relation to different tasks, and is likely to be better placed to uncover increases in specific aspects of self-efficacy not measured in the quantitative survey, such as girls' ability to discuss their goals with their parents, to support their siblings and friends, and to participate in classroom discussions.

At endline, DP-2 cohort girls continue to demonstrate a strong sense of confidence in achieving their educational goals in Ghana, Nigeria, and Kenya, as observed between baseline and midline. They associate working hard with achieving immediate goals, such as performing well in school, and transitioning to the next class, and long-term goals, such as being successful in their career as a doctor, engineer, or neurosurgeon. Performing well in school and getting support from their peers and feedback from their teachers reinforces self-efficacy. Girls claim that the ability to answer questions in class, as well as to understand what they were being taught, increases their confidence and morale. Girls used phrases such as 'being happy,' being proud', 'motivated', and 'uplifting' when they do well in class, in quiz and debate competitions, and when they are able to correctly respond to questions in class.

> *If they give us dictation and my mark is high, it makes me happy and proud. When the teacher asks me a question and I am able to answer, that makes me proud.*
>
> **Interview with old cohort girl, East Gonja, Ghana**
>
> *Yes. What makes me happy is being able to understand what I am taught. I would be sad if I didn't understand anything in class.*
>
> **Interview with old cohort girl, Yendi, Ghana**

Parents have also noticed a change in their daughters' behaviour; they believe that their daughters have become more considerate, more willing to share their things, and more willing to support younger siblings with schoolwork and home tasks over the years. Some parents in Ghana and Kenya mentioned girls being more polite and obedient to their elders, as well as being persuasive and bold when they needed something.

> *I kept telling my mom why she should enrol me in [anonymised] school because I know that students who graduate from the school perform well in their exams. Initially*

> *she did not listen to me, but as I kept reminding her every time, she eventually told my father, who agreed.*
>
> **Interview with old cohort girl, Nigeria**

Completing household chores and receiving praise and appreciation from their parents are important for self-efficacy since praise and gifts reinforce children's sense of accomplishment. While this finding has been consistent since baseline, it has become even more prominent at endline as girls have had to spend more time at home owing to school closures as a result of COVID-19. As a result, helping their parents out with chores, and engaging in discussions with their parents, have provided cohort girls with a sense of purpose.

> *Sometimes when my father wants to do something but does not understand it, he will call me to come and help him.*
>
> **Interview with old cohort girl, Savelugu, Ghana**

Qualitative findings have reported a steady increase in self-efficacy from baseline to endline. In part, this can be attributed to girls growing older and being tasked with greater responsibility at home. Parents' reactions to their child's achievement – their praise, motivation, and validation – were reported by girls as a crucial contribution to their sense of pride and self-esteem. Girls say that when they received kind words from parents, friends, and relatives, they felt loved and cared for, such as when parents had bought gifts for them during festive periods or provided a change of uniform or school supplies.

3.2.3 Self-efficacy and relation to DP-2 activities

As mentioned earlier, a contribution claim of DP-2 is that girls' clubs, together with other DP-2 activities, lead to improved girls' self-efficacy. In particular, 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.

Impact of DP-2 on girls' club members

To quantitatively test the effect of DP-2 girls' clubs on self-efficacy with the information collected during the quantitative surveys, we replicate our impact analysis for the subgroup of girls who reported being part of a DP-2 girls' club during the midline survey. In Ghana and Nigeria, this group consists of girls who were girls' club members at midline, but who would have had very limited exposure to the girls' clubs after midline. In these two countries, the analysis therefore examines the legacy effect of the girls' clubs approximately one year after leaving the clubs. In Kenya, the analysis shows the impact of DP-2 on girls' self-efficacy after approximately two years of exposure to the girls' clubs. Table 23 presents the impact estimates.

Table 23: Impact of DP-2 on self-efficacy (girls' club members only[47])

Baseline		Midline		Endline		DID		
Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL
Ghana								
64.2	65.6	66.9	63.5	66.6	65.2	2.7	4.8*	-2.0
Kenya								

[47] For this analysis, we limited the treatment sample to girls who reported being members of DP-2 girls' clubs at midline. We then matched these girls to girls in control schools who were comparable, i.e. shared a similar set of characteristics. This was done using the coarsened exact matching approach described in Annex 1.

Baseline		Midline		Endline		DID		
60.3	59.6	64.2	62.5	68.7	70.0	-2.1	1.0	-3.1
Nigeria								
66.2	65.1	74.6	71.8	80.6	81.8	-2.3	1.7	-4.0*

Source: DP-2 girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1.

In Ghana, DP-2 had a significant impact on girls' club members' self-efficacy between baseline and midline. The size of this effect is slightly larger than for the full sample. However, this impact wears off between midline and endline, as it does for the full sample, showing that the positive effect that girls' clubs had when girls were participating in them directly were not fully sustained approximately one year after girls had left the clubs.

In Nigeria, DP-2 had no significant impact on the self-efficacy of girls' club members between baseline and midline, and we would therefore not expect to see an impact between midline and endline. In fact, we find that between midline and endline, DP-2 had a negative impact on girls' club members' self-efficacy. The qualitative research does not offer a clear answer as to why this might be the case. However, this finding needs to take account of a number of factors. Self-efficacy scores have been increasing over time for all girls in Nigeria. Between baseline and midline, self-efficacy scores increased more in the treatment group compared to the control group, while between midline and endline, scores increased more in the control group compared to the treatment group. Girls in the treatment group had very limited exposure to girls' clubs and the MBW content between midline and endline. Therefore, the finding of negative impact between midline to endline is driven by cohort girls catching up to the gains that treatment girls had made in the baseline to midline period.

The most consistent interpretation of the results in Nigeria is therefore that DP-2 had no impact on girls' club members' self-efficacy scores over the complete duration of the project for girls who were exposed to the girls' clubs between baseline and midline. However, in the next section we reflect on indications from the qualitative research that suggest signs of positive change in self-efficacy when a broader perspective of self-efficacy is considered and for girls who were actively engaging with the MBW materials before schools closed.

In Kenya, the findings for girls' club members are similar to the findings for the sample overall. They show that DP-2 has not had a statistically significant impact on self-efficacy at any of the time points measured in the evaluation.

Perceptions of changes in self-efficacy and life skills as a result of the MBW content

In this section, we present findings from the qualitative research at endline that find a strong link between participating in girls' clubs and watching MBW videos, and improvements in self-efficacy.[48] The qualitative findings and quantitative findings presented above are inconsistent. This is the case particularly in Kenya where girls across the quantitative and qualitative samples have participated in girls' clubs and MBW between midline and endline, although girls had not participated in girls' clubs for several months due to the school closures at the time of data collection. In Ghana and Nigeria, the findings are also surprising but likely explained to some extent by different levels of exposure to the MBW content. We first present the findings from the qualitative research at endline, and then reflect further on the discrepancy.

Girls find the MBW videos relatable as the videos speak directly to their experience. In each country, different episodes and characters were popular, with some characters being a

[48] Qualitative findings include perceptions from both old cohort girls (JHS/ JSS in Ghana and Nigeria and Primary 7 in Kenya), and new cohort girls (from Primary 4, Primary 5, and Primary 6 in all three countries). Findings from both sets of girls show strong links between club participation and increases in self-efficacy.

clear favourite in all countries. For example, several girls in all three countries spoke about Amina, and the watermelon episode was popular among girls and mentors. In Ghana, where girls hawked to support their families, a girl who was part of the girls' club and watched the videos said how an MBW video had taught her that since the character Amina was supporting her parents by hawking before going to school in the morning, she arrived at school late and tired. She learnt that because Amina was tired, her concentration and consequently her performance was negatively affected.

Girls view some characters as role models and videos stimulate their own aspirations and help them articulate their desires.

> *What interests me the most is Rosa's attitude because she wants to assist people. She wants to study science so that she can help the sick. Through this, I have also decided that I will study science because I also like to help.*
>
> **Interview with new cohort girl, Nigeria**

Being able to relate to these characters has also helped introduce ideas that girls have not been familiar with and encouraged them to explore their own biases about gender further. For example, when the character Amina played football in one episode, girls in Nigeria found themselves confronting a previously held misconception about gender stereotypes head on. Many said that this episode broadened their views about what they had considered to be a male sport or career, and that it was possible for girls to take up football. As one girl puts it below:

> *I was shocked to see that Amina was a footballer and how people encouraged her even when she did not perform so well, she was not mocked or laughed at. She was very determined. Despite her failure, she was still able to carry on.*
>
> **Interview with old cohort girl, Nigeria**

Between midline and endline, qualitative findings indicate a strong link between participating in the girls' club and watching MBW videos to an increase in self-efficacy. This finding is based on girls' perceptions of increased confidence, examples of being able to negotiate for themselves and communicate their goals and desires clearly and effectively with the research team, as well as their parents and teachers, and setting consistent short- and long-term goals for themselves. These views were corroborated by parent, club mentor, and teacher interviews at endline, increasing our confidence in the findings.

In all three countries, qualitative findings also indicate links between attending the girls' club and watching MBW videos to an increase in life skills. Because of the short nature of the phone interviews, we were not able to measure girls' life skills quantitatively and therefore cannot report on the impact of DP-2 on life skills at endline.

In Kenya and Ghana, girls attribute an increase in life skills to attending the girls club, reinforcing what they said they have learnt at midline – that is, 'not fall prey to boys' and 'not let people trick you'. They also show greater awareness of social norms, the environment, community values, and their responsibilities at home and in the community. Club mentors from all the schools in Kenya and Nigeria also note an improvement in self-confidence and self-esteem in girls. They observed that girls who were previously shy were now able to ask questions and talk to teachers in class, which contributed to improving their academic performance. Girls observed their own confidence growing, and that they did not feel shy when they had questions or had not understood what the teacher was saying. In Nigeria, girls and teachers especially attribute changes such as communicating effectively and being more accommodating and patient with their siblings to MBW.

> *When a teacher asks question in class, I join the boys to also raise my hand, I will stand up and respond to the teacher. Another time, he asked people to tell a story, I told the story of MBW, the teacher now said, what is your name? I told him, since then everyone knows me in the class.*
>
> **Interview with old cohort girl, Nigeria**

In Ghana, girls spoke about how they had learnt about keeping themselves and their surroundings clean. Several girls across the qualitative sample said that they had learnt about the correct use and disposal of sanitary pads.

> *Yes. I know that I have to collect the rubbish and put it in a dust bin after sweeping. When I'm in my menses I have to change my pad and bath twice a day.*
>
> **Interview with new cohort girl, Yendi, Ghana**

In all three countries, parents' awareness about the club has increased and they shared the positive impact it has had on girls. Parents recall daughters discussing stories and characters and how characters overcame challenges with them.

Constraints in the endline evaluation mean that we are limited in our ability to explain the discrepancy between the quantitative and qualitative findings on girls' self-efficacy. Firstly, quantitative and qualitative data were collected concurrently (or in Nigeria, qualitative data were collected first), and there was therefore no opportunity for the qualitative data collection to seek to explain the findings from the quantitative survey. In addition, collecting data during COVID-19 means that it is difficult to understand what effects the pandemic may have had on levels of self-efficacy, and whether treatment and control girls may have been affected differently as a result of the prior intervention. One possibility is that self-efficacy is highly context-dependent, and while girls recall how girls' clubs and MBW have positively influenced their life in the past, this might not be reflected in their measures of self-efficacy at the present time, where COVID-19 has substantially changed many girls' circumstances. Another explanation is that qualitative research, while offering greater depth of analysis and understanding on specific issues related to self-efficacy, is by design not intended to provide statistically representative results of all schools supported by DP-2. The evaluation purposively sampled (and tracked over time) schools that were identified by DP-2 as representative of a 'high-performing' school and as such the findings on self-efficacy generated by the evaluation may represent the experience of girls where the MBW component has been implemented as intended. Finally, it is relevant to note that the MBW broadcast in Kenya has introduced some level of contamination, although this is likely to be small. Only about a fifth of girls in control schools had seen MBW videos on TV, and they are not exposed to the additional benefits of discussing these videos in a girls' club.

MBW and its effect on old and new cohort girls

Several questions asked to old cohort girls (who were mostly in JHS1/JSS1 in Ghana and Nigeria and in Primary 7 in Kenya at endline) and new cohort girls (who were in Primary 4, 5 or 6 at endline) were similar. However, the interview with new cohort girls was specifically designed to understand the effect of the clubs, including the effect of the MBW content on girls' perceptions of their self-efficacy. Consequently, researchers were trained to probe about the details of girls' responses to MBW content in interviews with new cohort girls, and this is likely to have resulted in more specific answers. Therefore, responses between the two cohort girls are not comparable. Moreover, we cannot draw an inference that new cohort girls have engaged with MBW content for longer and therefore show greater self-efficacy, since we only interview these girls at endline, and do not track their progress from baseline.

In Ghana, new cohort girls provided examples of characters and stories they remembered from the videos. Girls particularly remembered characters such as Grace and Amina, and the new cohort girls spoke about the challenges these characters faced in the stories and what

they had learnt from the characters' experiences as it applied in their own lives. In terms of specific lessons, many girls recalled the watermelon story where the protagonist had to sell watermelons before going to school and this made her tired before class. This is likely to have resonated with girls in Ghana who support their family by hawking before or after school hours. Girls also spoke about stories related to the vices of gambling, the benefits of using toilets, the values of sharing with others, and the need to be more tolerant.

Since most old cohort girls in Ghana had transitioned successfully to JHS, they spoke about their current experience in JHS. Girls remembered the skills they had learnt, like making liquid soap and beaded jewellery. In addition, girls felt more comfortable asking questions in class and shared positive examples like standing for the position of class prefect as a demonstration of their new skills. These changes were not directly attributed to the club.

Most of the new cohort girls in Kenya could recall details of the MBW videos. They enjoyed watching videos and the most popular story, as in Ghana, was the watermelon story about hawking. They also said that they had learnt how to be confident, disciplined with their work, and respectful towards others such as parents, grandparents and teachers. In contrast, fewer old cohort girls could recall details about MBW or said that they watched MBW videos in the club.

New cohort girls in both Kenya and Ghana continued with their micro-enterprise such as sewing, making beads, necklaces and earrings, making soap, and selling various items such as sweets and books.

In Nigeria, girls interviewed from the old cohort and new cohort both demonstrated strong recollection of the videos. New cohort girls were able to recall the episodes more vividly, including characters' names and what had happened during the episode compared to old cohort girls. Old cohort girls could describe the skills they had acquired in the girls' clubs, such as baking, sewing or knitting, more clearly. We found that both old cohort girls and new cohort girls were able to demonstrate an increase in self-efficacy, including feeling more confident in class and communicating their needs to their parents. With some old cohort girls, we find a greater degree of confidence and self-esteem that is attached to them going to JSS and feeling older and more mature.

Regression analysis to understand factors associated with positive change in self-efficacy

In this section, we further explore factors contributing to the **change or improvement** in self-efficacy between baseline and endline. To do this, we run a multiple regression analysis with the **change in self-efficacy between baseline and endline** as the dependent variable.[49] We examine how a range of factors are contributing to this change in self-efficacy, including girl and household characteristics, school and location-related factors, and factors related to the DP-2 intervention.[50] The main focus of the analysis is on identifying whether factors related to the DP-2 intervention are associated with changes in self-efficacy and our discussion in this section focuses on these indicators.

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

- girl attended remedial classes at midline,
- girl attended a girls' club at midline,
- girl had watched MBW content at midline,

[49] The change in self-efficacy is calculated by subtracting the girl's baseline score from her endline score. Regression analyses are run for girls in treatment schools.
[50] Baseline and midline covariates are used in the regression model as lagged variables.

- girl watched a video during regular classes during the last term at midline.

In Ghana only, we also differentiate between types of schools that have had different levels of exposure to the DP-2 intervention. We compare the change in self-efficacy across schools that have been exposed to the ALP component and schools that have been exposed to both the ALP component and the MBW component to schools that have been exposed to neither of these components. We also compare the change in self-efficacy in schools that have received support from DP-2's partner, CAMFED, to schools that have not received this support.

Figure 21, Figure 22, and Figure 23 present the main factors associated with the change in self-efficacy between baseline and endline for Ghana, Kenya and Nigeria respectively. The graphs show point estimates (the dots) and 90% 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 change in self-efficacy (at the 10% level). **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 self-efficacy score**, and *vice versa*.[51] Full regression models are presented in Annex 3.

In general, there are few factors that are associated with the change in self-efficacy. Looking at individual and household characteristics, across all three countries, girls who at baseline perceived that they had no support from their parents to continue their schooling had larger improvements in self-efficacy by endline. In the qualitative research, we find that one of the ways in which girls define improvements in self-efficacy for themselves is in an increased ability to discuss their educational goals with their parents. Girls who felt that they lacked support from their parents at baseline may have improved particularly in this aspect.

Looking at school-level factors, girls in schools with higher proportions of qualified teachers have improved more in their self-efficacy, though this is not observed in Ghana. In the qualitative research, we find that one of the ways in which girls define improvements in self-efficacy for themselves is in an increased confidence to participate in class. This may indicate that increased levels of confidence would be supported by a conducive classroom environment where teachers encourage participation and use child-friendly teaching methods.

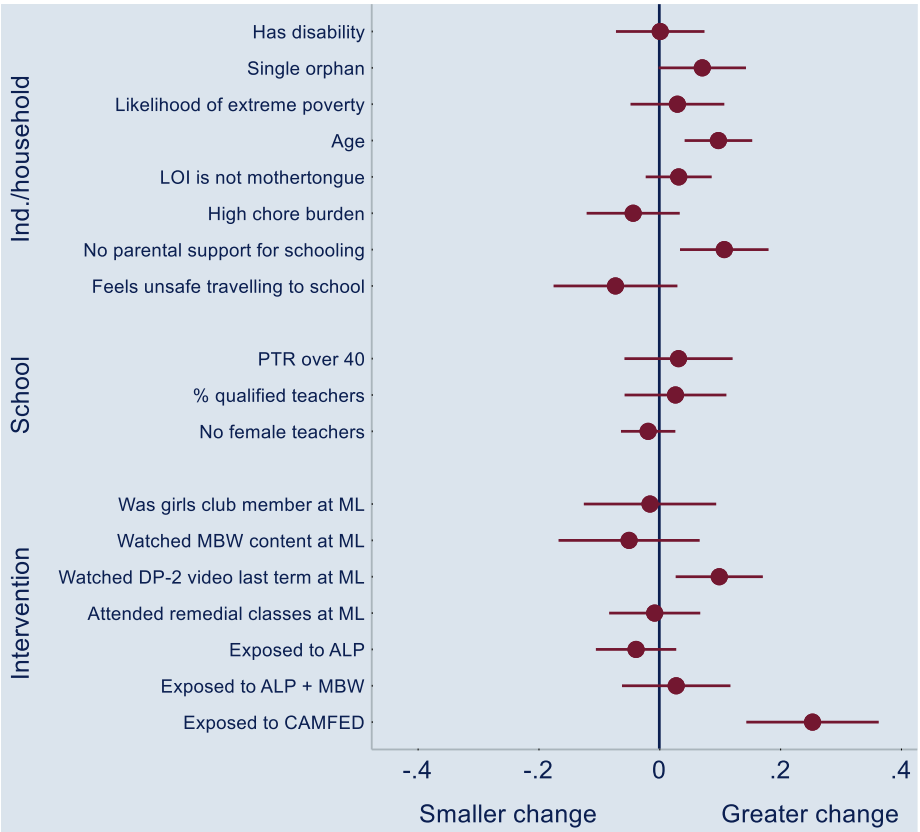
In Ghana, we find an association between attending a school supported by DP-2's partner, CAMFED, and a greater improvement in self-efficacy. CAMFED trains Learner Guides to deliver life skills content and to support the delivery of the MBW content in primary schools. In JHS, Learner Guides support study groups. These activities may have reinforced improvements in self-efficacy. Having watched a video during regular classes at midline is also associated with greater improvements in self-efficacy. The qualitative findings do not point to a link between the media centre and self-efficacy and it is therefore not clear what supports this link. It should be noted that exposure to MBW content was limited at midline (i.e. even girls who had watched MBW videos would have only watched a few videos), so any links between watching MBW content and changes in self-efficacy may have not yet been established. Finally, the change in self-efficacy is similar across different types of schools in Ghana, that is across schools that have the ALP and MBW components and those that do not have these components.

Factors related to the DP-2 intervention are not associated with changes in self-efficacy in Kenya and Nigeria. This is in line with the overall quantitative impact analysis, which does not find evidence that DP-2 has had an impact on self-efficacy in Kenya and Nigeria. It is important to note that the regression analysis can only explore factors related to the construct of self-efficacy as it is measured in the quantitative research and, as is the case

[51] The graphs show the standardised difference in the change in self-efficacy that would result from a one standard deviation difference in the factor. Coefficients have been standardised so they can be more easily compared against each other.

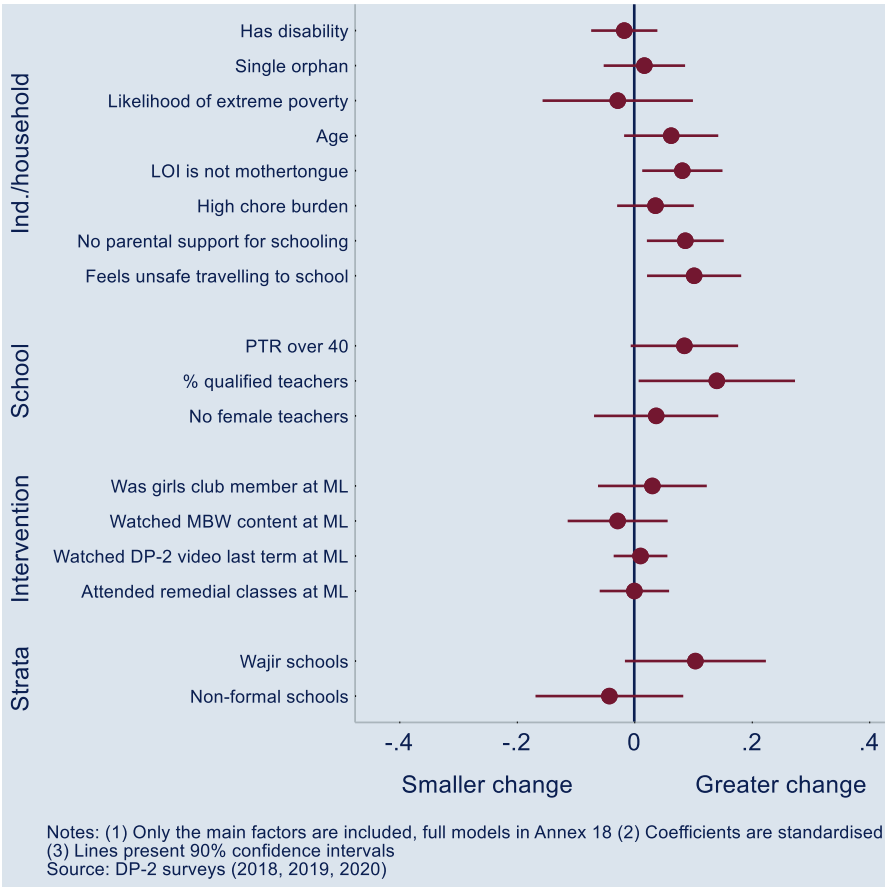
with the remainder of the quantitative analysis on self-efficacy, this analysis may therefore not capture other aspects of self-efficacy such as those that girls identify themselves in the qualitative research.

Figure 21: Main factors associated with change in self-efficacy (Ghana)



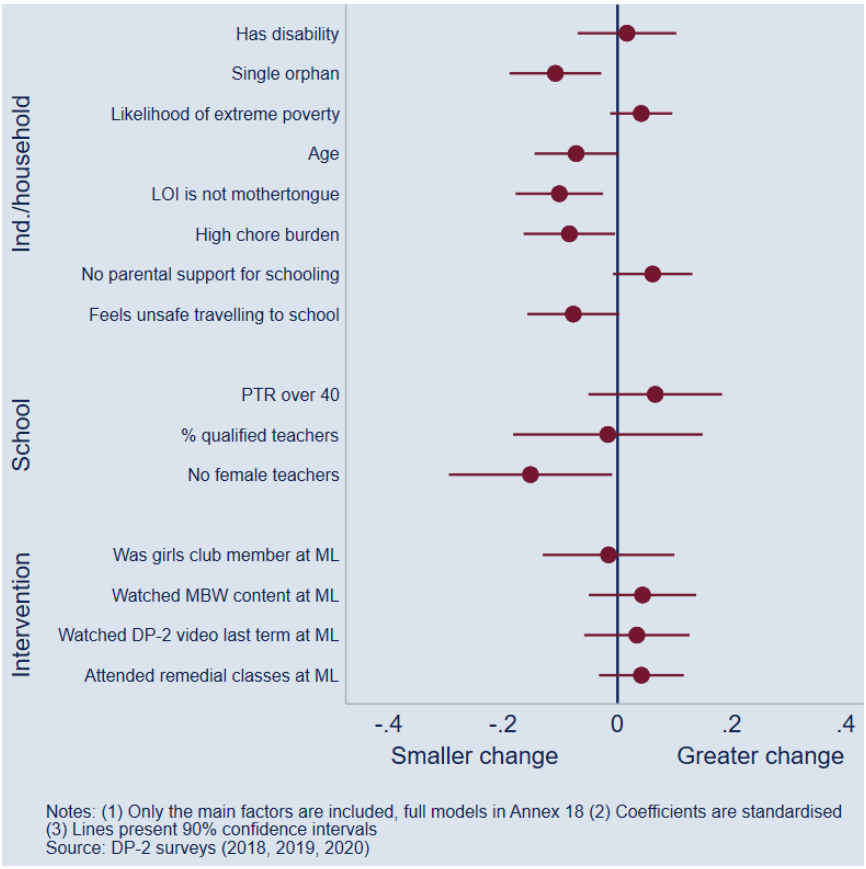
Notes: (1) Only the main factors are included, full models in Annex 3 (2) Coefficients are standardised
(3) Lines present 90% confidence intervals
Source: DP-2 surveys (2018, 2019, 2020)

Figure 22: Main factors associated with change in self-efficacy (Kenya)



Notes: (1) Only the main factors are included, full models in Annex 18 (2) Coefficients are standardised
(3) Lines present 90% confidence intervals
Source: DP-2 surveys (2018, 2019, 2020)

Figure 23: Main factors associated with change in self-efficacy (Nigeria)



Notes: (1) Only the main factors are included, full models in Annex 18 (2) Coefficients are standardised
(3) Lines present 90% confidence intervals
Source: DP-2 surveys (2018, 2019, 2020)

3.2.4 Implementation of the girls' club and MBW component

This section describes the implementation of the girls' clubs in Phase 1 primary schools. We report on DP-2 monitoring data, as well as on findings from the quantitative and qualitative research across the three rounds of the evaluation. Only a subset of DP-2 schools implements the MBW content in their girls' clubs. It was not possible to distinguish these schools from other Phase 1 schools in the monitoring data. The monitoring data therefore captures data from all monitoring visits that have been conducted for all Phase 1 schools.

All schools in the qualitative sample had a functioning girls' club at endline and club mentors reported regular meetings where watching MBW was the primary engagement, followed by income-generating activities, such as making bread, soap, or beaded jewellery before schools closed.

Membership and frequency of girls' club meetings

Figure 24 shows the average number of girls' club members per school based on DP-2 monitoring data.

Figure 24: Average number of girls' club members per school

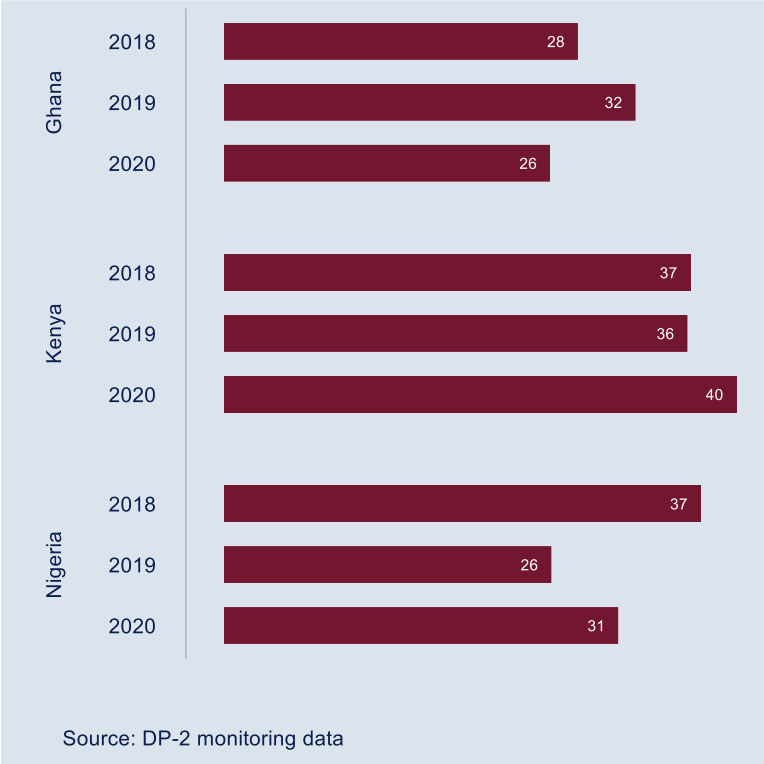
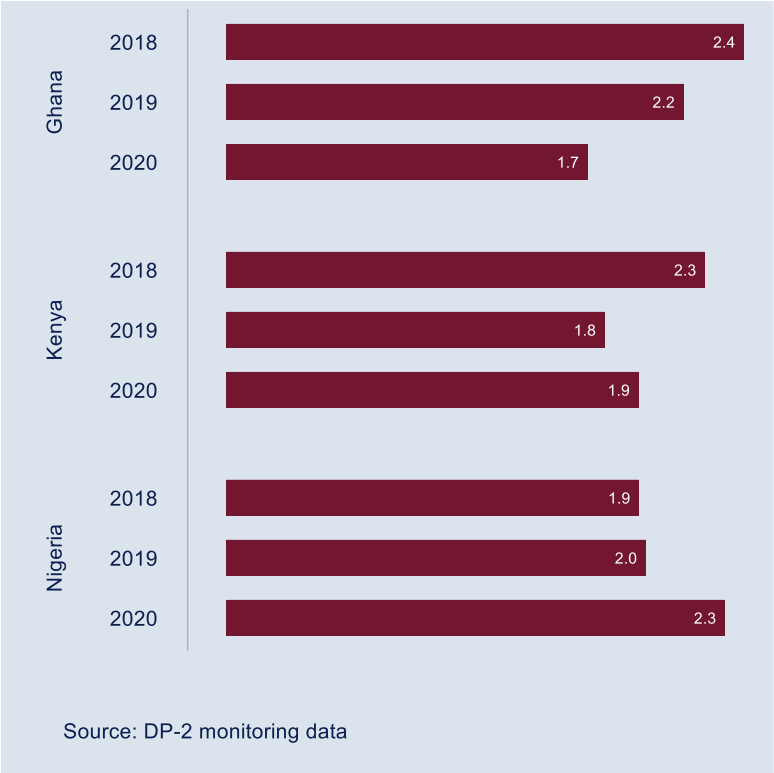


Figure 25 shows the average number of times the girls' club met in the past month. The project encourages clubs to meet at least once a week. However, **monitoring data suggests that girls' clubs are meeting on average less than once a week (i.e. less than four times a month)**. At the start of the project, girls' clubs met more frequently in Ghana and Kenya compared to Nigeria, but this trend reversed during the last year of implementation.

Figure 25: Average number of times the girls' club met in the past month[52]



Girls' clubs were reported to meet four times or more in the past month in only 15% of monitoring visits. In contrast to the monitoring data, evaluation data collected at midline suggested that most clubs in the treatment schools were meeting more frequently. Approximately 90% of all cohort girls who were girls' club members interviewed at midline indicated that the girls' club met once a week, and approximately a third of girls in Kenya and Ghana, and two thirds of girls in Nigeria reported that they met several times a week. It is not clear what may be driving the difference between the two sources of data.

The findings from our qualitative analysis explore how girls' clubs select members and arrange meetings across the six schools sampled for the qualitative research in each country. The analysis indicates that in Ghana, clubs convened four times every month. In two schools, clubs occasionally met more often. Club sizes ranged from 20 to 40 girls and meetings took place either before or after school, but some clubs also reported meeting at weekends. Membership was open to all and voluntary.

In Kenya, clubs met once a week and if there were challenges, such as non-availability of rooms or a busy schedule, they met once every fortnight. Only one club met twice a week. In schools where there were a lot of girls in the clubs, the girls were divided into groups on the basis of a combination of two classes, and each group met once a week. Enrolment in clubs was voluntary but permission from parents to attend was necessary. Some club mentors performed outreach activities themselves by going to different classes and sharing their club's past activities and asking the girls to ask permission from their parents to participate. Other clubs relied on girls that were already members of the club to share information about club activities with other girls. Across the six schools, mostly girls from Primary 5, 6, and 7 and a few girls from Primary 4 and 8 were allowed to participate in the club.

In Nigeria, the frequency of contact varied across schools, but every school met at least twice a week. Activities are held after school and occasionally during free periods or break

[52] DP-2 MIS data reported here is based on the question "How many times has the club met in the past month"? DP-2 monitors were asked to refer to the last month that "the school was in session". However, there are indications that this may not have been applied consistently and thus Figure 25 may present an underestimate of the true number of monthly meetings.

times. Girls clubs had about 30–40 girls, who were selected from Primary 5 and 6. Selection into clubs was variable. In some schools, girls were selected randomly through a lucky draw; in other schools, girls who were vulnerable or have special needs were purposively selected, whereas two schools continued to select girls who were performing well or already knew how to sew or make bread so that they could contribute positively to club activities.

Implementation of MBW content in the girls' clubs

Figure 26 shows the proportion of girls' clubs that have watched MBW videos during their meetings as reported in the DP-2 monitoring data. The MBW content was implemented from early 2019. By the end of the 2019 school year, the majority of clubs in all three countries had watched MBW videos, approximately 90% in Kenya and Nigeria, and 83% in Ghana. By 2020, the proportion of clubs who had watched MBW videos had increased to 88% in Ghana and 100% in Nigeria, but stayed the same in Kenya. Findings from the qualitative research at endline also show that girls have watched the MBW videos. Girls reported watching MBW videos and recalled the names of characters and the lessons learnt.

Figure 26: Proportion of girls' clubs that have watched MBW videos

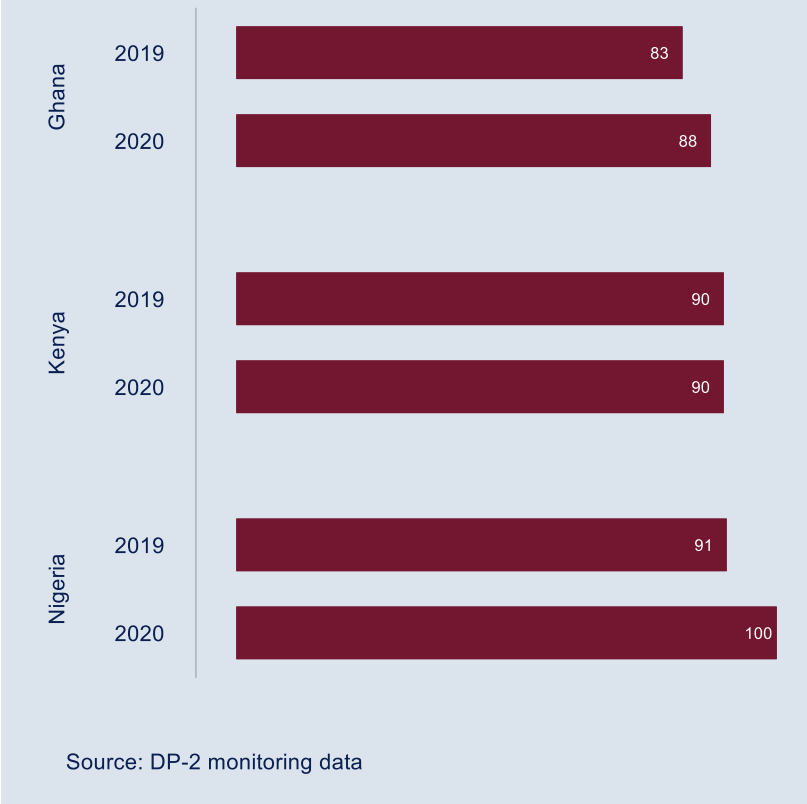
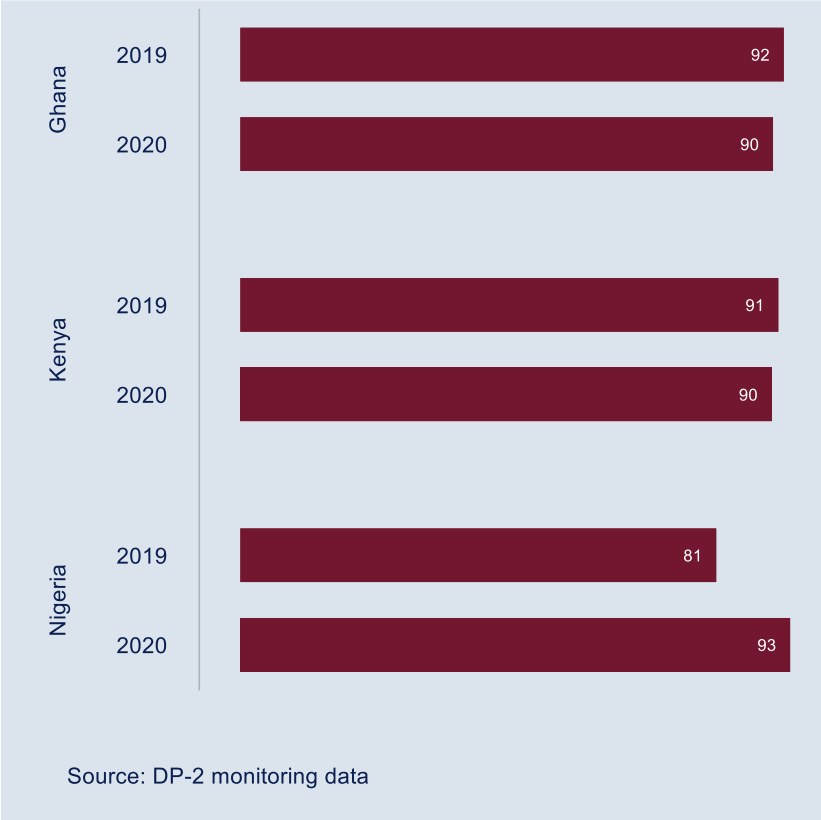


Figure 27 shows the proportion of girls' club mentors who reported changes in behaviour as a result of girls having watched MBW videos. At least 80% of club mentors reported such changes in 2019. By 2020, no less than 90% of mentors reported observing such changes in all countries. The monitoring checklist does not specify what types of behaviour change mentors should be looking for. Qualitative interviews with club mentors say that they have noticed a change in girls' ability to speak up with confidence, discuss their challenges openly, and work hard, and that this makes them feel a sense of pride for the girls.

Fewer mentors reported that their clubs had taken action after having watched MBW videos (see Figure 28). While over 70% of club mentors reported taking action in Ghana and Kenya during 2019 and 2020, no more than half the mentors in Nigeria reported taking action over the two years, with only 37% of mentors reporting taking action in 2020. The monitoring data does not specify what types of actions club mentors are expected to take. Qualitative endline

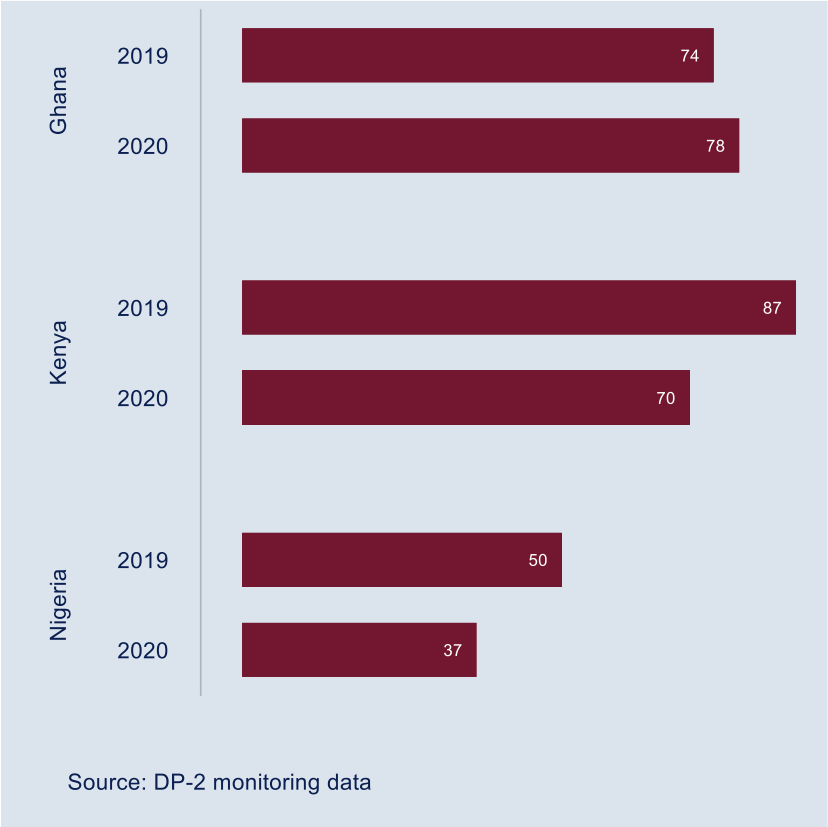
findings show that club mentors reported having encouraging discussions after the video, where girls' club members reflected on what they had learnt from the video, asked questions, and shared experiences with one another. In Kenya and Nigeria, club mentors felt that girls had shown interest in the MBW videos and participated eagerly in the discussions.

Figure 27: Proportion of girls' club mentors who reported changes in behaviour as a result of girls having watched MBW videos



Source: DP-2 monitoring data

Figure 28: Proportion of girls' club mentors that report taking action after having watched MBW videos



There is strong evidence that a beneficial aspect of MBW is that girls have a safe space in the club to discuss what they think of the videos. This act of reflection not only helps girls internalise the message in the videos, but also inculcates a sense of confidence to voice their opinions at home, in school, and among their peers. The messages learnt in the club are shared at home, which may explain why parents were more aware of the club at endline.

> *Like when we are back from school, when I eat and have completed our house chores, everyone wants me to tell them a story from MBW. I will ask them to be seated then we will each take turn to tell stories and people will clap and appreciate me*.
>
> **Interview with old cohort girl, Nigeria**

MBW TV broadcast in Kenya

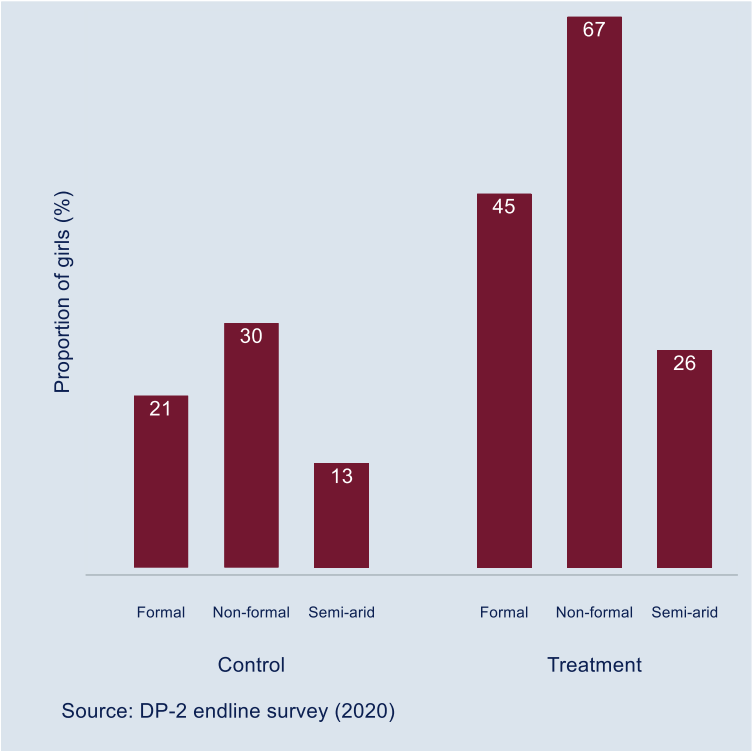
In Kenya, DP-2 launched a TV broadcast of the MBW animated series through Citizen TV. The MBW broadcast started in October 2019 and was broadcast every Saturday morning. The average viewership for the first 10 weeks was 1.7 million, and the show was the most viewed show during the timeslot (DP-2 quarterly progress report, quarter 11). As an adaptation to COVID-19, the MBW broadcast also started airing during the week as a resource for children who were now at home during school hours.[53]

Figure 29 shows the proportion of girls who have watched the MBW broadcast on TV. Girls in treatment schools are more likely to have watched the broadcast, possibly because they have heard about the broadcast from sensitisation activities conducted by the DP-2 team. In

[53] It was also adapted for radio broadcasts which began airing in Somali in Wajir in June 2020. The survey questionnaire however focused on the TV broadcast.

treatment schools, about two thirds of girls in non-formal schools had seen the broadcast, compared to 45% of girls in formal schools in Nairobi and the surrounding areas, and only a quarter of girls in the semi-arid/arid regions. The low proportion of girls in the semi-arid/arid regions who have seen the project on TV is likely to be linked to TV ownership: only 32% of households in those regions own a TV, compared to 60% of households of girls attending non-formal schools, and 64% of households of girls attending formal schools in the other counties (see Section 3.1.3). Of the girls who had watched the MBW broadcast on TV, 23% reported that they had watched the show with their parents.

Figure 29: Proportion of girls who have watched MBW TV broadcast by sampling strata



3.2.5 Changes in self-efficacy due to COVID-19

In Ghana, Kenya, and Nigeria, our analysis does not detect an impact on self-efficacy in the midline to endline period. However, self-efficacy levels are trending upward in all three countries. The observed lack of impact is explained by comparable or larger increases in self-efficacy levels across control schools in each country.

The social restrictions as a result of COVID-19 and the time that girls spend out of school have possibly had a negative effect on their self-efficacy. We find several positive examples of engagements with peers and teachers in the school and during play promote self-efficacy. Over the last three years, we have recorded several examples of friendship, peer networks, and learning, enabled by DP-2 activities, acting as important reinforcers of self-esteem. DP-2 girls that have benefited particularly from positive social interactions with peers and teachers are likely to miss these activities.

Nelis and Bukowski (2019) speak of the crucial role peer relationships play in an early adolescent's development of self-esteem:

> *[Peer relationships] are protective against risk for several problems, including victimization, non-optimal family experiences, and internalizing problems (Bagwell and Bukowski, 2018; Rubin, Bukowski, and Bowker, 2015). As children age, their social lives are characterized by increasingly spending time with peers (Collins and*

> *Laursen, 2004). Theories as the need-to-belong theory (Baumeister and Leary, 1995) and attachment theories point to the importance of close relationships as humans have the desire to form social connections, which are seen as necessary for survival. Close relationships are also fundamental to understand affect regulation (Mikulincer and Shaver, 2005). Unsatisfied relationships can create unpleasant feelings such as loneliness (Cacioppo et al., 2015) and positive close relationship can be a source of positive emotions (Ramsey and Gentzler, 2015).* (Nelis and Bukowski, 2019)

Parents in Kenya and, in certain cases, Ghana have arranged for tuition for their daughters so that they can continue learning even while schools are closed. Most of the girls interviewed in Kenya (cohort girls and girls who attend clubs) planned to attain their goals by studying independently, with support, if needed, from parents, teachers, and siblings.

> *Respondent: I'd like to see myself by the end of this year with very good manners… Because I will go back to school… I want to have the highest marks in class seven*
>
> *Interviewer: You want to have the highest marks?*
>
> *Respondent: Yes*
>
> *Interviewer: And how do you think you are going to achieve these goals?*
>
> *Respondent: By working very hard in my class.*
>
> **Interview with old cohort girl, Kiambu, Kenya**

However, in Ghana specifically, we note that several girls reported feeling sad about not being able to study in school regularly, and asked interviewers if they knew when the schools were going to reopen. Parents and girls were concerned that they would lose out on the progress they had made with their studies now that they were at home. Some girls found it hard to concentrate on their studies at home.

> *I was not doing better in English; I was just about improving when they closed down schools, and COVID has really drawn me backwards.*
>
> **Interview with old cohort girl, Sagnarigu, Ghana**

3.2.6 Conclusion

Interpreting the evidence produced by this evaluation against self-efficacy, and in particular at endline, should take into account two factors: the specific context in which the endline evaluation was conducted; and differences in the aspects of self-efficacy measured by the quantitative and qualitative components of the evaluation. With regards to the context, there are two key considerations. The first relates to the fact that the majority of cohort girls in Ghana and Nigeria had transitioned to junior secondary school by the time of our endline evaluation, meaning that they had not been exposed to some interventions related to self-efficacy (in particular, girls' clubs and MBW content) for some time. The second relates to the COVID-19 pandemic, and acknowledging that our respondents had not been in school for several months, and hence not exposed to DP-2 interventions. In addition, it is reasonable to assume that many girls in our sample had been exposed to a range of additional hardships as a result of the pandemic, including extra anxiety and stress, which may have affected their self-efficacy. With regards to differences between quantitative and qualitative measurement of self-efficacy, it is important to bear in mind that the quantitative measure is based on the GSE psychometric scale; this records responses against a fixed set of statements that can be summarised as relating to whether a respondent feels that they can accomplish their goals or overcome the problems that they are faced with. On the other hand, the very nature of qualitative research allows a broader exploration of self-efficacy as perceived by girls themselves and may uncover aspects of self-efficacy that have improved that are not captured by the GSE psychometric scale.

Overall, the quantitative findings suggest that DP-2 has had a positive impact on the self-efficacy of girls in Ghana over the course of its implementation, but that this impact was primarily generated in the first year of implementation, when the majority of girls in our evaluation sample were directly involved in girls' clubs. In addition, results from regression analysis find that attending a school that is supported by DP-2's partner, CAMFED, is associated with a greater positive change in self-efficacy between baseline and endline. CAMFED offers additional support to DP-2 supported schools by training Learner Guides to deliver life skills content and to support the delivery of the MBW content in primary schools, and to lead study groups in JHS.

The quantitative results indicate that, in Ghana, DP-2 was not able to generate further impact once girls transitioned to junior secondary schools and stopped attending the girls' clubs, and the impact that DP-2 had when girls were directly exposed to the girls' clubs had started to wear off by endline. In Kenya and in Nigeria, we did not detect an impact of DP-2 on girls' self-efficacy at any point in the evaluation. These findings remain similar when we restrict our analysis to girls' club members only. As noted above, the effect of the pandemic may have affected girls' self-efficacy[54], and it is therefore possible that this contributed to the dilution of programme impact in Ghana and to the lack of impact observed in Nigeria and Kenya.

The findings from the quantitative evaluation show that levels of self-efficacy have increased between midline and endline in Kenya and Nigeria, though not at a statistically greater level than for girls in control schools and so these increases cannot be attributed to DP-2. **At endline, findings from the qualitative research point towards levels of self-efficacy increasing in all three countries.** While our quantitative analysis of self-efficacy measures the construct in its broadest sense, the qualitative analysis is able to examine in more detail how girls judge their own capabilities in different contexts, and in relation to different tasks, and is likely to be better placed to uncover increases in specific aspects of self-efficacy that are not measured in the quantitative survey.

Qualitative findings have reported a steady increase in self-efficacy from baseline to endline. Between midline and endline, qualitative findings indicate a strong link between participating in the girls' club and watching MBW videos to an increase in self-efficacy. This finding is based on girls' perceptions of increased confidence, examples of being able to negotiate for themselves and communicate their goals and desires clearly and effectively with the research team, as well as with their parents and teachers, and setting short and long-term goals for themselves. In addition, girls across all three countries are able to articulate how they find the MBW content relatable to their own experience, and how this relatability has supported them to understand new ideas or encourage them to explore their own biases about gender further. These views were corroborated by parent, club mentor, and teacher interviews at endline, which increase our confidence in the findings.

Other factors that may have influenced this perception of improving self-efficacy include girls growing older and being tasked with greater responsibility at home. Parents' reactions to their child's achievement – their praise, motivation, and validation – were reported by girls as a crucial contribution to their sense of pride and self-esteem. Girls say that when they received kind words from parents, friends, and relatives, they felt loved and cared for, such as when parents had bought gifts for them during festive periods or provided a change of uniform or school supplies.

The findings from the quantitative and qualitative research are inconsistent. This is the case particularly in Kenya where girls across the quantitative and qualitative samples have

[54] For example, a study on Spanish university students found significant negative correlations between stressful events – focussing on the pandemic – and perceptions of academic self-efficacy. See Alemany-Arrebola et. al. (2020) *"Influence of COVID-19 on the perception of academic self-efficacy, state anxiety, and trait anxiety in college students"* Frontiers in Psychology, Vol 11, 2020.

participated in girls' clubs and engaged with MBW content between midline and endline, although girls had not participated in girls' clubs for several months due to the school closures at the time of data collection. In Ghana and Nigeria, the findings are also surprising, but likely explained to some extent by different levels of exposure to the MBW content, as the majority or our evaluation cohort transitioned to junior secondary school.

Constraints in the endline evaluation mean that we are limited in our ability to explain the discrepancy between the quantitative and qualitative findings on girls' self-efficacy. One possibility is that self-efficacy is highly context-dependent, and while girls recall how girls' clubs and MBW have positively influenced their life in the past, this might not be reflected in quantitative measures of self-efficacy at the present time, when COVID-19 has substantially changed many girls' circumstances. Another explanation is that qualitative research, while offering greater depth of analysis and understanding on specific issues related to self-efficacy, is by design not intended to provide statistically representative results of all schools supported by DP-2. The evaluation purposively sampled (and tracked over time) schools that were identified by DP-2 as representative of a 'high-performing' school and as such the findings on self-efficacy generated by the evaluation may represent the experience of girls where the MBW component has been implemented as intended. Finally, it is relevant to note that the MBW broadcast in Kenya has introduced some level of contamination, although this is likely to be small. Only about a fifth of girls in control schools had seen MBW videos on TV, and they are not exposed to the additional benefits of discussing these videos in a girls' club.

Nonetheless, the evidence suggests that when girls' clubs are functioning, and when girls have watched MBW content and discussed this with their mentors and peers, there appears to be a link between girls' clubs, MBW content, and improvements in self-efficacy. These improvements are shown in girls being more active in the classroom, being more aware of their environment, being more assertive with their parents, and building stronger relationships with their siblings and friends.

4 Transition

A successful transition is one of the outcomes of DP-2. The project aims to increase the rate at which cohort girls successfully progress to the next grade, move into junior secondary school, or move into other forms of training or employment after successfully completing primary school. The project focuses on improvements in transition through TPD and educational media, girls' clubs, remedial classes, and the CAP process.

In this chapter, 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 relating to the impact DP-2 has had on girls' transition between midline and endline, and compare these against the targets that were set at midline. Next, we present the different transition pathways that girls have taken at endline to understand the types of transition that are most common across each of the three countries. We then examine which factors may contribute to a successful transition or pose a barrier to it. Lastly, we highlight the changes in perception related to transition due to COVID-19, and the challenges resulting from it.

4.1 Definition of transition

When considering transition in this evaluation, it is important to note that GEC-T uses a distinctive definition of transition (see Box 4), which incorporates, among other aspects, both progression between primary grades as well as transition between primary and junior secondary school.

Box 4: 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, the 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 24 presents the transition pathways and defines what is considered as a successful or an unsuccessful transition under DP-2. For each country, the rows represent the possible transition pathways between evaluation rounds. We consider that girls have transitioned successfully if they are promoted to the next grade. In most cases, girls will have transitioned to junior secondary school since they were in Primary 6 at midline. This is the case primarily in Nigeria and Ghana, where most girls were expected to make the jump to junior secondary school between midline and endline. Since some girls had dropped out of school at midline, we consider them to have transitioned successfully if they have re-joined formal schooling at endline, regardless of their grade at endline. All other transition pathways – such as repeating a grade,[55] being demoted to an even lower grade, or dropping out of formal education without joining alternative forms of technical education – are considered to be unsuccessful.

[55] It is important to note that the definition of transition under DP-2 has changed since baseline. As outlined in the DP-2 Midline Report, at the baseline stage, grade repetition was considered to be a successful transition. However, it has been regarded as unsuccessful at midline and endline, and the baseline analysis has been updated to reflect that change.

Table 24: 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; and • Student drops out of school due to pregnancy, household employment, marriage, etc.
		Midline to endline	• Student successfully completes primary, passes exams, and enrols in junior secondary school. • Student promoted to next grade level within primary school. • Student re-joins schools after dropping out at midline; and • 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.; and • 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; and • Student drops out of school due to pregnancy, household employment, marriage, etc.
		Midline to endline	• Student promoted to next grade level; and • Student re-joins schools after dropping out at midline.	• Student not promoted but remains in school; and • Student drops out of school due to pregnancy, household employment, marriage, etc.

The quantitative analysis of transition presented in this chapter is based on the baseline cohort that we were able to track at midline and endline:

- **Baseline:** All girls in the transition cohort were in Primary 5 at baseline and were interviewed at their school. Their transition status at baseline was calculated using caregiver-reported information on grade repetition from the household survey.
- **Midline:** The transition cohort at midline was made up of girls who we were able to track at their primary or junior secondary school, girls who were absent at the time of the survey but still enrolled in the sampled school, and girls who were no longer enrolled in the sampled school but whose parents we were able to interview over the phone. Girls' transition status was determined using school records for girls interviewed in school, and caregiver reports for girls interviewed over the phone.
- **Endline:** The transition cohort at endline was made up of girls from the transition cohort at midline whose caregivers we were able to interview over the phone. Their transition status was determined using information reported by the caregiver.

4.2 Impact of DP-2 on transition

Table 25 presents the transition rates in the treatment and control groups over the three rounds of the evaluation – at baseline, midline, and endline. The table also shows the impact estimates from the quantitative analysis, which are estimated using the differences-in-

differences estimation technique.[56] The impact analysis shows whether any changes in transition between can be attributed to DP-2.

We show three estimates of impact. The first column (BL-EL) shows the impact that DP-2 has had over the full duration of the project; the second column (BL-ML) shows the impact that DP-2 has had between baseline and midline; while the third column (ML-EL) shows the impact that DP-2 has had between midline and endline. It is important to note that the ML-EL estimate shows what the project has achieved over and above any impact that was already established at midline. The GEC guidance recommends that at endline the evaluation focuses on reporting the impact that the project has achieved between midline and endline. However, for a full understanding of the impact of the project, it is also important to look at the impact the project has achieved over its complete duration.

The targets represent the expected percentage point improvement in the transition rate over and above the control group. The BL-ML target shows the change expected between baseline and midline, while the ML-EL target shows the change expected between midline and endline. To meet the target, the change in the rate of successful transition in the treatment group would need to be higher than that in the control group by the target percentage points. The BL-EL target is the sum of the BL-ML target and the ML-EL target.

We discuss the results separately for each country. We begin by describing the trends in transition that are observed over the duration of the project, and then discuss the impact that DP-2 has had on transition.

Table 25: Impact of DP-2 on transition

Baseline		Midline		Endline		DID			Target		
Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL	BL-EL target^	BL-ML target	ML-EL target
Ghana											
89.9	90.0	94.9	98.0	89.3	91.9	-2.5	-3.0	0.5	1	1	0
Kenya											
88.3	88.3	97.0	95.4	95.9	95.0	1.0	1.6	-0.6	1	1	0
Nigeria											
94.2	94.2	96.8	90.1	78.3	73.4	4.9	6.8*	-1.8	2	1	1

Source: DP-2 household and girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1 ^ The BL-EL target is the sum of the BL-ML target and the ML-EL target. Green shows that the logframe target has been met, orange shows that the target has not been met. Care should be taken in the interpretation of the targets given the specific circumstances during which self-efficacy was measured for the endline evaluation.

Ghana

At endline, 89% of girls in the treatment group and 92% of girls in the control group had transitioned successfully. These rates are lower than the rates of a successful transition at midline. This is to be expected because most girls at endline were making the transition from primary school to JHS. As noted above, there are additional challenges at this point of transition compared to the progression within primary school. Despite these challenges, the rate of successful transition at endline in Ghana remains high.

In Ghana, we were unable to detect any impact of DP-2 on transition, across any of the time points. However, the high rates of transition limit the extent to which DP-2 could reasonably be expected to generate any impact. Recognising this, the target for the project

[56] Further information on the impact estimation is provided in Annex 1.

had been to maintain the transition rate between midline and endline relative to the control group, and the project has achieved this.

Kenya

Findings in Kenya are similar to those in Ghana. **At endline, 96% of girls in the treatment group and 95% of girls in the control group had transitioned successfully.** These rates are very similar to the transition rates at midline and are extremely high.

In Kenya, we were unable to detect any impact of DP-2 on transition, across any of the time points. Like Ghana, given the very high transition rates, the target for the project was to maintain the transition rate relative to the control group. While the impact estimate between midline and endline is slightly and not statistically significantly negative, the project can be considered to have met its target when looking over the full duration of the project.

Nigeria

In Nigeria, 78% of girls in the treatment group and 73% of girls in the control group had transitioned successfully at endline. These rates of successful transition are substantially lower than at midline, where 97% of treatment girls and 90% of control girls had transitioned successfully. Barriers to transition to junior secondary school remain high in Nigeria, and it was therefore expected that we would see substantially lower rates of successful transition at the time point when most girls are expected to be making the transition from primary school to junior secondary school.

DP-2 has had a statistically significant impact on transition between baseline and midline.[57] Between midline and endline, the project had largely sustained the impact from baseline, but had not shown any further impact on transition. This is indicated by the impact estimate between midline and endline being close to zero and not statistically significant. Over the full duration of the project, i.e. on the full baseline to endline period, there has been a five-percentage-point improvement in the transition rate in the treatment group over and above the control group. This result is not statistically significant. However, it is likely that with a larger sample size, and thus greater power to detect impact, we would have found this result to be statistically significant. That is, with a larger sample size it is likely that we would have found that a positive change in transition directly attributable to DP-2 over the full duration of the project, and not just in the baseline to midline period.[58]

These findings suggest that DP-2 has indeed had a positive impact on the transition of girls over the course of its implementation, but that this impact was primarily generated in the first year of implementation, when the majority of girls in the evaluation sample were transitioning through primary school. The results indicate that DP-2 was not able to generate further impact at the point when the majority of girls were seeking to make the transition to secondary school. Nonetheless, sustaining the impact observed in the baseline to midline period is a significant achievement given that the transition between primary level and JSS level is accompanied by additional barriers to transition, which DP-2 has not been able to fully overcome. This interpretation is supported by findings from the qualitative research presented below which provide strong links of the remedial lessons to improved learning and hence lower repetition rates, but also point to

[57] In the DP-2 Midline Report, the impact estimate of DP-2 on transition did not reach statistical significance at the 10% level. The impact estimate was, however, positive and the logframe target was successfully met. We noted in the report that our sample may have been underpowered to detect a statistically significant effect. At endline, because of attrition from the sample between midline and endline, our analysis is conducted on a slightly different sample. When we repeat the impact analysis at this point, the impact between baseline and midline does reach statistical significance at the 10% level.

[58] This is based on sample power calculations that we made in the design phase of the endline evaluation. Our design note indicated that the estimated minimum detectable effect for transition in Nigeria was in the range of five to seven percentage points. As such, our finding here of a baseline to endline impact on transition of five percentage points is on the borderline of what the sample, given its size, is able to detect.

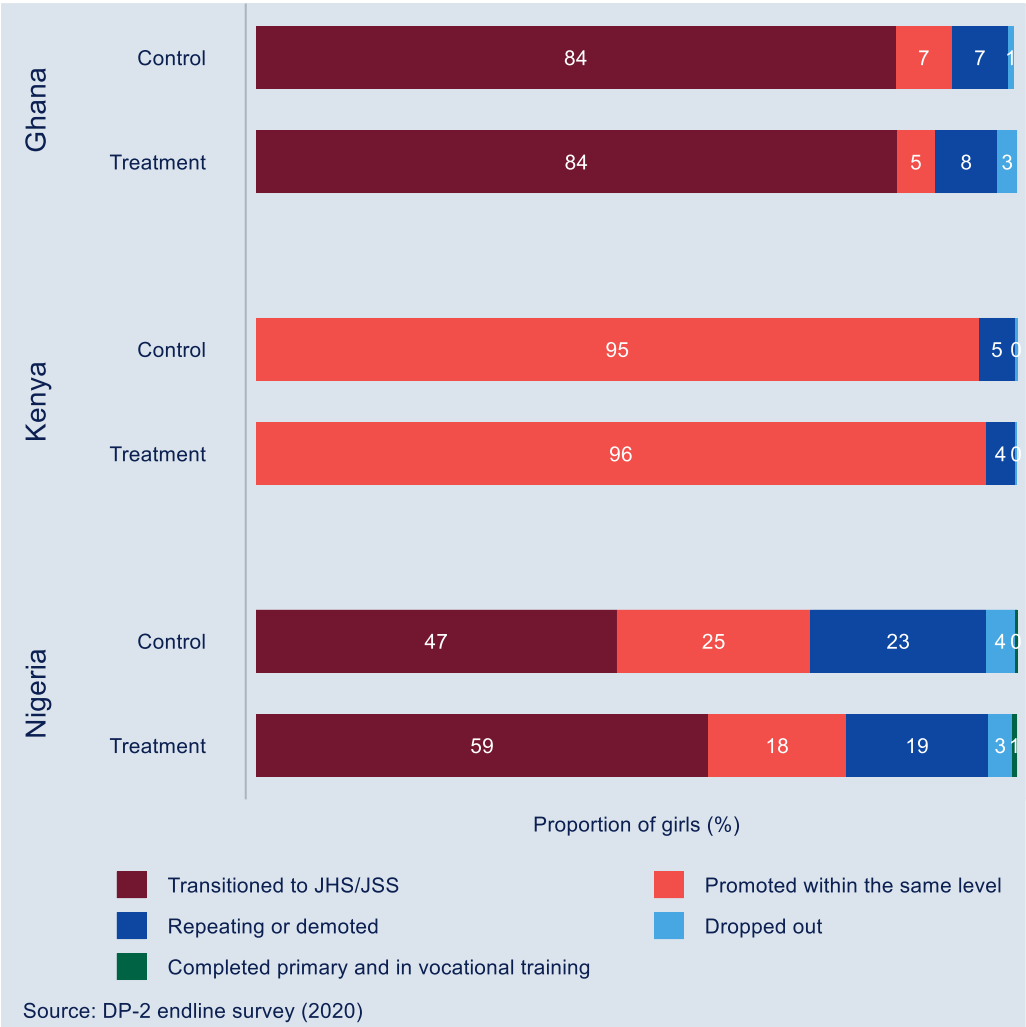
barriers to transition to JSS including financial barriers and persistent social norms around early marriage.

In terms of the logframe targets, while there were no improvements in the transition rate relative to the control group between midline and endline, over the full duration of the project, DP-2 has achieved a five-percentage-point improvement in transition relative to the control group. The logframe target effectively represents a cumulative target of two percentage points over the course of the project. We therefore consider that the logframe target has been met.

4.3 Transition pathways at endline

To understand the differences in rates of successful transition across the three countries, we present the pathways of transition that girls have taken since midline in this section. Figure 30 below depicts the percentage of girls transitioning through the key pathways outlined in Table 24 above.

Figure 30: Transition pathways at endline in the control and treatment group



Source: DP-2 endline survey (2020)

Ghana

In Ghana, 84% of girls in the treatment group made the jump from primary school to junior secondary school between midline and endline, while 5% of girls were promoted within the same level of education (either within primary school or within JHS). A small percentage of girls had already made the transition to junior secondary school at midline, having skipped

Primary 6. Therefore, over the course of the project, overall, 88% of girls in treatment schools made the transition to junior secondary school.

In addition, 8% of girls in treatment schools were either repeating their grade from the previous year, or, in a small number of cases, were demoted to a lower grade.[59] At endline, 2.5% of treatment girls had dropped out of school: this is divided into 1% of girls who had completed primary school but were currently not in any form of vocational training, and 1.5% of girls who had dropped out of school without completing primary school.

Kenya

In Kenya, 96% of girls in the treatment group were promoted to the next grade between midline and endline. Only 4% of girls were repeating their grade or, in a small number of cases, had been demoted at endline,[60] while 0.3% had dropped out of school. There was no difference between the treatment and control group in the proportion of girls who did not progress to the next grade.

Nigeria

In Nigeria, there is more variation in the way girls have successfully transitioned. Overall, 78% of girls in the treatment group had successfully transitioned in the midline to endline period via any of the routes discussed in Table 24, compared to 73% of girls in the control group. Successful transition is broken down as follows:

- 59% of treatment girls have successfully transitioned to JSS between midline and endline, compared to 47% of control girls.
- 18% of treatment girls have successfully transitioned within the same level (i.e. either transitioning between grades in primary school in transitioning between grades in JSS) between midline and endline, compared to 25% of control girls.
- Less than 1% of both treatment and control girls have successfully transitioned by completing primary school and moving into vocational training between midline and endline.
- The remaining 22% of treatment girls and 27% of control girls did not successfully transition between midline and endline, in each case primarily because they were repeating a grade, with a small proportion of girls dropping out completely.

Significantly more girls in the treatment group compared to the control group transitioned to JSS in the midline to endline period, i.e. the proportion of girls successfully transitioning via this route between midline and endline was 12 percentage points higher in the treatment group than the control group. However, the difference between treatment and control groups in the proportion of girls who were at JSS at endline is not as large. In fact, 78% of treatment girls and 73% of control girls were in any grade of JSS at endline, representing a difference of five percentage points.

This discrepancy can be explained by a higher proportion of girls in the control group transitioning to JSS early relative to girls in the treatment group. Given that all cohort girls were sampled from Primary 5 at baseline, we would have expected no girls to have transitioned to JSS at midline. However, at midline 16% of control girls had already transitioned to JSS, compared to just 11% of treatment girls.

Based on the very low learning levels observed in Nigeria at midline, almost no girls have the requisite knowledge to transition to JSS after the end of Primary 5. Therefore, the fact that

[59] 1% of girls were demoted to a lower grade.
[60] 0.3% of girls were demoted to a lower grade.

more treatment girls are completing Primary 6 before transitioning to JSS should be viewed positively as the additional year of schooling in primary school may prepare them better for JSS.

4.4 Enablers of transition

In line with the quantitative findings, girls from the qualitative sample that were followed from baseline have also transitioned to junior secondary school in Nigeria and Ghana, and to Primary 7 in Kenya at endline. Factors that were seen as facilitating these high rates of successful transition – including DP-2 supported remedial classes and the CAP process – are discussed in this section.

4.4.1 Transition and remedial classes

Head teachers and teachers in the qualitative research at endline made few links between remedial lessons and improved transition rates. However, in all three countries, remedial lessons were linked to improved learning outcomes, although to differing degrees. Head teachers and RTs recognise the importance of the remedial lessons in all three countries, provide increased attention to students in remedial classes, and draw strong links between remedial classes and improved grades. In Nigeria, parents also believe remedial classes have played an important role in improving learning outcomes. The midline evaluation also found some quantitative evidence that participating in remedial lessons was associated with improvements in learning, for literacy in Ghana and Kenya, and for both literacy and numeracy in Nigeria.

The impact of DP-2 on transition between baseline and midline in Nigeria was driven by lower grade repetition rates in treatment schools, compared to control schools. Since grade repetition is linked to students' performance in school,[61] the evidence suggests that remedial lessons are likely to have contributed to the impact of DP-2 on transition that was observed at midline. As discussed above, at endline, we observe a smaller difference in grade repetition between treatment and control schools; this is likely to be due to the barriers to transition to JSS that lead to high repetition rates in Primary 6.

In Nigeria, in addition to the remedial lessons, about three schools organised tutorial lessons at the weekend for all Primary 6 students to increase their chances of passing the entry-level examinations for JSS by revising questions from past papers and discussing answering techniques. In one school, the head teacher reported that students were given motivational talks to build their confidence before the exams – the school realised that sometimes students fail to perform because of anxiety and fear and not necessarily because of a lack of ability.

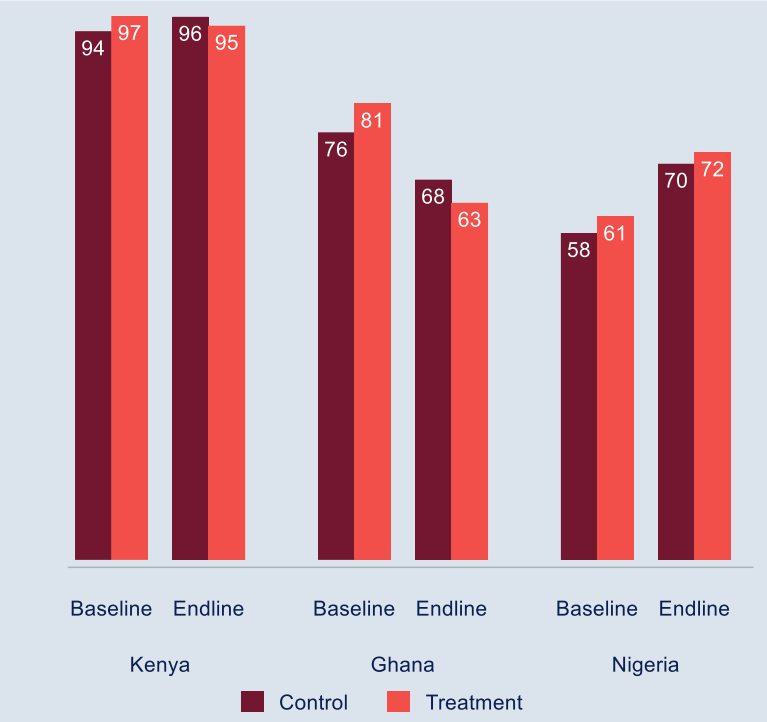
> *The school primary assistance is to see that students pass the exams and advance to secondary school. We also deliver motivational speeches to let the students know that they are special from other students that they will be going to meet in other schools. We admonish them to make sure they pay attention and learn what they need to learn, so that they will come out different from those children that didn't go through remedial classes in their school.*
>
> **Interview with head teacher, Nigeria**

[61] There is a policy of automatic promotion in primary schools in Nigeria, which means that even students with poor marks are promoted to the next grade. However, we would expect those that do repeat grades to be amongst the most poorly performing students.

4.4.2 Parents' aspirations

In line with baseline and midline findings, the endline analysis showed parents had high aspirations for girls to transition to secondary and tertiary education. We also found that community awareness activities conducted by the CAP and other school committees have increased parents' awareness of the importance of schooling. This is discussed in greater detail in Section 6.2. Quantitative findings showed that almost all parents in the three countries aspired for their daughters to complete at least secondary education while a majority of parents wanted girls to complete university as shown in Figure 31. In Kenya, parents' aspirations have remained constant between baseline and endline. In Nigeria, a significantly larger proportion of parents in both the treatment and control groups aspire for their daughters to attend university at endline compared to baseline. In Ghana, the proportion of parents who aspire for their daughters to attend university decreased significantly between baseline and endline in both treatment and control groups. At midline, we reported that the proportion of girls who aspired to complete university had decreased significantly since baseline. The finding on parents' aspirations at endline is aligned with the finding on girls' aspirations. We do not find evidence to suggest that there has been a positive change in aspirations that is attributable to DP-2 in any country.

Figure 31: Proportion of parents who hope their child will complete university



Source: DP-2 endline survey (2020).

In line with the quantitative findings, qualitative findings showed that most parents wanted their daughters to go to university and were willing to support them financially to enable them to be responsible, self-reliant, and independent, and to achieve their goals of becoming professionals. Examples include a parent in Ghana who mentioned how she refused to let her daughter get married and encouraged her to stay in school. Another example comes from Kenya, where a parent stressed that she would sell her assets to see her daughter through school. One parent in Nigeria uses her own schooling experience to encourage her daughter to stay in school, while another would like her daughter to continue her education to support her family in the future.

> *My plan was just to encourage her to be serious with her education, so that she can become a responsible person in future. I envisage her becoming a nurse or a teacher, even a minister for Ghana, so that the country can move forward.*

Interview with parent, Savelugu, Ghana

Someone who is well educated will have a bright future. Maybe she can be a doctor someday and help in finding a cure for this coronavirus, maybe she can be a teacher. So, all in all, education is very important.

Interview with parent, Wajir, Kenya

I use myself as a reference point, I got married when I finished my SSCE [Senior Secondary Certificate of Education]. It's not long after I married their father, after having children for him, he died. That is why I want to give them a good foundation, I don't want them to experience what I experienced.

Interview with parent, Nigeria

Schools in Ghana have also been increasing awareness among parents about the importance of girls' education. Head teachers in Ghana mentioned that transition outcomes have improved as a result of activities that were meant to encourage parents to continue to send their children to school and realise the value of education.

I think it is the way we outline our activities. You know, Fridays are for Jumma prayers so some students may decide to miss classes. They do not like coming to school on market days as well. But now, because of the activities we have put in place, they do not want to miss school at all. They know that on Fridays, boys' and girls' club will be meeting for drama. Even if their class does not have a TV, the next class will have so they are always in school. Because of the dramas we do on school drop-out, they know the impact of dropping out of school. So, now they know the consequences of dropping out of school and the benefits of staying on in school.

Interview with head teacher, Ghana

Further findings on the CAP and community members' efforts in reducing drop-out are discussed in Section 6.2.

4.4.3 Girls' aspirations

In addition, in all countries, cohort girls felt confident in their own abilities to transition and believed that their hard work and performance would help them to transition to higher grades and to build a successful career in the future.

I was performing well in school, that's why I believed I would go to JHS.

Interview with new cohort girl, West Mamprusi, Ghana

I want to finish school and become a businesswoman. I will have lots of goods in my shop, selling and making profit. I need to learn maths and English so that I can run my business successfully, that is why I want to complete school.

Interview with old cohort girl, Nigeria

There is evidence that positive reinforcement from teachers, attendance at girls' clubs, and watching MBW have increased self-efficacy and the resolve to work hard to be successful. This is explored in Section 3.2.

4.5 Barriers to a 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. When examining barriers to transition, we maintain the GEC-T definition and refer to both **progression** and **transition** as **transition**.

The findings on the transition pathways show that when girls are not transitioning successfully, this is usually because they are repeating their grade from the previous year. Across all three countries, levels of drop-out are much lower than levels of grade repetition. Of the 2.5% of girls who dropped out of school in Ghana, over half of the caregivers of these girls reported that the reason for the girl dropping out was that she was not interested in continuing her education. A few CAP participants interviewed for the qualitative research in Ghana believed that sometimes girls in their communities are swayed or negatively influenced by their peers, and in some instances, this leads to teenage pregnancies. In Nigeria, three reasons were given for the drop-out; these were all about equally common. Firstly, some parents were not able to afford school or indicated that the girl needed to financially support the household. Secondly, girls had married, or parents felt that their daughter had completed enough education. Thirdly, some girls were still awaiting admission to secondary school, or had not passed the entrance examination on their first attempt.

The qualitative research at midline identified household economic conditions and poverty, and early marriage and pregnancy as two persistent barriers to transition. The qualitative research at endline continues to support this assessment.

4.5.1 Grade repetition

While grade repetition is an unsuccessful transition pathway in itself, **the literature also indicates that grade repetition is one of the most important predictors of school drop-out**. Therefore, while most cohort girls in the evaluation sample are remaining in school for now, those who are repeating grades will be at higher risk of dropping out in future, and the relatively high percentages of girls who are repeating Primary 6 in Nigeria are at particular risk of not making the transition into JSS.

Poor learning outcomes are likely to be the main reason for girls repeating grades. At baseline and midline, we examined some of the predictors of learning outcomes, and found evidence that poverty and involvement in household chores are associated with poorer learning outcomes. School-level factors also played a role. While findings differed across countries, large class sizes, a lack of qualified teachers, and a lack of female teachers were linked to poorer learning outcomes in at least some contexts.

4.5.2 Household economic conditions and poverty

As discussed in Chapter 2, poverty is the key driver of marginalisation, particularly for households which are considered to be extremely poor. In line with this, at endline, **the lack of finance also emerged as a key hindrance to successful transition, particularly in Ghana and Nigeria. This was linked to the challenges associated with paying school and exam fees on time, in addition to difficulty affording supplies for school**.

In Ghana and Nigeria, the smooth transition of girls was hindered by the difficulties faced by parents in providing supplies for school when they were required. Parents also reported additional expenses that were incurred when their daughters transitioned to junior secondary school. Despite the contribution of Impact(Ed)'s DP-2 partner in Ghana, CAMFED, and other programmes, parents acknowledged that they still struggled to purchase all the necessary

school supplies for their daughters. Parents must make difficult decisions about managing expenses of several family members and often financial shocks, or an illness results in girls having to drop out of school.

> *When she was going to JHS, the only problem was that the headmaster of the JHS requested an amount of money to be paid, that was the only difficulty I encountered. By God's grace, I was able to raise the money to pay for that and also for her school uniform.*
>
> **Interview with parent, Savelugu, Ghana**

Food poverty was also reported as an issue in Ghana and Kenya. Parents stated that because they could not afford lunch money for their daughters, they made them stay at home rather than send them to school on an empty stomach.

> *The parents in the community earn low income and you see the students may not have something to eat at night and this affects the children because they are unable to go to school with an empty stomach.*
>
> **Interview with CAP participant, Nairobi, Kenya**

4.5.3 Early marriage and pregnancy as a barrier to transition

The literature[62,63] recognises early marriage and pregnancy barriers that prevent girls from transitioning through school. At endline, while most parental aspirations were generally favourable and focused on allowing their daughters to study further, interviews with community members outlined that teenage pregnancy is often a challenge faced by girls when they transition to higher grades.

In Nigeria, the blended survey at endline reveals that the primary reason parents would not send their daughter back to school is because she is married, and the decision for future studies rests with the girl's husband and his family. It is important to note that we found very few examples of drop out due to early marriage in Kenya or Ghana.

> *She was only going to school pending when she will get married, now she is engaged so she won't go to school anymore except if her husband wills it. Men here believe too much of school for a girl is not good.*
>
> **Parent, blended survey, Nigeria**

Some interviews revealed that CAP participants have been sensitising parents to continue to see value in their daughter's education and to try and prevent their daughters from becoming pregnant. However, these deep-seated norms are difficult to change, and we see limited impact on transition.

> *Our superiors always talk to us about supporting and enhancing girl-child education. DP-2 especially always talk about it anytime we meet with them. And in turn, we also relay such information to the parents and encourage them to invest in their daughters' education. Most of the parents discipline their children a lot. But we've realised that the waywardness begins when they get to JHS.*
>
> **Interview with CAP participant, Yendi, Ghana**

[62] Global Partnership for Education (2013) 'Accelerating Transition of Girls to Secondary Education: A Call for Action'. Available at www.ungei.org/resources/files/Accelerating_Girls_Transition_GPE_5_Mar_2013.pdf
[63] www.worldbank.org/en/topic/girlseducation

CAP participants from Wajir stated that prevalence of early marriages among Somali families made it challenging for girls to continue with their education. They reported that parents would pretend to transfer their girls out of the school, by claiming that they were unsatisfied with the teaching. Since schools cannot deny a school transfer, they would allow the girls to leave and parents would then arrange a marriage. They also said that since there was no law requiring girls to attend regular schools, parents in Wajir considered it more beneficial if girls attended a madrasa.

> *Two girls came with their parents said the school has no good learning progress and requested for transfer. As you know you can't deny parents a transfer, so finally they got married. That's how most of the girls drop out of school. You can even ask the chief about this.*
>
> **Interview with CAP participant, Wajir, Kenya**

4.6 Regression analysis to understand factors associated with positive changes in transition

In this section, we further explore factors contributing to the **change** in transition between midline and endline in Ghana and Nigeria. We limit this analysis to the midline to endline time period because this is the period during which most girls transition from primary to junior secondary school, which presents an important moment of transition. In addition, from an analytical perspective, there is also more variation in transition during this time period, which provides a better opportunity to quantitatively identify factors that are associated with successful transition. We do not conduct any analysis for Kenya because rates of successful transition are so high across all time points that there is too little variability in the outcome to meaningfully explore through regression analysis.

For the analysis, we run a multiple regression analysis with the change in transition status between midline and endline as the dependent variable.[64] We examine how a range of factors are contributing to this change in transition status, including girl and household characteristics, school and location-related factors, and factors related to the DP-2 intervention.[65] The main focus of the analysis is on identifying whether factors related to the DP-2 intervention are associated with changes in transition and our discussion in this section focuses on these indicators.

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

- girl attended remedial classes at midline,
- girl attended a girls' club at midline,
- girl had watched MBW content at midline,
- girl watched a video during regular classes during the last term at midline,
- high levels of CAP engagement at the school level at midline[66].

In Ghana only, we also differentiate between types of schools that have had different levels of exposure to the DP-2 intervention. We compare the change in self-efficacy across schools that have been exposed to the ALP component and schools that have been exposed to both the ALP component and the MBW component to schools that have been exposed to neither of these components. We also compare the change in self-efficacy in schools that have

[64] The change in transition status is calculated by subtracting the girl's midline status from her endline status. Regression analyses are run for girls in treatment schools.

[65] Baseline and midline covariates are used in the regression model as lagged variables.

[66] Schools were identified as having high CAP engagement at midline if the head teacher attended community workshop 1 and community workshop 2, the action plan document was available at the time of the visit, and participants in the CAP process had met to discuss progress in implementing the action plan.

received support from DP-2's partner, CAMFED, to schools that have not received this support.

Figure 32 and Figure 33 present the main factors associated with the change in transition status between midline and endline for Ghana and Nigeria respectively. The graphs show point estimates (the dots) and 90% 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 change in self-efficacy (at the 10% level). **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 likelihood of successful transition**, and *vice versa*.[67] Full regression models are presented in Annex 3.

In Ghana and Nigeria, girls attending schools with higher proportions of qualified teachers have a higher likelihood of successful transition. Where schools have higher proportions of qualified teachers, this may indicate a better level of teaching quality. This might contribute to better learning outcomes and/or to parents' perceptions that schooling is useful for their children.

In terms of factors related to the DP-2 intervention, high CAP engagement at midline is associated with higher likelihood of successful transition. In Chapter 6.2 and throughout the evaluation, the qualitative research has identified examples of how the CAP process in Nigeria has addressed barriers to both learning and transition. While the qualitative findings suggest that the CAP process cannot overcome structural or entrenched barriers to transition, such as financial constraints and social norms around marriage, the quantitative analysis suggests that CAP activities have been supporting transition for some girls. In addition, having watched MBW content at midline was associated with higher likelihood of successful transition. The qualitative study does not find strong evidence of a link between MBW content and transition, although respondents linked engagement in the MBW content to girls' increased motivation to be successful in their career and their ability to discuss their educational goals with their parents. Qualitative data also finds that factors such as poverty and subsequent reliance on child labour and perceptions around early marriage persist and negatively impact transition. While the qualitative research provides evidence of a link between remedial lessons and successful transition, having attended remedial lessons at midline is not a statistically significant predictor of successful transition in our regression analysis. As we have noted, it may be that remedial classes are helpful in supporting progression within primary school, but less so for the transition into junior secondary school, which is the main focus of the regression analysis.

In Ghana, no factors related to the DP-2 intervention were associated with a higher likelihood of transition. This is in line with the overall quantitative impact analysis, which does not find evidence that DP-2 has had an impact on transition in Ghana. Attending a school that also receives support from CAMFED was not associated with higher likelihood of successful transition. It should however be noted that only 15% of girls in our treatment sample reported receiving a bursary from CAMFED, which may not be sufficient to demonstrate any relationship in this analysis.

[67] 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 32: Main factors associated with change in transition status (Ghana)

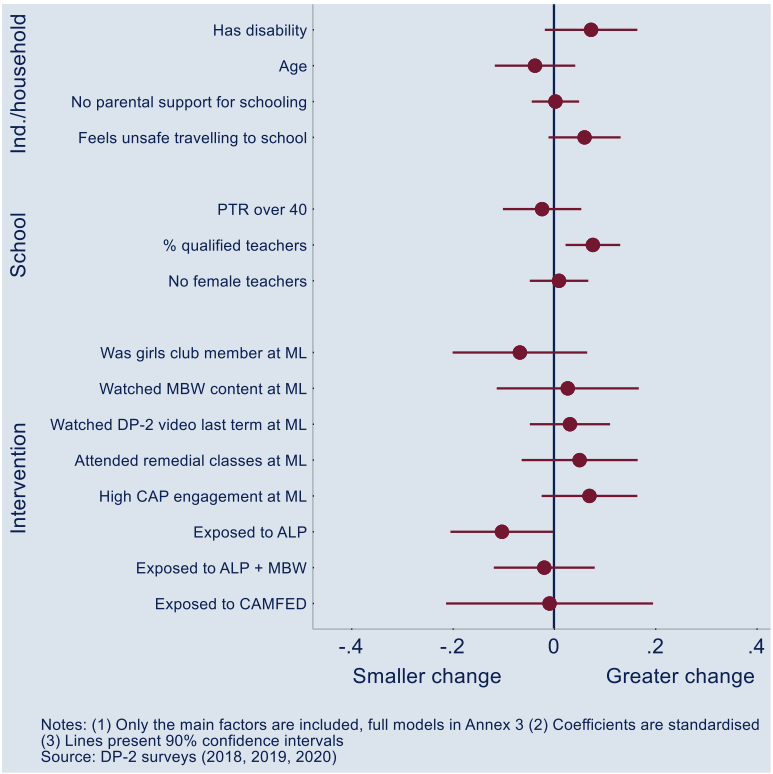
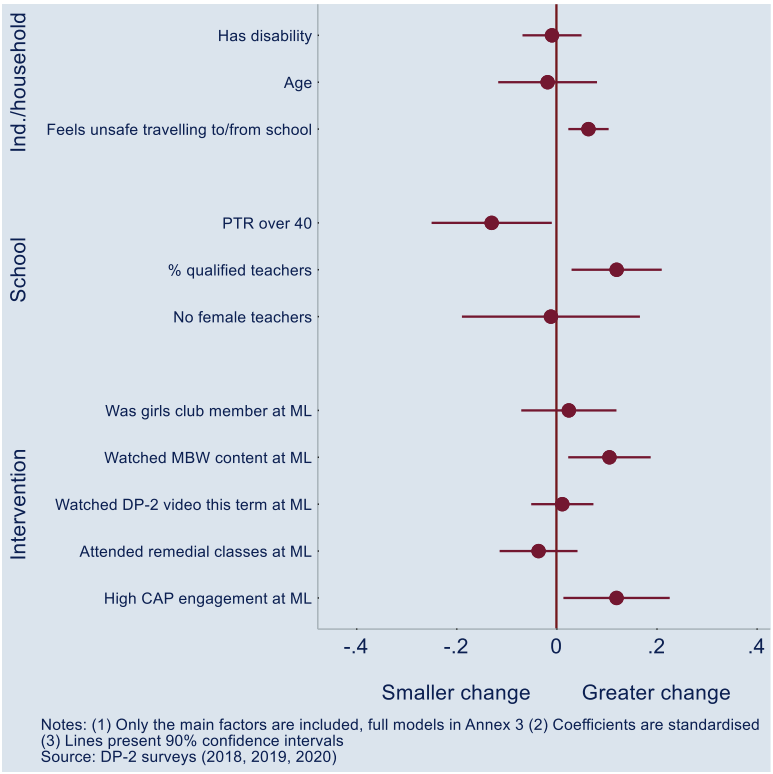


Figure 33: Main factors associated with change in transition status (Nigeria)



4.7 Changes in transition due to COVID-19

The COVID-19 pandemic and resulting school closures may pose additional barriers to transition or exacerbate existing ones in the future. **Across all three countries, in the treatment and control group, almost all parents of girls who were in school before COVID-19 (over 98%) intend to send their daughters back to school once schools**

reopen. However, parents do have concerns about their ability to afford schooling-related costs and about how much their children may have fallen behind in their learning. As discussed in Section 3.1, parents were worried about girls forgetting what they have learnt, and about their ability to keep up with lessons once schools resume. Since some parents have lost their jobs during the pandemic, financial barriers to transition have been exacerbated by the pandemic, and parents are concerned about affording school fees and other school-related expenses. Additionally, many girls in all three countries are currently either engaged in hard-skill acquisition ventures, working for a wage, or supporting their parents in running the family business.

In Nigeria, although parents are keen to send their daughters back to school, many of them expressed concern that their daughters have fallen behind because of school closures. As a result, some parents have taken the initiative to arrange a tutor for their daughter; they have found this very useful in preparing them for when schools reopen.

> *You see she is in JSS2 now; she would have joined JSS3 class if not for corona.*
>
> **Interview with parent, Nigeria**
>
> *We have blackboard at home, so my younger brother comes to teach them spellings. He is teaching them both Hausa and English.*
>
> **Interview with parent, Nigeria**

In Kenya, while all parents[68] plan to send their daughters back to school, they were concerned that girls would find it challenging to adjust to going back to school and sitting in class because they had become used to being at home and following a different schedule. They were also worried about managing the expectations of girls regarding transitioning to the next class because they may have to repeat a year. As discussed in Chapter 2, the Kenyan government has announced that all students will be repeating their year.

The blended survey revealed that the primary concern, especially for parents who sent their daughters to private school, was affording school fees. Several parents had lost their formal employment and had taken on odd jobs and errands to make ends meet. Parents, especially in Nairobi, who had lost their jobs were planning on moving back to their village outside Nairobi until they could find employment in the city again.

> *We were planning to move to the village, because there is no paying rent and bills, we were affected by the coronavirus, we both lost our jobs. I am just washing clothes for people in the estate.*
>
> **Parent, blended survey, Nairobi, Kenya**

A looming worry for most parents in Ghana was the need to buy new books, uniforms, shoes, and supplies once schools reopen. Poverty and the inability to buy school resources was voiced as a key concern, even during the baseline and midline, and emerged again in the form of the need to make additional expenses. While a few parents expressed the support from CAMFED in the form of supplies, sanitary pads, and books while their children were in primary school, they expressed fears about how they would meet these expenses in the future.

4.8 Conclusion

In education, transition commonly refers to the transition between one level of education (e.g. primary) to another (e.g. secondary). The GEC-T definition of transition also includes

[68] Over 99% of parents in the treatment group in Kenya intend to send their daughters back to school after they open.

promotion through grades within a level of education. At endline, many girls in Ghana and Nigeria transitioned between primary school and junior secondary school – an important milestone. In Kenya, girls continued to transition within primary school between midline and endline, with most girls transitioning from Primary 6 to Primary 7.

In Ghana and Kenya, rates of successful transition continue to be high at endline, with 89% of treatment girls in Ghana and 96% of treatment girls in Kenya transitioning successfully at endline. A high percentage of girls in Ghana (88%) have successfully made the jump to JHS. The main reason for unsuccessful transition in both countries is grade repetition (or demotion in a small number of cases). A small number of girls in Ghana (3%) and a very small number in Kenya (0.3%) have dropped out of school.

The evaluation provides evidence that targets for transition were successfully met in Ghana and Kenya between midline and endline, as these targets were set to maintain the same transition rate relative to the control group. The evaluation does not find any evidence that DP-2 has had an impact on transition in Ghana and Kenya. The very high rates of successful transition limited the extent to which DP-2 could reasonably be expected to generate any impact against successful transition in these two countries.

In Nigeria, rates of successful transition are substantially lower compared to midline, with 78% of treatment girls transitioning successfully at endline, compared to 97% of girls at midline. This was to be expected because the barriers to transition into JSS are most substantial in Nigeria, as compared to Ghana. Over the course of the project, 78% of girls in Nigeria have made the transition to JSS, with 59% making the transition between midline and endline and 17% having made it a year earlier, between baseline and midline. By far the most common reason for unsuccessful transition is grade repetition or demotion (19% of the sample), while only a small percentage of girls (3%) have dropped out of school.

Between baseline and endline, DP-2 has led to a five-percentage-point improvement in successful transition over the control group. While this estimate of impact was not statistically significant, the sample may have been underpowered to detect an effect of this size, and it is likely that there is a positive change in transition attributable to DP-2 over the full course of implementation. Between baseline and midline, DP-2 had a significant impact on transition, and this impact was largely sustained between midline and endline.

These findings suggest that DP-2 has indeed had a positive impact on the transition of girls over the course of its implementation, but that this impact was primarily generated in the first year of implementation, when the majority of girls in our evaluation sample were transitioning through primary school. This interpretation is supported by findings from the qualitative research; these provide strong links between remedial lessons and improved learning, which likely support lower repetition rates. Furthermore, we find evidence of an association between the CAP and transition, with regression analysis finding that where there is particularly high engagement with the CAP process, this is associated positively with transition. On the other hand, at endline, at a moment when the majority of girls were at the stage of transitioning between primary and junior secondary school, we do not find any quantitative evidence that DP-2 is supporting this transition. This suggests that DP-2 has not overcome some of the barriers to the transition to junior secondary school. This points to persistent structural barriers to transition to junior secondary school, which our evidence suggests are linked to financial barriers and social norms around early marriage.

The full effects of the COVID-19 pandemic on the transition status of cohort girls are uncertain. Almost all parents (98%) in all three countries reported that they intend to send their daughters back to school when they re-open. However, parents have raised concerns about the economic realities of the pandemic, and whether they will still be able to afford to send their children to school given that some parents have lost their jobs during the

pandemic and many girls in all three countries are engaged economically, either working for pay or supporting their parents to run a family business.

5 Sustainability

5.1 Background

DP-2 has incorporated a variety of activities to support the sustainability of each of the key interventions promoted by the project. The DP-2 approach to sustainability consists of engagement with key stakeholders at different levels, including the school, the community, and the system.

At the school level, the approach focuses on identifying and then supporting school leaders to take ownership of project activities. This includes, for example, the identification of, and investment in, RTs, who are expected to take a leading role in supporting the training of new teachers, as well as providing refresher training and mentoring of existing teachers in techniques promoted by DP-2 and in the use of learning centres and media in the classroom.

At the level of the community, DP-2 provides significant investment through its CAP process in community sensitisation and mentoring support to enable community members to develop and implement action plans that seek to address barriers to education, with a specific focus on girls. It is expected that the mentoring and support provided by DP-2 will enable communities, with support from schools, to take ownership of the CAP process cycle of continual diagnosis of barriers and identification of solutions to overcome these barriers.

DP-2 also recognises the need to support this grassroots change with efforts to mainstream activities in government systems in order to achieve systemic change. As such, DP-2 has incorporated specific activities into its approach to generate high-level commitment, ongoing support, and growing buy-in from government partners. These efforts have been interpreted slightly differently by DP-2 country teams, but with each country team recognising the importance of supporting continuity of project activities by identifying the links between project activities and government priorities, objectives, and policies to support increasing government buy-in and – crucially – ownership of activities.

5.2 Assessment approach

The approach to the assessment of sustainability is guided by the GEC-T sustainability template but updated and refined to contextualise for the specific activities that DP-2 is implementing.[69]

Table 26 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 schools, communities, or government have taken over full ownership of a project activity and intend to sustain its implementation after the closure of DP-2.

Table 26: 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

[69] A discussion of changes made to the assessment of sustainability can be found in Section 5.2 of OPM (2019) Discovery Project Phase 2: Midline Evaluation Report. Oxford Policy Management. The main changes relate to providing a set of project- and activity-specific criteria for each level of sustainability, moving from a level of **latent** sustainability to **established** sustainability.

Activity	Headline indicator
	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 the 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 support. Local MOE education plans are fully funded in recurrent MOE budgeting.

The assessment approach recognises that there is a continuum of sustainability on the path to achieving 'maximum sustainability' – defined below as **Level 4 (Established)** – and provides explicit criteria for each level of sustainability. Below we provide the generic concept for each of the four levels of sustainability defined in the GEC-T sustainability template (full details on the activity-specific[70] criteria for each level of sustainability can be found in Annex 1). The generic definitions of each level of sustainability are:

- **Latent (*develop knowledge and change in attitude*):** Relevant stakeholders (at school, community, and system levels) have begun to change attitudes towards project activities and begun to understand the value of project activities in supporting improved education outcomes for girls.
- **Emerging (*changes in behaviour*):** Relevant stakeholders (at school, community, and system levels) have begun to put project activities into practice, but still require extensive support from DP-2 staff and resources to do so.
- **Becoming established (*critical mass of behaviour change*):** A critical mass of relevant stakeholders (at school, community, and system levels) are beginning to drive the implementation of project activities and require less substantial support and resources from DP-2 to do so.
- **Established (*changes are institutionalised*):** The specific changes in attitudes, practices, or approaches are now well established with relevant stakeholders (at school, community, and system levels) who have the willingness and capacity to sustain the implementation of activities without support from DP-2 staff or resources.

In what follows we assess the sustainability of each project activity in each country. Scores are allocated on a 1 to 4 scale, reflecting the generic levels of sustainability described above, but assessed against the activity-specific criteria presented in Annex 1.

It should be noted that our assessment of sustainability, as with our assessment of other outcomes and intermediate outcomes, is hindered by the necessary changes resulting from the COVID-19 pandemic. In particular, for sustainability we relied at midline on a range of primary data that related to the implementation of project activities. While we have attempted to mitigate this by using other data sources, specifically data reported in DP-2's monitoring data, these were not collected with the needs of the evaluation in mind.

[70] That is, the specific activities defined in Table 26.

5.3 How sustainable is DP-2 in Ghana?

Table 27 presents a summary of the sustainability scores for each indicator for Ghana.

Table 27: 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 demonstrates the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education	A critical mass of schools demonstrates effective and continuous use of learning centres to improve learning and teaching practices, and has developed and enacted plans to sustain an active use of educational media	Through the teacher training component, a critical mass of schools demonstrates the effective use of teaching practices (including remedial classes) and the continuous coaching and training of new and existing staff, and does so sustainably	A critical mass of schools has 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	1			1
Overall baseline score	**1**				
Midline target	2	2	2	2	2
Midline score	2	2	2	3	2
Overall midline score	**2**				
Endline target	3	2	3	3	2
Endline score	2	2	3	3	3
Overall endline score	**3**				

Note: Scores represent the following levels of sustainability: 1 – Latent; 2 – Emerging; 3 – Becoming established; 4 – Established.

5.3.1 Community level

At midline, we found that while there had been improvement in the implementation of action plans, with more action plans in place and more meetings being held, there remained issues that prevented a higher sustainability score being awarded. In particular, this related to concerns around low engagement of community members in the CAP process.

At endline, we find a general improvement in both the participation of the school and community and in the efforts that CAP participants have made to implement their

plans. However, there remain some concerns about the sustainability of CAP activities, particularly as it relates to the ability of poor and rural communities to fund activities to address key barriers to education. Furthermore, the COVID-19 pandemic has significantly disrupted the CAP process and increased the difficulty in resuming it once schools re-opened. As such, the sustainability of the CAP process scores a 2 (*Emerging*) level of sustainability at endline.

Qualitative research conducted at endline indicates that there has been an increased engagement of both the school and community in the CAP process. In Ghana, this appears to have been focused mainly on sensitising parents about the importance of attending school, with results presented in Section 6.2 suggesting that this type of sensitisation was encouraging parents to change behaviour related to the involvement of their children in economic activities.

These efforts are encouraging given that the midline evaluation report had identified engagement in economic activity and domestic chores as a key barrier to education for girls, resulting in their either arriving at school late, or being too tired to fully concentrate once they had arrived. This suggests that the CAP process is enabling communities to both identify barriers as well as to put in place efforts to address these barriers. In addition, the qualitative research conducted at endline suggests that in some schools the CAP process had been able to mobilise resources in support of building infrastructure, such as toilets, or purchasing equipment, such as new furniture or dustbins, though this was not the case for all schools.

This finding is supported by available quantitative evidence, with data available in the DP-2 MIS suggesting that 90% of CAPs had both an action plan in place and had taken steps to implement that plan.

However, despite these improvements, there remain some concerns about the sustainability of the CAP process in Ghana. The first relates to the onset of the COVID-19 pandemic, with CAP participants in Ghana reporting that they had not met since schools had closed. While CAP participants expressed confidence that these activities would continue, they were not able to articulate specific plans on how to sustain their CAP activities, reporting that this would be discussed once schools re-opened. Given that it is likely that schools in Ghana will remain closed until after DP-2 closes, and given the break in activities, this may represent a threat to sustainability as the CAP process will have to be restarted without support from DP-2 staff. Respondents in both Kenya and Nigeria, in contrast, were able to articulate such plans.

> *Interviewer: Do you think the CAP will still go on even if DP-2 leaves? Can you sustain it?*
>
> *Respondent: Yes. Whether DP-2 leaves or not, we will still continue with our work. It will not be right for us to abandon the knowledge and skills they have trained us in. We should be able to use it to work even when DP-2 is no more with us.*
>
> *Interviewer: What have you already done that shows you can continue with the project?*
>
> *Respondent: Right now, the team members have gone their separate ways. Our intention is that when school reopens, we'll get together and determine the way forward.*
>
> **Interview with CAP participant, Tamale, Ghana**

The second relates to a GES directive that was implemented shortly before the midline round of research that prohibits schools from asking for any fees or contributions from parents or the community, which was felt to be counter to the initiatives being implemented through the CAP process around resource mobilisation within the community. At endline, we find this

directive to be still in place, and we find that according to CAP members interviewed through the qualitative research this continues to place a constraint on CAP activities. This was seen to place a restriction on some previous CAP activities that responded to community identified barriers, such as raising funds for school maintenance and thereby diluted the CAP's message. Whilst the CAP process should not be expected to respond to all external barriers to education, the restriction on the ability to respond to barriers that the CAP process had previously was viewed as a potential threat to the sustainability of the process.

5.3.2 School level

At endline we find that all school-level sustainability targets have been hit in Ghana. Progress was made on the sustainability of the TPD and ALP components, which appear to have received increased support and buy-in from government partners since midline, and are therefore now scored at a 3 (*Becoming established*). We continue to score the sustainability of girls' clubs at a 3 (*Becoming established)* and the sustainability of learning centres at a 2 *(Emerging*).

TPD and the ALP

At midline, we found encouraging evidence in Ghana that teacher training was having a positive impact on several dimensions of positive teacher practices. However, we also noted that long-term sustainability depended crucially on the 'training-of-trainer' model being implemented by DP-2, i.e. that teachers would initially be trained directly by DP-2 project staff, with identified RTs then taking the responsibility for providing step-down training to other teachers in the school and refresher training to teachers who had been directly trained. As such, there are two key aspects to the sustainability of the teacher training: that the step-down training actually occurs; and that the step-down training retains sufficient fidelity to the original direct training that it preserves its efficacy to deliver improved teaching quality.

Interviews conducted with government staff are encouraging and provide an indication that some aspects of the DP-2 teacher training would be retained. However, despite this positive development, there are a number of concerns that threaten the sustainability of the teacher training component. The first relates to an observation made by government staff: in order to incorporate DP-2 training into existing training schedules, and thus not to require additional resources, only abridged content would be incorporated. This threatens the fidelity of the training to what was originally intended and what drove the impact on teaching quality observed at midline. Furthermore, evidence from DP-2's monitoring data presented in Section 6.1.2 suggests that only just over half of schools had conducted any recent step-down training, and confirms the finding that step-down training tends to be more diluted in nature, as compared to the direct training provided by DP-2 project staff. This suggests that teacher training will continue, albeit in an abridged form that is not consistent with the original design of the teacher training component, which is pertinent given high rates of teacher turnover.

At endline, we find that all DP-2 schools in Ghana continue to implement the remedial lessons with evidence presented in Section 3.1 suggesting that, on average, the expected number of remedial lessons are being delivered each week. Furthermore, interviews conducted with DP-2 project staff and government officials confirm that the provision of remedial lessons is an emerging priority, which is enjoying support from multiple government institutions,[71] suggesting that the remedial lessons are likely to continue beyond the lifetime of the DP-2 project.

Despite this success, there remain some challenges to the sustainability of remedial classes in Ghana. In particular, the practice of paying a stipend to teachers for conducting remedial

[71] Including the GES, National Service Secretariat, and District Assemblies.

lessons is expected to stop when DP-2 ends. Evidence from the endline qualitative research suggests that this is likely to reduce the motivation of teachers to deliver these lessons.

In summary we have scored the sustainability of the TPD and ALP at a 3 (*Becoming established*). It is likely that both the teacher training and remedial lessons will continue to be implemented in some form following the closure of the DP-2 project. However, in the case of the teacher training in particular, it is unclear whether sufficient fidelity of implementation to the original design will be maintained for the same impact on teaching quality as observed at midline to be delivered. As such, this component is not scored higher from a sustainability point of view.

Learning centre

At midline, we found evidence that there were concerns around the availability of funding for the continued maintenance of the learning centre, particularly following the GES directive that prohibited Ghanaian head teachers from conducting fundraising activities for school facilities in the community. This concern remains at endline, with some DP-2 staff and government officials interviewed indicating difficulties surrounding the ability of schools to raise funds for the repair or replacement of broken equipment – a concern that was repeated by stakeholders at the school level.

Evidence presented in Section 6.1.2 suggests that this issue is already of concern, with evidence from the DP-2 MIS indicating that 15% of schools do not have functional equipment for use in the classroom and 14% of schools do not have functional equipment for use by teachers for lesson preparation in the 2019/2020 school year. Furthermore, evidence provided in Section 6.1.2 also suggests that the use of the learning centre has declined over time, with the DP-2 MIS reporting that 60% of schools had used the learning centre at least five times per week in 2018, compared to just 49% of schools in 2020.

In summary, despite some evidence that, when used, teachers find videos supportive in helping to engage students, findings that indicate the usage of the learning centre declining over time. Concerns about how the learning centre would be funded in future means that we have scored the sustainability of the learning centre at a 2 (*Emerging*).

Girls' clubs

At midline, we found that high proportions of girls in Ghanaian DP-2-supported schools, including those from the poorest income quartile, were participating in girls' clubs and engaging with the MBW content. Furthermore, we found an impact on self-efficacy, in part attributable to participation in girls' clubs, although this has not been found to hold as girls transition to junior secondary school. We also found evidence that clubs were managing to sustain activities without having to resort to asking parents for contributions (critical for the participation of the most vulnerable).

At endline, we find that positive progress in support of the sustainability of girls' clubs has continued. In particular, interviews with government staff revealed that some of the success is down to aligning girls' clubs with previous clubs that had existed before DP-2. In some cases, it was reported that the clubs had begun to be supported by either the District Gender Officer or the District Girls' Education Officer. Furthermore, government officials reported that girls' education remained a specific priority for the GES, and initiatives such as the girls' club life skills content like MBW were therefore likely to continue to be supported.

However, interviews conducted with DP-2 project staff and government officials did point towards some concerns related to the potential sustainability of the girls' clubs. The first relates to the time it takes to transfer the skills necessary for delivering key aspects of the activity, and in particular the MBW content. Respondents pointed to the effective facilitation of this by DP-2 project staff. They voiced concerns that with the relatively limited time for this

to bed in, the fidelity of delivery may be compromised, though all girls' clubs themselves were expected to continue. Furthermore, evidence reported by the DP-2 MIS presented in Section 3.2.4 suggests that there has been a small but steady decrease in the number of times girls' clubs were meeting in the average DP-2-supported school.

Nonetheless, we find sufficient evidence to suggest that sustainability of girls' clubs should be scored at a 3 (*Becoming established*), a continuation of the performance observed at midline in Ghana.

5.3.3 Systems level

At midline, sustainability at the system level in Ghana was scored at a 2 (*Emerging*), recognising that some progress had been made since baseline, particularly in the engagement with local MOE staff. At endline, we find sufficient evidence to award a score of 3 (*Becoming established*), based on findings that suggest the government is active in their ownership of aspects of the project, and that they have a plan and the human resources to carry out planned activities. However, while there are intentions to allocate dedicated funding to this plan, this is yet to be secured.

DP-2 project staff interviewed at endline understood sustainability to mean, primarily, ownership by the government at different levels, including national leadership (i.e. the 'minister or other key senior staff'), national institutions (e.g. the GES), and local government (e.g. districts).

The DP-2 team undertook efforts promoting sustainability conscientiously and proactively, supported by the recruitment of a Senior Technical Lead just before the midline round of research, with specific responsibility for engagement with government counterparts. This engagement entailed a number of strategies and actions. DP-2 engaged government from the onset of the project. At a national level, this entailed 'selling' the project to the Minister of Education and demonstrating its relevance to their agenda. At a district level, they were allocated a counterpart in each district education office, who was identified as the focal person for the project and who was responsible for reporting back to the District Director. DP-2 pursued a 'training of trainers' model and delivered most of the training required for the project through co-facilitating with a district trainer.

A key feature of DP-2's strategy was to engage key government staff in project activities, such as through co-facilitating with the circuit supervisor, undertaking joint monitoring visits, and briefing the District Directors of Education. Overall, the 'sustainability plans' became a central feature of this approach. These were jointly created with the districts, who were helped to identify key components of the project to sustain and to develop a plan for how to do this (such as ensuring that manuals were created), and how to fund it. The DP-2 team reported having quarterly 'district meetings' with a wide range of stakeholders in the District Office, including those from training and the human resources department. As the project ended, the District Assemblies have also been engaged in this way.

Generally, the DP-2 team's understanding of the plan was shared by respondents from the District Offices, who were primarily District and Municipal Directors of Education. They confirmed that they had been working on sustainability plans with support from DP-2. For the most part, this was spoken of as if these were their own plans, albeit plans which they submitted to DP-2 for feedback and final review. These plans included mapping activities as well as identifying and engaging with key stakeholders, including the District Assemblies.

Government respondents also agreed that they had sufficient human resources, without further support from DP-2, to continue with the project activities. This included having District Training Officers, Community Participation Officers, and Gender Desk Officers, all of whom had already been working on the project directly. They believed that responsibility for the direct delivery of activities were at the school level, and that the RTs and head teachers were

sufficiently prepared for this. However, a perennial concern was the high degree of staff turnover at school level. Although multiple teachers had been trained in the project within each school, and the idea was that these teachers would be able to train new teachers, respondents varied in the extent to which they thought this would be effective.

However, funding remained a key challenge. Government respondents reported District Assemblies as the key source of funding for the project but raised concerns in securing this funding. A first set of concerns related to the at times unpredictable and non-committal nature of politics, meaning that commitments of funding may not be maintained. A second set of concerns relate to the frequent delays in funding being released by District Assemblies, with delays of several quarters in payments being common. If funds are not secured, there will likely be an effort to continue project activities, but the effectiveness and sustainability of these will be at risk.

5.4 How sustainable is DP-2 in Kenya?

Table 28 presents the sustainability scores for Kenya.

Table 28: Kenya sustainability scores

	Community	School			Systems
	CAP	Learning centres	Teacher training and remedial	Girls' clubs	MOE engagement
Headline indicator	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	A critical mass of schools demonstrates effective and continuous use of learning centres to improve learning and teaching practices, and has developed and enacted plans to sustain an active use of educational media	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 does so sustainably	A critical mass of schools has 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**				
Endline target	3	3	3	3	3
Endline score	2	2	2	3	2

	Community	School	Systems
Overall score	**2**		

5.4.1 Community level

At midline, we identified the sustainability of CAPs in Kenya as 1 (*Latent*), the result of relatively low levels of engagement of head teachers and community members, as well as little evidence of action plans being implemented as expected. At endline, we find evidence of greater engagement in the CAP process and evidence of barriers to education being both identified and addressed. While DP-2 staff indicated that this was sometimes dependent on the personality and priorities of school leadership, **there is sufficient evidence to suggest that community level DP-2 activities have achieved a sustainability score of 2 (*Emerging*) at endline, an improvement over the midline score**.

Progress on the CAP process, as assessed at the time of the midline evaluation, was hindered by the delayed implementation of both the L4C and Community Workshop 2 training, which was still being rolled out at the time. Qualitative research conducted at endline, however, indicates that most participants had participated in both training sessions. This is corroborated by evidence presented in the DP-2 MIS, which suggests a dramatic increase in the proportion of CAP that had both an action plan in place and that had also taken steps to implement that action plan by the end of 2019 relative to 2018.

Evidence presented in Section 6.2 suggests that CAP participants were making greater efforts to engage a more diverse set of stakeholders in the CAP process. In particular, the evidence suggests that more frequent meetings had been held with parents and girls to sensitise them about progress at their school, and to inform parents on their child's learning progress. In some schools, this engagement also extended to the CAP participants taking an active role in following up with the parents of girls who had dropped out of school to encourage them to re-enrol.

Furthermore, the qualitative research, backed by evidence in the DP-2 MIS highlighted above, suggests that the CAP process had both identified context specific barriers to education, including those specific to girls, as well as put in place actions to address these. In some cases, these included leveraging community resources to support initiatives, such as improvements to school infrastructure or the donation of school supplies.

However, the qualitative research conducted at endline also highlighted concerns of CAP participants regarding the withdrawal of the supportive supervision that was being provided by DP-2 staff members. There were worries that stakeholders may be less inclined to engage without this support. DP-2 staff members further reported that although teachers had become more engaged in the CAP process since midline, teacher transfers remained high, and as such the threat that a key driving force for the CAP process could be easily lost. Furthermore, as with Ghana there were concerns that the COVID-19 pandemic had interrupted CAP activities in Kenya; it was unclear when these would resume and whether, without DP-2 support, this would happen.

5.4.2 School level

Progress has been made in the sustainability of the girls' clubs in Kenya, which are now scored at a 3 (*Becoming established*) level of sustainability; this relates to the significant alignment to ongoing government priorities and buy-in from government counterparts. However, we continue to score both the TPD and ALP components, as well as the learning centre, at a sustainability score of 2 (*Emerging*) in Kenya. The ALP,

in particular, was viewed by government counterparts as one remedial project among many; further, we find that usage of the learning centre had decreased over time and concerns related to how equipment would be maintained had not been fully addressed.

TPD and the ALP

At the time of the midline evaluation, we found that the direct training component of the teacher training was still being completed in Kenya; it was completed finally by September 2019.[72] Furthermore, the midline evaluation found evidence to suggest that there were inconsistencies in the implementation of direct training and, in particular, that many teachers had not attended the full package of training offered by DP-2; these difficulties are exacerbated by the finding that teacher turnover of DP-2-trained teachers was the highest in Kenya.[73]

At endline, we find that DP-2 project staff and government respondents have a shared understanding of who would be responsible for sustaining the teacher training component – namely, that it would be the responsibility of the TSC who reported that DP-2's training was in line with the national curriculum. This finding is corroborated by evidence from the endline qualitative research presented in Section 6.1, which suggests that RTs in Kenya are confident that step-down training will continue following the closure of the DP-2 project, and that the greatest number of recent step-down training sessions had occurred in Kenya relative to Ghana and Nigeria.

However, as with Ghana, there are concerns about whether the continued implementation of teacher training will have sufficient fidelity to the original intended design of the training component. While government officials expected that this component will continue, this was made possible only by incorporating training activities into current TSC budgets, which meant that teacher training content originally delivered in a three-day session was expected to be allocated only half a day. Furthermore, there were concerns that the TSC budgets were already stretched, and doubts as to whether they would be able to fully monitor the continuation of the TPD component. This compares to the situation in Ghana and Nigeria where additional funding has been promised (if not yet realised) to support the continuation of these activities. As a result, we find greater risks to the sustainability of the TPD component in Kenya relative to both Ghana and Nigeria.

The endline qualitative evidence presented in Section 3.1 suggests that RTs believed that remedial lessons were contributing positively to girls' learning because the teaching is specific and targeted at students' needs, with evidence in the DP-2 MIS suggesting that almost all schools were continuing to implement remedial lessons. However, the implementation of the remedial classes in Kenya appears to continue to face challenges not experienced in the other two countries. In particular, competing school activities seem to be limiting the time available for remedial lessons, which is further reflected in the DP-2 MIS – fewer hours of remedial classes are being implemented than intended. Furthermore, we found during the midline evaluation that the practice of private tuition in Kenya was common, and this appears to continue at endline, with at least some parents in Kenya reporting that they continue to pay for extra tuition for their children. This makes it difficult to distinguish the additional benefit delivered by DP-2 remedial lessons, particularly given the findings, presented in Section 3.1, that suggest that many teachers are unwilling to volunteer for teaching remedial lessons, given that their additional effort is not remunerated. This finding was corroborated by interviews with government officials who viewed the DP-2 remedial lessons as one remedial action among many.

In summary, while the endline evidence suggests that at least some aspects of teacher training will continue, it is likely that this will be in an abridged form, threatening the

[72] Midline data collection was completed in July 2019 in Kenya.
[73] 25–35% of teachers trained by DP-2 in Kenya had since left the school at midline.

sustainability of the effect generated on teaching quality. Further, remedial lessons appear to be implemented in a crowded space, one that both competes with other school activities and with the availability of other forms of extra tuition. As such, we have scored TPD and the ALP at a 2 (*Emerging*) level of sustainability.

Learning centre

In Kenya, DP-2 is known as the 'TV project', which our midline evaluation found made it popular among teachers, parents, and children. However, evidence presented in Section 6.1.2 show that there are some challenges with the maintenance of learning centre equipment similar to Ghana and Nigeria. According to the DP-2 MIS, 11% of schools in Kenya did not have functional equipment for use in the classroom and 15% did not have functional equipment for use by teachers for lesson preparation. The midline evaluation reported that a lack of functional equipment was most likely in non-formal schools in Nairobi and in schools in rural locations, which were the least likely to be able to raise funds to maintain equipment.

Despite this, the evidence presented in Section 6.1.2 shows that the learning centre is most frequently used in Kenya, with 75% of schools in the DP-2 MIS reporting that they had used the learning centre at least five times a week. This is, however, a significant decrease from the 95% who reported the same in 2018. In addition, data provided by the girls' survey at midline indicated that Kenyan girls were the least likely to have watched a video in the previous two weeks, relative to Ghanaian and Nigerian girls, with the discrepancy in these data likely to be the result of larger school sizes in Kenya.

In summary, at endline we do not have sufficient evidence to suggest an increase in the sustainability score. We find decreasing rates of the use of the learning centre over the period of DP-2 implementation and relatively high proportions of schools in Kenya which do not have fully functional equipment. Given that the maintenance of the learning centre remains the responsibility of the schools themselves, raising funds for this will remain a significant challenge, particularly for non-formal and remote rural schools. As such we continue to score the sustainability of the learning centre at a 2 (*Emerging*) at endline.

Girls' clubs

At midline, we reported a sustainability score of 2 (*Emerging*) for girls' clubs in Kenya. This was mainly driven by the finding that these clubs had not found a secure source of funding, and had had to ask for parental contributions, which was potentially excluding more vulnerable and marginalised girls; there was also a lack of the clear link between the girls' club activities or MBW to learning outcomes observed elsewhere.

At endline, we find evidence, at least qualitatively, of a link between participation in girls' clubs and positive perceptions of improvement in life skills and confidence, with girls themselves linking this to the relatability of the MBW content. This finding appears to have resonated, with government officials interviewed at endline speaking most readily about the benefits of the MBW component – they were impressed with the improvements in girls' confidence and self-esteem within a community.

This latter finding links to some positive outcomes for the sustainability of the girls' clubs in Kenya. Firstly, it is expected that the implementation of girls' clubs will be supported by child officers at the county level. Secondly, the content of the MBW is in line with the governments' competency-based curriculum. Thirdly, the MOE has recently launched a mentorship policy, which, although not yet launched at the school level, is reported to be highly compatible with the DP-2-supported aspects of girls' club implementation, and in particular the MBW content.

As such at endline we find sufficient evidence to award a sustainability score of 3 (*Becoming established*) for girls' clubs in Kenya.

5.4.3 Systems level

At midline, we scored the systems level of sustainability at a 1 (*Latent*) level of sustainability, recognising greater challenges of engaging government counterparts relative to Ghana and Nigeria. At endline, while we find an improvement, we do not find that DP-2's endline target for system-level sustainability has been met and award a score of 2 (*Emerging*). While the government understands the value of project activities and plans to continue with some, these activities are not considered 'specific' or 'distinct' and will instead be amalgamated into other processes. This approach risks the design of DP-2 activities being diluted and not retaining sufficient fidelity to implementation.

A core feature of the DP-2's strategy towards sustainability was frequently engaging key stakeholders in government in meetings, and ensuring that they were properly briefed about the benefits of the project. These stakeholders include the Directorate of Policy, Partnerships, and East African Cooperation, County Technical Committees, the TSC, the MOE Quality Assurance Department, School-level Boards of Management, teachers, community members, and stakeholders at 'Jogoo House' (the national headquarters of the MOE). DP-2 also invited officials from the MOE and TSC to accompany them on monitoring visits to the school, as the continuation of these visits was considered important to the sustainability of the project. At a school level, DP-2 signed memorandums of understanding about the project with the school management and relevant sub-county director.

The DP-2 team described the responsibilities for the ongoing project activities as divided between three parties. The TSC will be responsible for teacher training for all project activities, as part of their current mandate for TPD. The schools – and specifically the head teachers and BOM – will be responsible for delivering the project activities. This includes appointing and supporting teachers and mentors, maintaining equipment, and managing the CAP through the school boards. Finally, the County Office will be responsible for monitoring the schools through their existing quarterly visits.

The DP-2 team acknowledges that this arrangement is vulnerable to staff being transferred, but the hope is that the other staff in the school or county will be able to induct new placements. There is reportedly high teacher turnover, especially in non-formal schools and schools in Wajir due to safety risks in that region – one respondent reported that as many as 70% of teachers had left their posts after receiving the teacher training.

Government respondents shared DP-2's understanding of how responsibility for the activities would be divided in future – i.e. schools would be responsible for delivering the activities, while the county monitored compliance as part of their current routines, as the TSC provided teacher training within their current projects. It is worth noting, however, that county officials visit a range of schools, some of which had received the DP-2 project, while others had not – and thus there may be a risk that those schools that had received the DP-2 project will not receive the tailored support required to sustain project-supported activities.

Furthermore, government counterparts reported that they did not believe that there were sufficient funds to provide the same level of support to project activities as provided by DP-2 staff, particularly as it related to monitoring efforts in support of teacher training. As such, while it is encouraging that these activities were being integrated into existing processes, government counterparts reported that this was made possible only by considerably reducing the scope of activities. This raises concerns about the capacity of government institutions to continue activities with sufficient fidelity to the DP-2 approach as designed. Sufficient fidelity to DP-2's design is critical for sustainability. Taking the example of TPD, government counterparts expect that this will continue but with significantly less time allocated to components that have been up to now supported by DP-2, and further without the allocation of additional resources government counterparts have raised concerns whether supporting activities, such as monitoring, will be implemented given that existing TSC budgets are already perceived to be over-stretched. At midline we found some modest positive change in

teacher quality resulting directly from DP-2's training, with the qualitative research at endline indicating that this has likely continued. However, these positive changes were generated by DP-2's implementation as per design. It is unclear that these positive changes will be generated by a much reduced form of implementation that is possible through the approach to fully integrate within existing structures nor within a context where no dedicated financial resources are available to support key activities such as monitoring.

5.5 How sustainable is DP-2 in Nigeria?

Table 29 presents the sustainability scores for Nigeria.

Table 29: 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 demonstrates the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education	A critical mass of schools demonstrates effective and continuous use of learning centres to improve learning and teaching practices and has developed and enacted plans to sustain an active use of educational media	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 does so sustainably	A critical mass of schools has 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				
Endline target	4	3	4	3	3
Endline score	4	2	4	2	3
Overall endline score	**3**				

5.5.1 Community level

At midline, we found that there had been steady and solid progress in the implementation of the CAP process and that initial plans towards sustaining the

project results had been put in place. We find at endline that this progress has been sustained, with CAP participants having continued influence on behaviour change among community members and an increased ability to mobilise community resources; there is also higher diversity in the membership of the CAP than in other countries. **These findings suggest that the implementation of the CAP process has progressed to the stage where the level of sustainability can be considered sufficient to award a score of 4 (*Established*).**

At midline, we found that almost all schools in Nigeria reported having an action plan and were able to show physical documentation of the plan to the survey team on the day of the visit. Furthermore, we found that all communities reported developing sustainability plans to continue DP-2-supported activities after project completion. Qualitative evidence collected from CAP participants at endline, presented in Section 6.2, suggested that this practice had continued with step-down training for new participants in at least some schools.

Particularly encouraging in Nigeria is a reported ability to mobilise resources for school improvement and development, including the repair of infrastructure to create a favourable learning environment for students. This appears to be supported by an explicit strategy, supported by L4C training, to increase awareness and build relationships of trust with a diverse group from the community, efforts towards which had continued since midline to now include more female members. This was further strengthened by identifying important members of the community to act as champions of change and to amplify CAP messaging.

In Nigeria, there is strong evidence to suggest that the CAP process has a high degree of buy-in and ownership among both the schools and communities, has demonstrated an ability to action and refresh CAPs, and has demonstrated an ability to mobilise resources in support of its objectives. As such, there is sufficient evidence to award a sustainability score of 4 (*Established*) at endline.

5.5.2 School level

Overall progress has been made in one aspect of the DP-2 school-level activities. The TPD and ALP components have received significant government buy-in, including in the allocation of funding to support its continuation. This aspect of the school-level activities receives a score of 4 (*Established*). The implementation of the learning centre and the girls' clubs continue to be scored at a 2 (*Emerging*) level of sustainability. Concerns related to funding undermine the progress of the former, and concerns related to a lack of government buy-in undermine the progress of the latter with respect to sustainability.

TPD and the ALP

At midline, we found strong evidence that teacher training was improving teaching quality outcomes and that remedial lessons were contributing to the observed impact of DP-2 on learning outcomes in Nigeria. The midline evaluation also provided evidence that relevant government counterparts had understood this evidence and had started to take steps to sustain both the teacher training as well as the remedial lessons.

At endline, we find further evidence of progress. DP-2 project staff and government officials had a shared understanding that the teacher training would be the responsibility of the SUBEB, which would be supported by the LGA. As part of the project handover, the DP-2 team in Nigeria has developed a monitoring dashboard that is expected to be transferred to the monitoring and evaluation section in the SUBEB; it will be used for tracking teachers' and students' performance, attendance, and classroom observation. To some extent, the approach for tracking the performance of teachers is already embedded at the school level with endline qualitative evidence, collected prior to the COVID-19 pandemic, suggesting that

the progress of teachers participating in training is monitored by head teachers and the RTs through lesson supervision; the aim is to provide specific feedback to individual teachers or to identify the need for further refresher training. However, it is worth noting that DP-2 project staff in Nigeria expressed the desire for a no- or low-cost extension to the DP-2 project to ensure the success of this handover, a reflection of the difficulty of embedding new processes in government systems.

With regards to the remedial lessons, evidence provided in Section 3.1 suggests that DP-2-supported remedial lessons support the highest number of students and have the highest number of hours dedicated to them on average relative to Ghana and Kenya. Since midline, remedial lessons in Nigeria have now been integrated into regular school timetabling rather than being scheduled at weekends. Finally, a disbursement of 150 million naira has been approved by the Kano State Department to be allocated to the SUBEB to ensure that it has the resources to both deliver and scale the remedial lessons. This is a significant achievement; however, it should be noted that while the funding has been approved, DP-2 were continuing to work with the SUBEB to ensure that it is released. The survival of the remedial classes in Nigeria was perceived to be crucially linked to the availability of this funding.

In summary, given that plans for sustaining both the TPD and ALP are well understood by both DP-2 project staff and government officials, and that funding has been sourced for components that require it, we score the sustainability of this component at a 4 (*Established*).

Learning centre

At midline, we found that the sustainability of the learning centre was particularly vulnerable to the ability of schools to raise funds for maintenance, as well as regular access to electricity – a finding that was repeated by both stakeholders at the school level as well as by DP-2 project staff. Consequently, the sustainability of the learning centre was scored at a 2 (*Emerging*) at midline.

There is little evidence to suggest that there has been an improvement in the potential for sustainability at endline. Nigerian schools, as per the DP-2 MIS, were reported as the most likely to have all equipment functional and present in their schools. However, relative to Ghana and Kenya, the evidence presented in Section 6.1.2 suggests that the usage of the learning centre is by far the lowest in Nigeria. As reported by the DP-2 MIS, just 21% of schools reported using the learning centre at least five times a week in 2020, a figure falling from just over half of all schools in 2018. This likely reflects a range of factors including the ability to fund maintenance of the learning centre, perceived challenges of teachers in sorting through videos to find content best suited to lessons, as well as an increased focus on supporting other project activities, in particular ALP lessons.

Furthermore, the more active enforcement of the free education policy has restricted the ability of schools to solicit resources from communities to fund the maintenance or repair of equipment, a finding corroborated by the perception of DP-2 staff that schools may have other priorities for the use of their funding.

As such, we award a sustainability score of 2 (*Emerging*), meaning that there have been no improvements on the sustainability of learning centres in Nigeria at endline, with the midline score maintained.

Girls' clubs

At midline, the level of sustainability of the girls' clubs in Nigeria was scored at a 2 (*Emerging*), on the basis that while the girls' clubs were viewed positively, there remained challenges, both in the funding of the girls' clubs as well as in the availability of female mentors to sustain the clubs. Identifying female mentors for the clubs was particularly

challenging in Nigeria, with 44% of schools visited during the midline evaluation reported as not having any female teachers.

At endline, we find some evidence, presented in Section 3.2, that girls' clubs continue to be viewed positively, and girls and teachers report changes in students' confidence and ability to communicate effectively. However, government counterparts interviewed as part of the endline research placed less of an emphasis on sustaining the girls' clubs as compared to the strong desire to sustain the teacher training and remedial lessons. A variety of reasons were given for this, including that it was felt that the 'softer' benefits of the clubs were not appreciated as much as gains in 'harder' outcomes (i.e. learning outcomes); there was also a concern that the delivery of the MBW content was linked to the continuation of learning centres to deliver the video content.

Without the support of government counterparts, we therefore score the sustainability of girls' clubs in Nigeria at a 2 (*Emerging*). While DP-2 expects that MBW mentors will transfer their skills to other teachers or mentors, there are a number of challenges to this approach. Teacher turnover remains high in Nigeria, the training requirements for mentors are relatively intensive, and without committed support from government structures (as is clearly in place for other components), it is unclear how sustainable the girls' clubs, and in particular the delivery of the MBW content, will be.

5.5.3 Systems level

At midline, DP-2 in Nigeria had made the most progress in working towards the sustainability at the systems level, with strong links reported with MOE staff at both state and local levels, scoring a sustainability level of 3 (*Becoming established*). At endline, we find continued evidence of engagement, with some project activities being adopted into State Development Plans and being internalised by the SUBEB, which is responsible for training and monitoring. In addition, funds to support project activities have been 'allocated', which would imply a sustainability score of 4. However, these funds have not yet been released, and so **we continue to score sustainability at the system level in Nigeria at a 3 (*Becoming established)*.** Should funding be secured, we would consider this to be a sustainability score of 4 (*Established*).

Broadly, DP-2 undertook three strategies towards sustainability. The first was to engage government stakeholders from the beginning of the project, and work on the implementation of the project side by side with them. The purpose of this was to ensure that they understood the project, but also to negotiate how the requirements of the project could be integrated into government systems – for example, negotiating a frequency of school monitoring visits that was less than what schools had received through the project, but more than the state's current monitoring regime. The second strategy was to work towards including the project activities into policies, specifically the State Development Plan, and the state's education sector strategy. The team believed that including the project activities in this way would ensure that government delivered on their commitment, and that appropriate resources were allocated to sustaining the activities. The third strategy was to debrief their government counterparts at the conclusion of the project, such as through sharing lessons learnt and the project tools.

Government counterparts, including those at a senior level, were committed to sustaining the project and could offer several concrete examples of this commitment. A senior official in SUBEB, for example, reported that the SUBEB chairman had instructed that the project must continue, and that he would 'do everything possible to ensure the sustainability of the project'. Similarly, he reported that the Governor of Kano State had directed that the ALP and CAP components of the project should be incorporated into the State Development Plan and education sector strategy. This respondent also confirmed, without prompting, that the state had approved 150 million naira to scale up the ALP across LGAs within the state, and that SUBEB had directed LGA-level Education Secretaries to make time for the ALP in the school

timetable. A more junior official within the state civil service also reported that there was a plan to incorporate the volunteer teachers permanently into the state system. Nonetheless, one respondent regretted that the project had been implemented in so few schools, as they anticipated that scaling the project activities to other schools would be a significant challenge.

Government respondents were reluctant to commit or confirm funding for the project, but they were generally optimistic. The funding for training and monitoring would come out of existing SUBEB and UBEC budgets. Two respondents also alluded to the possibility of current UNICEF and Global Partnership for Education (GPE) funding being used towards sustaining project activities at the school level. There was currently a proposal for additional funding to scale these activities, but the likelihood of these funds being available was uncertain given the financial difficulties of the state at the moment. Without these funds, project activities would still continue within current schools, or possibly extend to a few more schools, but not more widely than that.

5.6 Conclusions

It should be noted that COVID-19 has had a significant impact on sustainability plans across the three countries, though this has manifested itself in different ways. In Nigeria and Ghana, concerns expressed by both DP-2 staff and government respondents mainly centred around how COVID-19 might affect plans that are in place to secure funding for the continuation of project activities, specifically that the economic impact of the pandemic might divert funding away from supporting project activities towards recovery efforts. In all three countries, but in particular in Ghana and Kenya, the pandemic also interrupted efforts to hand over project activities to governments counterparts, who have been understandably overwhelmed with their own COVID-19 response measures, although DP-2 continued to make efforts to maintain engagement with government counterparts throughout this period.

At the community level, the sustainability of the CAP process has always relied crucially on the success of engaging the head teacher and community. Where this was most successful, in Nigeria, this was based on a consistent engagement with a diverse group of school and community stakeholders, including not only those directly related to a child's education (e.g. teachers and parents), but also prominent or influential community members who could support the mobilisation of resources to respond to barriers identified by the CAP planning. In Kenya and to a smaller degree in Ghana, progress on CAP and community and head teacher ownership of the process has been slow in some schools, which could threaten sustainable CAP practice.

At the school level, the sustainability of project activities is more likely when two factors are present. The first is when the success (in terms of changing outcomes as learning outcomes) is tangible and when the added value of the project activity (as distinct from other projects being implemented) is clearest. This is most clearly demonstrated with the teacher training and ALP in Nigeria and Ghana, where stakeholders at different levels, including those at the school and in government, have reported that they see these activities as making a distinct and important contribution to improved learning outcomes. The second factor relates to this in terms of sustained engagement with government counterparts to both persuade and convince them of the efficacy of the activity, and to support them in thinking about how such activities can be aligned with ongoing government programming. Efforts in this regard have been consistent in Nigeria since baseline, where a systematic approach to government engagement has been in place for the full cycle of DP-2 implementation. Ghana has increased its efforts in this regard since midline, which was reported to be particularly influenced by the team's recruitment of the Senior Technical Lead with specific responsibility to engage with government counterparts. In Kenya, engagement with government has also increased since midline, at a senior level with the MOE and TSC, with specific departments

such as the MOE's quality assurance department, and at local level with county technical committees.

At the school level, the sustainability of project activities is less likely when there is the perception that the continuation of project activities requires the investment of resources that may be outside of the capability of the school, and when these will not be supported by government structures. This is most noticeable with the learning centre in all three countries. A running theme in all three countries has been concerns around the ability of schools to secure funds to both power and maintain the equipment, a finding that finds some support from the DP-2 MIS which suggests that just over 10% of schools in all three countries do not have either a functioning video player or TV to use in the classroom.

Sustainability at the system level appears to be related to two key factors: systematic efforts to engage government at different levels; and the ability of DP-2 to demonstrate the tangible added value of project activities. Nigeria, in particular, demonstrates the value of continued engagement with government counterparts with certain project activities being incorporated into State Development Plans and being entrenched in SUBEB planning. This is more powerful when combined with an ability to demonstrate the success of project activities tangibly with a clear vision of how these activities present an added value over and above what is already occurring in schools. This is clearly seen with the ALP and TPD components, which have received government buy-in in Ghana and especially in Nigeria as an improvement on the status quo. In Kenya, the DP-2 supported remedial lessons were perceived by government counterparts as being one among many remedial classes on offer. Government counterparts in Kenya reported that there was an intention to continue the TPD component through an integration into existing government teacher training and support practices. However, they also reported that no additional budget had been allocated to support this, and expressed concerns that this presented a risk to the sustainability of the TPD approach given other pressures on existing budgets.

6 Key intermediate outcome findings

6.1 Teaching quality

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 and that teachers become more skilled and knowledgeable through participatory training grounded in high-impact teaching practice, follow-up school-based coaching and access to quality teaching and learning materials. TPD constitutes a core component of DP-2 project activity, with a focus on improving teachers' performance, the quality of teaching, and ultimately learning outcomes. Box 5 provides an overview of the TPD component in Phase 1 primary schools.

Box 5: DP-2's design of TPD in Phase 1 primary schools

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.

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 session, though according to Impact(Ed), in practice the numbers were higher for larger schools. Teachers who have received direct training package from DP-2 are called RTs. 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, focusing on teacher observation and coaching**. While there are no strict guidelines around the number of monitoring visits, it is expected that each Phase 1 school would be visited approximately two to three times a month.

DP-2 also provides schools with **TVs, video and digital content players and educational DVDs (collectively referred to as the media centre)**. DP-2 trains teachers on integrating the educational DVDs into their regular teaching. It is expected that each school uses the learning centre at least five times a week for regular classes.

Lastly, DP-2 provides RTs with **access to a mobile learning platform, operated by DP-2 partner Cell-Ed**. Here, teachers can use their basic phones to access reinforcing teacher training refresher content on general pedagogy, literacy, and numeracy, based on the DP-2 direct training content.

This chapter begins by discussing self-reported perceptions of changes in teaching quality, drawing on findings from the qualitative research at endline, which explored self-reported perceptions about DP-2 teacher training from head teachers, RTs, and girls. We then give an overview of the implementation of the TPD component, drawing on monitoring data collected by DP-2 throughout the project's lifetime, and on the qualitative data collected at endline.

6.1.1 Self-reported perceptions of changes in teaching quality

The qualitative data offers insights into the self-reported perceptions of changes in teaching quality. All three countries offer evidence on the improvement in teachers' skills to teach literacy and numeracy, incorporate child-centred teaching methods, and use assessment strategies. Most of these improvements were attributed to the teacher training, mentoring opportunities, and support from school and community structures that teachers received in the last year as a result of DP-2.

We structure this section to cover perceptions of changes in four key teaching practices that were covered in the DP-2 training: the use of literacy strategies; the use of numeracy strategies; the use of a child-centred approach to teaching to create a safe and inclusive learning environment; and the use of assessment strategies. Under each sub-section, we describe the findings from the quantitative impact analysis on teaching quality conducted at midline based on lesson observations. We then present the findings from the qualitative research at endline on the aspects of the training that teachers recall best and report finding most useful in their lessons.

Use of literacy strategies

A core part of the DP-2 training is providing teachers with strategies for teaching literacy and numeracy concepts that teachers sometimes find difficult to teach. For literacy, these include strategies for developing phonemic awareness, phonics, vocabulary, comprehension, and fluency. At midline, the impact analysis showed that teachers in treatment schools in Nigeria were successfully using more literacy strategies compared to teachers in control schools. In Kenya, where the logframe target for this indicator was met, there was some indication of positive progress as well, although this did not reach statistical significance. In Ghana, we did not find any statistically significant evidence of impact of DP-2 on teachers' use of successful literacy strategies at midline.

At endline, RTs across all countries, but most commonly in Ghana, could recall content from the DP-2 training on literacy strategies for teaching the sound structure of language. RTs across the countries could remember the specific strategies involved in teaching phonics, including decoding, blending, and segmenting.

> *OK, like the blending that I am talking about, if I am teaching students in Primary 1 and I want the child to pronounce the word 'part', I will take the letter *P* and pronounce it for them, and add *ART*, and add the sounds to be *Part*, for them to blend the two to come out with the word.*
>
> **Interview with ALP RT, Savelugu, Ghana**
>
> *There was actually one lesson that the DP-2 people from Nairobi taught us using the devices given to the school and the way it should be used. We also had training on pronunciation and phonetics, how you segment them, how you blend them, and how to decode them. I found that it was helpful and at least some of these slow readers could actually start reading.*
>
> **Interview with ALP RT, Kiambu, Kenya**

As a result of their increased understanding of these strategies, teachers felt more confident delivering activities on the sound structure of language during their lessons. Teachers provide examples of how they have found these techniques, as well as child-centred strategies, very helpful, and reported integrating these into their teaching practices. They believe these approaches have been beneficial because they allow students to feel more engaged and participate in the lesson, and have thereby led to noticeable improvements in the reading abilities of the students. Teachers point out that the participatory nature of the activities to improve word formation, phonetics, and pronunciation have especially helped those students who were slow readers since they learn different ways of forming words, breaking down words and using phonetics.

> *I was taught how to teach letter sounds, word formation. Before this training, I could only confidently teach letter names, after the training, I understood letter sounds better. When I am coming to class, I arouse the interest of the students by singing a popular song such that they all join me, sometimes the song is on letter sounds, all students immediately join me in this. This way, I'm able to start my class with happy students.*

Interview with ALP RT, Nigeria

Use of numeracy strategies

Numeracy training focused on developing teacher capacity on a range of strategies to support conceptual understanding, procedural fluency, problem solving, reasoning, and justifying and developing a positive outlook towards mathematics, with an emphasis on using accurate mathematical models, particularly when teaching complex topics. At midline, the impact analysis found some positive indication across all three countries that RTs were using the numeracy strategies from the training. 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. In Ghana, there was evidence at midline that teachers in treatment schools were more successful at using the numeracy strategies when they attempted them, compared to teachers from control schools.

At endline, in the qualitative research, teachers mostly recalled the use of teaching aids to make lessons participatory and facilitate the teaching of certain concepts, particularly mathematical concepts. This was most commonly mentioned in Nigeria. In Nigeria, one particular strategy that teachers reported having frequent recourse to was the use of teaching aids (such as cardboard papers, picture cards, bottle tops, Impact(Ed) video clips, etc.) to make lessons more practical for students, and to help explain mathematical topics, such as measurement. In Ghana, teachers provide examples of using Impact(Ed) videos and teaching strategies that help them to explain complex concepts, such as fractions, sorting, and multiplication, more easily, while they were earlier only relying on the use of items such as oranges to explain some of these concepts. In comparison, there were relatively few mentions of numeracy strategies in Kenya.

> *If you are using a skill that the children do not understand, you will quickly change to another skill that will make the children understand. Teachers also use teaching materials and teaching aids to deliver lessons to help the children understand the topic quickly, especially when they are teaching types of shapes. They use cardboard paper and ask the students to use local materials to make shapes as well, to cut them into different shapes: cycle, triangle, kite, trapezium. These shapes help the children to know what it means.*
>
> **Interview with head teacher, Nigeria**

Other strategies specific to teaching numeracy were not mentioned, but the general child-centred approaches discussed in the next section are a core component of the approach to teaching numeracy that DP-2 promotes.

Child-centred teaching and creating a safe and inclusive environment

During the DP-2 teacher training, teachers are trained in creating a safe and inclusive environment during their lessons. This includes building students' confidence by praising them for the effort they are making, giving students space to make mistakes, treating failure as a natural part of learning, and refraining from belittling or shaming students. At midline, the impact analysis showed that DP-2 had a positive impact on teachers' ability to create a safe and inclusive environment in Ghana. The logframe target was met in Nigeria, indicating that there was positive progress, although this did not reach statistical significance. In Kenya, there was no evidence that DP-2 had led to an improvement on this indicator.

One way in which teachers are encouraged to create a safe and inclusive environment is through using an inclusive, child-centred teaching approach. Child-centred teaching methods are core to DP-2's literacy and numeracy trainings. This includes guidance on modelling of paired and group learning, using strategies like brainstorming to tap children's

prior experience and interests, selecting teaching and learning materials that are representative and inclusive, calling on non-volunteers, and promoting mutual respect

In the qualitative research at endline, head teachers and RTs across the three countries reported that RTs were using child-centred approaches that they had learnt from the DP-2 training. Teaching practices that RTs particularly recalled from the training included peer engagement, group work, and paired learning (where weaker and stronger students are paired up). Teachers also mentioned being told about the importance of treating girls and boys equally during their lessons.

Teachers stated that the use of these approaches has enabled them to teach their students using activities that encourage participation and engagement, instead of just lecturing them. They mentioned that integrating these approaches has made it easier and more productive for them to conduct their classes. Teachers reported that adapting their teaching strategies to a range of student needs, engaging both boys and girls in different subjects, encouraging students to ask more questions in class, and being mindful that they do not belittle them if they get answers wrong has helped to build students' confidence and encouraged more active participation in the class. Teachers believed that the academic performance of children in their classes has improved by virtue of increased participation and the practice of children working with each other.

> *Like allowing your students to come together in pairs. Think together, bring out their ideas and then share it out with their colleagues. And also, I learnt during this workshop we should always try to bring all students together in class, like how you ask your question based on their level. We can bring all students along, both slow students and active students depending on how you ask the questions. You will be given a bit difficult to those you think can answer and the less to those you think are slow students just for them to all be part of the class. And also, in gender, we also talked about gender like how to gather boys and girls in class. So today you see that mostly we use boys mostly in our mathematical lesson. We try as much as possible to engage the girls too.*
>
> **Interview with ALP RT, Sagnarigu, Ghana**

The findings from head teachers and ALP RTs were also corroborated by girls sampled for the qualitative study at endline. Girls across countries provided examples of how teachers had created an environment where they felt comfortable to ask questions, make mistakes, or admit that they had not yet understood something. They reported feeling more comfortable and confident about asking questions without fear of being reprimanded, which they mentioned was previously a common practice. As at midline, they also reported that teachers used illustrations and improvised materials to aid comprehension; that they carried out group work and question-and-answer sessions; 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 and provided explanations when they had not. There were examples of this both for remedial classes and regular classes, and girls remember being encouraged to ask more questions.

> *We were doing very well, our masters too were teaching well, we were allowed to ask questions and when they give us question, we were able to solve them.*
>
> **Interview with old cohort girl, East Gonja, Ghana**
>
> *In our remedial lesson, if the teacher gives work and there are boys in the class and we do not know how to do it, he does not make us scared or embarrassed, he encourages us to try our best to say whatever we have issues with as everyone must say their mind. But now honestly there is no such fear even when I'm in my class, I ask questions and also respond as well.*

Interview of new cohort girl, Nigeria

Use of assessment strategies

DP-2 teacher training also focuses on teachers' use of assessment strategies during their classes. Teachers are encouraged to use a range of formal and informal strategies, such as question-and-answer sessions, quizzes, exercises, and homework to gauge whether students have understood the material and where there are particular gaps. Teachers are encouraged to check the knowledge and understanding of a range of students at multiple points during the lesson. At midline, the impact analysis found strong evidence in Nigeria and some evidence in Ghana that teachers in treatment schools were using assessment strategies more successfully than teachers in control schools. There was no evidence of a change in Kenya, which may have been in part because teachers in Kenya across both treatment and control schools already had higher rates of success in their use of assessment strategies, which meant that there was more limited room for improvement.

At endline, findings from the qualitative research show that head teachers and RTs in Nigeria reported that teachers were using a more structured approach to checking the knowledge and understanding of their students, in line with the quantitative findings from the midline. Teachers started lessons by reviewing the previous lesson, used question-and-answer sessions, and provided students with adequate time to practise. One head teacher mentioned that, in his school, teachers are advised not to overload students with information in a short span, but to teach a little and pause intermittently to check for understanding before moving on.

Another head teacher explained how checking for understanding was built into the different stages of a lesson, and teachers should prepare for this during their lesson planning. He explained the use of assessment strategies in three stages in the lesson: the assessment at the start of the lesson involves asking questions to evaluate the knowledge of the students; the assessment during the lesson is to pause while teaching and ask some questions about what has been taught; while at the end, a general assessment of the topic taught is conducted.

One of the cohort girls in Nigeria explained how teachers were using assignments to gather feedback on what students had understood, and subsequently repeated topics that had been poorly understood.

> *Our English teacher gives us lots of assignment, if we return those, he gives us another one to write. Last time, he asked us to write on how we spent our Salah holiday. Our teachers review the work and allocate scores to them. He explains again for us to understand where we have not done well.*
>
> **Interview with new cohort girl, Nigeria**

In Ghana, one key factor that was mentioned by cohort girls is that students were encouraged to ask questions in class, and in some schools, girls reported having quizzes in class where they competed against boys. This is another technique allowing the teacher can understand where remaining gaps are and to provide further explanation. This was outlined by girls both in primary schools as well as JHS:

> *We did quizzes, sometimes against the boys. And that made it exciting.*
>
> **Interview with new cohort girl, Tamale, Ghana**

In Kenya, the qualitative research provides examples of head teachers seeing new assessment practices being adopted by teachers, suggesting that some positive changes have taken place in the last year. These practices include teachers going through and checking children's' books instead of asking children to simply exchange them with one

another. Head teachers believe that this contributes to improving the performance of students. A cohort girl in Kenya also spoke about the teacher repeating things that students had not understood, suggesting that the teacher was gathering feedback on where there were gaps in students' knowledge and understanding.

> *We are studying, we get time to study and teachers are also better, they repeat things if one does not understand, he gives us assignments to do and shows us how to do them.*
>
> **Interview with old cohort girl, Kajiado, Kenya**

Challenges with the implementation of the DP-2 teacher training

Despite the efforts to adopt interactive teaching methods to keep the class lively and students interested, RTs and head teachers in Nigeria reported that class sizes remain a major barrier to the quality of teaching. In half the schools, this was reported to be partly a result of enrolment increases resulting from stricter enforcement of the provision of free basic education by the government. Efforts from CAP participants were also reported to have contributed to increased enrolment in some instances. Whilst the contribution of the CAP is encouraging, increases in enrolment make it more challenging for teachers to manage classes in often overcrowded classrooms.[74] In contrast, as reported in Section 3.1, the smaller class sizes during remedial lessons made lessons easier to manage for teachers and resulted in girls finding lessons more enjoyable.

Head teachers and RTs in Ghana in some schools reported that the high influx of volunteer teachers in their school often necessitated running training sessions for these new teachers, especially on the use of the DP-2 videos and equipment, and teaching strategies. Since the volunteer teachers would often leave or be transferred a couple of months after the training, this exercise had to be conducted in a recurring manner. This could potentially influence the effectiveness of the training sessions since the comparative levels of understanding and grasp of the technical concepts and strategies is likely to be varied among volunteer teachers.

In Kenya, as has been discussed in Chapter 1, high rates of teacher turnover have been a persistent challenge for the project. This problem particularly affects non-formal schools and schools in Wajir.

6.1.2 Implementation of the TPD component

In this section, we review the implementation of the TPD component to determine whether activities were implemented as expected and to scale. The section focuses on the implementation of the TPD component in Phase 1 primary schools, as these schools are the key focus of the evaluation. Given that most cohort girls in Ghana and Nigeria have transitioned to junior secondary schools since September 2019 and have therefore spent part of their time since midline in these schools, we also briefly review the implementation of TPD in junior secondary schools. The section draws on monitoring data collected by DP-2 over the duration of the project, and qualitative data collected at endline.

Implementation of TPD in Phase 1 primary schools

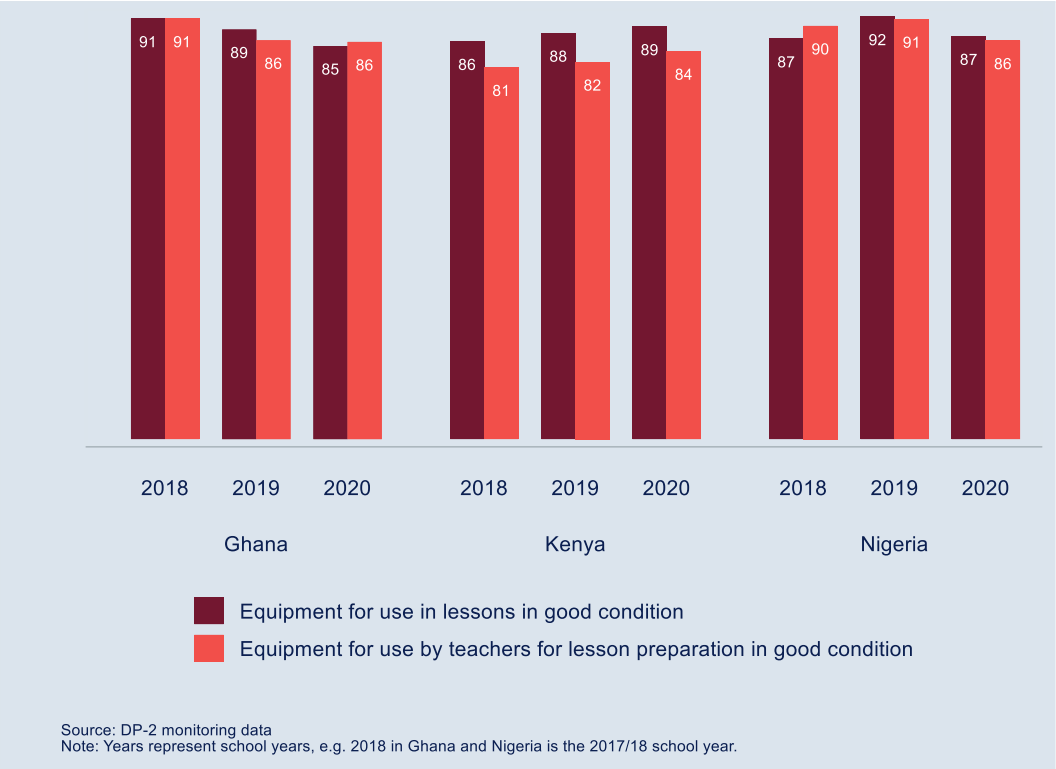
Use of educational media through the learning centre

Figure 34 shows the proportion of schools that have learning centre equipment in school and in good condition. This shows that a small but not inconsequential number of schools were observed not to have functional learning centre equipment on the day of the

[74] Our findings at midline shows that 60% of schools in Nigeria had a student-to-teacher ratio of 40:1 or higher.

monitoring visit.[75] In approximately 10 – 15% of schools across the three countries, the equipment for use in lessons was not in a good, functioning condition in the 2020 school year. In a similar proportion of schools, the equipment intended for teachers to use to prepare for lessons was not in a good, functioning condition. Overall, in 78% of schools in Ghana, 75% of schools in Kenya and 86% of schools in Nigeria, all learning centre equipment was functional in the 2020 school year. The midline evaluation found that some schools in rural and remote areas in Ghana and Nigeria, as well as some non-formal schools in Kenya, were not able to afford maintenance of the learning centre from existing school budgets, and therefore had not repaired broken equipment.

Figure 34: Proportion of schools where learning centre equipment is in school and in good condition

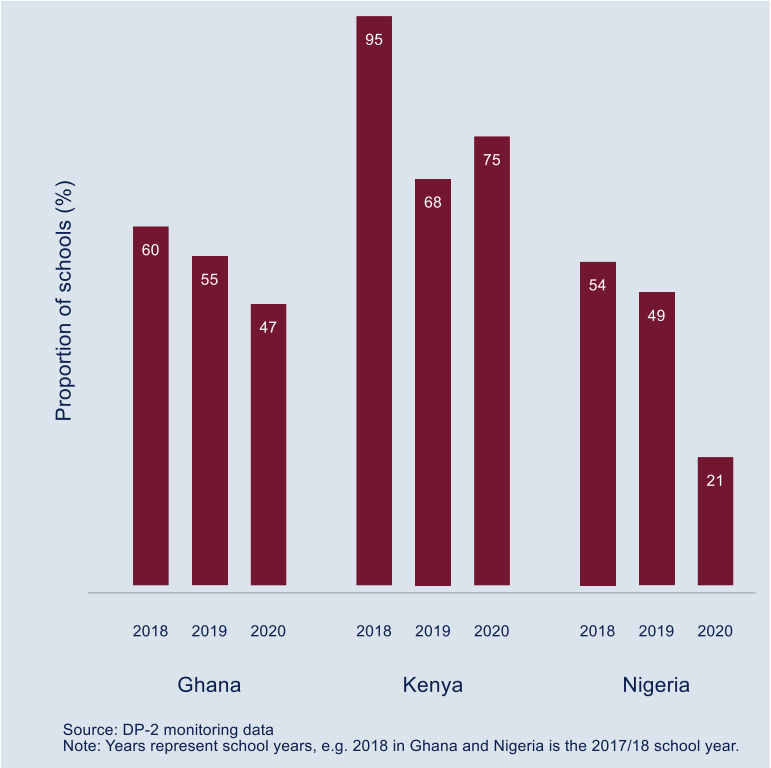


Source: DP-2 monitoring data
Note: Years represent school years, e.g. 2018 in Ghana and Nigeria is the 2017/18 school year.

Figure 35 shows the proportion of schools that have used the learning centre at least five times a week in the last month based on DP-2's monitoring data. Based on this data, **the usage rates of the learning centre are fairly low across the three countries, but particularly so in Ghana and Nigeria.** Our evaluation findings at midline, however, showed that girls in Kenya were least likely to have watched a video in class in the current or previous week. Overall, 47% of girls in Kenya had watched a video in the last two weeks, compared to 57% of girls in Nigeria and 63% of girls in Ghana. Since school sizes tend to be larger in Kenya, students may be getting less exposure to the videos even when learning centres are used more regularly.

[75] According to Impact(Ed), media centre equipment was considered to be not functional if it was not in a working condition or if the school did not have access to electricity on the day of the visit and was therefore not able to use the media centre equipment.

Figure 35: Proportion of schools that are using the learning centre at least five times a week[76]



Source: DP-2 monitoring data
Note: Years represent school years, e.g. 2018 in Ghana and Nigeria is the 2017/18 school year.

Findings from the evaluation identify challenges that schools face with using the learning centre. Of course, schools are not able to use the learning centre when the equipment is not functional. In addition, at midline, we found that the proportion of schools without access to electricity had increased in Kenya and increased substantially in Nigeria, which may be one reason for decreases in the percentage of schools that are regularly using the learning centre. At endline, RTs in Nigeria reported running out of fuel for generators to power the learning centre and having to use small laptop screens to show videos when the TV was not working. In Nigeria, this finding was exacerbated following a SUBEB communication related to compulsory free education for all. Some head teachers took this communication to mean that they could not seek support from the community to support the school, for example with donations of fuel for generators. Whilst this was later clarified by the SUBEB some head teachers remain cautious about approaching communities for donations.

In addition, the qualitative findings from baseline and midline show that teachers did not always find the content of the videos relatable. They said that they would have preferred content that was country-specific and material that spoke directly to the course syllabus. Whilst approaches to previewing and cueing relevant material were part of the DP-2 training, the time taken to set up the video and organise the class to watch the video during a lesson served as a deterrent in some cases. This was also reported by head teachers and RTs in Nigeria at endline, many of whom reported challenges in sorting through the videos to find the one suited to the lesson they were delivering. In Ghana, an additional constraint was the need to share the learning centre across many students and classes, and the associated infrastructural limitations of space for the children. Further, issues in repair and maintenance were also often cited as challenges.

Where media content was used, teachers find that videos have helped engage students. Students tend to understand and participate better when they are taught in this way; the learning centre has simplified and improved teaching, and makes the lesson interesting since

[76] According to Impact(Ed), teachers do not always complete learning centre logbooks despite being encouraged to do so, and learning centre usage may therefore be underreported.

the students feel more curious. Generally, RTs felt that students are more motivated to learn as they are exposed to the theoretical and practical aspect of whatever subject is being taught.

> *DP-2 provided us with these CDs and DVDs that have a lot of programmes for teaching. We have MBW, teaching and learning materials. Once you play the videos, you do not have to stress yourself because the video says it all. It reduces the way the student stresses himself to explain the concept. Some students find it better because they see what the teacher has explained to them. Children like TV a lot so once they see that they are going to learn a lesson and watch a video, you see that they are always interested. Those who don't talk in class will also begin to participate in the class.*
>
> **Interview with head teacher, West Mamprusi, Ghana**

Implementation of direct teacher training

As discussed in Chapter 1, **the roll-out of the direct teacher training sessions differs by country**. In Ghana, the roll-out of the training sessions was completed in November 2018; in Nigeria, it was completed in February 2019, and in Kenya in September 2019.

In the DP-2 Midline Report, we reported that schools were sending the expected number of teachers (between four to six) per school to attend the direct teacher training sessions delivered by DP-2 staff. However, the midline findings also indicated high rates of teacher transfers, which meant that teachers who had been directly trained by DP-2 were at times transferred to another school shortly after having received the training. For training sessions that had been delivered approximately a year before the midline data collection, approximately 15–20% of teachers in Ghana, 20–30% of teachers in Nigeria, and 25–35% of teachers in Kenya had left the school subsequently. In Ghana and Nigeria, DP-2 was working with their government counterparts on trying to make sure that if teachers or head teachers were transferred, they were transferred from one DP-2 school to another. In Kenya, this was not always possible because teachers leave non-formal schools for better opportunities and teachers in Wajir are transferred for security reasons.

One implication of the teacher transfers is that the same teachers often did not attend all of the direct training sessions. This is the case particularly in Kenya where rates of teacher transfer are highest and where DP-2 staff reported having little power to persuade schools to send the same teachers to attend both parts of the literacy/numeracy training. This means that students are taught by teachers who might often not have had exposure to the full range of direct training.

The qualitative data at endline explored further the perceptions of the training sessions that were received. As was also mentioned at midline, in general, there was a positive perception among the head teachers and RTs in all three countries regarding the training sessions organised by DP-2 in terms of expanding teachers' understanding of the topics they were taught. A majority of RTs recalled learning a range of teaching strategies from the training sessions they attended and found these strategies to be helpful. They said that they were taught how to manage and conduct their classes, and how to teach slow students. They also learnt that by grouping students according to their performance they could be taught better. In general, critical feedback about the training was minimal, but the challenge presented by the limited duration of it was reported by some schools across the countries; this perhaps also hindered teachers' ability to absorb the concepts fully.

In Kenya, nearly all RTs interviewed across the six sampled schools reported attending teacher training sessions conducted by DP-2 before school closures at least once or twice; however, very few teachers could completely recall the details of the content of the training sessions. In Nigeria and Ghana, all teachers interviewed have attended at least one session organised by DP-2. In both countries, teachers reported that training sessions on Numeracy

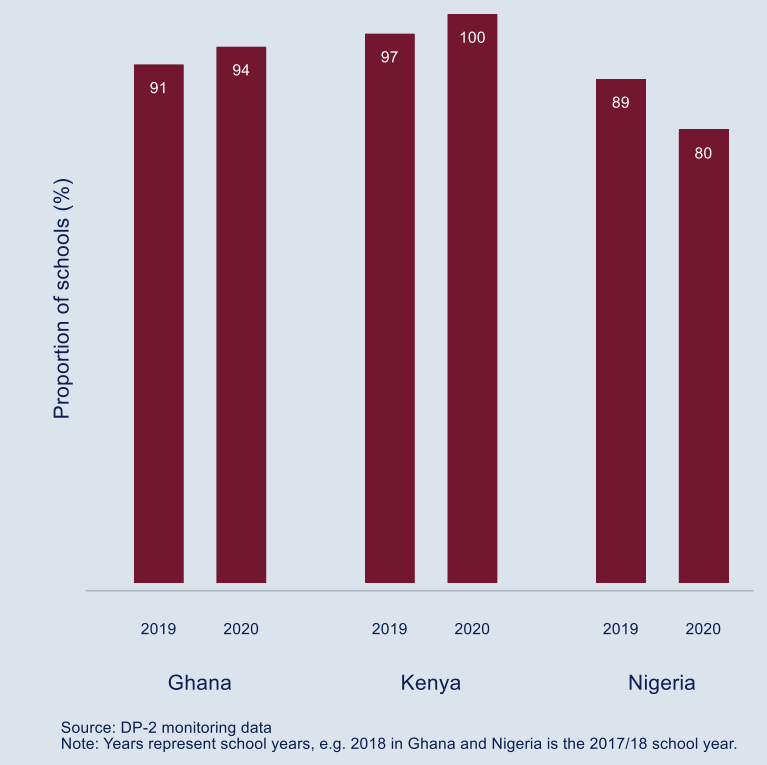
1 and 2 included topics such as how to teach multiplication in a very simple manner without using calculators; in Literacy 1 and 2 covered themes such as letter sounds, word formation, blending sounds to form words, and pronunciation. In addition, teachers also reported being trained on the use of the media centre.

In Kenya, the RTs also mentioned that their training sessions continued to be conducted over Zoom after schools were closed because of COVID-19 and were mostly focused on revision of previous training sessions. Head teachers from the six sampled schools reported that DP-2 supplemented teacher training sessions by giving provisions such as books, pens, and stationery to schools.

Implementation of step-down training

Figure 36 shows the proportion of schools that have a plan for delivering step-down training. This is high across all of the countries, but lowest in Nigeria.

Figure 36: Proportion of schools that have a plan for delivering step-down training



Source: DP-2 monitoring data
Note: Years represent school years, e.g. 2018 in Ghana and Nigeria is the 2017/18 school year.

Figure 37 shows the proportion of schools that have delivered step-down training in the last 90 days. This is highest in Kenya, but lower in the other two countries, particularly in Nigeria in 2020. The midline evaluation found that one reason why fewer step-down training sessions were conducted in Nigeria and Ghana is that schools tended to be smaller; in several schools, all English and mathematics teachers were directly trained by DP-2. In addition, teachers in schools across the three countries also struggled to find time to deliver step-down training. In Kenya, this was linked to the perception of respondents that teacher training can only be delivered on weekends or during holidays. It should be noted that the DP-2 project team in Kenya reports that this regulation only applies to training which requires teachers to move out of the school, and therefore should not apply to step-down training conducted at the school. The DP-2 project team in Nigeria also noted at endline that step-down training during 2020 was affected by instability related to national and state elections, high rates of teacher transfers, and activities from other projects competing for teachers' time.

The midline evaluation showed that training content is likely to be diluted when it is delivered through the step-down format. Training sessions last two full days during the direct training period, but most step-down sessions last only between one and four hours, although RTs may be stepping down training over multiple sessions.

Figure 37: Proportion of schools that have delivered step-down training in the last 90 days

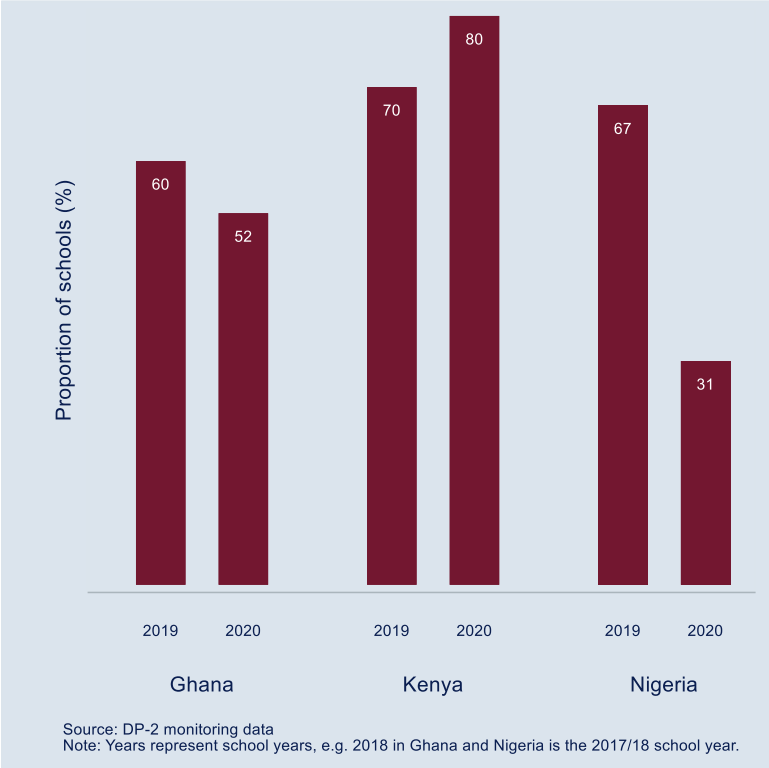
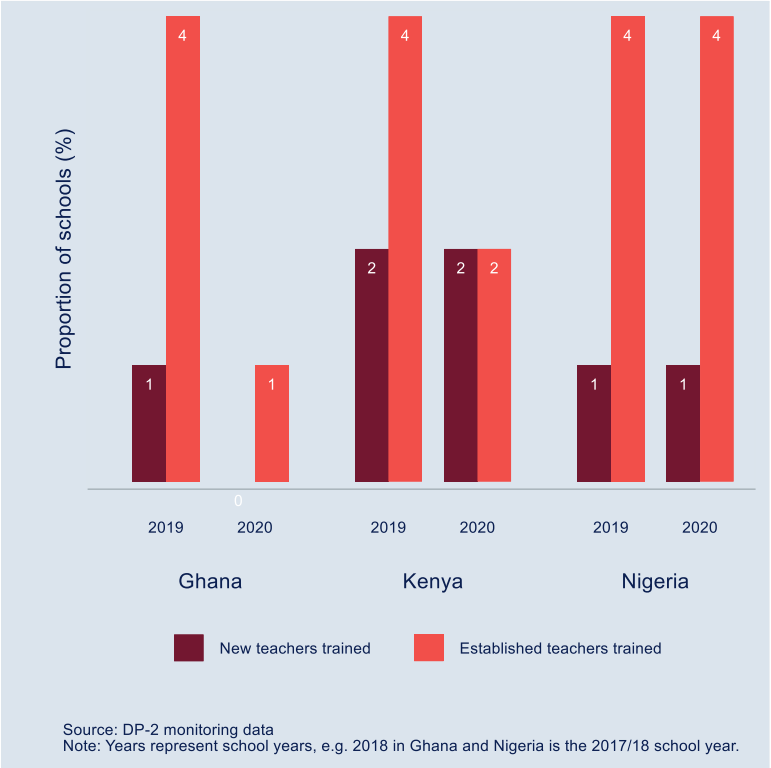


Figure 38 shows the median number of new and established teachers trained during step-down training sessions.[77] Overall, the number of new teachers trained during step-down training sessions seems to be fairly small, particularly in Kenya, where school sizes are larger and where primary school has two additional grades compared to Ghana and Nigeria.

[77] The timeframe for this indicator is not clearly defined in the monitoring data.

Figure 38: Median number of new and established teachers trained in step-down training



Source: DP-2 monitoring data
Note: Years represent school years, e.g. 2018 in Ghana and Nigeria is the 2017/18 school year.

The qualitative findings at endline on step-down training sessions reflect a similar pattern to those at midline. As was the case at midline, the mention of step-down training was variable across the countries for the schools visited in the qualitative sample, and most schools usually reported that teachers attended direct training sessions.

Some schools did report organising step-down training sessions for teachers who were unable to attend the DP-2 training, but these were reported at times to be informal/conversational in nature, and organised on a needs basis without a specific length or structure. The number of people varied depending on the teachers the training was relevant to. In these training sessions, RTs usually trained other schoolteachers on topics such as using gadgets (TV and DVD) for teaching or the curriculum.

In Kenya, the step-down training sessions usually happened after classes and were conducted either during lunch time or over tea. These sessions were organised once a week on average and lasted roughly 20–30 minutes. In Ghana as well, the step-down training sessions usually ranged from 30 minutes to one hour in length, and were linked to the occurrence of a training session that was organised by DP-2. In addition, another consideration regarding the frequency and need for step-down training was linked to the recruitment and influx of voluntary teachers in the school. A similar pattern is observed in Nigeria, where the occurrence of step-down training sessions is related to the provision of training by DP-2 as and when that happens. Teachers in Nigeria did not report having a specific frequency for the training sessions, and stated that it was conducted on a needs basis.

Pre-COVID-19 data collection that occurred in Nigeria also offered some evidence to show that following step-down training, the progress of participating teachers is monitored at the school level by head teachers and the RT, through lesson supervision. They give feedback on areas that need improvements individually; at other times, if there is need for a refresher, they send in a circular again inviting all the teachers for a refresher training to help bring all teachers up to speed, discuss areas of concern, and offer solutions.

With regards to the plans to continue step-down training after the project ends, RTs in Kenya and Nigeria were confident about continuing with these sessions even after the project ends, while those in Ghana were a little uncertain. While most of the school respondents in Ghana found DP-2 learning materials useful, they believed that if the DP-2 teacher training sessions stopped, then step-down training sessions, which were conducted after teacher training sessions, would also not happen. In Nigeria and Kenya, all school stakeholders interviewed mentioned that they would be able to conduct step-down training and use a child-centred teaching methodology since they had already received learning resources from DP-2 to facilitate this, and found the child-centred techniques useful. Only a few school respondents shared that the frequency of refresher training sessions would change once the project ended. This is discussed further in Chapter 5.

Implementation of monitoring and support visits

Figure 39 shows the number of monitoring and support visits received by schools per term.[78] **This shows that there is considerable variation in the number of monitoring visits that each school receives over a term**: 23% of schools in Ghana and Kenya, and almost 17% of schools in Nigeria received 10 or more visits per term. At the same time, approximately 10% of schools in Ghana and Nigeria, and 4% of schools in Kenya, had received only one visit. At midline, DP-2 staff in Nigeria and Ghana reported facing logistical challenges in reaching schools in remote and rural areas. In Nigeria, some trainers noted that during the rainy period, some communities are inaccessible due to poor roads. This is likely to contribute to some schools receiving fewer visits per term. In addition, DP-2 indicates in their progress reports that particularly during the later phases of implementation, poorly performing schools were targeted for monitoring visits. This would lead to some schools receiving higher numbers of visits than others.

Overall, DP-2 trainers were reaching the expected number of monitoring visits (6–9 visits a term per school on average[79]) in Kenya in the 2019 and 2020 school years (6.2 in 2019, 6.6. in 2020). In Nigeria, the average number of monitoring visits per school per term was slightly lower (5.6 in 2019, 5.2 in 2020). In Ghana, the average number of monitoring visits per school per term was high in 2019 (7.6 visits) but much lower in 2020 (3.4 visits).

[78] This is for schools which received at least one monitoring and support visit per term. Each term, a very small number of schools in each country were not visited at all.
[79] Calculated from two to three visits a month.

Figure 39: Distribution of number of monitoring visits per term (2019 and 2020 school years)

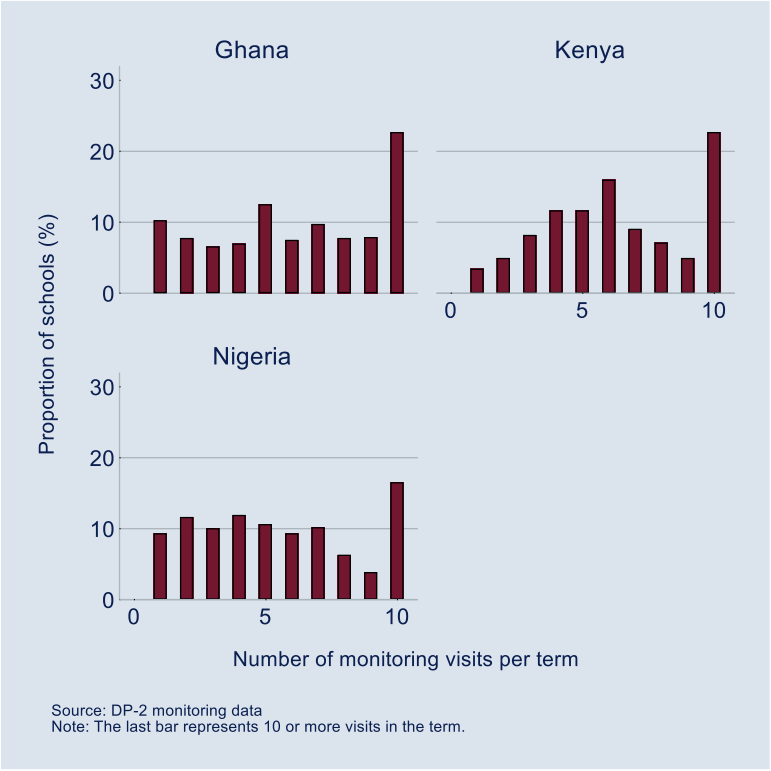


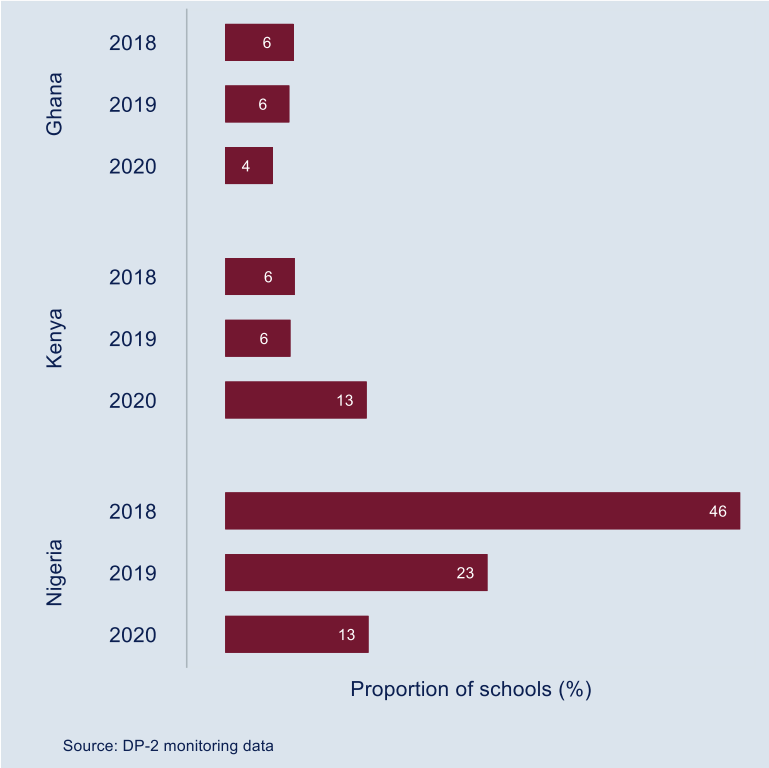
Figure 40 shows the proportion of monitoring and support visits conducted by DP-2 staff that are accompanied by MOE officials. MOE officials are invited to DP-2 training sessions. Joint monitoring visits by DP-2 staff and MOE officials help to familiarise the officials with the objectives of the project and secure buy-in to the project. MOE officials also conduct monitoring visits on their own as part of their mandate to monitor projects being implemented in government schools.

The number of monitoring visits accompanied by MOE officials is highest in Nigeria, although the proportion of visits accompanied by MOE officials is low across all three countries in the last two years. In Kenya, the number of monitoring visits accompanied by government officials is higher in the semi-arid/arid regions, compared to Nairobi and surrounding areas. For example, in 2019, only 1% of monitoring visits in Nairobi and surrounding areas were accompanied, compared to 11% of visits in the semi-arid/arid regions.

While only a small number of monitoring visits are accompanied by MOE officials, fairly high numbers of teacher interviewed at midline in Ghana (81%) and Nigeria (83%) reported that they had received a monitoring visit from a government official in the last term. This likely means that government officials are also conducting monitoring visits without being accompanied by DP-2 staff. In Kenya, the proportion of interviewed teachers who reported having received a monitoring visit from a government official in the last term was lower, at 43%.

At midline, we reported that it was easier for DP-2 staff to conduct monitoring visits together with MOE officials in Nigeria because desk officers for DP-2 are situated in each LGA-level education office. It may be that the change in political leadership and subsequent restructuring of government departments contributed to the lower frequency of accompanied visits in Nigeria in 2019 and 2020. In Kenya, DP-2 staff and government officials at midline explained that conducting mostly joint visits, as was originally planned, was not possible due to difficulties in scheduling these and time constraints experienced by government officials. In their progress reports, DP-2 also reports that monitoring visits from MOE officials happened less frequently than expected because of MOE time and resource constraints.

Figure 40: Proportion of monitoring and support visits conducted by DP-2 staff that are accompanied by MOE officials



Prior to the lockdown in Nigeria, the field team was able to engage with the schools on the supervisory structures, as well as to review the school's visitor books in three schools. Data regarding monitoring and supervision was not requested as part of the revised focus of the qualitative endline design in Ghana and Kenya.

In Nigeria, records from some of the schools revealed that SUBEB visited the school at least once a month, while Impact(Ed) supervisors visited the school about twice a month. SUBEB officers are also said to review school registers and teachers' lesson plans, and also observe classes and give feedback during their visits. In another school, the head teacher added that, apart from a visit from Impact(Ed) and the MOE supervisors, other development partners, such as the GPE, and Girls' Access, also supervise activities at the school. The most recent visit for GPE, as documented in their books, was February 2020.

Access to and use of the Cell-Ed platform

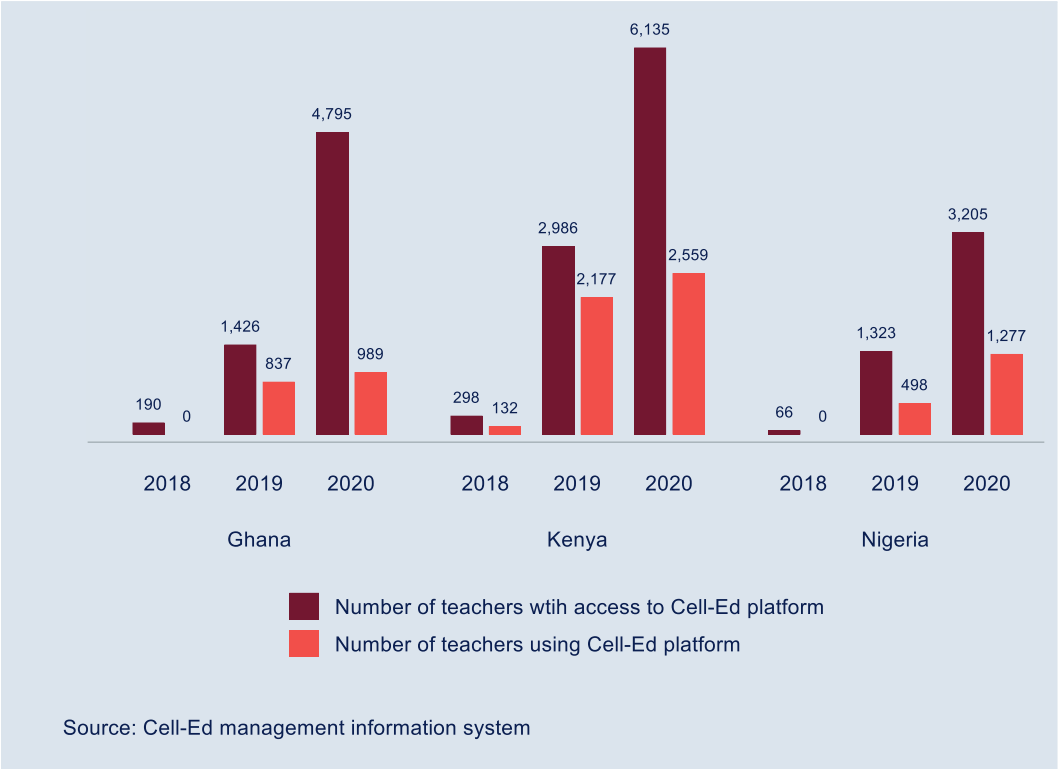
This section presents findings from the access to and use of the Cell-Ed platform based on monitoring data collected by Cell-Ed. These data do not differentiate teachers from different schools (i.e. Phase 1 and Phase 2 schools, and primary or secondary schools), and the findings therefore show usage across all teachers that DP-2 is working with. As reported in Chapter 1, the roll-out of the Cell-Ed platform was delayed across the three countries because of challenges acquiring toll-free lines and because of network issues. The bulk of teachers from Phase 1 primary schools had been 'onboarded' onto the platform by July 2019. In this section, we report on teachers' access and use of the Cell-Ed platform. This covers the period from the inception of Cell-Ed in 2018 to 14 July 2020.

In Figure 41, we present both the cumulative number of teachers introduced to the Cell-Ed platform, and the cumulative number of teachers who had accessed it.[80] Figure 41 demonstrates significant efforts to introduce the Cell-Ed platform to teachers in all three countries, both in 2019 but particularly in 2020. By 2020, the Cell-Ed platform had been

[80] Here we define here using the Cell-Ed platform by a teacher as spending any time on any Cell-Ed course.

introduced to a total of almost 5,000 teachers in Ghana, over 6,000 teachers in Kenya, and just over 3,000 teachers in Nigeria.

Figure 41: Cumulative number of teachers accessing Cell-Ed platform



Source: Cell-Ed management information system

We define a teacher as 'accessing' the platform if they have spent any time engaging with any course on the Cell-Ed platform. Figure 41 also reports that the number of teachers accessing the platform has increased over time. By 2020, a total of 4,825 teachers in all countries had accessed the platform; this is spread over 989 teachers in Ghana, 2,559 in Kenya, and 1,277 in Nigeria.

By 2020, the use rate, i.e. the proportion of teachers with access to the platform that were using it, was 42% of teachers in Kenya, 40% of teachers in Nigeria and 21% of teachers in Ghana. Impact(Ed)'s own reporting[81] noted a number of adaptations that were implemented to encourage the use of the platform. These included ensuring a zero-cost solution for teachers, enhancing trust in the platform through pre-existing relationships with teachers built on engagement through DP-2 direct training, and ensuring that training content was relevant and aligned to ministry-approved curriculum.

In comparison, the findings from the qualitative data show that although the awareness and uptake of Cell-Ed is slightly variable across countries, it is largely quite limited, though it is worth bearing in mind that qualitative research does not allow for generalisations across all DP-2 supported teachers and engagement with the Cell-Ed platform was not a direct focus in the remote qualitative research due to the shorter nature of the phone interviews. In-person data collection in Nigeria in March included a more direct question related to Cell-Ed, while the remote data collection conducted in July in all three countries did not have a direct question on this topic; it came up unprompted in some interviews with RTs when the topic of teacher training was being discussed.

In-person data collection in Nigeria showed that of all the six schools in Nigeria, only one RT reported ever accessing Cell-Ed app for information for his teaching. The other RTs explicitly mentioned that they were not using it. Although some head teachers and RTs confirmed that

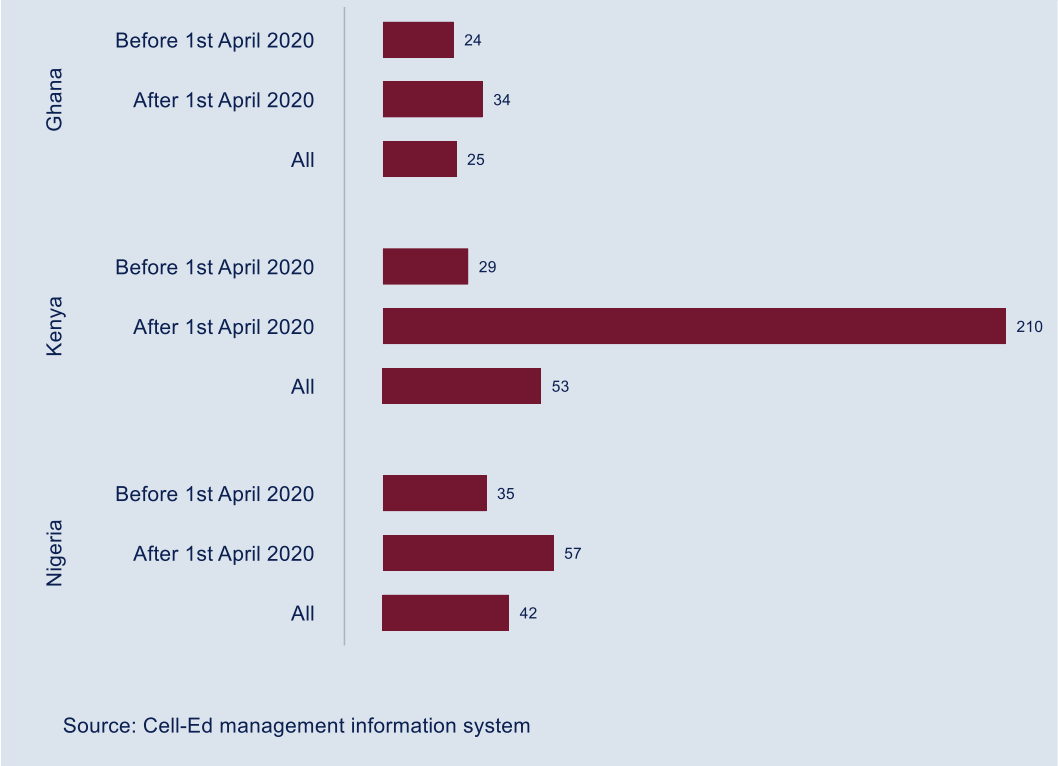
[81] Impact(Ed) (2020). *"Mobile teacher professional development GEC-T project completion report".*

they are aware of its existence, they have never seen the need to consult it. A few reported that they have forgotten the access code that was given to them during the training. In one school only, the RT said he had never heard of the platform. In Ghana, the mention of Cell-Ed came up only in one of the six schools. In this specific instance, the ALP teacher mentioned that they had received training on the phone through Cell-Ed, which allows them to receive messages and provides a code to get specific questions answered. Cell-Ed was not mentioned in any of the qualitative interviews in Kenya.

Figure 42 reports the average total time spent by teachers who had spent at least some time on the platform accessing courses. The highest engagement in the platform by time is reported for Kenyan teachers, who spent on average 53 minutes with the platform engaging in courses, with Nigerian teachers spending an average of 42 minutes with the platform. The lowest observed engagement of teachers with the platform was in Ghana, where teachers spent on average a total of only 25 minutes using it.

To give a sense of how this engagement may have been affected by the onset of the COVID-19 pandemic, we also report the average number of minutes spent with the platform before and after 1 April 2020. While time spent on the platform has increased in all countries since the start of the pandemic, the increase in Kenya is striking. If we consider Kenya teachers who last engaged with the platform after 1 April 2020, they spent an average of 210 minutes on the platform, compared to teachers who had last engaged with the platform before April 2020. It should be noted, however, that only 347 teachers in Kenya engaged with the platform after 1 April 2020. Nonetheless, for this group, their average engagement increased following the onset of COVID-19; they spent just 11 minutes on average on the platform before 1 April 2020, which then increased to an average total of 210 minutes after this date.

Figure 42: Average total time spent on the platform (minutes)



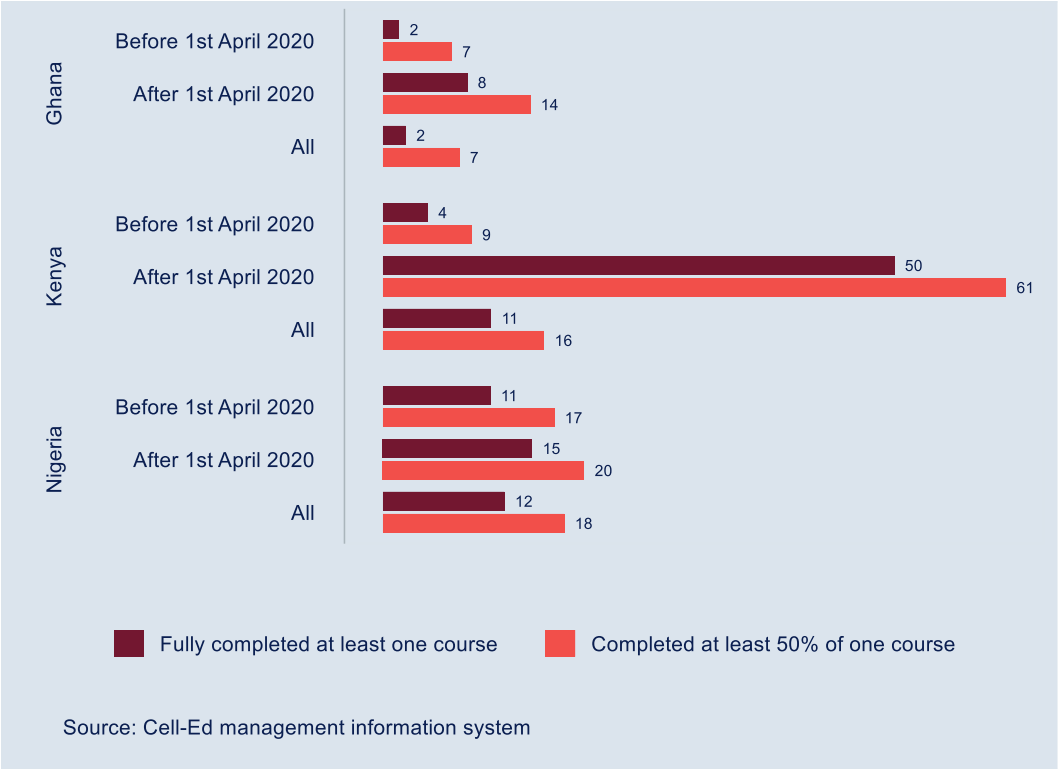
Teachers have a range of different courses available to them.[82] Figure 43 reports the proportion of teachers who have completed at least one course, disaggregated by when teachers last accessed the Cell-Ed platform. This indicates that relatively few teachers in any

[82] In all three countries all three are available: 'Create a Culture of Reading', 'Teach and Assess Literacy Fairly', 'Build Reading Skills', 'Build Numeracy Skills', and 'Assess Numeracy Fairly'. In addition, in Kenya, 'Literacy Training', 'Numeracy Training', 'Build Linguistic Practices', and 'Build Number Flexibility' are available.

country have completed at least one course; this ranges from 12% of teachers in Nigeria to just 2% of teachers in Ghana. The finding suggests that teachers may be 'dipping in and out' of courses rather than fully completing all units within a course.

The striking exception is for Kenyan teachers who last accessed the platform after 1 April 2020, while Kenyan schools were closed due to the COVID-19 pandemic. For these teachers, at least 50% of teachers had completed at least one course, while 61% had completed at least half the units within a course.

Figure 43: Proportion of teachers who have completed at least one course



Implementation of TPD in junior secondary schools in Ghana and Nigeria

This section briefly describes the implementation of the TPD component in junior secondary schools in Ghana and Nigeria. Box 6 outlines DP-2's design of TPD in junior secondary schools.

Box 6: DP-2's design of TPD in junior secondary schools

DP-2 provided one training session on education media, student-centred teaching, and gender-responsive pedagogy to junior secondary schools, which was delivered between October and December 2017. Between January and March 2020, DP-2 delivered an additional training session on literacy and numeracy that was not originally planned.

Teachers who have received direct training from DP-2 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, junior secondary schools are visited less frequently than Phase 1 primary schools.

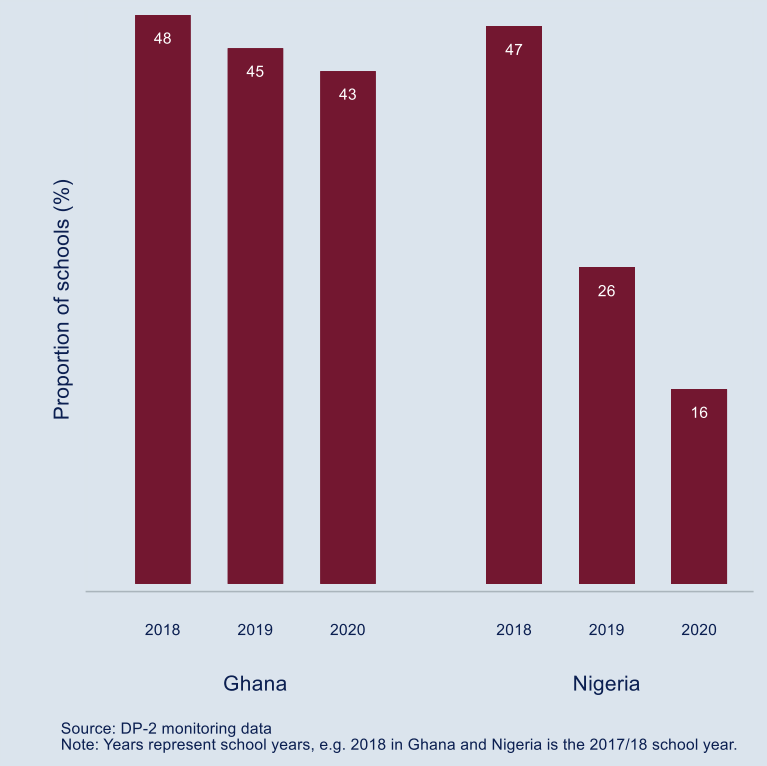
As with to primary schools, DP-2 provides junior secondary schools with TVs, DVD players, and educational DVDs (collectively referred to as the 'learning centre'); it is expected that each school will use the learning centre at least five times a week for regular classes.

Teachers from junior secondary schools also have access to the Cell-Ed platform.

Use of educational media through the learning centre

Approximately 85%–90% of junior secondary schools had a learning centre in good working condition in the 2018/19 and 2019/20 school years. As shown in Figure 44, under half the schools in Ghana and Nigeria are using the learning centre at least five times a week, and the proportion of schools in Nigeria which have been using the learning centre regularly in the last two years is very low.

Figure 44: Proportion of junior secondary schools that are using the learning centre at least five times a week



Source: DP-2 monitoring data
Note: Years represent school years, e.g. 2018 in Ghana and Nigeria is the 2017/18 school year.

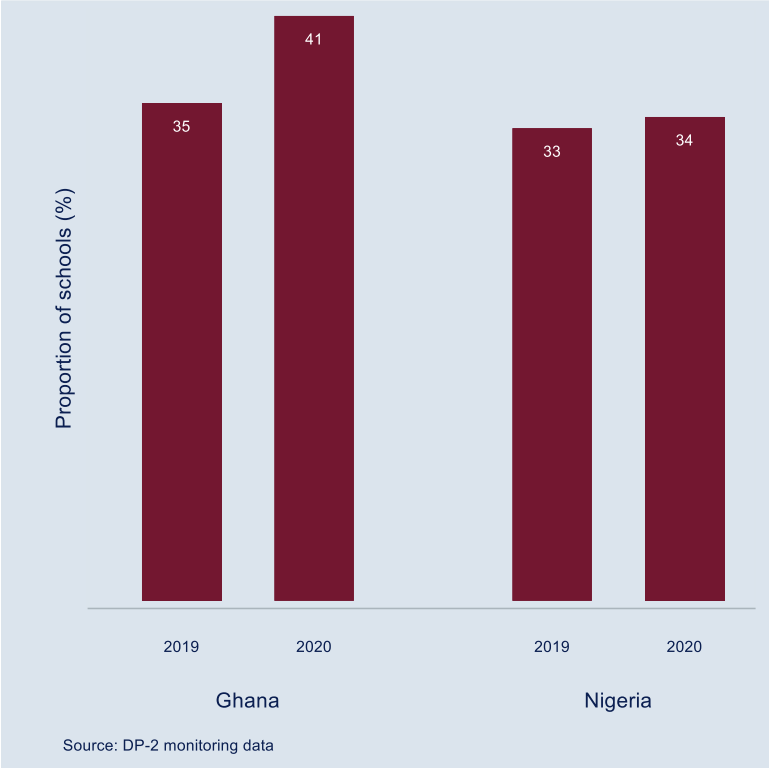
Implementation of direct teacher training

The evaluation does not have any information about the proportion of teachers from junior secondary schools who attended DP-2 training sessions.

Implementation of step-down training

Large proportions of schools (94% in Ghana and 84% in Nigeria in the 2019/20 school year) have a plan in place to deliver step-down training sessions. However, as shown in Figure 45, only just over a third of junior secondary schools in Ghana and Nigeria have delivered such training in the last 90 days.

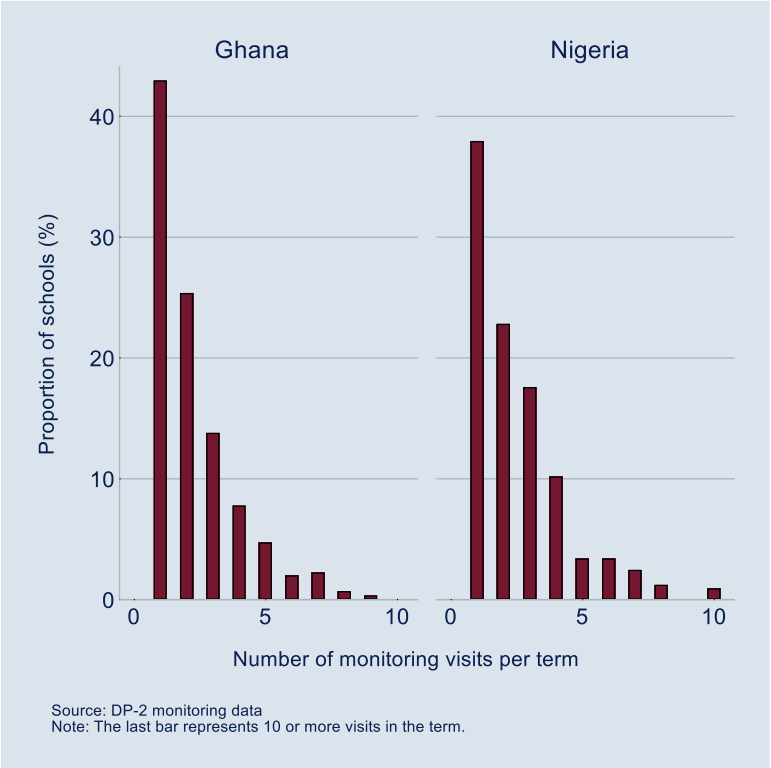
Figure 45: Proportion of junior secondary schools that have delivered step-down training in the last 90 days



Implementation of monitoring and support visits

Figure 46 shows that, as expected, junior secondary schools receive far fewer monitoring visits compared to Phase 1 primary schools: 43% of schools in Ghana and 38% of schools in Nigeria received only one visit per term. In addition, there are also larger proportions of schools that did not receive any monitoring visits at all per term.

Figure 46: Distribution of number of monitoring visits per term (2019 and 2020 school years)



Source: DP-2 monitoring data
Note: The last bar represents 10 or more visits in the term.

6.1.3 Conclusion

The findings from the midline evaluation largely provided proof of concept of the DP-2 TPD component. The findings found strong evidence that DP-2 teacher training and support leads to improved teaching quality in Nigeria, and some evidence that DP-2 teacher training and support leads to improved teaching quality in Ghana and Kenya in at least some domains.

At endline, qualitative research provides further support for the midline findings. RTs at endline could clearly recall what they had learnt from the DP-2 training sessions, and this aligns broadly with the expected content of the training. RTs recalled substantial technical detail around strategies for teaching literacy, such as decoding, blending, and segmenting. Overall, RTs recalled the numeracy strategies taught during the training least clearly, but reported that they use general child-centred approaches and teaching aids to engage students in the learning of mathematics.

Teachers across the three countries also reported using the strategies that they have learnt in the DP-2 training sessions during their lessons and reported that they perceived this to improve student learning outcomes as a result. Teachers reported that adapting their teaching strategies to different types of student, engaging both boys and girls in different subjects, encouraging students to ask more questions in class, and being mindful that they do not belittle them if they get answers wrong has helped to build girls' confidence and enabled more active participation in the class. Teachers believed that the academic performance of children in their classes has improved by virtue of increased participation and the practice of children working with one another. The findings from head teachers and RTs were also corroborated by girls sampled for the qualitative study at endline. Girls across the countries provided examples of how teachers had created an environment where they felt comfortable asking questions, making mistakes, or admitting that they have not yet understood something.

While the qualitative research at endline provides further evidence that teachers have found the DP-2 TPD useful and report implementing strategies that they have learnt, the evaluation is limited by the lack of lesson observations at endline to measure the impact of DP-2 on teaching quality at endline. This limitation means that we are unable to report on whether the impact that we have observed at midline has been sustained or enhanced at endline.

Respondents across the three countries report significant teacher turnover at their schools, due to high levels of teacher transfers or because of the presence of voluntary teachers. In addition, the direct DP-2 training is delivered to only a subset of English and mathematics teachers in most schools. **This suggests that step-down training is important to ensure that all teachers learn new teaching strategies, and all students in DP-2 schools benefit from improvements in teaching quality. However, the evaluation finds that there are some concerns around the implementation of the step-down training.** DP-2 monitoring data shows that large proportions of schools in Ghana and Nigeria have not implemented step-down training in the last 90 days, and the numbers of teachers receiving step-down training is low in all three countries. Given that our midline evaluation found that not all teachers had received direct training and found relatively high rates of teacher turnover following training (ranging from approximately 10% in Ghana to 25% in Kenya) it is likely that not all teachers are being reached through the step-down training. In addition, the findings at midline showed that much less time is set aside for step-down training than for direct training, implying that the content from the direct training would not be stepped down to other teachers with the same level of detail or quality as the original training. This limits the impact of the DP-2 TPD on a broader range of teachers and students, and also poses questions regarding long-term sustainability.

Teacher's uptake of the Cell-Ed platform varied across the three countries. In 2020, approximately 40% of teachers in Nigeria and Kenya who have been onboarded onto the platform used it, compared to only 20% of teachers in Ghana. Of the teachers who had accessed the platform, teachers in all countries had spent less than an hour on it, and very few had completed a full course. Impact(Ed)'s own reporting noted a number of adaptations that were implemented to encourage the use of the platform. These included ensuring a zero-cost solution for teachers, enhancing trust in the platform through pre-existing relationships with teachers built on engagement through DP-2 direct training, and ensuring that training content was relevant and aligned to ministry-approved curriculum.

6.2 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, school management committee (SMC)/SBMC/BOM members, parents, and community leaders) identify barriers to learning and transition, and plan actions to address such barriers. These actions are captured in a community action plan, typically a written document that follows a template provided by DP-2. DP-2 project staff follow up with the schools to ensure that the plan is finalised and being implemented. DP-2 also provides support through a follow-up workshop on how to strengthen local partnerships and further tap into relevant stakeholders and resources within the community. CAPs rely on no or low financial resources. 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. The CAP process is described in Box 7.

Box 7: 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 Impact(Ed), 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. DP-2 project staff are given clear guidance on who to target for participation in the CAP process, and the CAP manuals outline the following participant groups:

i. PTAs;
ii. SBMCs;
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 an incomplete one if there is a need for more time to complete the action plan and get wider approval from key stakeholders. The action plans typically contain explicit sections on: i) the identification of barriers; ii) actions; iii) the timeline for actions; iv) resources needed; and v) a verification strategy by CAP participants. As they complete a cycle of actions, communities are encouraged to continue the process of change through renewed action planning.

In addition, DP-2 introduced a L4C workshop: 'The L4C module targets education leaders to build consensus on a holistic approach to school effectiveness to ensure that barriers related to teacher effectiveness and student learning are addressed. This includes a focus on the role of parents and the community, the role of school and education office leaders, evidence-based barrier identification, teacher support and student learning with particular attention to girls and the vulnerable children' (DP-2, 2019). The workshop provides an opportunity to design an action plan from a leadership perspective at the school level, building on and strengthening action plans with manageable and sustainable solutions. By endline, all L4C workshops had been completed in schools that were receiving the DP-2 project.

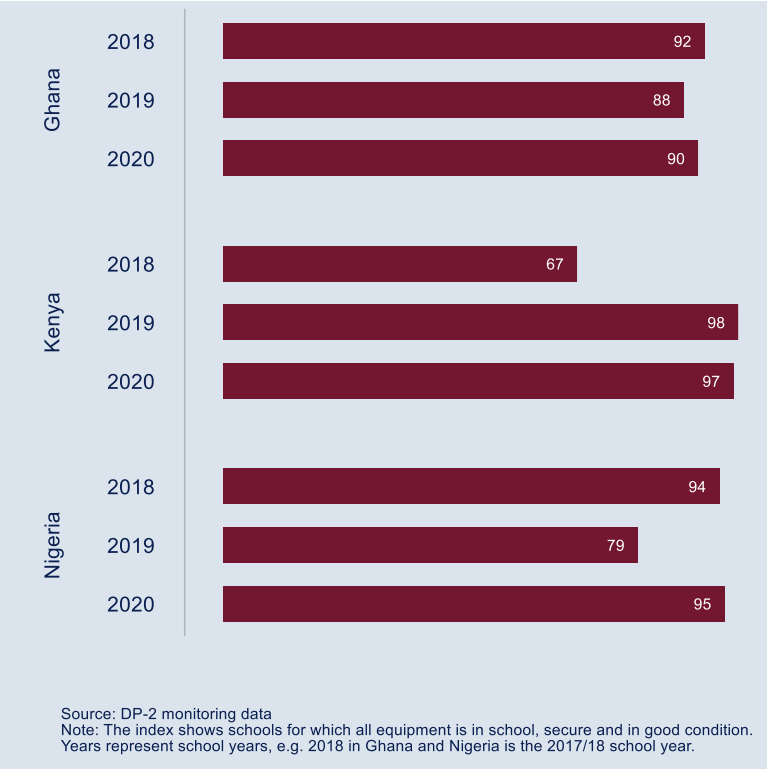
This section provides an endline assessment of the current state of implementation of the CAP process, any self-reported and observed attitudes towards girls' education among girls, their parents and community members involved in the CAP process, and any changes from midline. We begin by presenting outcomes that the CAP process has achieved. We then discuss the training and development of the action plans and their implementation.

6.2.1 Self-reported outcomes of CAP

DP-2 monitoring data shows that in the last year, almost all schools/communities that were monitored during the year had taken steps to implement their action plans (see Figure 47). In Ghana and Nigeria, the majority of schools had taken steps to implement their

action plans since the start of the project (with a small dip in Nigeria during 2019), but implementation substantially increased in Kenya after the first year.

Figure 47: Proportion of schools/communities that have taken steps to implement their action plan



Source: DP-2 monitoring data
Note: The index shows schools for which all equipment is in school, secure and in good condition. Years represent school years, e.g. 2018 in Ghana and Nigeria is the 2017/18 school year.

While monitoring data shows that most schools have been taking some steps to implement their action plans throughout the project, **the qualitative study at endline finds that there has been a considerable increase since midline in CAP members' participation in the school and community, and in the efforts that CAP participants have made to implement their plans**. Efforts focus on improving attendance, as well as on improving the school's infrastructure to ensure it is safe and comfortable for children. In a few examples in Kenya and Nigeria, CAPs have focused on identifying and addressing challenges that deter girls from attending school – from entrenched problems such as early marriage to easier but important considerations such as the provision of sanitary products and secure toilets. The implementation of CAP activities in the three DP-2 countries are reported to have brought some positive outcomes. While changing community perceptions is a slow and difficult task, the CAPs have made progress within their communities.

Country specific improvement in outcomes are discussed below.

In Ghana at midline, CAP participants have been involved in sensitising parents about the importance of attending school; this had led to a modest reduction in children's household chores and involvement in local business. At endline, participants in the CAP process continued working on the barriers that they had identified at baseline and midline. This included community-level awareness building activities to increase attendance in school and to increase awareness about the importance of remedial classes.

> *Yes. We even advised them (parents) not to let them hawk wares around town to sell. We told them it's a contributing factor to the teenage pregnancies. They were asked to let their children attend the after school extra classes we organised in the school. Most of the girls joined it and by the time they close and go back home it's almost dark. So, they won't have time to roam around.*

Interview with CAP participant, Yendi, Ghana

Parents say that they are more aware of practices that could hinder favourable learning outcomes, such as arriving late at school, poor attendance, hawking, and involvement in household chores. However, in light of COVID-19, parents report that children have had to help out with domestic and business-related chores, given the financial pressure of the COVID-19 lockdown.

One CAP actively helped get children into private tuition when schools were closed, in a bid to avoid drop-outs.

> *Yes. [COVID-19] has already done that [affected transition] because children don't go to school anymore. If we [had not] found private tuition for them, they wouldn't know anything by the time the pandemic ends and schools reopen. That aside, a lot of them will get pregnant and give birth.*

Interview with CAP participant, Tamale

In some schools, the CAP participants spoke of support for building toilets and installing dustbins and buying new furniture for the school before lockdown, based on financial contributions and resources provided from the community. CAP participants reported being motivated by DP-2 staff to carry out these responsibilities.

In Kenya, we found limited evidence of action plans or of schools and communities working collectively at midline, which made it difficult to ascertain the impact of the project at the community level in Kenya. At endline, we find greater progress has been made in implementing the CAP. CAP participants have conducted more awareness-raising activities, held one-to-one meetings with parents, and worked closely with the community to raise resources for their work. CAP participants from three out of six schools said that they carried out awareness-raising initiatives within their communities. These initiatives were focused on a variety of topics, ranging from encouraging the use of English language in school to preventing Female Genital Cutting (FGC). In one school district, awareness-raising activities were focused on encouraging the use of English language in school instead of the mother tongue, so that students could communicate better and perform well in their exams. In Wajir, CAP participants were able to raise awareness on the culturally sensitive issue of FGC. To influence parents against the practice, CAP participants wanted to raise awareness that FGC was not a religious activity but a cultural practice. By openly discussing the challenges with FGC and the ill effects on girls, and sharing their view that FGC was not considered to be Islamic practice, CAP participants hoped to slowly change the community's opinion about this practice. Some opinions continue to prove difficult to change, as the interview with a CAP member below suggests.

> *Respondent: Another reason is that our children who finished school are jobless idling in social media platform. So, in short, we think it's better marrying off your daughter instead of tarnishing the name of the family. Everyone is on Facebook chatting and spoiling themselves. So, we consider the man who holds his daughter at home teaches her Qur'an and marry her off the luckiest one.*
>
> *Interviewer: But the use of social media is affecting both genders …*
>
> *Respondent: You know girls are delicate (they are fried meat). They are made up of shame unlike the boy child.*

Interview with CAP participant, Wajir

CAP participants in Kenya also met more frequently with parents and girls in the last year and attributed the increase in meetings to greater direction and support from the DP-2 project. CAP participants from four schools reported that they had organised meetings with parents to inform them of the progress the school is making, during which they shared

the learning outcomes of the students, and talked about their discipline and wellbeing. CAP participants believe such meetings would encourage parents to support CAP activities, such as providing contributions in the form of pens or books. In three schools out of the six sampled in Kenya, the CAP met with parents of student who had dropped out of school to encourage them to send their children back to school.

CAP participants worked on decreasing barriers to attendance and learning by addressing concerns related to sanitary hygiene and encouraging student performance. In one school, CAP collaborated with an NGO to access sanitary pads and counselled girls on sanitary practice. In another school, they provided girls with water cans for use in toilets during their period. In another school in Kiambu, they rallied the community to donate books and other items to children as awards for performing well, for 'good' behaviour, and for cleanliness. These awards were given to both boys and girls to encourage them equally. **The CAP also claims to have made several improvements to the school infrastructure as part of their action plan.** In one school, a CAP member reported that they had fixed school infrastructure that was in poor condition, such as classrooms, walls, doors, and made the school more disability-friendly to fulfil their promises on the action plan. In another school, spaces were cleared out for girls to carry out activities likely to be part of the girl's club, such as beadwork and soap-making.

CAP participants report a change in attitude towards the community in favour of girls' education as girls are performing well in school. In addition, messages from community and religious leaders and the threat of fines levied by local leaders and MOE if children were found to be engaged in labour has also changed opinions.

In Nigeria, the CAP participants had made progress in increasing parents' awareness by midline. Parents were becoming more aware of practices that could hinder favourable learning outcomes, such as arriving late at school, poor attendance, and hawking – issues that were raised at baseline. Participants in the CAP process had reported helping to reduce the drop-out rate of students due to extensive community sensitisation efforts. Despite this work, some parents in Nigeria continue to report that they expected their daughters to marry after completing secondary school. Parents that could not afford their daughters' school fees said it was unlikely they could support further education unless the groom's family was able to provide the resources for this.

At endline, the CAP reported continued influence on behaviour changes among community members to eliminate or minimise barriers to school enrolment, attendance, learning, and transition, especially for girls. Their efforts had also strengthened the school accountability process through their supervisory role and regular engagement with head teachers and parents. Parents and school staff confirm that CAP participants across all schools in the qualitative sample contributed to reductions in street hawking by girls, reductions in household chores, and improved levels of parental support to girls.

All CAP participants reported that they have been able to mobilise resources for school improvement and development. Repairing classrooms and toilet facilities, installing water supplies, and purchasing classroom furniture were among the achievements of the CAP participants in their attempt to create a favourable learning environment for students. In addition, head teachers attest to the use of L4C training to work with schools and parents and form more cordial and trusting relationships between the school and community. This holistic increase in awareness, improvement in relationships with the school and community, and improvement in school infrastructure can be attributed to the CAP participants' efforts in Nigeria.

In fact, a key strategy employed by CAP participants in Nigeria was to include important members in the community. They worked closely with religious leaders, who have amplified CAP messages in the community.

> *Our emphasis has been on the need to educate the girl child as propounded in the holy book. When you educate a child, you have educated a community, you see. Women are the custodians of the moral values of the society and as parents or would-be parents they are in the forefront to receive every moral and intellectual education to be able to build a virile home that can stand the test of time.*
>
> **Interview with religious leader, CAP participant, Nigeria**

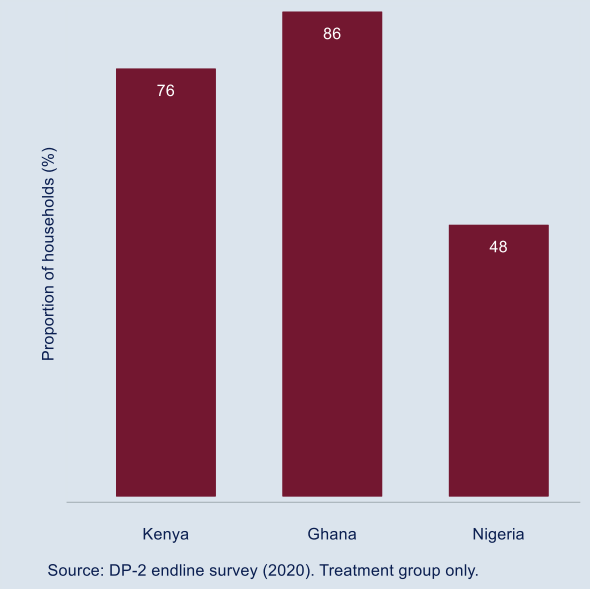
By endline, CAPs continued to diversify their membership to include influential people and more female members, as compared to what was found at midline. At endline, we find that two schools had been especially successful in including members who could directly support the school. In the first example, in a school owned by the community, members of the alumni association were co-opted as CAP participants, and subsequently took on the responsibility to pay the salary of four community teachers employed in the school. In another school, a mothers' association joined forces with the CAP to conduct a house-to-house campaign aimed at mitigating cultural barriers that limit access. According to some parents of cohort girls and head teachers, this move successfully convinced more mothers to send their children to school early and provide them with meals and learning materials.

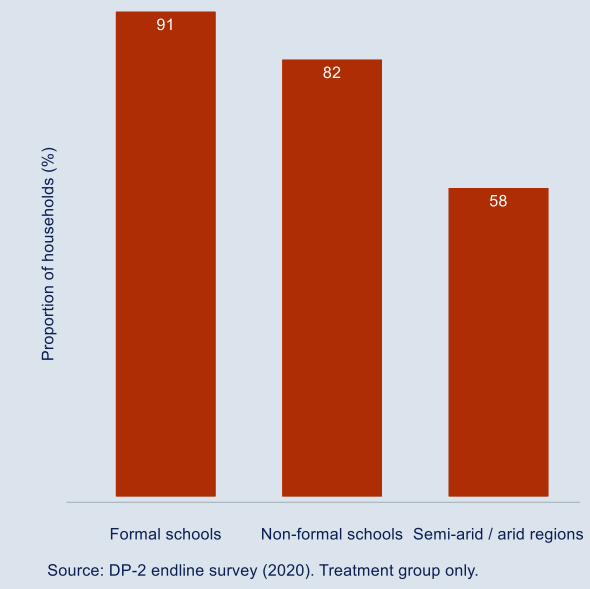
The fact that DP-2 has been one project among many others with similar objectives, especially in Nigeria and Kenya, has made it difficult to ascertain the boundaries between them and the results they cumulatively produce at midline; this continues to be the case at endline. Participants in the CAP process are, by design, members of other school-based committees, which helps them reach out to parents as part of their ongoing activities. However, for this very reason, we could not establish a clear connection with the development of an action plan and improvement in schools as the involvement of CAP participants in other organisations, such as the PTA/SMC, meant that parents often conflated the CAP's efforts as being those of the latter.

Evidence from the quantitative survey at endline shows that the extent to which parents attend school committee meetings from organisations such as the PTA/SMC differs by country, and across the sampling strata in Kenya (Figure 48). Parents in Ghana, parents from non-formal schools in Kenya, and parents from formal schools in Nairobi and surrounding areas are very likely to have attended a school committee meeting in the last 12 months, which was typically organised by the PTA. In contrast, in the semi-arid/arid regions of Kenya, only 60% of parents had attended a school committee meeting, and in Nigeria only 50% of parents had attended such a meeting. Therefore, complementary communication tactics where the CAP has reached out to parents in one-to-one meetings, or at religious congregations are likely to be effective measures to pass on information to parents who cannot come to the school for formal meetings in Nigeria and semi-arid/arid regions in Kenya, where norms around early marriage continue to pose a barrier for girls continuing their education, particularly to secondary level (see Chapter 2).

To summarise, CAPs in Nigeria continue to engage with the community and school, and our findings have several examples of best practice. CAPs in Kenya have made significant progress from midline with greater engagement from community members. In Ghana, CAPs continue to make steady progress against their plans

Figure 48: Proportion of households that attend school committee meetings, by country (left) and by sampling strata in Kenya (right)





6.2.2 Implementation of the CAP component

DP-2 training for participants in the CAP process and new CAP members

DP-2 provides three training sessions for CAP: Community Workshop 1; Community Workshop 2; and L4C training. At the time of the endline study, based on information provided by DP-2, the community workshops and the L4C training were completed in all countries. In Nigeria, all three training sessions had already been completed at midline, and no further direct training was delivered between midline and endline. In Ghana, the L4C training was delivered between midline and endline, and in Kenya, the roll-out of the Community Workshop 2 and the L4C training was completed between midline and endline.

In Ghana, if participants leave the CAP, new participants are provided with an orientation with the support of DP-2 project staff. In Nigeria, if one of the members drops out, one of the SBMC/PTA or the CAP members replaces them. New members are trained by existing members; however, there is no fixed process for training new members. In Kenya, CAP participants are drawn from BOM members and parent associations are responsible for nominating new parent members.

At midline, in Ghana, 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. While fewer CAP participants reported attending any training sessions within the last year at endline, some participants clearly remembered previous L4C training.

In Kenya, head teacher attendance at training sessions varied at midline. DP-2 project 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. The findings at midline suggested that participants in Wajir and Nairobi could provide only a hazy summary of the training sessions, whereas the participants in Kajiado and Machakos could clearly recollect what they had been taught in the CAP workshops. At endline, more CAP participants across all schools were able to confirm that they had attended training sessions,

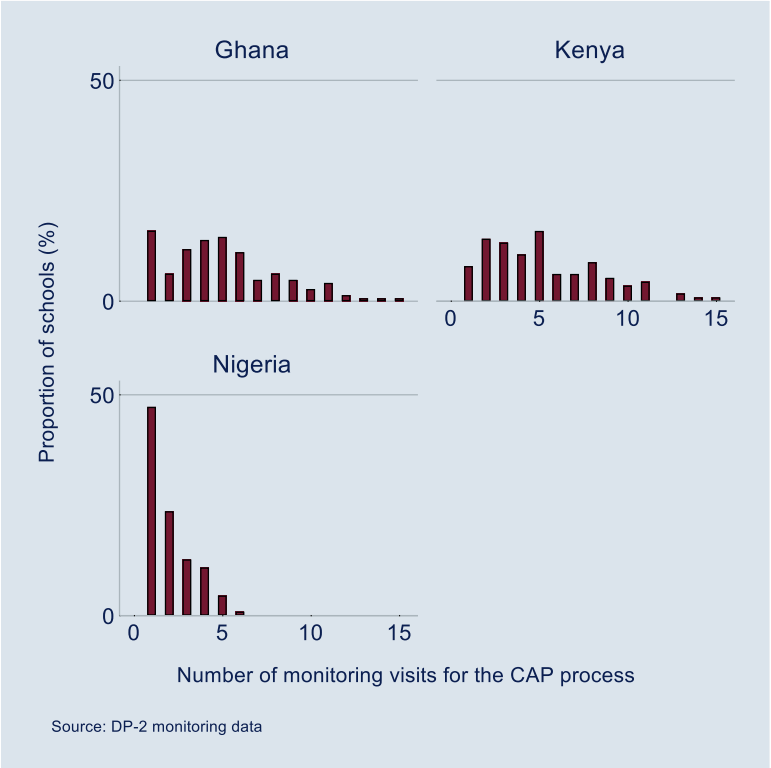
and were able to recall the training sessions, including content on L4C. Both Community Workshop 2 and the L4C training were still being rolled out at the time of the midline evaluation, so it is possible that CAP participants from the schools in the qualitative sample only attended these training sessions after the midline evaluation.

In Nigeria, all members of the CAP process interviewed reported attending one or two training sessions from DP-2 at midline, through which they had a better understanding of how to develop the community action plan and support the school more efficiently. At endline, CAP participants had carried out step-down training for new participants in some schools.

DP-2 project staff, CCAMs, are also responsible for monitoring the CAP in schools in Ghana, Nigeria, and Kenya. **DP-2 monitoring data suggests that schools were inconsistently monitored in their implementation of the CAP process.** Over the full course of project implementation, 40 out of the 150 Phase 1 schools (27%) in Nigeria had no recorded monitoring visits from a CCAM. This was also the case for 13 out of 165 Phase 1 schools (13%) in Ghana, and 6 out of 115 Phase 1 schools (5%) in Kenya. Among schools that had recorded monitoring visits, the frequency of monitoring visits received over the course of the programme varied (see Figure 49). In Nigeria, 47% of schools were visited only once and most of these visits took place in 2018. In Ghana and Kenya, there was greater variation, with a small number of schools being visited up to 15 times. At midline, the process evaluation found that the number of CCAMs and ACAMs had been reduced to shift additional resources towards teacher trainers given DP-2's focus on literacy and numeracy.

In addition, resources were being focused on the monitoring of the MBW pilot. This is likely to have reduced the monitoring efforts dedicated to the CAP process. Nevertheless, the low level of monitoring of the CAP process that has taken place in Nigeria is surprising. As indicated in the rest of the chapter, this does not seem to have affected the implementation of the CAP process in Nigeria. The qualitative research reports on findings from six high-performing schools so it may not reflect how the CAP process has been implemented in other schools. However, quantitative data from midline collected in all treatment schools showed that a high percentage of head teachers had participated in all CAP training sessions, that almost all schools had action plans available, and that action plans had been developed with the involvement of a range of stakeholders.

Figure 49: Number of monitoring visits for the CAP process throughout project implementation



During the monitoring visits, if schools had not completed the activities outlined in the action plan, DP-2 project staff asked about challenges faced in completion and then provided support in completing the activities in the plan. In Kenya, DP-2 project staff reviewed the action plan with the head teacher, who then convened a meeting with participants in the CAP. In Nigeria, CAP participants are monitored and encouraged to complete activities from the action plan. In Ghanaian schools, the PTA and SMC align to come up with a School Performance Improvement Plan. Impact(Ed) expects schools to integrate the School Performance Improvement Plan and the action plan to ensure that the CAP process is sustained. In Kenya, the action plans are written down and on displayed on the school noticeboard, to differentiate between the school's strategic plan and the CAP's plan. At the start of 2020, the DP-2 staff in Nigeria had a meeting with the SUBEB, at which they presented their proposed sustainability plan, including for CAP. This proposal was accepted by the SUBEB and the School Development Plan, and the action plan from the CAP process are to be integrated in Kano. For more details, see Chapter 5 on the sustainability of DP-2.

The availability and development of the community action plans

At midline, the evaluation found variations across countries in the proportion of schools that had action plans. Almost all schools in Nigeria (96%) reported having an action plan, compared to 88% of schools in Ghana and only 66% in Kenya. We could verify the presence of the action plan in 92% of schools in Nigeria, 77% of schools in Ghana, and 47% of schools in Kenya. Data from the DP-2 monitoring system shows that in all three countries, action plans are being updated at least once or twice a year on average, which is in line with expectations.

At endline, we have limited information on action plans, as the qualitative study could not verify the availability and development of plans in person. Progress was reported in all three countries, with significant changes in Nigeria, followed by Kenya and Ghana.

In Ghana, given the disruption caused by COVID-19, CAP members could not recollect their last meeting. They had been unable to update their plans as a result of school closures.

Meetings before closures were variable, with members meeting more frequently than others. Additional information on the availability and progress of community action plans was not available due to the (necessarily shorter) phone interviews.

At endline, all sampled CAP participants in the qualitative sample in Kenya reported that they had updated their CAP plan in meetings held before lockdown and school closures were imposed. However, the research team could not verify the physical copy since data collection was conducted remotely. More head teachers reported participating in the development of the action plans at endline, a change from the findings at midline. However, the responses from head teachers in the qualitative sample were not detailed, which suggests that they were not heavily involved and unlikely to have taken an active leadership role in the CAP process.

At endline, we do find that CAP members had begun to work closely with the community to implement activities in their plan in Kenya. A majority of CAP members in Kenya said that support from the community had been crucial to the successful implementation of the activities. They received support from parents, in particular, the PTA, and church members in the form of monetary support or in the form of community members volunteering their time to construct school buildings and classrooms, or repair roofs, windows, doors, and desks. When parents were not able to contribute monetarily towards books and stationery, local businesses such as booksellers contributed in kind. Another way through which CAP members raised funds was by selling beads and soaps made by the girls and crops grown by the boys – therefore working closely with the clubs set up by DP-2 to encourage a positive teaching and learning environment in school. At the time of endline data collection, CAP activities were interrupted by COVID-19, and so data on future activities is limited.

In Nigeria, the development of and implementation of CAP activities has always maintained a steady and promising momentum. Since baseline, there has been greater involvement of community representatives and parents in Nigeria compared to other countries. By endline, all but one school in the qualitative sample had updated their action plan for the year, which was verified by teams that had collected information in-person before schools closed. The only school that was unable to update its action plan was still completing activities from the previous year – they had struggled to raise enough funds from local businesses to meet their targets.

Self-reported challenges with the CAP process

At midline, challenges included mobilising resources in Kenya and Ghana; raising awareness in the context of poverty, and members having to conduct several visits, especially in Nigeria, before they could reach and subsequently sensitise parents; volunteering – with CAP participants having limited time to participate in unpaid activities; and lack of school participation, especially in terms of schools' reluctance to participate with parents, whom they viewed as ignorant and/or illiterate. At endline, the nature of these constraints had not changed, and the challenges shared at endline are explained below.

Mobilising resources: CAP participants have made progress from midline in mobilising resources, but continue to struggle with raising money to buy books and pens for students. Parents living in arid regions who depend on agriculture for their livelihood, and who are therefore cash-poor, are especially unable to contribute in Kenya. In Ghana, the resources required to conduct CAP activities continue to be scarce. The GES directive that prohibited schools from asking for any fees or contributions from parents or the community continues to be considered a constraint. However, in comparison to the midline, a small subset of schools in the qualitative sample collected money through the PTA.

Raising awareness in the context of poverty: While progress has been made since midline, CAPs continue to find it difficult to engage with some parents because they did not have time to attend meetings.

Motivating teachers (specific to Kenya): The CAP reported finding it challenging to motivate teachers, especially to teach remedial classes. CAP members reported that schools needed to hire more teachers as teachers were exhausted and overworked, and unable to give the attention that children require. This was isolated to one school in Kenya, but the CAP felt that even though they had mobilised resources to hire a new teacher, motivating existing staff was beyond their control.

Impact of COVID on implementation

As a result of the lockdown and school closures in Kenya, CAP members could not complete implementation. A few CAP participants said that they had to cancel awareness-raising activities. They had limited funds to carry out their outstanding CAP activities as they were unable to complete fundraising activities during the COVID-19 closures. This has impacted outreach efforts that would have been especially important during the pandemic, such as being unable to raise funds to support vulnerable children living in insecure neighbourhoods, and not being able to complete house visits for those girls that had dropped out either before the pandemic or because of COVID-19. Some CAP participants were worried that drop-out rates for girls and boys would increase sharply because parents may ask their daughters to get married, especially if girls get pregnant or are vulnerable to getting pregnant when not in school, or if boys take up using substances outside school. **In Nigeria, CAP participants played a more active role during school closures.** CAP participants have helped the school spread the message of tuning into the DP-2 radio programme and to continue studying at home, despite school closures. Some participants are thinking about how they can support the school once it reopens, especially in terms of maintaining safe distance and hygiene practices.

> *We do not know the policy statement that the government will issue as guideline for the reopening of schools. If they insist on social distancing and all hygiene facilities to be put in place, then there will not be enough space to accommodate these students. We will try to review our CAP so that we can begin to put some of these measures in place before school resumes.*
>
> **Interview with CAP participant, Nigeria**

CAP participants are worried about being able to raise funds to ensure that they can support the school, especially since businesses have been shut in the community and people are unlikely to have resources to spare due to the lockdown.

6.2.3 Conclusion

Community engagement in DP-2 takes the form of a CAP process. DP-2 supported community engagement through a series of workshops where participants (head teachers, teachers, SMC/SBMC/BOM members, parents, and community leaders) were invited to identify barriers to learning and transition and define local solutions to these. These solution at are captured in action plans together with steps for implementing them. The implementation of the actions plans is monitored over time by DP-2.

DP-2's monitoring data shows that the majority of schools and communities that were monitored during the 2020 school year had taken steps to implement their action plans at endline. This is corroborated by the qualitative study at endline, which finds that there has been a considerable increase in CAP members' participation in the school and community, and self-reported data that CAP participants have been implementing activities as per their plans. There have been notable improvements in

Kenya, as CAP participants' engagement increased after the first year and was reported to be high at endline.

In all three countries, CAP activities centre around raising awareness about the importance of schooling, and campaigning against early marriage and labour. CAP participants have also worked on decreasing barriers to attendance and learning by addressing concerns related to sanitary hygiene, and encouraging student performance by hosting awards ceremonies for both teachers and students. CAP participants also claim to have made several improvements to the school infrastructure as part of their action plans.

At endline, we have limited information on action plans, as we could not verify the availability and development of the plans in person, and the project's monitoring data is limited. The qualitative evidence however suggests that CAPs have continued their work or improved their engagement.

Findings at endline show that in Kenya CAP participants have conducted more awareness-raising activities, held one-to-one meetings with parents, and worked closely with the community to raise resources for their work since midline. In Ghana, CAP participants continue to sensitise parents about the importance of attending school; this had led to a modest reduction in children's household chores and involvement in local business, consistent with the findings at midline. In Nigeria, CAPs report that they are active in their communities, and have novel solutions to ensure their efforts are successful – such as ensuring a diverse membership, which has led to the successful mobilisation of resources for school improvement and development, and women's participation in their children's schooling.

The attendance and participation of head teachers has been variable in the CAP process, which may threaten the sustainability of CAP in the school in the future. At endline, we find that existing CAP members are actively training new members in Ghana and inducting SBMC members in Nigeria to replace former members. Limited data on recruiting new members was available in Kenya, where the head teacher is expected to replace members and CAP members are tasking with orienting new members.

COVID-19 has led an understandable disruption of CAP activities in all countries. In Nigeria and Ghana, CAP participants have continued their engagement despite school closures, and reported for example engaging girls in tuition and planning to set up sanitisation stations when schools reopen in Nigeria. CAP participants are worried about their continued ability to raise funds to ensure that they can support the school, especially since businesses have been shut in the community and people are unlikely to have resources to spare due to the lockdown.

7 Conclusions and recommendations

This chapter begins with a summary of the findings of the endline evaluation, structured along the outcome and intermediate outcome indicators. As we have done throughout the report, we also include a summary of the midline findings, and make an overall evaluative judgement on how DP-2 has contributed towards changes in each outcome and intermediate outcome indicator. It is important to keep in mind that the original design of the evaluation was affected by COVID-19. This means that we do not have robust mixed-methods evidence of the impact that DP-2 has had on targeted outcomes and intermediate outcomes at endline and have had to rely on project monitoring data to understand progress in the implementation of DP-2. COVID-19 also disrupted the final phase of project implementation, and this is likely to have affected activities targeted at sustaining the activities and outcomes of DP-2 in the future. These factors affect the extent to which we can fully report on the impact of the project and on whether the underlying TOC holds.

7.1 Conclusions

7.1.1 Barriers to learning and transition

This section summarises findings from Chapter 2. **Our analysis shows that poverty is the key driver of educational marginalisation.** It affects girls' attendance at school, their ability to fully participate in lessons and in extracurricular activities, and their ability to concentrate during their lessons. In addition, **poor school infrastructure and the lack of qualified teachers and female teachers pose barriers to learning**, most strongly in Nigeria, but also in Ghana and to a lesser extent in Kenya. DP-2's CAP process aims to tackle some of these barriers by asking communities to identify the specific local barriers and develop solutions to them. However, communities are, of course, themselves financially constrained and therefore cannot tackle all barriers related to structural poverty and persistent problems within the educational system.

In some cases, contextual factors may pose specific direct barriers to girls taking up or participating in specific DP-2 activities. In particular, concerns about distance and safe travel to school, as well as the need for girls to carry out household chores and support their households economically, mean that parents may be reluctant to let girls take part in activities that take place outside the regular school timetable.

7.1.2 Learning outcomes

This section summarises findings from Section 3.1. **Quantitative findings at midline demonstrated a large positive impact of DP-2 on learning outcomes in Nigeria. At midline, no evidence was found that DP-2 had had an impact on learning outcomes in Ghana and Kenya (with the exception of Wajir, where we found evidence of a positive impact of DP-2 on numeracy outcomes at midline).** It might be expected that improvements in learning are slow to emerge, because they are a result of improvements across a range of intermediate outcome indicators, such as improvement in teaching, attendance, self-efficacy, and support from girls' family and community.

Findings from the qualitative research at endline show that DP-2 is changing perceptions towards learning in all countries. Girls feel that they are learning better, interacting more with their teachers and with one another, and feeling more confident about participating in class. Head teachers and teachers report observing improvements in students' learning when teachers use strategies from the training in their lessons. However, given that we could not implement learning assessments at endline, we are unable to report on whether the impact on learning outcomes in Nigeria observed at midline has been

sustained, and whether any impact on learning outcomes in Ghana and Kenya had emerged by endline..

Remedial lessons are perceived positively, and findings from midline and endline suggest that they are addressing foundational literacy and numeracy skills gaps. In Nigeria, there is evidence from midline that participating in remedial lessons contributed to the overall impact that DP-2 had on learning outcomes. The midline evaluation also found some quantitative evidence that participating in remedial lessons was associated with improvements in literacy in Ghana and Kenya. **At endline, the qualitative research supports this finding, reporting that girls, RTs, and head teachers are supportive of the remedial lessons**. At endline, girls attending the second phase of remedial lessons in Nigeria have improved substantially in their foundational literacy and numeracy skills over a short period of four months, based on monitoring data (Learner Checks) conducted by the project. In Ghana, reports from information collected by teachers during the remedial lessons suggested that girls attending the second phase of remedial lessons were also showing improvements. Data was not available in Kenya at endline. The qualitative research finds that girls and RTs across all three countries feel that the remedial lessons are beneficial and are contributing to improved learning. The smaller class sizes during remedial lessons allow teachers to engage more intensively with each individual student and their specific needs, and encourage students to more actively participate in lessons than is possible in regular lessons with larger class sizes. With smaller class sizes, RTs are able to spend more time on teaching compared to classroom management.

While remedial lessons have been implemented as per design, it has been challenging to integrate remedial lessons fully into the normal functioning of the schools. At midline in Ghana and Nigeria, remedial lessons were usually held outside of regular school hours, which prevented participation of some students. By endline, DP-2 had made efforts to ensure the integration of remedial lessons within the official school schedule (aided, in part, by the extension of the official school day in Ghana). Nevertheless, since remedial lessons usually took place in the afternoon after the morning session, some children were tired and hungry while others missed the lessons to support their parents at home or to attend Islamic classes. In Kenya, remedial lessons take place during periods allocated for extracurricular activities in the timetable, but teachers find it challenging to make time for them, given other competing school activities. Across the three countries, teacher motivation to teach the remedial lessons was low. In Kenya, teachers cannot be paid to deliver remedial lessons, and subsequently lack motivation. In Nigeria, the stipend that teachers were paid for delivering these lessons had been reduced when payments were taken over by the government, which led to reduced motivation to teach these classes at endline. In Ghana, DP-2 continued to pay stipends until the end of project implementation but respondents indicated that teachers would not be motivated to continue teaching remedial lessons if they no longer receive a stipend.

The outbreak of COVID-19 and the subsequent closure of schools and media centres has substantially disrupted education for girls in all three countries. Parents are concerned about girls losing what they have learnt, and therefore engage older siblings or private tutors to teacher their children when they can afford it. Access to educational resources provided by the government is low in Nigeria, Ghana, and in the semi-arid/arid regions in Kenya. In Nairobi and surrounding areas, most girls have access to educational programmes on television, but some parents struggle to afford the subscription. As a response to the COVID-19 pandemic in Kenya and Nigeria, DP-2 provided students with access to English and mathematics courses through the Cell-Ed platform, which students can access through their parents' phones. Engagement with these courses has been very low in Nigeria and low in Kenya. However, it should be noted that this response was rolled out as a quick, low-cost activity that was feasible within the last months of project implementation and engagement was not expected to be very high. In addition, the platform also served an additional purpose of sharing public health and child protection messages

along with information on learning opportunities, which have been received by a far greater number of households.

7.1.3 Self-efficacy and life skills

This section summarises findings from Section 3.2. **Interpreting the evidence produced by this evaluation against self-efficacy, and in particular at endline, should take into account two factors: the specific context in which the endline evaluation was conducted; and differences in the aspects of self-efficacy measured by the quantitative and qualitative components of the evaluation.** With regards to the context, there are two key considerations. The first relates to the fact that the majority of cohort girls in Ghana and Nigeria had transitioned to junior secondary school by the time of our endline evaluation, meaning that they had not been exposed to some interventions related to self-efficacy (in particular, girls' clubs and MBW content) for some time. The second relates to the COVID-19 pandemic, and acknowledging that our respondents had not been in school for several months, and hence not exposed to DP-2 interventions. In addition, it is reasonable to assume that many girls in our sample had been exposed to a range of additional hardships as a result of the pandemic, including extra anxiety and stress, which may have affected their self-efficacy. With regards to differences between quantitative and qualitative measurement of self-efficacy, it is important to bear in mind that the quantitative measure is based on the GSE psychometric scale; this records responses against a fixed set of statements that can be summarised as relating to whether a respondent feels that they can accomplish their goals or overcome the problems that they are faced with. On the other hand, the very nature of qualitative research allows a broader exploration of self-efficacy as perceived by girls themselves and may uncover aspects of self-efficacy that have improved that are not captured by the GSE psychometric scale.

Overall, the quantitative findings suggest that DP-2 has had a positive impact on the self-efficacy of girls in Ghana over the course of its implementation, but that this impact was primarily generated in the first year of implementation, when the majority of girls in our evaluation sample were directly involved in girls' clubs. In addition, results from regression analysis find that attending a school that is supported by DP-2's partner, CAMFED, is associated with a greater positive change in self-efficacy between baseline and endline. CAMFED offers additional support to DP-2 supported schools by training Learner Guides to deliver life skills content and to support the delivery of the MBW content in primary schools, and to lead study groups in JHS.

The quantitative results indicate that, in Ghana, DP-2 was not able to generate further impact once girls transitioned to junior secondary schools and stopped attending the girls' clubs, and the impact that DP-2 had when girls were directly exposed to the girls' clubs had started to wear off by endline. In Kenya and in Nigeria, we did not detect an impact of DP-2 on girls' self-efficacy at any point in the evaluation. These findings remain similar when we restrict our analysis to girls' club members only. As noted above, the effect of the pandemic may have affected girls' self-efficacy[83], and it is therefore possible that this contributed to the dilution of programme impact in Ghana and to the lack of impact observed in Nigeria and Kenya.

The findings from the quantitative evaluation show that levels of self-efficacy have increased between midline and endline in Kenya and Nigeria, though not at a statistically greater level than for girls in control schools and so these increases cannot be attributed to DP-2. **At endline, findings from the qualitative research point towards levels of self-efficacy**

[83] For example, a study on Spanish university students found significant negative correlations between stressful events – focussing on the pandemic – and perceptions of academic self-efficacy. See Alemany-Arrebola et. al. (2020) *"Influence of COVID-19 on the perception of academic self-efficacy, state anxiety, and trait anxiety in college students"* Frontiers in Psychology, Vol 11, 2020.

increasing in all three countries. While our quantitative analysis of self-efficacy measures the construct in its broadest sense, the qualitative analysis is able to examine in more detail how girls judge their own capabilities in different contexts, and in relation to different tasks, and is likely to be better placed to uncover increases in specific aspects of self-efficacy that are not measured in the quantitative survey.

Qualitative findings have reported a steady increase in self-efficacy from baseline to endline. Between midline and endline, qualitative findings indicate a strong link between participating in the girls' club and watching MBW videos to an increase in self-efficacy. This finding is based on girls' perceptions of increased confidence, examples of being able to negotiate for themselves and communicate their goals and desires clearly and effectively with the research team, as well as with their parents and teachers, and setting short and long-term goals for themselves. In addition, girls across all three countries were able to articulate how they found the MBW content relatable to their own experience, and how this relatability supported them to understand new ideas or encouraged them to explore their own biases about gender further. These views were corroborated by parent, club mentor, and teacher interviews at endline, which increase our confidence in the findings.

Other factors that may have influenced this perception of improving self-efficacy include girls growing older and being tasked with greater responsibility at home. Parents' reactions to their child's achievement – their praise, motivation, and validation – were reported by girls as a crucial contribution to their sense of pride and self-esteem. Girls say that when they received kind words from parents, friends, and relatives, they felt loved and cared for, such as when parents had bought gifts for them during festive periods or provided a change of uniform or school supplies.

The findings from the quantitative and qualitative research are inconsistent. This is the case particularly in Kenya where girls across the quantitative and qualitative samples have participated in girls' clubs and engaged with MBW content between midline and endline, although girls had not participated in girls' clubs for several months due to the school closures at the time of data collection. In Ghana and Nigeria, the findings are also surprising, but likely explained to some extent by different levels of exposure to the MBW content, as the majority or our evaluation cohort transitioned to junior secondary school.

Constraints in the endline evaluation mean that we are limited in our ability to explain the discrepancy between the quantitative and qualitative findings on girls' self-efficacy. One possibility is that self-efficacy is highly context-dependent, and while girls recall how girls' clubs and MBW have positively influenced their life in the past, this might not be reflected in quantitative measures of self-efficacy at the present time, when COVID-19 has substantially changed many girls' circumstances. Another explanation is that qualitative research, while offering greater depth of analysis and understanding on specific issues related to self-efficacy, is by design not intended to provide statistically representative results of all schools supported by DP-2. The evaluation purposively sampled (and tracked over time) schools that were identified by DP-2 as representative of a 'high-performing' school and as such the findings on self-efficacy generated by the evaluation may represent the experience of girls where the MBW component has been implemented as intended. Finally, it is relevant to note that the MBW broadcast in Kenya has introduced some level of contamination, although this is likely to be small. Only about a fifth of girls in control schools had seen MBW videos on TV, and they are not exposed to the additional benefits of discussing these videos in a girls' club.

Nonetheless, the evidence suggests that when girls' clubs are functioning, and when girls have watched MBW content and discussed this with their mentors and peers, there appears to be a link between girls' clubs, MBW content, and improvements in self-efficacy. These improvements are shown in girls being more active in the classroom, being more aware of their environment, being more assertive with their parents, and building stronger relationships with their siblings and friends.

7.1.4 Transition

In this section, we summarise the findings from Chapter 4. In education, transition commonly refers to the transition between one level of education (e.g. primary) and another (e.g. secondary). The GEC-T definition of transition also includes promotion through grades within a level of education. In Kenya, the evaluation has followed girls over two years of primary school, from Primary 5 to Primary 7. In Ghana and Nigeria, the evaluation followed girls as they progressed between Primary 5 and Primary 6, between the baseline and midline evaluation rounds. Between midline and endline, most girls were expected to have made the transition from primary school into junior secondary school. This represents an important educational milestone.

In Kenya, the rates of successful transition have been very high since baseline. At endline, 96% of treatment girls transitioned successfully, meaning that they progressed successfully to the next grade of primary school. There is no significant change in the rate of successful transition compared to midline. The main reason why girls in Kenya did not transition successfully is grade repetition, with only a very small number of girls (0.3%) having dropped out of school.

In Ghana, rates of successful transition have also been high since baseline. At endline, 89% of treatment girls transitioned successfully. Significantly fewer girls transitioned successfully at endline compared to midline. This is to be expected because girls in Ghana are making the transition into JHS and are likely to be facing additional barriers at this important point, including the more limited availability of JHS. Despite this, transition rates remain high. A high percentage of girls in Ghana (88%) successfully made the jump to JHS at some point during the evaluation. As in Kenya, the main reason why girls did not transition successfully between midline and endline is grade repetition (8%), with a small percentage of girls having dropped out of school (3%).

The evaluation provides evidence that targets for transition were successfully met in Ghana and Kenya between midline and endline, as these targets were set at maintaining the same transition rate relative to the control group. The evaluation does not find any evidence that DP-2 has had an impact on transition in Ghana and Kenya at any point in the evaluation. The very high rates of successful transition limited the ability of DP-2 to generate any impact against successful transition in these two countries.

In Nigeria, where the barriers to making a successful transition between primary school and secondary school are more substantial compared to Ghana, we find that rates of successful transition have fallen, from 97% of treatment girls at midline to 78% at endline. Barriers to this critical moment of transition remain high in Nigeria, and this overall fall in successful transition rates was to be expected. However, while rates of successful transition have fallen, it is encouraging to note that the majority of girls in the treatment sample remain in school, with the majority of those not transitioning successfully resulting from a grade repetition or demotion, and with only 3% of girls dropping out completely from school.

Between baseline and endline, DP-2 has led to a five-percentage-point improvement in successful transition over the control group in Nigeria. While this estimate of impact was not statistically significant, the sample may have been underpowered to detect an effect of this size, and it is likely that there is a positive change in transition attributable to DP-2 over the full course of implementation. Between baseline and midline, DP-2 had a significant impact on transition, and this impact was largely sustained between midline and endline.

These findings suggest that DP-2 has indeed had a positive impact on the transition of girls over the course of its implementation in Nigeria, but that this impact was primarily generated in the first year of implementation, when the majority of girls in our evaluation sample were transitioning through primary school. This interpretation is

supported by findings from the qualitative research; these provide strong links between remedial lessons and improved learning, which likely support lower repetition rates. Furthermore, we find evidence of an association between the CAP and transition, with regression analysis finding that where there is particularly high engagement with the CAP process, this is associated positively with transition. On the other hand, at endline, at a moment when the majority of girls were at the stage of transitioning between primary and junior secondary school, we do not find any quantitative evidence that DP-2 is supporting this transition. This suggests that DP-2 has not overcome some of the barriers to the transition to junior secondary school. This points to persistent structural barriers to transition to junior secondary school, which our evidence suggests are linked to financial barriers and social norms around early marriage.

The full effects of the COVID-19 pandemic on the transition status of cohort girls are uncertain. Almost all parents (98%) in all three countries reported that they intend to send their daughters back to school when they re-open. However, parents have raised concerns about the economic realities of the pandemic, and whether they will still be able to afford to send their children to school given that some parents have lost their jobs during the pandemic and many girls in all three countries are engaged economically, either working for pay or supporting their parents to run a family business.

7.1.5 Sustainability of DP-2

This section summarises findings from Chapter 5. Throughout this evaluation sustainability has been measured on a four-point scale that measures a continuum of sustainability:

1. **Latent** – representing developed knowledge and changes in attitudes in key stakeholders
2. **Emerging** – representing that some stakeholders have begun to change behaviour and put project activities into practice
3. **Becoming established** – representing that a critical mass of stakeholders are driving implementation of project activities with minimal support from DP-2
4. **Established** – representing that changes in attitudes, practices and approaches are institutionalised and are being implemented without support of DP-2

Table 30 provides a summary of sustainability scores for each of the key project activities, across each round of research colour-coded to reflect whether target scores have been achieved. By endline, most sustainability targets had been achieved in both Ghana and Nigeria, whilst the majority of sustainability targets had been missed in Kenya with the exception of girls' clubs. In Nigeria, two project activities achieved the highest level of sustainability, with activities at the community level and the TPD and remedial activities at the school level being rated at an *Established* level of sustainability.

Table 30: Sustainability score summary

Sustainability indicator	Ghana			Kenya			Nigeria		
	BL	ML	EL	BL	ML	EL	BL	ML	EL
Community level	2	2	2	2	1	2	2	3	4
Learning centres	1	2	2	2	2	2	2	2	2
TPD and remedial	1	2	3	2	2	2	2	3	4
Girls' clubs	1	2	3	2	2	3	2	2	2
System level	1	2	3	1	1	2	2	3	3
Overall score	**1**	**2**	**3**	**2**	**2**	**2**	**2**	**3**	**3**

Sustainability indicator	Ghana			Kenya			Nigeria		
	BL	ML	EL	BL	ML	EL	BL	ML	EL
Key									
Met or exceeded target									
Did not meet target									

It should be noted that COVID-19 has had a significant impact on sustainability plans across the three countries, though this has manifested itself in different ways. In Nigeria and Ghana, concerns expressed by both DP-2 staff and government respondents mainly centred around how COVID-19 might affect plans that are in place to secure funding for the continuation of project activities, specifically that the economic impact of the pandemic might divert funding away from supporting project activities towards recovery efforts. In all three countries, but in particular in Ghana and Kenya, the pandemic also interrupted efforts to hand over project activities to governments counterparts, who have been understandably overwhelmed with their own COVID-19 response measures, although DP-2 continued to make efforts to maintain engagement with government counterparts throughout this period.

At the community level, the sustainability of the CAP process has always relied crucially on the success of engaging the head teacher and community. Where this was most successful, in Nigeria, this was based on a consistent engagement with a diverse group of school and community stakeholders, including not only those directly related to a child's education (e.g. teachers and parents), but also prominent or influential community members who could support the mobilisation of resources to respond to barriers identified by the CAP planning. In Kenya and to a smaller degree in Ghana, progress on CAP and community and head teacher ownership of the process has been slow in some schools, which could threaten sustainable CAP practice.

At the school level, the sustainability of project activities is more likely when two factors are present. The first is when the success (in terms of changing outcomes as learning outcomes) is tangible and when the added value of the project activity (as distinct from other projects being implemented) is clearest. This is most clearly demonstrated with the teacher training and ALP in Nigeria and Ghana, where stakeholders at different levels, including those at the school and in government, have reported that they see these activities as making a distinct and important contribution to improved learning outcomes. The second factor relates to this in terms of sustained engagement with government counterparts to both persuade and convince them of the efficacy of the activity, and to support them in thinking about how such activities can be aligned with ongoing government programming. Efforts in this regard have been consistent in Nigeria since baseline, where a systematic approach to government engagement has been in place for the full cycle of DP-2 implementation. Ghana has increased its efforts in this regard since midline, which was reported to be particularly influenced by the team's recruitment of the Senior Technical Lead with specific responsibility to engage with government counterparts. In Kenya, engagement with government has also increased since midline, at a senior level with the MOE and TSC, with specific departments such as the MOE's quality assurance department, and at local level with county technical committees.

At the school level, the sustainability of project activities is less likely when there is the perception that the continuation of project activities requires the investment of resources that may be outside of the capability of the school, and when these will not be supported by government structures. This is most noticeable with the learning centre in all three countries. A running theme in all three countries has been concerns around the ability of schools to secure funds to both power and maintain the equipment, a finding that finds some support from the DP-2 MIS which suggests that just over 10% of schools in all three countries do not have either a functioning video player or TV to use in the classroom.

Sustainability at the system level appears to be related to two key factors: systematic efforts to engage government at different levels; and the ability of DP-2 to demonstrate the tangible added value of project activities. Nigeria, in particular, demonstrates the value of continued engagement with government counterparts with certain project activities being incorporated into State Development Plans and being entrenched in SUBEB planning. This is more powerful when combined with an ability to demonstrate the success of project activities tangibly with a clear vision of how these activities present an added value over and above what is already occurring in schools. This is clearly seen with the ALP and TPD components, which have received government buy-in in Ghana and especially in Nigeria as an improvement on the status quo. In Kenya, the DP-2 supported remedial lessons were perceived by government counterparts as being one among many remedial classes on offer. Government counterparts in Kenya reported that there was an intention to continue the TPD component through an integration into existing government teacher training and support practices. However, they also reported that no additional budget had been allocated to support this and expressed concerns that this presented a risk to the sustainability of the TPD approach given other pressures on existing budgets.

7.1.6 Teaching quality

In this section, we summarise the findings from Section 6.1. 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 and ongoing support.

The findings from the midline evaluation largely provided proof of concept of the DP-2 TPD component. The findings found strong evidence that DP-2 teacher training and support leads to improved teaching quality in Nigeria, and some evidence that DP-2 teacher training and support leads to improved teaching quality in Ghana and Kenya in at least some domains.

At endline, qualitative research provides further support for the midline findings. RTs at endline could clearly recall what they had learnt from the DP-2 training sessions, and this aligns broadly with the expected content of the training. RTs recalled substantial technical detail around strategies for teaching literacy, such as decoding, blending, and segmenting. Overall, RTs recalled the numeracy strategies taught during the training least clearly but reported that they use general child-centred approaches and teaching aids to engage students in the learning of mathematics.

Teachers across the three countries also reported using the strategies that they have learnt in the DP-2 training sessions during their lessons and reported that they perceived this to improve student learning outcomes as a result. Teachers reported that adapting their teaching strategies to different types of student, engaging both boys and girls in different subjects, encouraging students to ask more questions in class, and being mindful that they do not belittle them if they get answers wrong has helped to build girls' confidence and enabled more active participation in the class. Teachers believed that the academic performance of children in their classes has improved by virtue of increased participation and the practice of children working with one another. The findings from head teachers and RTs were also corroborated by girls sampled for the qualitative study at endline. Girls across the countries provided examples of how teachers had created an environment where they felt comfortable asking questions, making mistakes, or admitting that they have not yet understood something.

While the qualitative research at endline provides further evidence that teachers have found the DP-2 TPD useful and report implementing strategies that they have learnt, the evaluation is limited by the lack of lesson observations at endline to measure the impact of DP-2 on teaching quality at endline. This limitation means that we are unable to report on whether the impact that we have observed at midline has been sustained or enhanced at endline.

Respondents across the three countries report significant teacher turnover at their schools, due to high levels of teacher transfers or because of the presence of voluntary teachers. In addition, the direct DP-2 training is delivered to only a subset of English and mathematics teachers in most schools. **This suggests that step-down training is important to ensure that all teachers learn new teaching strategies, and all students in DP-2 schools benefit from improvements in teaching quality. However, the evaluation finds that there are some concerns around the implementation of the step-down training.** DP-2 monitoring data shows that large proportions of schools in Ghana and Nigeria have not implemented step-down training in the last 90 days, and the numbers of teachers receiving step-down training is low in all three countries. Given that our midline evaluation found that not all teachers had received direct training and found relatively high rates of teacher turnover following training (ranging from approximately 10% in Ghana to 25% in Kenya) it is likely that not all teachers are being reached through the step-down training. In addition, the findings at midline showed that much less time is set aside for step-down training than for direct training, implying that the content from the direct training would not be stepped down to other teachers with the same level of detail or quality as the original training. This limits the impact of the DP-2 TPD on a broader range of teachers and students, and poses questions regarding long-term sustainability.

Teacher's uptake of the Cell-Ed platform varied across the three countries. In 2020, approximately 40% of teachers in Nigeria and Kenya who have been onboarded onto the platform used it, compared to only 20% of teachers in Ghana. Of the teachers who had accessed the platform, teachers in all countries had spent less than an hour on it, and very few had completed a full course. Impact(Ed)'s own reporting noted a number of adaptations that were implemented to encourage the use of the platform. These included ensuring a zero-cost solution for teachers, enhancing trust in the platform through pre-existing relationships with teachers built on engagement through DP-2 direct training, and ensuring that training content was relevant and aligned to ministry-approved curriculum.

7.1.7 Community attitudes and perceptions

This section summarises the findings from Section 6.2. Community engagement in DP-2 takes the form of a CAP process. DP-2 supported community engagement through a series of workshops where participants (head teachers, teachers, SMC/SBMC/BOM members, parents, and community leaders) were invited to identify barriers to learning and transition and define local solutions to these. These solution at are captured in action plans together with steps for implementing them. The implementation of the actions plans is monitored over time by DP-2.

DP-2's monitoring data shows that the majority of schools and communities that were monitored during the 2020 school year had taken steps to implement their action plans at endline. This is corroborated by the qualitative study at endline, which finds that there has been a considerable increase in CAP members' participation in the school and community, and self-reported data that CAP participants have been implementing activities as per their plans. There have been notable improvements in Kenya, as CAP participants' engagement increased after the first year and was reported to be high at endline.

In all three countries, CAP activities centre around raising awareness about the importance of schooling, and campaigning against early marriage and labour. CAP participants have also worked on decreasing barriers to attendance and learning by addressing concerns related to sanitary hygiene and encouraging student performance by hosting awards ceremonies for both teachers and students. CAP participants also claim to have made several improvements to the school infrastructure as part of their action plans.

At endline, we have limited information on action plans, as we could not verify the availability and development of the plans in person, and the project's monitoring data is limited. The

qualitative evidence however suggests that CAPs have continued their work or improved their engagement.

Findings at endline show that in Kenya CAP participants have conducted more awareness-raising activities, held one-to-one meetings with parents, and worked closely with the community to raise resources for their work since midline. In Ghana, CAP participants continue to sensitise parents about the importance of attending school; this had led to a modest reduction in children's household chores and involvement in local business, consistent with the findings at midline. In Nigeria, CAPs report that they are active in their communities, and have novel solutions to ensure their efforts are successful – such as ensuring a diverse membership, which has led to the successful mobilisation of resources for school improvement and development, and women's participation in their children's schooling.

The attendance and participation of head teachers has been variable in the CAP process, which may threaten the sustainability of CAP in the school in the future. At endline, we find that existing CAP members are actively training new members in Ghana and inducting SBMC members in Nigeria to replace former members. Limited data on recruiting new members was available in Kenya, where the head teacher is expected to replace members and CAP members are tasking with orienting new members.

COVID-19 has led an understandable disruption of CAP activities in all countries. In Nigeria and Ghana, CAP participants have continued their engagement despite school closures, and reported for example engaging girls in tuition and planning to set up sanitisation stations when schools reopen in Nigeria. CAP participants are worried about their continued ability to raise funds to ensure that they can support the school, especially since businesses have been shut in the community and people are unlikely to have resources to spare due to the lockdown.

7.1.8 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.

Positive influence on girls' self-efficacy and life skills

Endline findings show that girls' club activities provided girls with support. In all three countries mentors provided counselling to girls, taught them skills and values which helped build their self-confidence, and provided them with menstrual hygiene products such as sanitary napkins which supported their attendance. In Nigeria, CAP members have contributed to the provision of designated toilet facilities for girls at some schools which previously posed barriers to girls' attendance and learning especially when they are menstruating.

Club mentors in all three countries said that they held talks for girls about the importance of cleanliness and personal hygiene, motivation, and building self-esteem. They also carried out activities such as making soaps, sewing clothes, making beads and bangles, and collecting donated clothes. These products made and collected by girls at the club were sold to generate revenue to buy essentials for girls in schools such as sanitary napkins and underwear.

According to club mentors in Kenya, such activities along with participating in environmental campaigns and cleanliness drives, contributed to the development of self-confidence in girls who felt that they were able to ask questions in class and make friends from other classes. Most of the new cohort girls found the girls' club activities useful because they learnt about managing a business and being independent. Interviews with club mentors and girls found

that MBW videos had some gender-sensitive content. According to club mentors, MBW stories, such as one focusing on avoiding early marriage, were relevant for girls because they were able to relate to the videos. Club mentors believed that after watching the characters in the videos go through difficult situations, girls developed critical thinking and reasoning skills, and gained confidence to ask questions. Most new cohort girls also felt that MBW videos helped them build self-confidence and taught them about values and responsibilities. From the videos they reported learning about values that make them more responsible and self-confident as individuals such as being disciplined, thinking about career goals, working and studying hard, being patient, being hygienic, keeping oneself from danger, respecting elders, understanding one's rights and keeping the environment clean.

In Kenya we find that remedial classes have helped girls develop their self-confidence because they were encouraged to ask questions and improved their learning outcomes because they received helped with their revisions. In turn, this helped change parental and community perceptions about educating girls in all three countries.

Positive influence on parents

Our findings suggest that parents have intended for their daughters to complete school and focus on their careers in Ghana and Kenya from baseline, and challenges such as lack of finances have held girls back, which is out of the project's sphere of influence. However, In Ghana, the project has supported positive attitudes around girls' education by sensitising parents about reducing the burden of household chores and responsibilities outside of the house (e.g. hawking) to improve attendance in regular classes and remedial classes.

A few CAPs in Kenya focussed on gender sensitisation. This included awareness-raising initiatives on FGC that were carried out, according to a CAP participant, to help the community understand that FGC is not a religious but a cultural practice that harms the girl child, providing girls with sanitary napkins and water cans for use in toilets during their periods, and creating space for the club to meet and hold their activities in the school. According to CAP participants, this has supported a shift in the perception of girls getting married to girls having a career-oriented future when they grow up.

In Ghana, a prominent focus of the CAP activities in most schools has been sensitisation activities to convince parents to send their children to remedial classes, to minimise the burden of household chores, and to reduce the time girls spend supporting their parents economically such as through hawking. From midline to endline we see that this has had a positive effect on parents' attitudes towards the importance of girls' education and has encouraged them to continue sending their daughters to school. Finally, in Ghana, CAMFED was discussed as a source of support in some interviews with parents and teachers. A few parents expressed appreciating the support from CAMFED in the form of supplies such as uniforms, stationery, books, sanitary pads. As this is provided to girls who come from vulnerable families, parents expressed fears on how they would meet these expenses going forward.

In Nigeria, the role of the CAP has been transformative. School level stakeholders such as principals and RTs acknowledge the CAP members' efforts to reduce girls' involvement in household chores and work such as hawking. CAP members conducted outreach and sensitisation activities to make parents' aware of the impact on girls' private study time, and that participation in the labour market could potentially expose them to molestation and intimidation, which has raised awareness of the importance of being in school. As a result of school closures due to the pandemic, girls in some schools reported that chores have increased compared to when schools were open. Some CAP members and club mentors expressed fears that this trend might persist when schools reopen. A few CAP members said that when a date for school reopening is announced, they will collaborate with the community chiefs and religious leaders to encourage parents to send their children back to school, and

rely on channels such as Friday prayers, town criers, and word of mouth to spread the message.

7.2 Reflections on the TOC

In Section 1.2.1 of this evaluation report we defined four 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 collected throughout the evaluation.

TPD and educational media

The first causal statement reads:

> *TPD and educational media for regular teaching and for ALP remedial lessons lead to improved teaching quality, which in turn leads to better school attendance, better learning outcomes and higher transition rates.*

The midline findings provide strong evidence that links TPD with improved teaching quality and better learning outcomes, where TPD was well implemented. This is most clearly seen in the case of Nigeria, where most teachers had received the full complement of direct teacher training provided by DP-2. While we saw some gains to teaching quality in all countries, the impact on teaching quality in Nigeria was the strongest. Here, we saw a range of improvements in pedagogy, including in mathematics and English teaching strategies, as well as in assessment strategies, which were directly attributable to DP-2, with DP-2 meeting all of its teaching quality-related targets. Furthermore, Nigeria was the only country in which we found positive changes in literacy and numeracy outcomes that were attributable to DP-2 at midline. In addition, the midline evaluation found a positive association between the proportion of teachers trained by DP-2 and improvements in learning outcomes in all countries.

At endline, there are encouraging signs that this causal pathway continues to hold. In particular, it is encouraging that teachers who responded to the endline qualitative research were able to clearly articulate how they were using the various teaching and assessment strategies they had learnt through the DP-2 supported training in the classroom. Furthermore, these findings are reflected by responses given by students themselves, with girls interviewed in all three countries reporting how the teaching strategies used by their teachers made them feel comfortable expressing themselves and asking questions in class, and gave them increased confidence in their ability to complete assignments themselves. Given that the midline findings provide proof of concept of this causal pathway, and that we find evidence that teachers are continuing to use enhanced teaching methods, it is reasonable to assume that the causal pathway that links TPD with improved teaching quality and better learning outcomes continues to hold, where TPD is well implemented.

However, while there is evidence that this causal pathway holds, the effect is likely to be dependent on the 'mode' of implementation. Our evaluation finds that step-down training is delivered for a shorter duration than the full, direct training, and irregularly or informally in some schools. It would therefore be expected that the impact of the DP-2 training is more limited for teachers who have only received step-down training. We had expected that the endline evaluation would explore whether and to what extent exposure to only step-down training leads to improvements in teaching quality. Since we could not conduct lesson observation at endline due to the school closures, it has not been possible to collect this evidence. A limitation of the evaluation is therefore that we cannot report fully on the effectiveness of step-down training. As such, it is difficult for the evaluation to draw definitive conclusions about whether any impact on teaching quality can be sustained in the long-term through a step-down training approach.

Responses from government respondents indicate that governments expect to integrate aspects of the DP-2 training into in-service teacher training. At the time of the endline, this is most likely to happen in Nigeria and Ghana. However, government respondents reported that it is likely that the DP-2 training will be adopted in a diluted form with only some aspects being taking up and/or the training being delivered over a shorter duration. It is unclear to what extent similar improvements in teaching quality to those found in this evaluation would be expected with a diluted version of the training.

The evaluation finds some evidence of the link between the use of educational media and improved teaching quality. There is some qualitative evidence, collected in both the midline and endline rounds of evaluation, which suggests that where media content was used, teachers find that videos have helped to engage students by making lessons more interesting, to support students to visualise what they were being taught, and to connect this learning with their own real-life experiences. However, this is dependent on the ability of schools to power and maintain the media equipment. In all three countries just over 10% of schools reported to the DP-2 MIS that either the TV or video player for use in the classroom was not functioning at the time of visit, with similar proportions reporting the same for the TV or video player for use by teachers for lesson preparation. This will remain a challenge for schools that struggle to raise funds to power or maintain the equipment. We also find reducing rates of usage of media in the classroom, with under half of schools in both Ghana and Nigeria reporting that they use the learning centre at least five times a week, according to the DP-2 MIS.

The evaluation finds some evidence of the link between teacher training and improved transition in Nigeria, and no evidence in Ghana and Kenya. In Nigeria, we find a positive change in transition rates for primary students that is directly attributable to DP-2. Respondents to the qualitative research at endline do not link this to teacher training. However, our evaluation finds that teacher training is linked to improved learning outcomes. Given that the definition of transition used by GEC-T includes progression between grades at primary school, it is reasonable to assume that teacher training via improved learning outcomes has contributed to improved transition rates at primary level in Nigeria. The evaluation finds no evidence of a positive change in transition rates that is directly attributable to DP-2 in Ghana and Kenya at any stage of the evaluation, though this is likely linked to general transition rates already being high in both countries.

The evaluation finds no evidence to support a link between teacher training or the use of educational media with attendance at midline. Evidence on this part of the TOC was not available at endline as attendance could not be measured. The midline results found no positive change in attendance directly attributable to DP-2. As with transition, general attendance rates were already high (above 90% in Ghana and Kenya, and above 80% in Nigeria at baseline), which left little room for improvement. The qualitative research found that the use of educational media, teachers' use of teaching aids, and teachers encouraging active participation of students all contribute towards girls' positive experiences at school and generate girls' interest in their lessons, but the evaluation found no evidence of a direct link with attendance.

Girls' clubs and MBW content

The second causal statement reads:

> *Girls' clubs, with MBW content, improve girls' life skills and self-efficacy, which in turn leads to better school attendance, better learning outcomes and higher transition rates.*

The evaluation finds evidence that girls' clubs and MBW support positive change in self-efficacy and life skills. At midline, we found positive changes in quantitative measures of both self-efficacy and life skills that were directly attributable to DP-2, with positive

changes being observed in Ghana for the former, and in Kenya and Nigeria for the latter. At the time of the midline, MBW content had not yet been fully rolled out, and so it is encouraging that at endline we find early qualitative evidence that the MBW content is supporting positive changes in both self-efficacy and life skills. Evidence provided in Section 3.2.3 suggests that the content of the videos, and their characters, are easy to recollect and are resonating well with the girls and their lives; there is positive feedback about MBW – both from girls and club mentors. As such, the early signs suggest that the implementation of MBW within girls' clubs is a promising practice, providing that all the right conditions are in place, i.e. that there is a functioning girls' club, a working media player, and a mentor that is well engaged in the process and has received training on the MBW content.

This link was not supported by quantitative measures of self-efficacy at endline, where we found no evidence of a positive change in the quantitative measure of self-efficacy that was directly attributable to DP-2. However, the interpretation of this finding needs to take into account several factors. Firstly, while the qualitative research interviewed girls who were in both primary and junior secondary school at endline in Ghana and Nigeria, the overwhelming majority of girls in the quantitative sample had already made the transition to junior secondary school at endline, which meant that they had not been exposed to either girls' clubs or MBW content for some time. In addition, girls in all countries had not been exposed to girls' clubs and MBW content for several months due to the school closures, and this may have influenced how girls responded to questions around self-efficacy in the quantitative evaluation. Secondly, quantitative measures of self-efficacy are narrowly defined, while the qualitative approach allows a broader exploration of self-efficacy, as defined by girls themselves. Therefore, it is likely that the qualitative research will have uncovered aspects of self-efficacy not captured by quantitative measures.

The evaluation finds evidence that suggests improvements in self-efficacy require sustained participation in girls' clubs. This is most readily seen with Ghana, where we found in the midline evaluation evidence of a positive change in the quantitative indicator of self-efficacy directly attributable to DP-2, with the effect being stronger for girls who were members of a girls' club. The majority of cohort girls in Ghana had transitioned to junior secondary school after the midline evaluation, and therefore had only one to two months' exposure to the girls' clubs after midline. Without exposure to the girls' clubs, we do not find evidence of a further positive change in the quantitative measure of self-efficacy between midline and endline in Ghana. It should be noted that these findings cannot provide evidence about whether any improvements resulting from the MBW content in particular could be sustained over time because the cohort girls had only very limited exposure to the MBW content before transitioning to junior secondary school.

The evaluation finds no evidence that supports the link between improved self-efficacy and attendance at midline. Evidence on this part of the TOC was not available at endline as attendance could not be measured. At midline, this evaluation found no evidence of positive change in attendance rates that are attributable to DP-2, although attendance rates in all three countries were already high at baseline. As mentioned above, attendance was not measured at endline.

The evaluation finds some evidence in Nigeria that supports the link between improved self-efficacy and learning outcomes, but no evidence in Ghana and Kenya. Qualitative research conducted at endline suggests that respondents perceive learning outcomes to be linked to both the TPD and remedial lessons, but do not make the link between self-efficacy and learning outcomes. However, regression analysis conducted at midline suggests a positive association between higher levels of self-efficacy and improvements in both literacy and numeracy learning outcomes, although only in Nigeria.

The evaluation finds no evidence that supports the link between improved self-efficacy and improved rates of transition. In Ghana and Kenya, we find no evidence of a positive change in transition that is directly attributable to DP-2. In Nigeria, where we do find

evidence of a positive change in transition rates, at least at primary level, respondents to the qualitative research suggest that this links more strongly to improved teaching quality and remedial lessons rather than to changes in girls' self-efficacy.

School leadership and community involvement in action planning

The third causal statement reads:

> *Joint school leadership and community involvement in community action planning (CAP) to identify and address barriers to girls' learning and transition leads to changed attitudes and perceptions on the part of community members and to concrete actions in support of girls' education. These, in turn, lead to better school attendance, better learning outcomes, and higher transition rates.*

This evaluation finds strong evidence in support of the first step in this causal statement, i.e. that CAP activities to identify and address barriers to girls' education lead to changed attitudes and to concrete plans in support of girls' education. Evidence presented in Section 6.2 demonstrates that the majority of CAPs had taken concrete steps to implement action plans, with qualitative evidence suggesting that there has been a considerable increase in the diversity of membership in the CAP process, as well as in efforts to implement action plans. These efforts included the sensitisation of parents on factors that might hinder favourable learning outcomes, such as hawking, with respondents in all three countries reporting some forms of behaviour change. Efforts also included the mobilisation of community resources to address specific barriers, such as improvements to school infrastructure in Ghana and Nigeria or providing access to sanitary pads and the donation of books in Kenya.

The evaluation finds no evidence that supports the link of the CAP process and changes in community attitudes to increased attendance at midline. Evidence against this part of the TOC was not available at endline, as attendance was not measured. In all three countries, this evaluation at midline had not found a positive change in attendance that can be directly attributed to DP-2, though it is worth noting that attendance rates in all three countries were high at baseline (above 90% in Ghana and Kenya, and above 80% in Nigeria).

The evaluation finds some evidence that supports the link between the CAP process and changes in community attitudes to improved learning outcomes, but the evidence is not available to fully test this link in the TOC. Sensitisation efforts conducted through the CAP process have increased parents' interest in girls' education. There is evidence that parents, in particular in Ghana and Nigeria, have taken concrete steps to reduce the burden placed on their daughters, such as reducing their involvement in hawking or household chores, to allow their daughters to arrive at school on time and well-rested. It is reasonable to assume that these actions would improve attention in the classroom and allow more time for study or homework, thereby supporting learning. However, it is important to note that this evaluation could not quantitatively test whether these reported changes in behaviour contributed to improved learning outcomes, nor report on the extent to which the chore burden has reduced at endline.

The evaluation finds some evidence in Nigeria only that supports the link of the CAP process and changes in community attitudes to transition. In Nigeria, we find evidence that DP-2 has led to a positive change in transition rates, though the evidence suggests that DP-2 has predominantly supported progression between grades in primary school. Regression analysis suggests that a greater likelihood of successful transition is associated with the presence of an engaged CAP process. However, it should be noted that we do not find evidence of DP-2 having had a positive impact on successful transition in the midline to endline period, when the majority of girls were making the transition to junior secondary school. As such it is likely that CAPs have not been able to address all barriers to transition,

particularly systemic barriers such as high rates of poverty or the availability of junior secondary schools, neither of which DP-2 was designed to address. Transition rates in Ghana and Kenya were already high at baseline in both treatment and control schools and have remained so across all three years. We find no evidence of positive changes in transition rates in either country that are attributable to DP-2.

Remedial lessons

The fourth causal statement reads:

> *Remedial lessons for students who are falling behind lead to improved learning outcomes for those students, a narrower gap in learning outcomes between these students and others, and higher transition rates among these students.*

Midline findings provide strong evidence that links remedial classes with improved learning, where remedial classes are well implemented and innovative. This is most clearly seen in the case of Nigeria where, prior to DP-2 implementation, very few children had been exposed to remedial classes. In Nigeria, we found that improvements in numeracy that are directly attributable to DP-2 were higher for girls who had attended remedial classes. Furthermore, although there were no positive changes in learning outcomes overall directly attributable to DP-2 in Ghana and Kenya at midline, attendance at remedial classes was positively associated with improvements in literacy outcomes.

At endline, we find that teachers interviewed in all three countries are able to articulate how they perceive remedial classes to have improved learning outcomes. Evidence suggests that teachers in all three countries reported that remedial lessons allowed teachers to provide teaching that is specific and targeted at students' needs. This was facilitated in particular by smaller class sizes, which allowed students to receive more individual attention, facilitated greater active student participation, and reduced the time teachers spent on classroom management. This suggests that the causal pathway continues to hold.

Findings from the evaluation suggest that the provision of remedial classes is most impactful when these are new to the context. This is most clearly seen in the contrast between Nigeria and Kenya. Our midline evaluation reported that remedial classes were a true innovation in Nigeria, with almost no remedial lessons being offered in comparator schools not supported by DP-2, while remedial lessons were offered in 76% of comparator schools in Kenya. Furthermore, we find strong support from government for the continuation of the DP-2-supported remedial lessons in Ghana and Nigeria, while in Kenya these were viewed by government counterparts as 'one remedial class among many'.

As with the causal pathway related to teacher training, we find some evidence that links remedial classes to improved transition rates in Nigeria and no evidence that this holds in Ghana and Kenya. As with the teacher training pathway, it is reasonable to suggest that remedial classes, through improved learning outcomes, have reduced the rate of grade repetition in Nigeria, thus improving transition rates through primary school.

7.3 Recommendations

7.3.1 Recommendations for governments taking forward DP-2 project activities

Teacher training and support

Government institutions taking the teacher training forward should attempt to ensure that the full package of DP-2 training is delivered, as it is likely that gains to teaching quality will be diminished by a 'diluted' level of training. Teacher training is likely to

continue in some form in all three countries. In Ghana and Nigeria, this is particularly promising as a variety of stakeholders, including government officials, are committed to the integration of aspects of the DP-2-supported training into regular programming and are taking steps to secure funding to make this a reality. In Kenya, DP-2 training is expected to be integrated into regular activities, though government stakeholders have articulated concerns that this will put pressure on already constrained budgets. Across the three countries, there are early signs that this implementation will be abridged relative to the direct training provided by DP-2; this relates, in particular, to the amount of time allocated to training in a step-down form. The DP-2 package includes an initial nine-day direct training, supported by step-down training of teachers who are not directly trained and refresher training for trained teachers, as well as ongoing observation, coaching and mentoring. Ensuring fidelity to this original design will be imperative to ensure that positive gains to teaching quality continue.

Remedial lessons

The efficacy of remedial lessons can be enhanced by formal integration into the school timetable. While this can be difficult to manage, this evaluation has provided evidence that scheduling remedial classes either after school hours in the afternoon or at weekends can present a barrier to the attendance of girls who have, for example, expressed concerns related to their own safety when having to return from school later than normal. In Ghana and Nigeria, MOEs have adjusted the school timetable and established co-curricular slots for remedial lessons in the last year.

How teachers can be compensated for teaching remedial lessons in line with government guidelines should be considered. In Nigeria, teaching remedial classes is done on top of existing contractual obligations, and as a result they have been compensated for this effort with stipends throughout the course of DP-2. This is expected to continue as the implementation of remedial classes is integrated into normal government programming. In Kenya, where teachers are contractually obligated to deliver remedial lessons, the evaluation finds evidence that teachers are overworked and find it difficult to deliver remedial lessons on top of their other responsibilities.

7.3.2 Recommendations for Impact(Ed) and FCDO for the future implementation of similar education projects

Ensure all activities are focused on need

While GEC-T has supported a range of different interventions with different approaches to tackling the barriers to girls' education, it has required all projects to address a standard set of perceived constraints. This includes, for example, a requirement to focus energy, time, and resources on addressing barriers to transition and attendance. In this evaluation, we have found high existing rates of transition and attendance, in particular in Ghana and Kenya. The requirement to focus efforts on addressing attendance and transition in these countries will have no doubt diverted energy, time, and resources away from activities that may have delivered greater added value in terms of improving girls' access to education and improvements in learning outcomes. As such, it is recommended that future programming avoids blanket requirements and instead allows greater space for more tailored interventions that address the specific needs relevant to the context.

Teacher training and support

Future programmes should pay special attention to supporting the institutions and stakeholders at school and government level that are expected to take over project

activities; efforts should be made to ensure that they have the right capacities to sustain project activities, so that these will continue with fidelity to original design. Sustainability requires not just that an activity will continue, but also that it retains sufficient fidelity to the original design. The indications are positive that teacher training will continue in Ghana and Nigeria and at scale. However, in both cases this will require changes to the way in which teacher training was originally delivered by DP-2, and in particular that it is expected that DP-2-supported training will be delivered in an abridged form. While it is still too early for this evaluation to state definitively the extent to which this will affect the outcomes generated, it is not unreasonable to expect that some of the efficacy in generating improvements in teaching quality will be lost.

Remedial classes

This evaluation has found strong evidence of the efficacy of remedial classes, but the need to implement and how to implement is dependent on context. Remedial classes have been shown to be most effective when they are not common practice, as was the case in Nigerian primary schools and potentially in Wajir, Kenya. In Nigeria, we find strong evidence supporting the link between remedial classes and improved learning outcomes, with part of this link being generated by DP-2 filling a missing gap in meeting the needs of more poorly performing students. In Kenya, on the other hand, remedial classes were much more likely to be offered in general with or without DP-2 support. In both Ghana and Kenya, paid tuition was offered fairly commonly but this was not always accessible to the most marginalised groups. Therefore, in order for remedial classes to be most effective, they should be free of charge and target the most vulnerable students by identifying those that lack economic, social, and familial support (all of which are identified as important barriers to education).

MBW content

There is sufficient evidence to support the continued implementation of MBW content in schools, and we recommend that this is accompanied by future evaluation of the impact of MBW content on self-efficacy, and other outcomes, such as self-confidence, life skills, learning outcomes and transition, to strengthen the evidence base that supports the efficacy of this intervention and to understand the conditions that need to be in place for governments to successfully scale up this intervention. The evaluation provides evidence that girls relate well to MBW content and that this is contributing to positive changes in self-esteem and self-efficacy. While there are some indications that this may contribute to literacy and numeracy outcomes, this evaluation has been limited in its ability to test these fully.

CAP process

The CAP process works best when there is a clear identification of 'champions of change' and where membership is diverse. This evaluation finds evidence that the CAP process can be effective in identifying and addressing barriers to education and bridging the gap between the school and the community. It works best when both school leadership and influential community members are engaged in the process. The former ensures a continuity of activity in CAP processes, and the latter support engagement of the community, as well as to mobilise resources in response to barriers identified. Further, it works best when membership is diverse and, in particular, when its implementation is sensitive to the needs of marginalised parents, who, along with their daughters, may face particular barriers to engagement, as well as particular barriers to education. Implementation in Nigeria in particular offers an example of best practice, with high engagement from a diversity of stakeholders including school leadership, influential community members, and parents.

Educational media

While most teachers and students find the educational media content interesting and engaging, DP-2 should review its implementation of learning centres and media content in educationally marginalised contexts where regular and sustained use of the media content is found to be challenging. Throughout the course of the evaluation, we have identified a number of challenges to the use of media content. This is reflected in the endline evaluation finding evidence of just over 10% of schools in each of the three countries who do not have fully functional equipment for use in the classroom and a similar proportion of schools who do not have fully functional equipment for use by teachers for lesson preparation, and evidence of decreasing usage of the learning centre in all countries, though most noticeably in Nigeria. External challenges have contributed to this, in particular the midline evaluation findings found a decrease in access to electricity in Nigeria and Kenya, and DP-2 staff in Ghana and Nigeria report that there are challenges with securing donations to power generators. We find repeated concerns about the ability of schools, particularly more remote and rural schools or informal schools in Nairobi, to meet the expense of maintaining the equipment or powering generators. Furthermore, some teachers, most noticeably in Nigeria, report difficulties in using the content and in making it relatable to their lessons. This latter finding is in stark contrast to MBW content, which was viewed by all respondents as directly relatable to the real-life experiences of girls. In future projects Impact(Ed) should consider how learning centres are implemented, especially in more marginalised, resource-poor environments where it can be challenging for schools and surrounding communities, over time, to mobilise resources to secure, maintain and actively use media resources. Attention should be given to how to better enable this, including for example through sharing practices from schools that have succeeded with securing and maintaining equipment and regularly using content in such environments.

Discovery Project 2 Endline Evaluation Report - Annexes

Final Version

Oxford Policy Management

November 2020

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Annex 1. Project Management Response to Endline Evaluation

I. CONTEXT

The endline evaluation was adapted in the face of COVID-19 to be a purely remote exercise and therefore key outcomes could not be measured either at all or in the ways originally intended (see next section). This was unfortunate, but OPM did the best they could with the data they were able to gather and Impact(Ed) accepts the overall quality and content of the re-designed endline evaluation. The overall findings are well presented, and project management is in agreement with many of them as laid out in the body of the report. There are also a few areas in the report that project management takes issue with; these are detailed below.

Impact(Ed) wishes to express gratitude for the efforts of the external evaluator to adapt, quickly, to the challenges posed by the pandemic. It is the opinion of the project that OPM has gone above and beyond to make up for the reduction of quantitative data by increasing their efforts qualitatively and using as many alternative sources of information as were available to them, including Impact(Ed)'s monitoring data. While this data collection cannot make up for the limited quantitative survey data and lack of quantitative learning and classroom observation information, OPM deserves a great deal of credit for using what tools, methods and data were available at the time and producing a quality report.

In the project management response, Impact(Ed) first will respond to most of the larger findings of the endline evaluation and then reflect on how the findings either confirm or challenge the DP2 theory of change (TOC). The project finds that, while there are areas for improvement, the overall TOC remains sound. Finally, the project will respond to OPM's recommendations. Note the format of this paper differs slightly from the FM-developed template. This was done to improve readability by keeping findings and responses together.

It needs to be noted at the outset that the Discovery Project has been running since 2014 and this evaluation is of Impact(Ed)'s Discovery Project-2 (DP-2), representing the last two years of the project only. While this evaluation is correctly focused on the second iteration of the Discovery Project, Impact(Ed) wishes to emphasize that the majority of primary schools have been receiving support of one kind or another since 2014. As such, the results presented capture changes since 2018 only and cannot capture the full extent of project impact.

II. Note on Effect of COVID-19 on the Endline Evaluation

With the onset of the global pandemic, plans for the conduct of the endline evaluation were thrown into disarray and OPM was forced to reexamine how the project would be assessed given prohibitions on person-to-person interactions. Most of the adjustments made are detailed in the main body of the report, but it is worth reiterating the overall impact of these changes. The unavailability of expected data used to assess impact for learning, teacher performance, life skills and other key areas is a serious loss for the project. Because of these restrictions, the project cannot definitively show impact where it is thought to have occurred. The lack of learning assessment data is felt most acutely in Ghana and Kenya where the previous evaluation (midline) did not yet show significant impact, although, after just one full year of DP-2 implementation, this was expected. By endline, Impact(Ed) expected that adaptations to the project, along with more exposure to teacher professional development, remediation, etc., would result in measurable impacts. Impact(Ed)'s own monitoring data supports this view. For example, learner checks conducted in Nigeria prior to the shutdown show a steady increase in all measures, improving by an average of 32 points on a 100-point scale. In Ghana, checks used to assess progress in remedial classes prior to the shutdown found a 19 percent and 22 percent increase in literacy and numeracy scores, respectively. Classroom monitoring of teacher performance has also demonstrated improvements in all countries, with overall scores increasing from an average of 2.93 to 3.05 on a 4-point scale. It is the project's position that there is a high probability that these results would be mirrored in quantitative results if they had been collected. While OPM has attempted to address this and other measures of impact through limited quantitative and qualitative data, nothing can replace this lost opportunity.

It is worth noting that the timing of the endline evaluation did not allow for any meaningful assessment of DP-2's COVID-19 response activities, which started in April 2020, shortly before endline data collection. This timing made sense given the constraints of the overall project timeline and the desire to assess, as much as possible, the impact of DP-2 as originally designed before too much time passed following the abrupt school closures in March. While only briefly covered by the endline, it is clear that Impact(Ed) was well positioned to contribute to government-led responses in all three countries, and all indications are that activities undertaken were highly relevant, appropriate and responsive to governments' priority needs. While some monitoring data from downstream partner Cell-Ed's mobile platform was captured in the report, it would have been ideal to evaluate mobile learning efforts more fully as well as other distance learning efforts through various technological platforms, i.e. TV and radio. Over 6-8 months, there have been some real breakthroughs and promising results, though more for TV and radio programming than for mobile learning.

III. Response to the Main Findings and Conclusions

Changes in Learning

As stated above, the lack of quantitative learning data at endline represents a lost opportunity for the project. The qualitative data showing that at least perceptions of

learning are positively linked to DP-2 is welcome and in line with Impact(Ed)'s expectations of the same.

In line with midline findings, remedial classes were perceived to have a positive impact on learning by girls and teachers, which aligns with the project's monitoring data. While the monitoring data was not intended to be used for evaluative purposes, the demonstration of improvement for at least Ghana and Nigeria aligns with OPM's qualitative findings at endline of ALP/remedial intervention.

As far as remedial implementation, the project does take issue with some of the findings regarding the timing of remedial sessions, at least in Ghana and Nigeria. Impact(Ed) worked closely with local MOEs and individual schools in those two countries to ensure that remedial instruction is taking place during school hours as much as possible (this corresponds with project adaptations after the first phase of the ALP and government setting aside blocks of time toward the end of the school day for remediation in both countries). The project's own interaction with schools, monitoring data, and government counterparts indicate that schools in Ghana and Nigeria were, in fact, holding remedial sessions during the school day as directed, and therefore country and HQ management are not sure why OPM would have found otherwise. While the project does not doubt the qualitative reports OPM collected, the project does wish to suggest that the holding of these classes outside of normal school hours is the exception in these two countries.

Finally, the project appreciates the finding that the COVID-19 pandemic has substantially disrupted education for girls in all three countries. While some of the COVID-19 emergency responses that DP-2 has engaged in since school closures are outlined in the report, these interventions have taken place either just before or since endline data collection and analysis were underway. As such, many of the effects of these interventions could not be assessed by OPM, as noted above.

Self-Efficacy and Life skills

Impact(Ed) acknowledges the quantitative findings of no improvement in self-efficacy scores in comparison to control groups even as it contrasts with qualitative findings discussed below. The project agrees with OPM that the context does present a challenge in interpreting the data. The lack of quantitative findings was expected by the project given the impact of COVID-19 on top of the limited number of schools that were allowed to fully implement MBW in clubs. As OPM notes, the fact that most of the girls tested for self-efficacy in Ghana and Nigeria were in JSS when the project was limited to implementing MBW through clubs in only selected primary schools depressed the potential for impact. This is compounded by the fact that COVID-19 forced all girls out of school and into uncertain and potentially dangerous environments which is likely not conducive to the measurement of self-efficacy. The project, therefore, understands that the self-efficacy survey results at endline must be interpreted with caution. It should also be reiterated that gains in self-efficacy were seen at midline in Ghana, a country

where the implementation of MBW in clubs was ahead of Kenya and Nigeria at the time, pointing to the potential for significant gains given longer duration and the right environment.

Impact(Ed) accepts and appreciates that the qualitative findings in the evaluation do point to increases in self-efficacy and the project echoes OPM's assertion that the qualitative assessment is better able to examine how girls judge their own capabilities in different contexts. The project also appreciates the corroboration of these findings with statements from teachers and family members. It should also be noted that OPM's finding that parents' support of girls and their achievements played an outsized role in their scores and self-perception. This is relevant as the midline results found a strong connection between the project's CAP process and changes in parental attitudes, and therefore can be linked to this impact. Additionally, MBW in the schools, and specifically its use beyond clubs to engage parents and community members in support of girls' education, also holds potential to shift attitudes and behaviors (see World Bank study in northern Nigeria[1]). Future projects will ensure that this aspect of developing self-efficacy, i.e. parental support, is more explicitly targeted within project design.

The project is concerned with the discrepancy between the quantitative and qualitative data. Impact(Ed) acknowledges that possible explanations put forth by OPM are plausible and feels that, of the suggested explanations, the effect of COVID-19 and the large amount of time most girls had been away from clubs seem most plausible. The project does, however, take issue with OPM's other explanation, that the qualitative sample was only for high-performing schools. While it is true that the selection of schools for qualitative analysis was not random, the criteria given to country teams was to choose schools that were fully and actively participating in the project so that we would actually test the impact of the intervention. While undoubtedly there is some connection between participation in the project and project performance, the two classifications are not the same. In other words, Impact(Ed)'s view is that a large majority of schools are fully and actively engaged[2] and, while not random, the schools

[1] See Orozco, Victor and Ericka Gabriela Rascon Ramirez. 2020. "Movies, Mobile Gaming and Digital Books: Experimental Evaluation of Entertainment Education Interventions to Change Social Norms and Improve Educational Outcomes in Northern Nigeria." AEA RCT Registry. November 18. https://doi.org/10.1257/rct.3619-1.1. While the 14-month follow-up survey data collection was interrupted by COVID after only 20% data collection, there was still statistically significant evidence that showed positive changes in parent attitudes vis-à-vis girls going to school, continuing their education, and delaying marriage and motherhood.

[2] Monitoring data indicates that nearly all schools were actively engaged. In the final 6 months of the project (Sep 2019- Feb 2020), over 85% of schools' media centers were in good condition and had functioning project management and sustainability committees and plans. This is in addition to the positive indicators we see for improved teacher practice and active CAPs in most all schools.

sampled for qualitative data collection are more representative of schools as a whole than “high-performing” implies.

Transition

Impact(Ed) accepts the overall findings of transition in all three countries. In Ghana and Kenya, the project agrees with OPM’s assessment that since the baseline level of transition was already elevated, it was not likely that additional gains would be discernible given the parameters of the study. For Nigeria, the project is encouraged by the 5-percent improvement over control and appreciate OPM’s notation that the lack of statistical significance may be a result of the sample simply not being large enough.

Regarding the finding that the majority of gains in transition in Nigeria were from years 5 to 6, and less so to JSS, the project feels that more information would have been helpful before stating that there was no evidence to support this level of transition. While many girls did not transition to JSS, OPM does note that most of the girls that failed to do so remained in school, albeit by repeating a grade. Given the barriers to girls in Nigeria especially, the fact that girls are remaining in school is critical to assessing the overall impact of the project. This is coupled with positive qualitative information that points to at least some level of impact.

Finally, the project agrees with the assessment that the overall impact of COVID-19 on future transition is not fully understood. Impact(Ed) shares OPM’s concern that while almost all parents do express their intention to keep their daughters in school, the lengthy break in the school schedule is of grave concern and, among final C-19 response activities of the project, a great deal of emphasis has been placed on promoting and supporting re-enrolment and school readiness for children’s return and successful reintegration. These activities have been very well received by all stakeholders in project areas and should assist children’s return and reintegration.

Sustainability

Sustainability of DP-2 has always been a focus of Impact(Ed)’s implementation at all levels and teams in all three countries have worked hard to gain the support and buy-in of actors at the community, school, and system (MOE) level since the beginning of DP-1, in fact. The progress seen in these scores as of the final evaluation of the project, and particularly over the course of DP-2, is important. While not all of the project’s ambitious sustainability targets were met, most were, and a few even overperformed, especially in Nigeria. This was not by happenstance; DP-2 teams have worked very deliberately and persistently to engage all stakeholders and especially government partners in implementing the major activities of DP-2 and tracking their promising results, building their sense of ownership and commitment to sustaining – and, on the government side, potentially scaling – many project components. While the overall story is positive, OPM is correct in pointing out the very real risk of COVID-19 on government-led sustainability and particularly scale-up plans, given competing

demands for public resources. In the remaining time for DP-2, Impact(Ed) is continuing to work with its partners to ensure that project activities and investments are maintained as much as possible going forward, especially as it works to hand over full responsibilities to schools and local MOE partners.

At the **community level**, DP-2 was successful in promoting significant community involvement that included working through the Community Action Planning (CAP) process to engender tangible action on the part of community members in support of their children's education, with a special focus on working with school representatives to improve girls' attendance, learning and retention/transition. The scoring of Nigeria as a "4" (i.e. sustainability "established") is particularly notable in that it reflects the fact that the CAP process is embedded in these Fitila-supported school communities, providing a long-term foundation for sustained positive outcomes for girls' education. Moreover, the government in Kano has reiterated plans to adopt this successful model in schools across the state.

With regard to **school-level** sustainability, Impact(Ed) is pleased to see the strong scores – mainly "3s" – for teachers sustaining the project training through their own training and coaching of peers, and schools sustaining the remedial classes and clubs. These come as a result of significant and steady efforts on the part of the project to cultivate committed and capable resource teachers and mentors, supported by district education officials and head and deputy head teachers, to play their roles and sustain these well-received activities and investments beyond the life of the project (and come even in the face of significant challenges, such as limited step-down training resources and significant numbers of teacher transfers over time). Impact(Ed) also appreciated OPM's finding that school-level sustainability is more likely when there are tangible results (such as with the remedial program, especially in Ghana and Nigeria) and sustained effort to engage government counterparts (as was present in all three countries). The project appreciates the recognition of the work by all three country teams to continuously engage government counterparts in co-implementing the main project activities and in regular follow-up monitoring of schools.

The project does take some issue with the finding that many schools are less likely to sustain project activities in light of the state of the media center. While it is true that a functioning and well managed media center is important, it was never Impact(Ed)'s expectation that schools would not have to deal with periodic damage and/or loss of equipment over several years of a project's lifetime and beyond. This is, in fact, why the model is to sign a MOU with schools at the outset in which they commit to participate actively in the project, including taking responsibility for securing and maintaining the media equipment and content. While these are generally resource-starved communities, part of that commitment is to repair and/or replace damaged or stolen equipment, which schools generally honor even if takes many months to mobilize the necessary resources to do so (and do everything they can to prevent such incidents in the first place). We have many examples of this throughout DP-1 and 2, where schools have impressively fundraised to replace stolen or damaged equipment and even added additional security to prevent future theft such as a perimeter wall, security guard and or cameras. This is reflected in an increase in the percentage of project schools visited with all media center equipment and resources in place and

working from 82% in the first year of the project to 85% in the last 6 months (showing that schools are generally repairing and replacing damaged or missing equipment over time, as needed).

With this backdrop in mind, OPM's finding that significant numbers of schools have non-functioning media centers is misleading for two reasons. First, they based this on monitoring data of the project that records as "not fully functioning" any media center that project staff cannot verify as working (for example, if there is no way to power the equipment on a given day that project staff visit, or there is a problem with any single piece of equipment, e.g. a battery that has died in the remote control). The reason the project does this is to make sure it is following up again soon thereafter to verify that all is in order, but with this sweeping definition of "not fully functioning", project monitoring data showed as high as 20-25% of schools without functioning media centers. The reality is that the percentage that have significant issues, e.g. a significantly damaged or stolen television or DVD player is much lower as stated elsewhere in the report. Even those schools often find ways of continuing to use media in the classroom while they work toward repairing or replacing missing equipment, e.g. by using the second television or DVD player (normally for teachers to preview media content as they prepare video lessons) for classroom teaching. However, given this finding, Impact(Ed) will adjust monitoring systems in future to better disaggregate issues under "not fully functioning" for more clarity on the implications of such data.

A more accurate assessment of the sustainability of the media centers would include consideration of data on school repairs and replacements over time, as well as an examination of how schools adapt to continue using media to enhance teaching and learning (and for clubs, etc). This may not have been feasible for the OPM team to undertake given constraints at endline but must be taken into account in interpreting what was included in the endline report.

At the **system level**, the project agrees with the overall assessment, while taking slight issue with OPM's scoring for Kenya. As OPM notes in the report, DP-2 has worked extensively over the past year and a half, including with the support of the new senior technical leads in each country coming out of RAM3, to strengthen ties with each country's Ministry of Education at all levels. It is gratifying to see these efforts pay off by project end, and much credit goes to the country teams for their work in building these relationships and in bringing promising project approaches to high-level government audiences for continued investment and potential adoption at scale. In fact, these efforts have continued as a major focus in the project's last six months since the endline was carried out.

Regarding Kenya, OPM acknowledged that there is strong commitment from government to continue with some of the main project activities, e.g. related to teacher professional development, and that this reflects significant progress, but based their score (2 - "emerging" sustainability) on the fact that the Kenyan government has not earmarked a dedicated budget with which to do so. Yet the reality is that a) the score was "2" at midline and, as OPM recognizes, significant progress has been made at the

system level and b) the government has expressed strong commitment to integrate certain project training and follow-up coaching of teachers into its existing plans and budgets for teacher professional development. These points merit a score of “3” (“becoming established”). Impact(Ed) does not believe that having a separate budget line and initiative is the only way to establishing system-level sustainability; mainstreaming as part of overall TPD efforts is actually a better way to accomplish the same.

Teaching Quality

As with learning gains, the lack of classroom observation data represents a lost opportunity for the project to confirm progress shown in the qualitative findings. Impact(Ed) is pleased by the finding that teachers report the TPD useful and are able to recall several key components of training and describe how they’ve applied what they learned to enhance their teaching. This is in agreement with DP-2 monitoring data which has shown a small but steady improvement of teacher performance across the life of the project in all three countries.

While the endline data is positive overall, the project does take issue with the finding that a relatively small number of teachers have participated in step-down training. It should be noted that this issue is country and even project area specific and should be addressed as such. For instance, schools in Ghana are typically smaller and therefore the project was able to reach a larger proportion of teachers directly in training, reducing the need for step-down trainings. Even in countries/areas where this is not the case, i.e. where there are larger schools, the project made a conscious effort to reach more teachers with direct training, and step-down training by teams of Resource Teachers did reach others in their schools. It needs to be stressed that step-down training was never intended to replace the full set of trainings by Impact(Ed), but to provide a means by which key elements of training content could be disseminated as broadly as possible given the relative short time frame and limited resources of the project. The project also concedes that, where direct training of all or most all teachers is not feasible, the administration of step-down training is necessary, particularly when working at scale, and can be improved in future projects. This becomes even more important in a context of significant teacher turnover.

Finally, the project acknowledges many of the challenges in implementing the Cell-Ed component of the project. Due to several factors, including regulatory and technical barriers, roll-out of Cell-Ed in all three countries was delayed. This resulted in less time for the project to adapt once lower-than-expected uptake measures were identified. Impact(Ed) worked closely with Cell-Ed to identify and address the main issues, including developing a solution that was 100% free to the end user and providing more robust communications and support to teachers to encourage and enable their usage. This did lead to a critical mass of teachers engaging with the mobile training opportunities available to them (within a 20% to 40% engagement range). Moreover, the Cell-Ed mobile platform was a central element of the project’s COVID-19 emergency response strategy, allowing for mass communications – on public health,

child protection and well-being, and learning opportunities – to reach tens of thousands of households in project areas.

Overall, Impact(Ed) appreciates that the Cell-Ed component of the project offers rich learning and, while ultimately it did contribute to the project's teacher professional development efforts, future mobile technology interventions will need to be designed with this learning in mind, including the challenges associated with the use of mobile technology for student learning at home. There is real potential for supplementing education through technology, including phone-based learning, and an appreciation for a complementary hybrid approach emerging from COVID-19 emergency response learnings. In the future, Impact(Ed) will explore ways in which technology can be used to support ongoing distance education opportunities alongside in-class learning. This can lead to many benefits, one of which is improving higher household reach in times of emergency as systems will have been established, tested and trusted. This of course would include identifying barriers and needs related to access for the most vulnerable households while schools are operating versus scrambling to address this gap once emergencies arise.

Community Attitudes and Perceptions

DP-2 accepts the findings of the evaluation in terms of the CAP process and community attitudes and perceptions. Given the challenges of COVID-19, OPM had to use other sources to make its determination of progress in the CAPs. As one of the primary sources for this data was monitoring by Impact(Ed), much of the findings are not surprising to the project. The qualitative data collected remotely for the endline evaluation tracks with DP-2's understanding of how the CAPs are used as a tool to not only bring the school and community together, but to address significant barriers to education faced by girls' and the most vulnerable in meaningful ways and, more broadly, support meeting school needs that may not otherwise be met.

The project also appreciates OPM's conclusion that head teachers are a key aspect of CAP implementation and will continue to work with schools to ensure that they are included throughout the entire process. In fact, the project's additional Leadership for Change workshop brought together formal school leaders with this in mind and specifically for them to assess CAP implementation and plan for reinforcing efforts in support of girls' attendance, learning and transition on the part of head teachers and schools governance bodies. As the CAP implementation was variable at midline, it is another lost opportunity to not be able to definitively demonstrate improvements, particularly in Kenya and Ghana where the project made a concerted effort to improve after the midline results.

GESI

Impact(Ed) welcomes the finding that the project has had a positive influence on girls and their parents. For girls, 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. The project also appreciates the findings that the clubs and the *My Better World* video series and facilitator guide have demonstrated real 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.

The project also agrees with OPM's breakdown of how the various aspects of the project combine to improve the attitudes and behaviors of parents. This tracks closely with Impact(Ed)'s own theory of change and offers a strong argument for the importance of community and parent engagement in any education project.

IV. Review of TOC in the context of the Endline report

Summary of Project Theory of Change

The Discovery Project's bundling of community engagement, girls and boys clubs, teacher professional development, educational and social impact media, and sustainable technology supports the overall goal of boosting 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 transition to 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, the project seeks to create lasting, sustainable change to impact girls (and boys) now and for years to come.

DP-2'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. For example, 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 included:

- 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 a new life skills media series called *My Better World* drawing on themes from CAMFED's life skills curriculum, to develop a range of practical knowledge and real-world skills for clubs, schools, and communities.[3]
- Engaging communities and further supporting them to address persistent barriers to girls' learning, progression and transition including through working more closely with school governance bodies in their leadership roles and focusing communities on the most relevant barriers in context.
- 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.

Taken together, at the output level these activities were intended to:

- 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 was intended to 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

[3] Impact(Ed)'s "My Better World" series features a unique, part-animation, part-documentary format and is designed to equip girls (and their male peers) with specific life skills through engaging, scripted stories and real-life role models across Africa.

were to 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 and then reiterated at midline, 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, gender-balanced and socially inclusive 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 monitoring, 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 on sensitive topics and associated follow-up support, 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 participating and acting on what they decide are priorities within their contexts (including supportive parents as well as 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, and 5) a monitoring and support system.

Learning improvements are dependent on 1) teaching improvements and relevant, quality teaching and learning materials, 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) supportive home and community environments.

Finally, it is worth restating in line with OPM's baseline report that poverty in DP-2 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 DP-2, as stated previously Impact(Ed) believes the project can have significant impact even in the face of poverty. At the same time, Impact(Ed) 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' learning[4] 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

[4] 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 Impact(Ed)'s understanding of the multi-layered barriers to many marginalized girls' being in school, engaging academically and actually learning.

(and boys) who are not yet literate and numerate. In addition, the DP-2 community and leadership action planning processes emphasize the importance of data-driven decision making and how this applies to identifying the most vulnerable and at-risk children for appropriate targeted actions to ensure all children 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 Endline Findings

To state the obvious, much of the work of measuring the full extent of the project's TOC was disrupted by the COVID-19 pandemic and resulting limitations on the endline evaluation's scope and methods. Much of the data that would have gone into answering to what extent the TOC remains valid was not collected. The conclusions reached by OPM should be viewed in this light. While there were some positive findings further confirming the TOC, there was also a lack of data to establish certain linkages in the TOC. As OPM no doubt would agree, lack of evidence does not necessarily mean that the linkages are not there, and it is even more so given the unique circumstances of the endline.

With all that said, Impact(Ed) welcomes the finding that there is strong evidence for multiple areas of implementation leading to learning gains, improved self-efficacy, and increased transition, as well as changed attitudes and behaviours among key stakeholders. The nature of the TOC is such that the project's interventions work together to create impacts that any one or two could not. The fact that there is at least some evidence in each of the focus areas of the project for improvement indicates that the overall TOC is sound and should be used as a model, with modest adaptations, for projects going forward.

TPD and educational media

While Impact(Ed) agrees with the overall findings, there are a few areas where the project feels additional context is needed. The fact that there was strong evidence linking project training and coaching of teachers to improved teaching quality to improved learning during midline is appreciated and again the project laments not being in a better position to provide more evidence of the same at endline. It should be noted that at the time of midline, only Nigeria had received the full set of teacher trainings and that Ghana and Kenya did see more modest gains in teaching quality and learning at that point, which were expected to be more robust by the end of the project. Impact(Ed)'s own monitoring does show steady improvement in both Ghana and Kenya (not to mention further improvement in Nigeria) prior to schools shutting down.

As far as the mode of implementation resulting in different levels of effect regarding TPD, the project does agree that direct training is superior in quality, but does wish to stress that step-down training (provided by resource teachers and supported through training and material from Impact(Ed)) is a critical aspect of reaching the full number of teachers in each school. It was not practicable for the project to engage in direct training of all teachers given budget and time constraints. While improvements in step-down training are certainly possible, it is likely that this disparity is not able to be effectively addressed without significant commitment of additional resources, either to reach more teachers through expanding direct training or resourcing a proper step-down training intervention. Impact(Ed) agrees that the approach to reaching all teachers sustainably should be considered thoughtfully and as a matter of priority in any future project design based on this model.

The effects and impact of the use of educational media in the classroom are difficult to measure and OPM had to use Impact(Ed)'s monitoring data to address some of the gaps that resulted in not being able to visit classrooms. It should first be noted that while some classrooms do have deficiencies in power or equipment, these are often addressed in due course by the school and community which have agreed to take steps to address these outages, breakages and/or losses. Impact(Ed) has experience working with thousands of schools over decades now and typically finds that project-supported schools and communities do take their MOU commitments seriously and will repair or replace equipment, as needed, over time. As explained above, even though in many instances project monitoring data shows media equipment as 'not functioning', this only meant that their functioning could not be verified on that particular monitoring visit. For those schools with actual damage or loss of equipment, this is not surprising given the environment, and roughly 60% of schools affected by damage or theft managed to repair or replace some or all of their missing equipment as of 2020 and the COVID-19 outbreak (117 out of 198 schools across the 3 project countries); others generally had a concrete plan and were making progress toward repair or replacement. Moreover, as noted above, the project did see an increase in percentage of schools visited with fully working LCs from 82% in the first year of the project to 85% in the last 6 months. Impact(Ed) stresses that this is where strong school community commitment and actions they have taken more generally in support of education are key, actions that are highlighted in the endline itself.

Finally, in assessing the link between improved teaching and educational media, Impact(Ed) is very aware of the difficulties in linking these two in the best of circumstances. Impact(Ed) appreciates OPM's work with qualitative data to find some evidence of a link between the two (and subsequently learning gains). Impact(Ed) still would like to stress that while much work needs to be done, the qualitative data does indicate that educational media helps teachers in teaching complex topics as well as creating greater levels of engagement and enthusiasm in class as a result of teacher's use of media. While learning gains could not be measured at endline and the results at midline for Ghana and Kenya were inconclusive, the improvements in teaching and engagement are likely in time to lead to at least some levels of greater learning, even if they were not able to be demonstrated in this particular evaluation.

Girls' clubs and MBW content

At midline, OPM found improved levels of self-efficacy in Ghana and life skills in Kenya and Nigeria. This was in spite of the fact that, at midline, it was very early on in the rollout of *My Better World* media in clubs in Kenya and Nigeria (and only slightly further along in Ghana). DP-2 had looked forward to seeing improvements in self-efficacy (and life skills, though only self-efficacy was surveyed in the re-designed endline) in all countries at project end, so project management is disappointed in the lack of improved self-efficacy detected at endline. Impact(Ed) appreciates OPM's acknowledgement that there may have been several reasons for this, not least of which is the COVID pandemic and its effect on both data collection and, in the middle of a public health emergency with social and economic vulnerabilities exacerbated, the self-efficacy of the girls themselves. Also, the fact that most of the girls tested for self-efficacy in Ghana and Nigeria were in JSS when the project was limited to implementing MBW in only selected primary schools depressed the potential for impact. The project does appreciate that qualitative measures did suggest improvements and agrees that the requirement of sustained participation in clubs as a forum for viewing and discussing the full MBW series is probably necessary for more significant and lasting change.

It was unfortunate that attendance could not be measured to ascertain if there was a link between girls' club membership and that metric, but here Impact(Ed) must again stress the fact that qualitative data does show improved levels of enthusiasm for school, a likely precursor to improved attendance. The project does take some issue with the characterization that there is no evidence of a link between improved self-efficacy and learning gains in Ghana and Kenya. OPM identified a demonstrable link between self-efficacy and learning gains in Nigeria at midline and acknowledges in the baseline that there is evidence for a general linkage between the two in the academic literature. Rather than say there is no evidence of a link between improved self-efficacy and learning gains in Ghana and Kenya, particularly given the established link seen in Nigeria at midline, it is more accurate to say the link could not be assessed at endline due to the inability to collect data required to make a determination.

School leadership and community involvement in action planning

Impact(Ed) welcomes OPM's finding that the evaluation finds strong evidence that CAP activities lead to changed attitudes and concrete plans in support of girls' education. The project has always felt strongly that the community must be involved in all levels of planning and execution to support work in schools and that community action planning is a strong tool for actions that enable greater girls' attendance, learning, and transition. While the lack of evidence that CAPs support higher attendance (from midline) is not surprising, it should also be stressed that attendance levels in all three countries are relatively high and there may not have been enough room for improvement to be appreciable.

In terms of the CAP process's effect on transition, Impact(Ed) welcomes the finding that links CAP implementation and improved transition. Having said that, the project finds this finding slightly misleading as OPM admits in the text that transition rates in Ghana and Kenya were already high and therefore making it unlikely to find any link. Rather than say that there was no link between CAPs and transition, the project feels it is more accurate to say that the existing higher levels of transition preclude the ability of the evaluator to make a determination.

Remedial Lessons

The project welcomes OPM's finding that remedial classes are positively associated with improved learning and transition. While a late addition to the project design (and TOC), the response from teachers and communities regarding remedial classes, along with project monitoring showing steady progress on the part of learners, have been very positive. Impact(Ed) acknowledges and agrees with the finding that remedial classes are likely to have the most impact in environments where the classes are novel and acknowledges that the more widespread availability of such classes in Kenya, particularly in greater Nairobi, has undercut the degree to which this project component may have contributed to improved learning there. Future iterations of the project should take this into consideration, particularly in areas where remedial classes are commonplace.

Impact(Ed) does believe a more robust assessment of remedial classes and what has or may not have worked well, why and how would be helpful, especially after significant adaptations were made to this component of the project post-midline. Unfortunately, this was not possible at endline due to the COVID-19 outbreak, although project teams have reflected on this at length and are leaving behind remedial handbooks – that incorporate project learnings – for government partners and schools to refer to going forward.

V. Response to Recommendations

Government institutions taking the teacher training forward should attempt to ensure that the full package of DP-2 training is delivered, as it is likely that gains to teaching quality will be diminished by a 'diluted' level of training.

Impact(Ed) agrees with the overall recommendation that government institutions deliver the full package of DP-2 training. The project has, in fact, worked closely with MOE officials in all three countries to ensure that they are able to do just that. Having said that, it is a given that MOE partners will not give the same level of training as they incorporate DP-2 trainings into their own curriculum, and of course their own in-service

teacher training curriculum does overlap with content covered by DP-2. Across all three countries, where government officials have committed to continuing training using materials and methods designed by the project, government ministries will have to work within their own broader curriculums and training regimens.

The efficacy of remedial lessons can be enhanced by formal integration into the school timetable.

This recommendation is based on data showing that some remedial classes are still taking place after school. At least in Ghana and Nigeria, this is not the case, based on the project's monitoring and support to the schools. The project already had moved to implement this recommendation coming out of midline as one of the key project learnings from the first phase of the ALP. Impact(Ed) will continue to pursue incorporation of remedial classes within the school timetable as a good practice going forward and this is reflected in the remedial handbooks just cited above.

How teachers can be compensated for teaching remedial lessons in line with government guidelines should be considered.

The project is aware of the challenge that is represented by the compensation of teachers for remedial lessons. Given the great importance of the remedial program (as part of the project's accelerated learning strategy), a decision was made to provide modest monetary rewards to teachers of remedial classes in Ghana and Nigeria (this was not allowed in Kenya). This was not expected to last beyond an initial demonstration period and the long-term goal was for government to pick up the costs of extra compensation to teachers putting in the time and effort required for remedial classes, once all agreed on the added value of these. Ideally, modest financial incentives should be accompanied by other incentives as well, e.g. recognition of training received and service provided within the performance management system.

The case of Kenya is illustrative in that, due to local regulations, the project could not provide payments to teachers (although they were being paid privately, under the table, to offer their own classes to students seeking extra support, making it that much harder to motivate them to teach after-school classes as part of project activities). It is not a coincidence that the project had far greater challenges in setting up and supporting remedial classes in Kenya, especially in the beginning of the project when the benefits were not yet demonstrated. On the other hand, it should be pointed out that teachers in Kenya did show more commitment to the project's remediation efforts in time. In future iterations, it would be prudent to consider this experience. One takeaway is likely that monetary incentives or rewards of some kind are important ingredients of success and, for teachers putting in the extra time and efforts, are an appropriate policy response.

While GEC-T has supported a range of different interventions with different approaches to tackling the barriers to girls' education, it has required all projects to address a standard set of perceived constraints.

The project agrees with the assessment that the focus on transition and attendance in DP-2 ended up not being as impactful as was envisioned. As the report notes, the rates of transition and attendance in all three countries was already relatively high at baseline, making any perceived gains in this area very difficult to measure. Resources to address both measures were still seen as necessary however given the prescriptive nature of the transition and attendance indicators as put forth in GEC guidance. Having said that, it should be noted that this was not a given prior to baseline. In fact, during GEC-1, data collected at that baseline indicated that transition and attendance were areas in need of improvement, albeit from a still relatively higher baseline.

It is Impact(Ed)'s position that the ideal scenario would have been to have more flexibility in reallocating resources and focus after the baseline was conducted at even the outcome level. While the project was able to set its own targets, DP-2 felt pressured to set at least some gain in the targets despite the challenge of increasing these measures. In fact, many other indicators in the project were revised and even dropped from the logframe after baseline (and to a lesser extent after midline) based on the data collected. Allowing the project to do the same at even the outcome level (with appropriate consultation with the FM) would be appropriate and should be encouraged going forward.

Future programmes should pay special attention to supporting the institutions and stakeholders at school and government level that are expected to take over project activities; efforts should be made to ensure that they have the right capacities to sustain project activities, so that these will continue with fidelity to original design.

As stated above, the project does agree that local stakeholders need support to ensure that they are able to continue project trainings, particularly if they are to mimic DP-2's design. Impact(Ed) has made considerable efforts in this vein and concedes that even more could have been done, particularly given the current capacity of host governments to conduct these trainings and conduct the critical follow-up that was key to DP-2's success. Having said that, the project does wish to state that this level of capacity building was not part of the project's design or TOC. While a strong commitment and investment in capacity strengthening and working closely with local MOEs and schools throughout to continue the work of DP-2 was built into the project's design, the level of capacity building needed to ensure that teachers are adequately trained, including new teachers in a context of significant teacher transfers over time, is very large and investments would need to be both substantial and sustained over a long time frame (beyond project resource and time limitations).

This evaluation has found strong evidence of the efficacy of remedial classes, but the need to implement and how to implement is dependent on context.

The project agrees completely with this recommendation and feels that any future projects should certainly include a robust needs assessment and tailored design process prior to engaging in remedial classes. Impact(Ed) would like to also suggest that in future more work be done to test the value of different types of remedial interventions, especially ones that focus on different grade levels. This would go a long way to informing how to improve remedial class delivery, maximize resulting learning gains, and minimize the number of those potentially left behind.

There is sufficient evidence to support the continued implementation of MBW content in schools, and we recommend that this is accompanied by future evaluation of the impact of MBW content on self-efficacy, and other outcomes, such as self-confidence, life skills, learning outcomes and transition, to strengthen the evidence base that supports the efficacy of this intervention and to understand the conditions that need to be in place for governments to successfully scale up this intervention.

Impact(Ed) believes strongly in the utility of the *My Better World* series and agrees that further implementation of the media and corresponding Impact(Ed) facilitator guides in clubs would be beneficial. While the project appreciates OPM's conclusion that MBW is worthy of continued implementation, it does not go far enough. The project believes the midline and endline together have brought out significant evidence already of a range of positive effects on girls. Impact(Ed) will consider ways to scale MBW life skills content to schools for school leaders, teachers and mentors to use to enhance the curriculum, support girls and boys clubs, and strengthen parent and community outreach. This is in addition to further efforts to support broadcasts of MBW through local radio and TV stations as a means of reaching even more children and promoting, for girls in particular, greater self-esteem, life skills and agency.

The CAP process works best when there is a clear identification of 'champions of change' and where membership is diverse.

The project welcomes and agrees with the recommendation as stated. Impact(Ed) is proud of the CAP process and sees it as a critical component to ensuring that all school and community stakeholders are working together for the shared goal of improving girls' education. Going forward the project will continue to work with schools and communities and work to ensure that CAP processes are driven by diverse groups, and especially representatives of marginalized groups, to better understand barriers and support improved educational outcomes for all children.

While most teachers and students find the educational media content interesting and engaging, DP-2 should review its implementation of learning centres and media content in educationally marginalised contexts where regular and sustained use of the media content is found to be challenging.

Impact(Ed) agrees in the importance of supporting active media use in schools and has a well-developed model for empowering schools to lead on this, including working with schools to ensure that the infrastructure required to maintain media centers is in place and plans to maintain and use them to maximum effect are realistic and followed up on. While the project already does this, most notably requiring schools to provide the project with management and sustainability plans, Impact(Ed) appreciates this recommendation and will continue to focus on working with stakeholders to address the challenges marginalized school communities, especially, face in securing, fully benefiting from, and sustaining media resources going forward.

Annex 2. Endline evaluation approach and methodology

The following section describes the approach to the endline evaluation. Oxford Policy Management (OPM) has been contracted by Impact(Ed) to conduct an evaluation of the Discovery Project 2 (DP-2) in Ghana, Kenya, and Nigeria over three rounds. The baseline and midline round of the evaluation were completed in 2018 and 2019, respectively. Following the original evaluation design, we were expecting to conduct the endline evaluation in February – September 2020. The endline evaluation was expected to be a mixed-methods, quasi-experimental impact evaluation, involving a large-scale school-based quantitative survey and qualitative data collection in schools and households. The endline evaluation was expected to quantify the impact that DP-2 has had on its two key outcomes (learning outcomes and transition), on sustainability, and its intermediate outcomes.

Due to the outbreak of the COVID-19 global pandemic and the resulting school closures, the original endline evaluation design was no longer viable. In addition, because of the timeframe in which the DP-2 project will be completed, it was not possible to postpone the endline evaluation until a time where social distancing measures are eased, and school visits and face-to-face research would be feasible. **We therefore adjusted the endline evaluation design to a design that could be implemented through remote data collection and analysis of secondary data**. This necessarily required a review of the scope of the evaluation, as several of the questions that the evaluation had set out to answer at endline cannot be answered effectively through these data collection methodologies. Despite focusing on a more limited set of research questions, the endline evaluation aims to capture perceptions of project effectiveness and implementation in a timely manner and to ensure that crucial learning useful for future implementation is not lost.

2.1 Overall approach and research questions

This section describes our overall approach to the endline evaluation, and the research questions that are answered by the endline evaluation. Section 2.1.1 describes the changes to the evaluation approach because of the COVID-19 pandemic. The section begins by introducing the two broad research themes that guide the endline evaluation, and the available sources of data to address these research questions. Next, we summarise the deviations from the original scope of the evaluation, including comparing the information available at endline against what the evaluation had set out to collect. Lastly, we summarise how the evaluation and analysis approach has changed because of the data that is available at endline. Section 2.1.2 provides the research matrix, which documents in detail the research questions that are answered by the endline evaluation.

2.1.1 Changes to the evaluation approach

Overall evaluation approach

The original evaluation design was a theory-based mixed-methods evaluation that included a quantitative impact evaluation, facilitated by a large-scale survey with girls,

parents, teachers and head teachers, as well as a qualitative impact evaluation that followed a purposively selected cohort of girls, as well as parents and educators.

An endline evaluation round that follows this original design had already been designed at the time of the COVID-19 outbreak. In addition, **qualitative data collection in Nigeria had already been completed in line with the original design.** Following the COVID-19 outbreak, it was no longer possible to continue with the remainder of the data collection as planned. This necessitated a shift from face-to-face interviewing to remote interviewing using telephone interviews for the remainder of the evaluation.

To redesign the endline evaluation, a new research scope was defined in consultation with Impact(Ed) and the FM. The research scope was defined with the following factors in mind:

- Priorities for evidence to be produced by the endline evaluation;
- Constraints on the modes of data collection that are possible in the current situation and resulting constraints on the types of evidence that can be produced;
- The time required for a re-design of the approach, data collection, analysis, and reporting.

Following discussions with Impact(Ed) and the FM, we agreed that the endline round of evaluation would focus on **two broad research themes**, which are listed in order of priority.

Research themes for the endline evaluation

1. **What progress has been made against outcomes and intermediate outcomes of DP-2 as it was designed and implemented before the COVID-19 outbreak, i.e. up until mid-March 2020?**
2. **How have outcomes and intermediate outcomes been affected by COVID-19?**

To address these research themes, the evaluation drew on the following sources of data:

- Quantitative data collected through phone interviews
- Qualitative data collected through face-to-face interviews in Nigeria
- Qualitative data collected through phone interviews in all three countries
- Monitoring data

Summary of deviations from the original scope of the evaluation

In this section, we summarise the implications of the change in data collection methodology to remote interviewing on the types of data that we could collect for the endline evaluation. The main implications were:

- **Many of the indicators that the quantitative impact evaluation has been collecting data on need to be collected in schools or through face-to-face interviews.** This includes the measurement of learning outcomes through learning assessments that need to be conducted face-to-face, the measurement of teaching

quality through lesson observations in schools, and the measurement of attendance at school through school records. This meant that quantitative data on these indicators could not be collected at endline, and we therefore do not have quantitative impact estimates for some of the key outcome and intermediate outcome indicators.

- For the qualitative impact evaluation, **phone interviews do not allow the use of certain research techniques, in particular focus group discussions (FGDs)**, which had been a key research technique in the original design. FGDs had to be replaced with individual interviews.
- **Phone interviews are shorter than face-to-face interviews**, with previous experience suggesting that respondents are likely to lose concentration if interviews last longer than 30 minutes. This meant that we had to prioritise some questions and could not ask other questions. It also meant that some of the themes explored in the qualitative research could not be explored in as much depth as originally planned.
- When remote data collection took place, schools had been closed and project activities halted for several months. This meant **we had to be aware of recall bias** and could not expect respondents to remember as many precise details about their engagement with DP-2. This meant that we could not collect as much detail about respondents' engagement in DP-2 as originally planned.

In summary, for the quantitative impact evaluation, the change to remote data collection and the shorter duration of the interviews meant that it was not possible to collect quantitative impact data on some of the indicators that the evaluation had set out to measure. For the qualitative impact evaluation, the change to remote data collection meant that certain research techniques were not possible, and that the breadth and depth of the data collected were more limited.

Table 1 presents a summary of whether and to what extent the endline evaluation reports on the logframe indicators that the evaluation was intended to measure. The table shows how we intended to assess each logframe indicator and how this approach changed because of the change to remote data collection. It should be noted that where we indicate that there is no change to the qualitative data collection for the indicator, this means that qualitative data on the indicator continued to be collected at endline. However, as explained above, there were differences in the breadth and depth of the qualitative data that could be collected at endline. In Section 2.1.2, we outline the specific research questions for the endline evaluation.

Table 1: Summary of data collected at endline against the logframe indicators

Indicator	Original design	Changes in the revised evaluation design
Learning: literacy and numeracy	**Quantitative:** Learning assessments (EGRA / EGMA and SegRA / SeGMA) of literacy and numeracy, administered face-to-face in schools **Qualitative:** Perceptions of progress	The learning assessments most be administered face-to-face, which is not possible at endline. As such the impact of DP-2 on literacy and numeracy outcomes will not be assessed quantitatively at endline. The evaluation includes questions on perceptions of changes in learning outcomes. We will also review DP-2's learner check results in Nigeria, measuring remedial girls' literacy and numeracy levels at two intervals, the start of Phase 2 remedial classes in November 2019 and one term

Indicator	Original design	Changes in the revised evaluation design
		later in March 2020, though only half of the data collection had been completed before schools closed in Kano. This data is only available for girls who are part of the remedial classes, and there is no control group. No student check data is available from Ghana or Kenya.
Learning: Self-efficacy	**Quantitative:** Self-efficacy index (Generalised Self-Efficacy Scale) **Qualitative:** Perceptions of changes in self-efficacy	No change
Transition	**Quantitative:** Transition status, from school records and interviews with caregivers **Qualitative:** Perceptions of barriers and contributors to transition	School records were not available at endline. Instead, we asked caregivers to report on the transition status of their daughters. This information is combined with the information collected at midline to report on the impact of DP-2 on transition at endline.
Attendance	**Quantitative:** Attendance rate from school attendance registers **Qualitative:** Perceptions of barriers and contributors to attendance	Attendance will not be assessed at endline. Attendance records were not available, and a purely qualitative assessment of attendance was not a priority for the evaluation given the high attendance rates observed at midline.
Teaching quality	**Quantitative:** Lesson observations **Qualitative:** Perceptions of engagement with teacher training and use of DP-2 teaching methods	At endline, the impact of DP-2 on teaching quality will not be assessed quantitatively because lesson observations are not possible. Instead we will assess the perceptions of teachers of the efficacy of DP-2 activities aimed at improving teaching quality. This will be supported by analysis of monitoring data.
Life skills	**Quantitative:** A Likert-type scale is used to create a life skills index **Qualitative:** Perceptions of life skills learnt through engagement with girls' clubs and MBW	We will assess qualitatively what life skills girls have learnt from the girls' club / MBW sessions. We will not assess life skills quantitatively because the shorter duration of the phone interview meant that only one index (self-efficacy or life skills) could be administered. Because self-efficacy is the outcome indicator for the project, the quantitative data collection focused on self-efficacy rather than life skills. Both the life-skills and self-efficacy index measure similar constructs geared at understanding the confidence of girls in different situations. The self-efficacy index focuses on the ability of girls to solve problems in general, whilst the life-skills index focuses on the confidence of the girl in the classroom.
Attitudes and perceptions	**Quantitative:** Girls and parents are asked about aspirations to complete secondary school and university	This will be assessed qualitatively. The original logframe indicator included a quantitative assessment of the *percentage of girls who aspire to complete secondary or higher education (provided no constraints)*. Given the ongoing COVID-19 situation, the data on this indicator is unlikely to be comparable

Indicator	Original design	Changes in the revised evaluation design
	Qualitative: Perceptions of progress in the implementation of CAP activities, and its outcomes	to midline findings as it would be difficult (and unrealistic) for girls to imagine a situation where COVID-19 does not pose a potential constraint to their education.
Sustainability	Sustainability was intended to be assessed through an assessment of progress against outcomes, intermediate outcomes, and implementation as well as targeted interviews with key stakeholders including project staff and MOE officials	The endline evaluation assesses the sustainability of DP-2, but the assessment is not based on as rich a set of evidence as originally intended.

Summary of deviations to the evaluation methodology

This section summarises the key implications of the changes in data collection methods and available data on the evaluation methodology and analysis approach. Further details on the evaluation methodology and analysis approach at endline are provided in the remainder of this chapter.

Measuring perceptions of effectiveness rather than measuring impact

A major component of the original intended endline evaluation approach had been an impact evaluation to assess the attributable impact of DP-2 on key outcomes and intermediate outcomes. **The revised quantitative impact evaluation is much more limited in nature greatly reducing the ability of the evaluation to robustly measure the attributable impact of DP-2 on the full range of expected outcomes**.

The evaluation continued to make a quantitative assessment of the impact of DP-2 on self-efficacy and transition, albeit with a smaller sample as discussed below. However, for other indicators, **the endline round focused by necessity more strongly on a qualitative assessment of the factors that stakeholders perceive to be influential in driving change in outcomes, and on understanding how DP-2 activities are perceived to contribute to any perceived changes in outcomes**. For example, given that we could not conduct learning assessments remotely our judgement of progress in this domain rested on two sources of evidence: (1) learner check instruments implemented by Impact(Ed), but only on treatment girls that assess progress but not whether this is attributable to DP-2; and (2) a qualitative assessment of the perceptions held by teachers, parents and girls of girls' learning progress and whether they perceive that this relates to DP-2.

Mixing methods

The original design of the endline evaluation intended that quantitative and qualitative methods would be integrated to ensure robustness, depth, and improved validity in the research findings. Each evaluation method targets stakeholders based on the strengths of the method to maximise the breadth of the data and would have enabled us to answer all key research questions. In addition, some research questions were expected to be addressed by both quantitative and qualitative methods that would have enabled us to triangulate findings from different research methodologies and contextualise findings from the quantitative research.

As is detailed in Table 1 as well as the research matrix presented in Section 2.1.2, this was no longer possible at endline in all cases. For example, our assessment of teaching quality was no longer grounded by a robust assessment of the impact of DP-2 on various dimensions of teaching, but rather assessed through an understanding of what aspects of the training teachers have retained and what they plan to use in the future. This is supported by evidence that this evaluation has already generated in previous rounds.

In addition, qualitative data collection in Nigeria was completed before COVID-19, while the remainder of the data was being collected during the pandemic. The difference in context is likely to affect answers to some questions, and this needed to be taken into consideration in how we triangulate findings from different research methodologies.

Despite these limitations to mixing methods, **the new data collection methodology also provided an opportunity to test a different approach to mixing methods through the use of blended questions**. These are questions in the quantitative survey where a quantitative response prompted the interviewer to ask a more detailed, and probing question to get a qualitative response. This method provided us with a greater depth and breadth of answers for a few important questions that provided relevant contextual information on the project. Specifically, blended questions were asked around whether girls plan to return to school, reasons for girls dropping out of school, and what girls learnt from the MBW content (in Kenya).

Changes to the quantitative analysis approach

A major implication of the use of telephone interviews for the quantitative survey were **larger non-response rates compared to face-to-face interviews**, due to a number of factors, including lack of access to a telephone, lack of available or reliable contact information, or high refusal rates. We used different mitigation approaches to prevent non-response, but non-response rates were nevertheless higher compared to face-to-face research. This meant that **the sample was not large enough to allow for the types of sub-group analysis that were conducted at midline**. For example, we did not conduct separate analysis for the different sampling strata in Kenya, or for schools with different exposure to the intervention in Ghana.

Non-response rates were also not random, that is non-response was driven in the main by respondents who did not have access to a telephone. These respondents are likely to be among the more vulnerable within the evaluation sample. Section 2.5.2 shows differences between respondents who were successfully tracked and those who were lost from the sample. Section 2.6 describes how this non-random response was taken into account in the analysis, relying on the background characteristics of the girls collected in the previous evaluation rounds.

A further change to the quantitative analysis approach was that we have more limited background characteristics of girls at endline, because of the shorter duration of the phone interviews and because no data was collected at schools. This meant that the difference-in-difference analysis approach had to be adjusted. This is described in Section 2.6.

Changes to the qualitative research techniques

FGDs were a key qualitative approach used during the baseline and midline rounds of research. **As explained, the endline evaluation did not include FGDs and relied**

only on one-on-one interviews. FGDs are a useful approach relative to individual interviews in that the group format can stimulate discussion, generate new ideas and promote the exploration of unknowns. Furthermore, it allows for a range of views to be explored on given topics.

2.1.2 Key evaluation questions at endline

Once the key research themes had been established and the limitations to the data collection methodologies had been identified, we developed a detailed research matrix to guide the endline evaluation.

Table 2 outlines the research questions that are answered at endline, as well as the sources of data and types of respondents for each question.

Table 2: Research questions at endline

Research question	Sub-questions / sub-indicators	Source of data	Respondents
Learning			
What progress have girls made in their learning in the last year, prior to the COVID-19 outbreak, including during the ALP lessons?	What progress have students in DP-2 classes made between November 2019 and March 2020? (Nigeria only)	Learner check data	
	What are teachers' perceptions of the progress girls in their class have made in the last year? What do they perceive has contributed to this change? What are caregivers' perceptions of their child's performance at school? How do girls experience their classes and view their performance?	Qual	ALP teachers Cohort girls Parents of cohort girls
	Did, and how did, teachers perceive the ALP lessons to be beneficial in supporting weaker students to catch-up with their peers? Do teachers plan to re-engage with remedial classes once schools return?	Qual	ALP teachers
	Were activities related to the ALP component implemented as expected and to scale? Sub-indicators: Schools with active remedial classes Average number of students attending remedial classes per school Average number of English / maths remedial classes delivered per month % of schools with regular monitoring from school heads and local partners	Monitoring	n/a
How have girls' views towards their education changed because of COVID-19?	Are, and how are, girls studying / learning while schools are closed? How has this changed their views towards education?	Quant + Qual	Cohort Parents Cohort Girls
Self-efficacy and life skills			
What is the impact of DP-2 on self-efficacy since the midline evaluation? What are changes in girls' attitudes to schooling and	What is the impact of DP-2 on self-efficacy as measured by a Likert-scale module?	Quant	Cohort girls
	What are girls' perceptions and attitudes to schooling, self-efficacy? Has this changed since midline and why?	Qual	Cohort girls Parents of cohort girls

Research question	Sub-questions / sub-indicators	Source of data	Respondents
behaviour as well as their life skills as result of them attending girls' clubs (and especially because of the MBW content)?	What are changes in girls' attitudes to schooling and behaviour as well as their life skills as result of them attending girls' clubs (and especially because of the MBW content)?	Qual	Girls' club members from primary schools Club mentors
Have girls' clubs and MBW activities been implemented as expected and at scale?	Number of girls/boys actively participating in girls' club activities Percentage of girls/boys' clubs that are watching and discussing MBW content at least 2x/month	Monitoring	n/a
	What activities do girls recall having last done in the girls' clubs? What did the club mentor last do as part of the club? How are girls using what they have learnt in the club at home?	Qual	Girls' club members from primary schools Club mentors
	Do girls watch the MBW show on TV and in their girls' clubs? For those who do not watch, why do they not watch the show? For those who do, how do they perceive it to have helped their life skills? (Kenya only)	Quant + qual	Cohort girls Parents of cohort girls
Transition			
What is the impact of DP-2 on transition since the ML evaluation?	What is the impact of DP-2 on girls' transition status? Sub-indicators: % of cohort girls transitioning to JSS (Ghana and Nigeria) / middle to upper primary (Kenya) % of cohort girls transitioning to vocational training or tertiary education % of cohort girls transitioning to employment or other economic activities % of girls who drop out, and reasons for drop-out	Quant	Cohort girls
	What are the perceptions of barriers to the continued education of girls (including but not limited to COVID-19)? How has DP-2 contributed to the change in barriers, if at all?	Qual	Cohort girls Parents of cohort girls CAP members

Research question	Sub-questions / sub-indicators	Source of data	Respondents
Will the COVID-19 pandemic change the transition status of girls who had transitioned successfully?	What percentage of girls that were in school plan to return / do not plan to return to school? What supports their return or why do they not plan to return?	Quant + Qual	Cohort girls
Teaching quality			
What DP-2 teacher training and support activities did teachers find most useful and why?	What DP-2 teacher training and support activities did teachers find most useful and why? Which skills are they most likely to retain upon return to school and why?	Qual	ALP teachers
Were activities designed to improve teaching quality implemented as expected and to scale?	Were activities related to teacher training and support (direct + step-down training, coaching / supervision, teacher training via Cell-Ed's mobile platform, educational video, and digital content) implemented as expected and to scale? Sub-indicators: % of schools with learning centre equipment present and in working condition % of schools using media resources at least 5 lessons per week during and after school hours Number of coaching sessions given to targeted English and Math teachers by DP-2 staff % of teachers accessing refresher courses and tips/reminders for teaching numeracy and literacy via Cell-Ed platform % of schools with a plan for resource teachers to train and retrain other teachers Average number of new teachers trained in last year (step-down) per school Average number of old teachers trained in last year (refresher) per school	Monitoring	n/a
Community attitudes and perceptions			
What has been the impact of DP-2 on community members' attitudes towards girls' education?	What are changes in parents' attitudes to girls' schooling and life skills? What are the main factors that influence parents' support to education? Have these changed because of COVID-19?	Qual	Parents of cohort girls

Research question	Sub-questions / sub-indicators	Source of data	Respondents
Have CAP activities been implemented as expected and to scale?	What is the progress of the CAP since the midline evaluation? What have been barriers to progress including with regards to COVID-19?	Qual	CAP members
	Did, and in what way did, head teachers find the CAP useful? Where the CAP has not been functioning, what was the reason for this?	Qual	Head teachers
	What proportion of CAPs have been revised in the last year (March 2019 – March 2020)? What proportion of CAPs have taken tangible actions to address barriers to girls' education?	Monitoring	
Sustainability			
Sustainability at community level (CAP component): Have a critical mass of communities, through CAP, demonstrated the ability to independently develop existing and new CAP initiatives to continuously address barriers to girls' education?	Evidence from CAP section above		
	Will schools and communities sustain the actions of coming together to identify and address barriers to girls' education? Why/why not?	Qual	CAP members
Sustainability at school level (girls' clubs component): Do a critical mass of schools have established girls' clubs which are self-sustained and functioning on a regular basis using the MBW content?	Evidence from girls' club and MBW section above		
	How and why is the club mentor likely to support and sustain girls' clubs and the MBW component in the school once the project ends? If they do not plan to sustain, why not?	Qual	Club mentors
	Why or why not are head teachers likely to support and sustain girls' clubs and the MBW component in the school once the project ends?	Qual	Head teachers
Sustainability at the school level (teacher training &	Evidence from learning and teaching quality sections above		

Research question	Sub-questions / sub-indicators	Source of data	Respondents
ALP components): Do a critical mass of schools demonstrate the implementation of effective DP-2 teacher training and effective ALP?	Do teachers plan to sustain the practice of remedial classes once schools resume? Why or why not?	Qual	ALP teachers
	Why/why not are head teachers likely to support and sustain remedial classes in the school once the project ends?	Qual	Head teachers
Sustainability at the school level (educational media component): Do a critical mass of schools demonstrate the continuous use of educational media, and have developed and enacted plans to sustain active use of educational media?	Evidence from teaching quality section above		
	Why/ why not are HTs likely to support and sustain the learning centre and active use of educational media in the school once the project ends? How do they plan to sustain it?	Qual	Head teachers
Sustainability system level: Does the MOE have fully fledged education plans furthering project-related teacher development and school support? Are these plans fully funded?	Can government officials clearly articulate a plan for sustaining DP-2 activities including roles and responsibilities, and financing?	Qual	MOE officials
	What support does the MOE provide to the implementation of DP-2 activities? If they do not support it, why?	Qual	MOE officials
	How have DP-2 country teams engaged with the MOE to promote MOE engagement in DP-2 activities? What are the main challenges in securing MOE engagement?	Qual	DP-2 project staff
	What activities and investments do DP-2 country teams expect to be supported by the MOE? How will they support these and why?	Qual	DP-2 project staff

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'.[5]

A sustainability scorecard was developed at baseline to guide the measurement of sustainability for this evaluation. The scorecard is used to assign a sustainability score between 0 (negligible) to 4 (established) at three different levels: community, school, and system. Table 3, Table 4, and Table 5 show the criteria for each of the five rating scores at each of the three levels of sustainability. The research questions on sustainability listed in the table above indicate the key focus for the sustainability questions at endline. Using information from these questions, as well as information collected throughout the evaluation, we assign a sustainability score to each country using the sustainability scorecard.

The sustainability scorecard was adapted from the FM's general GEC scorecard at baseline and were subsequently revised at midline with inputs from Impact(Ed). The revisions focused on providing a clear distinction between the five ratings. Our analysis assesses 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 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 was measured as DP-2 is implemented, rather than after the project has ended. Therefore, our evaluative judgement relies on information provided by key stakeholders during the life of the project and is based on their perceptions on whether the project fulfils the criteria for sustainability at each level.

[5] GEC-T MEL Guidance Part Document.

Table 3: Sustainability scorecard – community level

Rating	Indicator 1 Criteria **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.**	GEC Sustainability Scorecard
4- Established: *Changes are institutionalised*	CAP is an integral part of school, community, and government mechanisms, independent of Impact(Ed) support.	The specific change in practice and attitude is now well established. Communities demonstrate independent ability to act without support from project, can 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.
3- Becoming established *Critical mass behavior change*	In most communities, CAP members are leading their action plans with some Impact(Ed) support. CAP is able to demonstrate results of the implemented CAPS. Evidence of regular meetings, repeated planning and implementation process and resource mobilisation to carry out implementation.	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.
2- Emerging *Changes in behaviour*	Impact(Ed) 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.	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.
1- Latent *Develop knowledge and change in attitude*	CAP members have, with Impact(Ed) support, recognized the challenges/ barriers that hinder girls' access to continued education. They articulate a desire to address these challenges/ barriers. There is buy-in amongst members that CAP is a way to address these barriers.	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.
0- Negligible *Null or negative change*		No evidence that community members accept the project approach, and changes in attitude or engagement with activities very limited. Stakeholders may even reject key

Rating	Indicator 1 Criteria 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.	GEC Sustainability Scorecard
		aspects of project. Project not working effectively to build consensus or support but focus only on activity implementation.

Table 4: Sustainability scorecard – school level

Rating	Overall indicator for learning centres (LCs) 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	Overall indicator for teacher training 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	Overall Indicator for girls' clubs 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.	GEC Sustainability Scorecard
4-Established: *Changes are institutionalised*	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 Impact(Ed) 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) 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	Overall indicator for teacher training 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	Overall Indicator for girls' clubs 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.	GEC Sustainability Scorecard
3- Becoming established *Critical mass behavior change*	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 Impact(Ed); - updated plans to continued use of the LC. Evidence of LC/use of video refresher training conducted with new teachers.	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	Evidence that girls' clubs are functioning regularly in most of DP2 schools. School, community members provide resources, where needed or desired, to the girl's club to support activities and evidence that clubs are self-sustained. 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. Evidence that My Better World curriculum is followed in most schools and club members are able to articulate its benefits.	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.

Rating	Overall indicator for learning centres (LCs) 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	Overall indicator for teacher training 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	Overall Indicator for girls' clubs 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.	GEC Sustainability Scorecard
2- Emerging *Changes in behaviour*	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 Impact(Ed) teachers	Evidence of schools engaged in teacher training; evidence of a set number of teachers attending Impact(Ed) training per year, month, etc; evidence of step-down training implemented at schools on all teaching modules; evidence of coaching trained teachers by Impact(Ed) and school leadership; evidence of teachers implementing new DP skills in lessons; evidence of BOM/SPMC supporting teacher training	In some schools, support is provided to the mentor from school and CAP to ensure club activities can continue 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. Evidence of continuing or finished projects carried out by the club members. Evidence that My Better World Curriculum has been shared during meetings and girls' clubs members are aware of it.	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.
1- Latent *Develop knowledge and change in attitude*	School leadership (HT, PTA, BOM/SBMC), resource teachers and Impact(Ed) trained teachers recognize the existing challenges and consequences of having inappropriate and insufficient gender sensitive learning materials and see the value of	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 project. Teachers demonstrate an interest in addressing	School leadership and staff, parents and CAP recognize the importance of the girls' club in improving gender equity amongst girls. Evidence that the school leadership and girls club mentors are trained and recognize the importance of girls' clubs (and boys clubs) activities and	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.

Rating	Overall indicator for learning centres (LCs) 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	Overall indicator for teacher training 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	Overall Indicator for girls' clubs 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.	GEC Sustainability Scorecard
	the LC/technology in addressing these challenges.	challenges to girls' education and show commitment to teacher training and other ways of addressing these barriers.	discussions as valuable in addressing gender equity amongst vulnerable girls. 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. All eligible cohort girls have equitable access to the clubs. Evidence that My Better World Curriculum is introduced in some schools	
0- Negligible *Null or negative change*				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.

Table 5: Sustainability scorecard – system level

Rating	Overall systems revised indicator: ***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.***	GEC Sustainability Scorecard
4- Established: *Changes are institutionalised*	Demonstrable evidence of ownership of project activities by the 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 *Critical mass behavior change*	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. Evidence that national/sub-national MOE are beginning to incorporate project activities in regular planning and budgeting.	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.
2- Emerging *Changes in behaviour*	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. Impact(Ed) 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. National/sub-national MOE has an understanding of how project activities are resourced, whether these resources are generated at community, school, or system level.	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*	Impact(Ed) 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 staff report an understanding of the importance of their potential role in project activities. Impact(Ed) demonstrates evidence of active engagement with national/sub-national MOE officers to secure authority to operate, and national/sub-national	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 specific policy, systems, and departments. Project's evidence is being shared with relevant stakeholders, including broader networks of organisations.

	MOE officers demonstrate an understanding of the importance of project activates in addressing barriers to girls' education.	
0- Negligible *Null or negative change*		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.

2.2 Evaluation methodology

The evaluation is longitudinal and spans three years, starting with a baseline round in 2018, followed by a midline round in 2019 and an endline round 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.

2.2.1 Impact evaluation methodology

Quantitative methodology

We employ a quasi-experimental impact evaluation design to quantify and attribute the impact of DP-2 on outcome indicators. 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 (CEM)** to assess the impact of 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 (DID)** to further control for time-invariant differences between treatment and control units. The overall impact evaluation design is therefore a **CEM-DID** design.[6]

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 intermediate outcome level indicators across the evaluation and with quantitative findings, jointly answer some of the effectiveness and to a smaller degree impact questions as presented in Table 2. It also explores 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. The core questions seek:

- To understand **the contribution of the DP-2 intervention** to positive learning and transition outcomes, and
- To understand **how the interventions may have contributed**.

The purpose of the endline qualitative data collection is to collect data on qualitative indicators, explore the DP-2 project's implementation progress made since the midline and generate answers to the research questions. In so doing we mainly

[6] Further details of this approach are given in the inception report, which is appended as **Error! Reference source not found.**.

- Collect data on perceptions of project users (the same cohort of girls, parents, community leaders and members part of CAP, head teachers from the baseline) on barriers to girls' school attendance, learning, transition, opportunities for economic activities and explore whether or not these perceptions changed since the midline and explanations of why they have changed.
- Collect data on perception of improvement in girls' learning from ALP teachers and girls as a result of the introduction of the ALP component at midline.
- Collect data on any change in attitudes, behaviours, and values of project users due to the project i.e. self-reported change attributed to the project activities.
- Follow a sub-sample of the cohort of girls and their caregivers to understand the reasons for dropping out and the role of barriers to transition[7].

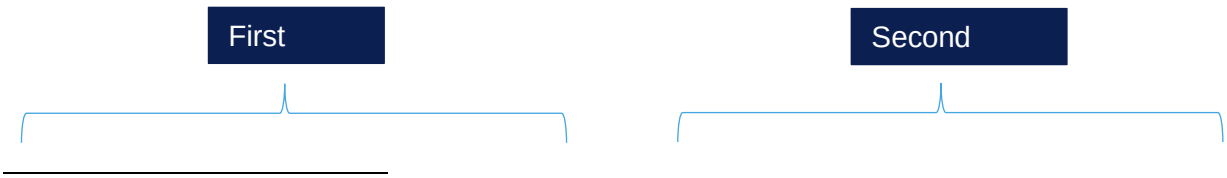
2.2.2 Sampling strategy

Quantitative sampling strategy

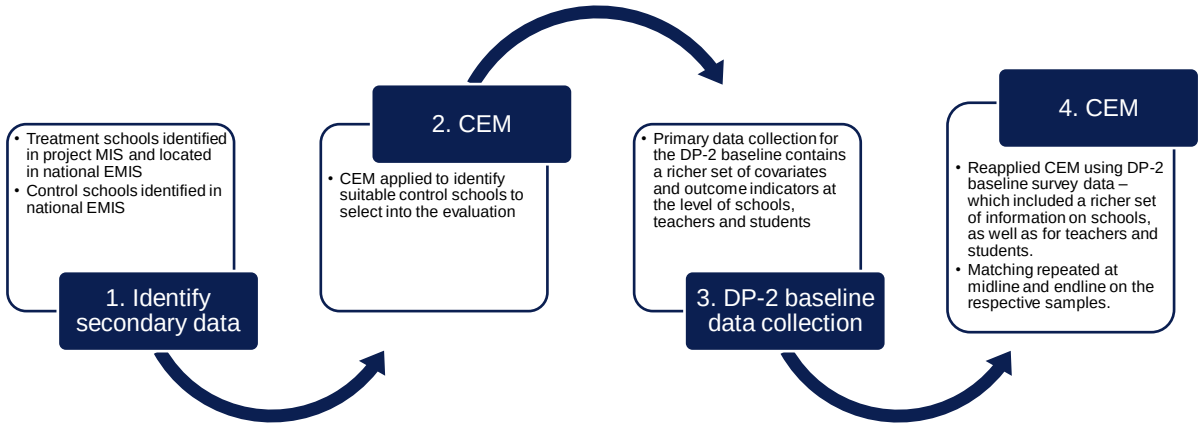
The impact evaluation is designed to provide a representative sample of project schools in the targeted intervention areas in each country. Taking into account DP-2's implementation approach,[8] we employed a multi-stage cluster random sampling strategy, which considers **schools as the primary sampling unit (PSU)**, from which teachers and students were randomly selected to be part of the evaluation sample. A master sampling frame was constructed using Education Management Information System (EMIS) data for each country (which includes all schools in the evaluation areas including both treatment and potential control schools) and the list of all DP-2 intervention schools.[9]

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 1 presents steps taken to reach a balanced school sample for this evaluation; this was done in two stages.

Figure 1: Steps to defining a balanced sample



[7] We have not been able to locate a few girls who have moved away from their DP-2 supported school and not left any contact details with the headteacher or teacher. These girls would need to be tracked in-person and doing so would risk exposing the communities and our research team to COVID-19.
[8] DP-2 implementation prior to this evaluation purposively selected intervention schools based on geographic proximity and the necessary local MOE support structures.
[9] 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 project control schools'.



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 6, lists the variables used for matching using the EMIS data.

Table 6: School-level CEM indicators prior to data collection

Country	Nigeria	Kenya	Ghana
Indicators	Boys enrolment Girls enrolment Local government administration School location *(urban/rural)* Type of school *(religious/public)*	Boys enrolment Girls enrolment County Access to electricity	Boys enrolment Girls enrolment District

Utilising the respective variables in Table 6, 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. We intended to randomly sample 20 girls (in Ghana and Nigeria) / 21 girls (in Kenya) from Primary 5 and one teacher who teaches English or mathematics in Primary 5 from each school.

However, when visiting the 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) insufficient number of girls enrolled in Primary 5; (ii) schools with no Primary 6 grade; and (iii) errors in matching school names between the EMIS data and DP-2 intervention school list. These challenges are described in more detail in the DP-2 Baseline Report. Attaining 20/21 girls per school was a big challenge across the majority of school in the three countries, but particularly in Ghana. To maintain as large a sample size as possible, we oversampled girls in schools where the number of girls enrolled was larger than 20/21. Nevertheless, this issue may mean that the sample is less representative of the target population because smaller schools are excluded from the sample at a higher rate. However, it was considered to be a priority to maximise the sample size and ensure that the sample is sufficiently powered for the analysis.

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 project for girls as follows:[10]

- **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.

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 and endline, 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 girls that could be tracked at endline.

CEM works by **temporarily coarsening each covariate available for matching by recoding it so that substantively indistinguishable values 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, 31-35 year olds and so on.

Once covariates have been coarsened into groups, **an exact matching algorithm is applied to identify matches**. This is achieved by splitting all treatment 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 pruned[11].

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):

$$w_i = \begin{cases} 1, & i \in T^s \\ \dfrac{m_C}{m_T} * \dfrac{m_T^s}{m_C^s}, & i \in C^s \end{cases}$$

$Where$:

$m_C = number\ of\ matched\ control\ units$

$m_T = number\ of\ matched\ treatment\ units$

$m_C^s = number\ of\ control\ units\ in\ stratum\ s$

$m_T^s = number\ of\ treatment\ units\ in\ stratum$

[10] At midline, the evaluation also quantified the impact of DP-2 on teacher outcomes (teaching quality), and a separate matching exercise was therefore conducted at the teacher level. Because the endline evaluation was not able to measure teacher outcomes, this matching is not conducted at endline.
[11] *Iacus et. al. (2011)*

Qualitative sampling strategy

The qualitative sampling approach at baseline was a sequential nested mixed-methods sampling approach.[12] 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. With the support of Impact(Ed), we selected a small number of cases to study intensively through a combination of 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 Impact(Ed) country teams using the following criteria: i) best performing Impact(Ed) school based on the Impact(Ed) country team's assessment; ii) availability of a minimum of three teachers who had received Impact(Ed) literacy and numeracy and/or any another Impact(Ed) 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 Impact(Ed) country teams determined the 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 teaching methods taught by Impact(Ed)), had active school management committees, had clubs that were actively engaged, 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 DP-1.

Respondents were selected from each school and the surrounding community. In particular, the evaluation has been tracking a group of girls who were in Primary 5 at baseline, as well as their parents. The respondents for the qualitative research at endline are described in detail in Section 2.3.1.

2.2.3 Learning and transition cohort for the evaluation

The GEC MEL guidance sets out that the quantitative impact evaluations need to track cohorts of girls for the measurement of the learning and transition outcomes. **This evaluation is tracking a joint sample for both learning[13] 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. Given that DP-2 works with in-school children, these cohorts consisted only of in-school girls at baseline.

[12] An example of this approach 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.

[13] The learning cohort is the cohort that was assessed for both literacy and numeracy assessments, and for self-efficacy. Therefore, while no learning assessments were administered at endline, the learning cohort represents the sample that is used for the analysis on the self-efficacy outcome.

At midline, we tracked all girls who were interviewed at baseline. Where we could track girls successfully to a school that is part of the evaluation sample, we interviewed the girl and administered the self-efficacy scale and determined her transition status through school records.[14] When we could not track a girl in a school that was part of the evaluation sample, we contacted the girl's caregiver telephonically and conducted a short interview with the caregiver to determine the girl's transition status (but we did not collect self-efficacy data for these girls because we did not interview them directly).

At midline, the learning cohort therefore consisted of all girls who could be successfully tracked to a school that is part of the evaluation sample and for whom self-efficacy data was available.

The transition cohort at midline consisted of all girls that are part of the learning cohort, plus girls who were no longer enrolled in a school that is part of the evaluation sample, but whose caregivers could be tracked through a telephone interview.

At endline, we tracked all girls who were successfully tracked at midline for the learning cohort and the transition cohort. Girls who had been dropped from the learning cohort at midline because we could not interview them face-to-face remained dropped from the learning cohort at endline. This is because we do not have any self-efficacy data for these girls at midline, and therefore cannot do a midline to endline analysis.

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

In addition to the learning cohort and transition cohort that were sampled at baseline, additional in-school girls were added to the sample at midline to increase the sample size (these are referred to as **top-up girls**). These girls were randomly sampled from amongst all girls from Primary 6 who were present on the day of the visit, and who were not already part of the evaluation sample. At endline, we continued to track these cohort girls. However, during the analysis stage, the decision was made not to include the top-up girls in the endline analysis. This is because information from top-up girls was only available at midline and endline, and the girls could therefore not be included in the analysis that covered the full duration of the evaluation. Calculations of sample power showed that the power for the analysis was not substantially reduced by excluding the top-up girls from the analysis. Removing these girls from the analysis simplified the analysis approach and meant that the impact analysis for midline to endline, and that from baseline to endline, could be run consistently over all three rounds of the panel.

2.2.4 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:

[14] 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 interviewed the girl at this school.

- **Integrating methodologies for better measurement**: the research matrix presented in Section 2.1.2 illustrates how various evaluation questions will be answered using a variety of quantitative and qualitative methods, as well as project monitoring data. 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 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.

The original design of the endline evaluation intended that quantitative and qualitative methods would be integrated to ensure robustness, depth, and improved validity in the research findings. Each evaluation method targets stakeholders based on the strengths of the method to maximise the breadth of the data and would have enabled us to answer all key research questions. In addition, some research questions were expected to be addressed by both quantitative and qualitative methods that would have enabled us to triangulate findings from different research methodologies and contextualise findings from the quantitative research.

As is detailed in Table 1 as well as the research matrix presented in Section 2.1.2, **this integration of methods was no longer possible at endline in all cases**. For example, our assessment of teaching quality was no longer grounded by a robust assessment of the impact of DP-2 on various dimensions of teaching, but rather assessed through an understanding of what aspects of the training teachers have retained and what they plan to use in the future. This is supported by evidence that this evaluation has already generated in previous rounds.

We **could also not collect detailed information on the implementation of the intervention at endline**. Instead, we rely on project monitoring data to understand the reach and uptake of the intervention and combine this with qualitative data on the project activities.

In addition, **qualitative data collection in Nigeria was completed before COVID-19, while the remainder of the data is being collected during the pandemic**. The difference in context is likely to affect answers to some questions, and this will need to be taken into consideration in how we are able to triangulate findings from different research methodologies.

Despite these limitations to mixing methods, **the new data collection methodology has provided an opportunity to test a different approach to mixing methods through the use of blended questions**. COVID-19 has disrupted schooling and implementation plans, but more importantly, changed the process of learning for girls across Kenya, Nigeria, and Ghana. It has changed the context under which parents and girls are able to return or continue schooling, owing to a change in physical resources. To understand this contextual change, OPM used blended questions in the quantitative survey, where a quantitative response prompted the interviewer to ask a more detailed, and probing question to get a qualitative response. This method provided us additional information for a few important questions on the context of the

cohort girls' lives. Specifically, blended questions were asked around whether girls plan to return to school, reasons for girls dropping out of school, and what girls learnt from the MBW content (in Kenya). The responses to these questions were analysed against quantitative responses and written up together in the report.

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.

2.2.5 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 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 baseline 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 interviewers had **female and male interviewers** to ensure both genders were represented but also to be able to respond to any contextual demands while collecting data across the countries. At endline, because interviews were conducted over the phone, female interviewers were selected for the qualitative research to lead interviews with girls to ensure ease in responding to questions. The qualitative interviewers 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 interviewers 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 research; and

- **Participation**: For disability we included a short module in the quantitative survey at household and girl level using the Washington Group disability questions,[15] specifically designed for identifying a range of disabilities in children. At endline, because of the shorter nature of the survey, the disability questions were not administered but girls' disability status from midline is used in the analysis.

2.3 Endline data collection process

2.3.1 Pre-data collection

Data collection instruments at endline

Quantitative data collection instrument at endline

As has been described above, the scope of the quantitative research was substantially reduced because it was not feasible to conduct learning assessments, lesson observations, or to collect information specifically related to school records or school infrastructure remotely. As a result, we administered one quantitative phone interview, which included one module that was administered to the caregiver and one module that was administered to the cohort girl (see Table 7).

Table 7: Quantitative tool for endline evaluation

Respondent	Content
Caregiver	• Transition • Change in transition status due to COVID-19 • Limited set of background characteristics
Cohort girl	• Perception of learning pre-COVID-19 • Self-efficacy • Implementation of MBW broadcast (Kenya only)

The household survey administered at baseline contained a set of questions on background characteristics of the girl, such as the household's poverty status. As phone interviews are designed to last approximately 30 minutes, **it was not possible to administer all questions related to background characteristics at endline**. We used the background characteristics of the cohort girls that we collected at baseline in

[15] www.washingtongroup-disability.com/

our analysis but did not have information on how these characteristics have changed in the last two years.

We considered conducting remote quantitative interviews with teachers and head teachers from primary schools focusing on implementation-related questions. However, a review of the available monitoring data showed that the monitoring data covers similar indicators to those that were being asked in the quantitative research. We therefore opted to analyse the monitoring data to reduce the length and complexity of the primary research and minimise any potential problems with recall bias or lack of comparability between midline and endline.[16]

Qualitative data collection instruments at endline

At endline, **the qualitative research study collected data from the same respondents it intended to reach originally**. However, initially the qualitative endline was designed to rely heavily on FGDs with members of the CAP process, cohort girls who were tracked from baseline and girls who have participated in girls' clubs and watched MBW together. In Nigeria, these FGDs were carried out through in-person data collection conducted before COVID-19. In Ghana and Kenya, these discussions had to be converted to in-depth interviews over the telephone with revisions in the total number of respondents and length of research guides given the limitations of this research model. While fewer questions were asked at endline to ensure respondents did not feel fatigued, drop out or provide inaccurate information, care was taken to ensure responses provided the depth required to answer research questions.

Table 8 shows the qualitative instruments and focus at endline. Most of the girls in the qualitative cohort were part of the girls' clubs at baseline in all three countries. At midline, we observed that not all girls were part of the girls' club, as some of the girls had dropped out of the club or the club itself was not functioning. The implementation of the MBW component was nascent at midline and the midline evaluation therefore captured limited information on this component. At endline, we interviewed a new group of girls in primary schools who have received both the MBW and ALP interventions to explore the perceived changes that have taken place through both interventions. These girls were sampled from the same six schools in each country that form the qualitative panel.

In Nigeria, interviews with head teachers, club mentors, CAP members, girls in primary schools, cohort girls, and parents of cohort girls were conducted through in-person data collection before COVID-19. Shorter follow-up interviews with these respondents were conducted over the phone to answer research questions that included a focus on COVID-19, and how the pandemic has changed respondents' perceptions around learning, self-efficacy, and transition. In addition, in Nigeria, during the in-person data collection, interviews with girls who have dropped out of school, and with their parents, were conducted. These interviews were not part of the revised remote evaluation design because of challenges in tracking these girls. Interviews with ALP teachers, and interviews with Impact(Ed) project staff and MOE officials were not included in the in-person data collection and were therefore only conducted remotely through phone interviews.

[16] For example, we would have asked ALP teachers about the supervision visits that they have received in the last term (January – March 2020) but given that the term was disrupted by the school closures, respondents' answers to the questions would not be comparable to midline and would therefore not provide a clear indication of progress in implementation.

Table 8: Qualitative instruments and focus at endline

Respondent and research method	Purpose
Interviews with head teachers in primary schools	• To understand the progress of the CAP and ALP implementation at school, and how the CAP and the ALP were useful in improving outcomes such as attendance, learning and transition. Where relevant, reasons why the CAP may not be functioning. • To understand what factors supported or hindered cohort girls' transition to secondary school (in Ghana and Nigeria) • To understand whether, how and why the head teacher is likely to support and sustain interventions such as MBW, the media centre, CAP and ALP in the school once the project ends
Interviews with ALP teachers in primary schools that have been trained by the project	• To understand what DP-2 teacher training activities teachers found most useful and why • To understand which of the skills taught during training teachers are most likely to retain upon returning to school and why • To understand if teachers perceive it to be useful to continue the ALP when schools reopen and why or why not • To understand if teachers perceive an improvement in girls' learning in their classes and why or why not
Interview with club mentors in primary schools	• To understand how the MBW content in girls' clubs was last implemented at school level • To explore any changes in girls' attitudes to schooling and behaviour as well as their self-efficacy as a result of them attending girls' clubs and especially as a result of the MBW content • To understand whether, how and why the club mentor is likely to support and sustain these interventions in the school once the project ends
Interviews with members who are part of the CAP process in primary schools	• To determine the progress of the CAP since the midline, and any barriers to progress including challenges with regards to COVID-19

Respondent and research method	Purpose
	• To understand whether and why/why not the CAP activities / CAP processes are likely to be sustained once the project ends • To explore what barriers to continued education for girls are, including but not limited to COVID-19
Interviews with girls in primary schools (in clubs and remedial classes)	• To explore what girls last recall and find most useful as part of girls' club activities and how girls are using what they learnt in the club at home • The explore changes in girls' attitudes to schooling and behaviour as well as their self-efficacy as result of them attending girls' clubs and especially as a result of the MBW content • To understand what girls find most useful from their remedial classes and why • To explore if girls have watched the MBW TV show at home and do (and how do) they perceive it to have helped their life skills. For those who do not watch the show, explore reasons why (in Kenya)
Interviews with cohort girls	• To understand girls' perceptions and attitudes to schooling and self-efficacy and if this has changed since midline and why • To explore perceptions of barriers to the continued education of girls (including but not limited to COVID-19) and explore how the project contributed to this change (if at all) • To understand how COVID-19 has changed the girls' learning, views towards education and perceptions of their likelihood to return to school
Interviews with parents of cohort girls	• To explore changes in parents' attitudes to girls' schooling and life skills • To understand what the main factors are that influence parents' support to education, and whether these have changed as a result of COVID-19

Respondent and research method	Purpose
	• To explore parents' perceptions of barriers to education (including but not limited to COVID-19) and explore how the project contributed to this change (if at all)
Interviews with parents of girls and girls who have dropped out from schools	• The revised endline design will not interview parents and girls who have dropped out
Interviews with head teachers in Phase 2 schools	• To understand the progress of CAP, and how the CAP was useful in improving outcomes such as attendance, learning and transition. Where relevant, reasons why the CAP may not be functioning. • To explore which activities head teachers are most likely to retain upon returning to school and why.
Interviews with DP-2 trained teachers in Phase 2 schools	• To explore which teacher training and support activities teachers in Phase 2 schools found most useful and why • To understand which skills taught during the training teachers are most likely to retain upon returning to school and why
Interviews with MOE officials	• To understand whether, how and why / why not the MOE is likely to support and sustain DP-2 activities once the project ends
Interviews with Impact(Ed) project staff	• To understand the activities undertaken to promote the long-term sustainability of the project • To understand whether and how project activities are likely be sustained once the project ends

Telephonic conversations were designed to last at most 30 minutes, however, they often lasted up to an hour, especially with head teachers and teachers where the respondent was willing to provide detailed answers**. Qualitative interviews were designed to focus on the project and limit the collection of contextual information collected in previous rounds.** This was an unfortunate but necessary measure to limit respondent fatigue and maximise information about the project's progress given time limitations.

In addition, **qualitative interviews were divided into a core module and an additional module**. In the core module, critical questions were asked of all respondents in the sample. A secondary module covered follow-up or less critical questions that were asked of fewer respondents. This has helped maintain some

balance between breadth and depth and ensure we did not take too much of respondents' time. OPM has tested the feasibility of designing a core and follow-up module in two pilots in each country before finalising the questionnaires. All revisions were shared with Impact(Ed) and the FM.

At the request of the FM, as an addendum to the main endline evaluation report, we prepared a short note on the activities in Phase 2 schools based on data collection in a small number of Phase 2 schools. The aim of the data collection in Phase 2 schools was to identify change stories in Phase 2 schools, with a focus on teacher training and step-down training, use of the learning centre as well as the CAP process and progress. In the absence of quantitative data collection in Phase 2 schools nor any previous qualitative data collection in these schools, it is important to flag that the data collection in Phase 2 schools does not provide evidence of impact that interventions have had, nor will it provide robust evidence of change over time in these schools. Rather, this is a snapshot of the intervention in these schools at endline, under the contextual challenges of COVID-19, where schools have been closed for over three months. Recollection of events was limited. We did not interview any girls from these schools. As these schools have not previously been part of our evaluation, we have not previously spoken to these girls or their parents and they are not familiar with the evaluation. In the current circumstances, given our lack of previous engagement with the parents or girls, we avoided initiating a phone conversation that they may find stressful where they are likely to be reluctant to answer questions.

Sampling approach and 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. At endline, we aimed to track all cohort girls in the treatment and control group who had been interviewed at midline. This included girls who were successfully re-interviewed at midline and those who were added to the sample at midline as part of the top-up to the sample. We did not attempt to track girls who had been lost from the sample at midline.

The sample of girls that we attempted to re-contact at endline was limited to girls for whom we had phone numbers. We collected phone numbers for the caregivers of our cohort girls at baseline during the household survey. At midline, we asked the cohort girls during the girl survey whether their phone numbers have changed. We also collected phone numbers for the top-up girls from the girls themselves at midline. However, girls did not always know their phone numbers, particularly in Nigeria, so overall we had fewer available phone numbers for the top-up girls.

Table 9 shows the sample size of the learning and transition cohorts at endline in each country. As shown in Table 9, we had phone numbers for the majority of the sample in Ghana and Kenya, but for a lower percentage of the sample in Nigeria. This is firstly because we had fewer phone numbers for top-up girls in Nigeria as mentioned above. Secondly, a larger percentage of households in Nigeria did not own a phone at baseline (and did not have access to a shared phone) and so we could not collect contact information for these households.

Table 9: Initial sample size of learning and transition cohort at endline

	Treatment			Control		
	Total nr of girls surveyed at midline	Nr for which contact details were available	% for which contact details were available	Total nr of girls surveyed at midline	Nr for which contact details were available	% for which contact details were available
Ghana						
Learning cohort	1096	1047	95.5%	920	866	94.1%
Transition cohort	1214	1163	95.8%	1032	976	94.6%
Kenya						
Learning cohort	1114	1039	93.3%	1101	1026	93.2%
Transition cohort	1305	1222	93.6%	1296	1210	93.4%
Nigeria						
Learning cohort	1135	942	83.0%	1133	914	80.7%
Transition cohort	1186	987	83.2%	1173	946	80.6%

Qualitative approach

The sampling approach at endline followed the sampling approach at baseline (and midline) to build a qualitative panel dataset, i.e. the same schools in each country, the same communities and the same cohort of girls were tracked.

The sampling frame for the endline evaluation retained the same sampling design intended for the endline evaluation, with revised methods and numbers of respondents. As FGDs were no longer feasible and had to be replaced with individual interviews, the total number of interviews increased. OPM used the qualitative respondent list from midline to contact head teachers, parents and cohort girls and interview the requisite number of respondents from this list. We relied on updated lists of CAP members, RT/ALP teachers and girls who have participated in Impact(Ed)-supported girls' clubs and remedial classes.

In Nigeria, during the in-person data collection, FGDs were conducted with CAP members, cohort girls, and girls in primary schools as per the original endline design. In addition, interviews with one girl who had dropped out of school at midline (but re-joined again at endline), and with their parents, were also conducted. In light of the short available timeline for the evaluation, the qualitative sample in each respondent group had to be limited. The revised sampling frame is presented below.

Table 10: Qualitative sampling frame for the endline evaluation

Respondent and research method	Revised endline sample	Changes from the original endline sample	Total per school
Interviews with head teachers in primary schools	One head teacher in each of the six schools	The head teacher was often interviewed with a resource teacher which will no longer be possible over the phone	1

Respondent and research method	Revised endline sample	Changes from the original endline sample	Total per school
Interviews with ALP teachers in primary schools	One RT/ALP teacher in each of the six schools	No change from original design	1
Interview with club mentors in primary schools	One club mentor in each of the six schools	No change from original design	1
Interviews with members who are part of the CAP process in primary Schools	Two CAP members	An FGD was planned with 3-5 CAP members	2
Interviews with girls in primary schools (in clubs and remedial classes)	Two interviews with girls who participated in both clubs with MBW and ALP/remediation in each school	An FGD was planned with 3-5 girls	2
Interviews with qualitative cohort girls	Three interviews with girls who are part of the original cohort of qualitative research	An FGD was planned with 5-6 cohort girls	3
Interviews with parents of qualitative cohort girls	Three interviews with parents who are part of the original cohort of qualitative research	An FGD was planned with 5-6 parents of cohort girls	3
Interviews with parents of girls and girls who have dropped out from schools	Interviews with any girls who have dropped out of school and with their parents were not included in the revised endline sample in Kenya and Ghana.	We had originally planned to conduct interviews with girls who have dropped out if it was possible to physically track them.	0
Interviews with head teachers in Phase 2 schools	One head teacher in each of the three Phase 2 schools	Not part of original design	1
Interviews with resource teachers in Phase 2 schools	One RT in each of the three Phase 2 schools	Not part of original design	1
Total numbers in each school/community			**15**
Total numbers in each country			**96**

In addition to the numbers in the table above, **we aimed to interview approximately three Impact(Ed) staff members and at least three MOE officials in each country**. Impact(Ed) country teams were contacted and asked to provide names of staff members and MOE officials who would be able to provide information on the sustainability of the interventions. Impact(Ed) country staff who were interviewed included the Senior Technical Lead, Country Directors, and coordinators for the different components (teacher training and community mobilisation).

We selected three Phase 2 schools in each country using monitoring data to identify schools that had average levels of engagement with DP-2. This was done by

constructing an index using indicators from monitoring data on the functioning of the learning centre, availability of sustainability plans, and plans and delivery of step-down training. Specifically this engagement index was a sum of the indicators presented in Table 11, which measure different aspects of a schools engagement with DP-2.

Table 11: Engagement index indicators

Engagement index
Is there a current plan for resource teachers to train and retrain other teachers?
Is there an active sustainability plan?
Is the school leadership demonstrating commitment to the media centre?
Has the school management committee met within the past school term?

Recruitment and training of interviewers

Recruitment of interviewers

Our local data collection partners – Research Guide Africa (RGA) in Kenya, TNS RMS in Ghana, and OPM in Nigeria – conducted recruitment of interviewers for this evaluation for both qualitative and quantitative data collection in each of the countries. During the recruitment, priority was given to interviewers who had been part of the baseline and midline teams because of their familiarity with the work. 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 Nigeria to support the interviews with Impact(Ed) project staff and MOE officials.[17] Research assistants were recruited on a competitive basis and were chosen based on their experience of managing qualitative studies, working with qualitative data, and knowing the local contexts and language.

Training and pilot for quantitative fieldwork

Before the start of training, **we conducted a pilot of the quantitative data collection tool in each country** to test how long the tool takes to administer, to identify any challenges with question phrasing, to test the software that was used for the remote data collection, and to finalise the fieldwork protocols. The pilot allowed us to identify strategies for confirming that we are speaking to the correct household, and strategies to explain to parents why we would like to speak to their daughters and why these interviews should ideally be private. We also asked respondents about the times during which they would be most likely to be available for an interview, and we finalised the times during which we would collect data based on this. The pilot was conducted by the supervisors, which meant that they already gained familiarity with the tool during the pilot. OPM staff conducted a remote training for the supervisors before the pilot.

After the pilot, **in Ghana and Kenya, OPM staff conducted one further day of training with the supervisors and survey managers. Survey managers and supervisors then stepped down the training to the interviewers over the course**

[17] In Kenya, these interviews were conducted by an OPM staff member.

of three days. OPM staff remotely joined some key training sessions and were available throughout the training to answer questions. They also held daily debriefs with the supervisors and survey management.

In Ghana and Kenya, **training was conducted at a training venue under strict adherence to health precautions in light of COVID-19**. The interviewers' temperature was checked each day when arriving at the venue, interviewers wore face masks and adhered to social distancing, and hand sanitisers and hand washing facilities were available. Interviewers also all received training on recognising the symptoms of COVID-19 and were advised to stay at home and contact the survey management should they experience any symptoms.

In Nigeria, because the data collection was conducted by OPM, OPM staff led the entirety of the training. The training in Nigeria was conducted remotely, with all interviewers dialling in to the training from their homes. The training was primarily hosted over Zoom but also made use of other platforms like Telegram and WhatsApp chatroom for break-out sessions and other communications.

The training included sessions on the tool, the software (Voxco in Kenya and Nigeria, Nfield in Ghana), data collection protocols, research ethics and safeguarding, interviewing techniques during phone interviews, and safety measures for COVID-19. Interviewers practiced administering the tool during two pilot sessions.

Training and pilot for qualitative fieldwork

In March 2020, training for in-person qualitative fieldwork was conducted across the three countries. In Ghana and Kenya, fieldwork was called off after the training because of the school closures in light of COVID-19. In Nigeria, in-person fieldwork was conducted following the training.

In July 2020, remote training of researchers and supervisors was conducted over five days in Kenya and Ghana, and four days in Nigeria, to prepare for the remote data collection.

In Kenya, the training was led by OPM staff and included presentations with several practice sessions for the researchers to help them be familiar with and practice the tools. Researchers congregated in the RGA office and practiced social distancing.

In Nigeria, the training for the remote data collection was carried out remotely via Zoom to comply with local norms and researchers logged into the training from their various locations. Three researchers who had participated in the pre-COVID-19 endline data collection were trained on the updated protocol for the round of remote data collection.

In Ghana, researchers were present in one venue. Social distancing was practiced in the seating arrangements at the training venue, and each researcher was equipped with a mask and sanitiser during the training. Four researchers were trained on the revised endline design and approach. All four of these researchers had also been part of the training in March 2020 (prior to the fieldwork being halted due to COVID-19). Training was led by OPM and the Senior Research Executive from Kantar.

Trainings in all three focused on the overview of DP-2 project, the objective of this phase of data collection, detailed discussions about the tools and best practices for remote data collection. In Nigeria, the team also went over the tools administered before the pandemic and the respective respondents. Team leaders shared the revised study protocol for phone interviews, personal conduct, and ethical

practices for remote data collection, safeguarding and child protection policies, and training on safety measures for COVID-19. Researchers were provided with the contact information of all state specific hotlines to reach for any COVID-19 related symptoms/issues. The training used PowerPoint presentations, role plays and several breakout sessions to provide researchers time to practice the tools and familiarise themselves with the new data protocol. Researchers were also trained on the data entry application and a call recording application which was utilized for data collection. Since the team was mostly familiar with the programme related information, most of the discussion on the tools during training was focused on the sequence of questions, contextualisation of the language and minor changes in the language for clarity.

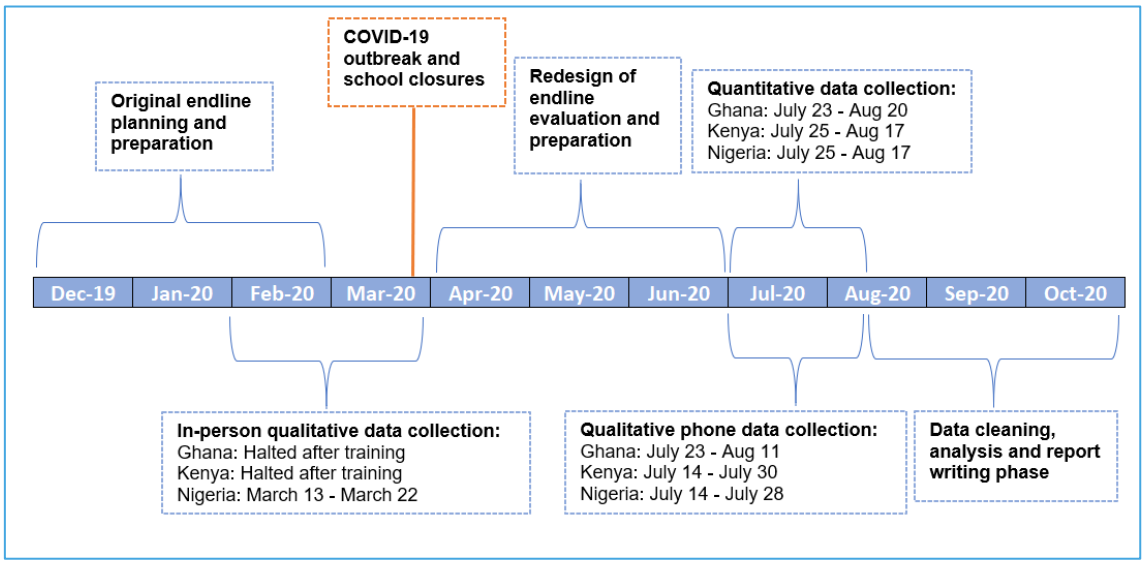
A pilot was conducted remotely on the third or fourth day of the training with a small sample of schools shared by Impact(Ed). Researchers had the opportunity to administer tools across all the respondents. A debrief sessions was held at the end going over logistical and other challenges with administering the tools. Feedback from this session informed minor revisions to the tool such as additional probes and rephrasing of certain questions to fit context. These changes were reflected on to the final tools in the application.

2.3.2 During data collection

Endline data collection

Figure 2 shows the data collection timeline at endline.

Figure 2: Endline data collection timeline



Quantitative fieldwork

Quantitative data collection was conducted by 20 interviewers in Ghana, 20 interviewers in Kenya and 16 interviewers in Nigeria. Interviewers were supported by supervisors and a survey manager in each country. In Ghana and Kenya, call centres were established following local public health advice and workplace regulations. Precautionary measures, as described in the section above on training, were in place. In Nigeria, all interviewers worked from their homes.

Interviewers used either laptops or tablets to access the questionnaire and record the answers. Calls to respondents were made through phones or tablets. In Kenya and Nigeria, data collection was conducted using the Voxco CATI software. Interviewers worked in shifts and made phone calls on an ongoing basis during their shifts. All phone numbers were imported into the software, and the calls were managed through rules set up in Voxco. Calls were randomly assigned to interviewers. Interviewers logged in to the platform, where they could access the phone number that was assigned to them. They called the phone number and recorded the relevant outcome of each phone call. This outcome was automatically updated in the call management system. For phone calls that did not result in successful interviews, follow-up calls were managed through rules set up in the call management system that determined how many hours or days elapsed between follow-up calls. In Ghana, data collection was conducted through the Nfield CAPI software, and the call management was handled manually through Excel-based tracking sheets.

Qualitative fieldwork

Qualitative research was conducted by four interviewers in Ghana, seven interviewers in Kenya and three interviewers in Nigeria. Interviewers were supported by supervisors/field managers and the OPM research team in each country. In Ghana, a call centre was established following local public health advice and workplace regulations. In Kenya, owing to the small team, researchers conducted interviews from the RGA office, where social distancing measures and other health precautions were followed. In Nigeria, all interviewers worked from their homes.

In Ghana, data collection was conducted through the Nfield CAPI software. In Kenya, data collection was conducted using a software developed by RGA, and in Nigeria, we used a combination of the CsPro software and the Callbox application.

All researchers conducted interviews with all the respondents in the qualitative sample. Priority was given for female researchers to interview cohort girls. In Ghana and Kenya, researchers who spoke certain minority languages were paired with respondents from that language group.

Interviews were recorded with permission of the respondent. Audio files were saved daily. Recordings were later transcribed by transcription specialists and submitted to OPM. Transcripts were quality assured by the research manager and the OPM country research lead. Every day debrief sessions were held for researchers to provide updates of the day's interviews and participate in an ongoing analysis process.

Fieldwork took an average of 10 to 14 days in each country. Follow-up phone calls were conducted for up to three days in Nigeria, five days in Kenya and five days in Ghana to ensure we could reach a maximum number of participants.

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 considered 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.[18] All ethical review committees were notified of the change in data collection methodology resulting from COVID-19, and we submitted amendments to our applications where required.

All recruited interviewers were required to have a valid criminal background check or a locally equivalent form of background check. In Kenya, due to the COVID-19 pandemic, no criminal background checks were being issued for several weeks, and once the application process re-opened, applications were taking longer than usual to be approved. This meant that several of our interviewers whose background checks had recently expired were not able to renew them before the start of data collection. As a result, in agreement with Impact(Ed) and the FM, it was agreed that interviewers who had worked on previous rounds of the evaluation, and who held a valid background check that had expired after March 2020, could sign a self-declaration form in order to participate in the data collection while the renewal of their background check was pending. All interviewers also signed OPM's safeguarding policy, OPM's code of conduct and Impact(Ed)'s child protection policy.

All interviewers received extensive training on research ethics and safeguarding procedures. The training covered topics such as the rights of participants, how to obtain informed consent and assent from respondents, general interviewer codes of conduct, and procedures for ensuring the safeguarding of children and other vulnerable groups to protect them from any harm.

We also put in place specific child protection measures to ensure all interviewers and evaluation staff understand their ethical and statutory responsibilities when it comes to protecting children from harm. The entire evaluation team was 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.

During 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 Impact(Ed) 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 Impact(Ed) 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

[18] See Annex 6 of the DP-2 baseline report for our detailed ethics approach for this evaluation.

situation) for further assessment and subsequent action of relevant research leadership.

Child protection incidents identified during the data collection 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 Impact(Ed) 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 Impact(Ed)'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 endline were treated based on this procedure.

Re-contact protocols and attrition tracking

Quantitative re-contact protocol

Before the start of the data collection, we updated our sample size calculations and determined that we could achieve a reasonable minimum detectable effect (MDE) if we reach 60% of our sample in each country. Throughout the evaluation, we tracked attrition rates to ensure that we reach at least 60% of respondents.

Data collection was limited to households for which contact information was available. **All households were called at least six times.** Where possible, we collected multiple phone numbers per household during the baseline and midline rounds of the evaluation. We started with the primary phone number and rotated to the alternative phone number if the respondent could not be reached on the primary phone number after four attempts.

Different strategies for ensuring high response rates were followed in each country but in all countries, we involved head teachers to help reach respondents. In Kenya, head teachers were informed ahead of the data collection, and were provided with airtime to reach out to all parents of cohort girls from their school and inform them about the upcoming research. During data collection, the research team continued to reach out to head teachers to ask for updated contact numbers where the contact numbers we had were no longer valid or unreachable. In Ghana, we reached out to head teachers in schools with large non-response rates. In some communities that had particularly poor network coverage, head teachers communicated with parents to take the call in an area in the community with better coverage. In Nigeria, a large number of the phone numbers that had been collected at baseline and midline were no longer registered numbers or were not being answered. This is because it is common in Nigeria to frequently change phone numbers, or to have different primary phone numbers at different times. To ensure that we achieve a large enough sample size, data collection was stopped for four days in Nigeria, and enumerators and supervisors focused their efforts on collecting updated phone numbers for our respondents with the support of head teachers and other key

members of the community. This allowed the team to collect new phone numbers for 596 households, out of which 461 could be successfully completed.

Qualitative re-contact protocols

The protocol was for researchers to attempt a phone number a maximum of eight times over a period of three days, at different times of the day. During this three-day period, short messages (English and local language) were sent to phone numbers that they could not reach to notify the users about the call. If still unsuccessful, the researcher contacted either the headteacher, RT or parents of other cohort girls who live in the same community to help reach the respondents in question. For incorrect numbers, the headteachers were notified straight away to provide alternative phone number. If cohort girls, girls from primary schools, teachers or CAP members remained unreachable, they were replaced with respondents from the same school, within the original sample from baseline.

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 endline, 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 Impact(Ed) 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 interviewers, 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 observing interviewers during fieldwork, carrying out back checks and live interview observations. Data validation procedures were coded into the instruments directly. Data were sent daily 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 (Stata) before accepting individual interviews. Where inconsistencies were found, the data management team either followed up with enumerators or respondents. The data management furthermore monitored fieldwork progress and enumerator performance and provided feedback to individual enumerators or the entire field team when necessary.

2.3.3 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, midline and endline. Descriptive statistics of the characteristics of girls 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 analyse the monitoring data to describe the project's implementation.

- **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 2.2.1, 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 2.5.3.

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.[19] The process involves the identification of themes through 'careful reading and re-

[19] 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

reading of the data'.[20] 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.

Presenting findings across Kenya, Ghana, and Nigeria

As the context for each country has been varied and specific to each of these countries, OPM has not compared findings across three countries. Rather, data is presented thematically to provide balancing findings and learnings from each country. To the degree possible, we will attempt to do so at endline, and any changes will be reported.

Qualitative data is neither representative nor can it be counted. The strength of this method is to provide a deeper insight into exploring why respondents may perceive positive changes or challenges to the implementation. At endline too, the analysis from qualitative data will not be representative and not attempt to describe the situation in its entirety. Rather, it will provide a meaningful explanation of how schools, communities and students perceive the DP-2 intervention may or may not have contributed to their attitudes and actions related to continued learning.

Qualitative data in Nigeria

[20] Rice and Ezzy (1999), *Qualitative research methods: A health focus*. Melbourne: Oxford University Press, p. 258.

Where feasible, qualitative data collected in Nigeria may lend a deeper insight into the implementation of the project. The difference in timing of the data collection will need to be considered in mixing the qualitative findings in Nigeria with the quantitative research. OPM will explore if interviews and discussions in these schools can lend itself to case studies. This may allow us to present a rich picture of changes (or lack of) in schools as a result of DP-2 before COVID-19.

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.

2.4 Challenges with the endline data collection and limitations to the evaluation design

2.4.1 Challenges in endline data collection

In Table 12 and Table 13, we outline some of the challenges encountered during both the quantitative and qualitative data collection activities across the three countries.

Table 12: Challenges during the quantitative data collection

Challenges	Mitigation approaches
Phone numbers were no longer valid, were unreachable, or belonged to the wrong household. This was an issue, particularly in Nigeria.	As described earlier, we relied on the support from head teachers to secure updated phone numbers for households that we could not reach. In Nigeria, data collection was paused for four days, while all interviewers and supervisors reached out to head teachers, community members and parents from the same schools to obtain updated contact numbers for our respondents.
Poor network coverage meant that calls dropped in some cases. In Kenya and Nigeria, interviewers accessed the questionnaire online, and **poor internet connection** sometimes meant that interviewers were logged out of the Voxco software and had to reconnect before continuing the interview.	Because it was important to ensure that remote households are not excluded, enumerators made substantial efforts to re-contact these households and to complete the interviews despite multiple disruptions.
Parents and their daughers were not always available at the same time for the interview. Our protocol was to interview the parent first and to ask for the parent's consent to speak to their daughter. We then asked for the daughter's assent to be interviewed. Often, parents were at work or	This had been anticipated and interviewers had been trained to schedule call-backs at a time when the daughter would be available. In Kenya and Nigeria, call-backs were scheduled directly in the CATI software, and the CATI call management system ensured that the call-back was allocated to an interviewer at the time of the appointment. In Ghana, the scheduling of call-backs was manual, and

Challenges	Mitigation approaches
on the farm, and therefore not in the same location as their daughters.	the interviewers were supported by a larger team of supervisors to ensure that all appointments were met.

Table 13: Challenges during the qualitative data collection

Challenges	Mitigation approaches
School closures because of COVID-19 affected training and fieldwork in each country differently. • Qualitative training in Kenya was due to start the day before closures started to be in put in place, as a result, training was moved online. Schools were not yet closed at this point, so the team proceeded with the pilot. Eventually schools shut and fieldwork could not be carried out as planned. • Qualitative training in Ghana began as planned, but school closures meant fieldwork could not begin. • Qualitative training in Nigeria and in-person fieldwork was conducted as planned but had to be completed in a short timeframe to avoid closures.	In all three countries, research methodology and questions, research guides, training guides and plans, fieldwork protocol and analysis plans had to be redesigned to adapt to a telephonic interview format. A new training process was held online, and fieldwork was conducted in Kenya and Ghana with a revised set of questions. In Nigeria, a shorter 'update' questionnaire was administered, to understand the effects and changes because of school closures.
Nigeria	
<u>Contacting respondents during the phone interviews</u> Many respondents' numbers were either wrong, switched off or unreachable which slowed the interview process. Poor network coverage, especially in rural areas led to numerous call drops, increasing the interview times. Some head teachers were concerned about their airtime when they had to contact other respondents to locate them for the team.	This had been anticipated and from the total qualitative sample size from baseline, phone numbers for other girls and parents were used as replacements for those who could not be reached after several attempts over three days. Head teachers were helpful in providing alternative phone numbers of school staff like ALP teachers and club mentors. However, their help in securing phone numbers of cohort girls and parents was limited because of distance. Headteachers who complained were provided with some extra airtime to facilitate their speedy response. Some participants with particularly poor network were requested to provide alternative numbers through which they could be reached or move to a location within the community that had better network coverage.
<u>Data collection through phone interviews</u> • There was some delay in getting phone numbers of Phase 2 teachers and headteachers from the Impact(Ed) team. This slowed down the pace of work.	Interviews for some cohort girls and parents sometimes had to be conducted at nighttime, to suit the schedule of the phone owners.

Challenges	Mitigation approaches
• Trying to reach some of the girls proved challenging as many of them did not have personal phones. Hence, we had to rely on the parents' availability to conduct interviews. Since many of them were farmers or entrepreneurs, available times were mostly at night. • Network remained a major challenge, considerably elongating interview time for many respondents.	
Debriefs Daily debriefs could not always be held because of the various times scheduled for interviews by respondents.	When debrief sessions could not be held, researchers were asked to submit their daily notes at the end of every day.
Kenya	
Contacting respondents • Incorrect phone numbers for a few ALP girls, ALP teachers and club mentors. • Few respondents were unreachable despite multiple call attempts. • The head teacher and CAP members from a private school in Nairobi are unreachable	Phone numbers for respondents were located through snowballing respondents e.g.: one CAP member could provide contact details for another member. Conducted a replacement interview with an ALP teacher. Contacted Impact(Ed) with a request for additional phone numbers. For the private school in Nairobi, we received an update from Impact(Ed) - the relationships between the school director, parents and teachers are strained due to extended school closures which have contributed to issues such as teachers' salaries, charges for online classes etc. These strained relationships have affected the readiness of respondents to talk about the school.
Ghana	
Contacting respondents • Trying to reach some of the girls proved challenging as many of them did not have personal phones. Hence, we have had to rely on the parents' availability to conduct interviews. • Reaching CAP members was challenging, as their phone numbers were not valid or incorrect.	• Researchers were trained and requested to be more flexible when scheduling calls with parents, which might sometimes be preferred by the respondents earlier in the morning before they went for work or after they would come back at night. On many occasions, the interviews have been conducted later in the evening to ensure that they suit the schedule of the interviewee. • The OPM team requested the Impact(Ed) team for alternative contact details as well as a list of more CAP members across districts so as to conduct follow up interviews in these schools. In some cases where the challenge where related to network connectivity, the OPM asked CAP members who could be reached for an

Challenges	Mitigation approaches
	interview to help source alternative contact details for the other named CAP member.
Data collection • Since commencing fieldwork, a key challenge in reaching parents has been unavailable due to being busy with household chores or economic activities which often involve them, and their children being occupied for most of the day especially prior to Eid. • School level stakeholders were busy with other duties especially around the upcoming elections in Ghana • Some CAP members were unreachable on the numbers provided or were unable to provide time for an interview citing other priorities.	• In some other cases, the key challenge in reaching parents has been due to network problems or the numbers not being reachable. In such cases, the research team coordinated with the Head Teacher, ALP teacher or Club Mentor to try and reach the girls through alternative numbers. Many of these interviews have been successfully scheduled and completed after Eid. • The researchers have maintained flexibility in scheduling the calls and have rescheduled as needed to align with the schedule with the interviewee. • In two cases, the head teacher requested that the assistant head teacher be interviewed in their stead, since they had more availability to be interviewed. These assistant head teachers are aware of the project as well as school level details.

2.4.2 Limitations to the evaluation design

There are some limitations to the evaluation design. Firstly, we outline limitations to the evaluation design that result from the redesign of the evaluation as a result of COVID-19. It is important to note that the scope of the evaluation has been substantially reduced and the strength of the evidence is more limited in a number of ways.

- **Attributing impact:** The changes in the evaluation design as a result of COVID-19 mean that we will not have robust quantitative measures of impact on several of the project's outcomes (literacy and numeracy) and intermediate outcomes (attendance, teaching quality, life skills). This limits the extent to which the evaluation can provide robust mixed-methods evidence on the impact that DP-2 has had on these outcomes, and means that the impact on these outcomes cannot be quantified. It also means that the breadth of evidence that is available for making judgements about the sustainability of the project and the validity of the TOC is more limited.
- **Perceptions of effectiveness come from a small number of well-performing schools:** The sampling strategy for the qualitative research from baseline was to select well-performing schools. The reason for this was that these schools are particularly likely to be responsive to the intervention, and therefore for changes to occur. Sampling schools where there is a higher likelihood of change allows us to explore the mechanism of these changes in greater detail. This was a strength of the evaluation approach when combined with robust quantitative impact data collected across a representative sample of schools. However, at endline, greater emphasis is placed on qualitative perceptions of effectiveness, in some cases in the absence of quantitative data. It therefore needs to be kept in mind that the qualitative analysis reflects whether and how stakeholders perceive DP-2 activities

can contribute to changes in outcomes in contexts where these activities are likely to be well implemented and schools and communities are likely to be responsive to change.

- **Reduced sample size limits the ability to conduct subgroup analysis:** Phone surveys have larger non-response rates than face-to-face interviews by their nature. As a result the sample size achieved at endline is smaller than expected. Calculations of sample power suggest that the achieved sample size continues to be large enough to detect moderate impact estimates for the full sample. However, the sample size is not large enough to allow for impact analysis for specific subgroups (e.g. across the sampling strata in Kenya and across different types of schools in Ghana).[21]
- **Limited depth of qualitative data:** Shorter duration of phone interviews and the inability to conduct FGDs at endline mean that the qualitative data is of more limited depth than initially intended.
- **Different timing of data collection and recall bias:** The main component of the qualitative data collection in Nigeria took place before school closures. The qualitative data collection in Ghana and Kenya, and the quantitative data collection in all three countries took place several months after schools had closed and after girls, teachers, schools and communities had stopped engaging with most of the core DP-2 activities. Firstly, this means that we have more detailed qualitative data in Nigeria, not only because we could conduct longer interviews but also because respondents were still participating in DP-2 activities. In the other two countries, we are asking respondents to recall information from several months ago, and could not expect respondents to remember as many precise details about their engagement with DP-2. Secondly, in the qualitative research, we mostly asked girls to reflect back on their experiences at school and their engagement with DP-2 when schools were open. In the quantitative research, however, some questions by necessity have to refer to the present time. In particular, the self-efficacy scale assesses respondents' current levels of self-efficacy. There are therefore limitations to mixing this data.

In addition to these limitations resulting from the re-design, there are some limitations to the evaluation as originally planned that need to be kept in mind.

- **Inability to fully evaluate the MBW component:** This aspect of the DP-2 intervention was included only after the design of the evaluation had been completed. Implementation of the component in primary schools began from December 2018. However, the cohort girls that we are tracking in the evaluation transitioned to junior secondary school in September 2019 (with holidays in August 2019), and therefore had only at most eight months of exposure to this particular component. The MBW content was rolled out on an ongoing basis so these girls would not have been exposed to the full MBW content. The evaluation therefore cannot measure the impact of the full range of MBW content on girls' self-efficacy and life skills. To mitigate this somewhat, at endline, we sampled an additional group of girls for the qualitative research who had been participating in the girls' clubs and engaging with MBW content over the last year.

[21] As noted below, the evaluation was not powered to detect small to moderate estimates of impact for these subgroups at the outset. These subgroup analyses were however conducted at midline because they were of particular interest. At endline, however, the sample size for these subgroups is now to small that these analyses are no longer feasible.

- **Attributing impact to specific components of the project:** Through a theory-based approach, the evaluation aims to unpick the linkages between project activities, outputs, intermediate outcomes, and final outcomes, and to the degree possible seek to understand the *contribution* that the various project interventions have made toward achieving progress against headline outcomes. However, the evaluation cannot quantify the attribution of specific components of the project. For example, we cannot say how much the teacher professional development contributed to any impact of DP-2 on learning outcomes, where there is an impact. Instead, the evaluation aims to tell a credible contribution story as to whether, given the available evidence, it is credible to say that teacher training has or has not made a contribution to observed changes in learning.
- **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 TOC, 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 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. Unfortunately, as a result of COVID-19, we are not able to measure impact on learning outcomes at endline. A lack of impact at midline should therefore not be seen to imply a lack of impact at endline.
- **Sample size not powered for subgroup analysis:** 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. Similarly, after the start of the evaluation, it became evident that, because of a challenge in the targeting of schools, a subset of treatment schools in Ghana were not receiving the full implementation package. It was of interest to conduct subgroup analysis for these schools to try to understand the impact in the schools that are receiving the full implementation package, but similar limitations apply regarding the power of the analysis.
- **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.

2.5 Representativeness of the learning and transition samples, attrition and matching of treatment and control groups

2.5.1 Sample size achieved at endline

Quantitative sample

Table 14 shows the outcome of each interview at endline separately for the girls from the original sample and those who were added as top-up girls at midline.

Table 14: Outcome at endline

Outcome at endline	Ghana		Kenya		Nigeria	
	Original sample	Top-up	Original sample	Top-up	Original sample	Top-up
Caregiver + girl interview completed	1132	184	1404	230	1297	53
Caregiver only completed	240	14	347	8	68	0
Refusal	14	2	68	1	21	0
No response	44	15	190	38	289	17
Wrong household / invalid number	381	106	104	21	176	7
No phone number available	33	81	134	45	357	74
Total learning cohort completed	**1132**	**184**	**1404**	**230**	**1297**	**53**
Total transition cohort completed	**1372**	**198**	**1751**	**238**	**1365**	**53**

Table 15 shows the final sample size and attrition levels for the learning cohort and the transition cohort at endline before any matching is carried out on the two groups. This excludes the top-up girls because, as discussed above, top-up girls were not included in the analysis. The minimum endline target was calculated when the endline evaluation was redesigned. Sample size calculations showed that with this sample size, the evaluation is still powered to detect impact. Even after excluding the top-up girls, the minimum sample size has been achieved in all cases, except for the learning cohort in Ghana where the number of cohort girls interviewed at endline is very marginally below the target – but this is outweighed by the benefits of conducting the analysis on one consistent sample from baseline to endline.

Table 15: Endline sample of cohort girls and attrition (excl. top-up)

Country	Original baseline target	Minimum endline target	Baseline	Midline	Attrition baseline - midline	Endline	Attrition baseline - endline
Learning cohort							
Ghana	2400	1147	1965	1614	18%	1132	42%
Kenya	2520	1238	2392	1861	22%	1404	41%
Nigeria	2400	1102	2289	2117	8%	1297	43%

Country	Original baseline target	Minimum endline target	Baseline	Midline	Attrition baseline - midline	Endline	Attrition baseline - endline
Transition cohort							
Ghana	2400	1282	1965	1844	6%	1372	30%
Kenya	2520	1459	2392	2247	6%	1751	27%
Nigeria	2400	1159	2289	2208	4%	1365	40%

Table 16 shows that attrition rates between baseline and endline were similar across treatment and control groups.

Table 16: Attrition rates in treatment and control groups at endline

Country	Baseline treatment	Endline treatment	Attrition baseline – endline treatment	Baseline control	Endline control	Attrition baseline – endline control
Learning cohort						
Ghana	1051	618	41%	914	514	44%
Kenya	1264	745	41%	1128	659	42%
Nigeria	1182	664	44%	1107	633	43%
Transition cohort						
Ghana	1051	738	30%	914	634	31%
Kenya	1264	925	27%	1128	826	27%
Nigeria	1182	698	41%	1107	667	40%

Qualitative sample

Table 17 shows the interviews that were completed during the face-to-face data collection in Nigeria.

Table 17: Interviews completed during face-to-face data collection in Nigeria

Respondent	Nigeria	
	Original sample	Total contacted
Head teachers in primary schools	6	6
RTs in primary schools	6	6
Club mentors in primary schools	6	6
Members who are part of the CAP process in primary schools	18	16
Girls in primary schools (in clubs and remedial classes)	36	36
Cohort girls	36	35
Parents of cohort girls	36	35

Table 18 shows the interviews that were completed during the phone-based data collection across the three countries.

Table 18: Interviews completed during the phone-based data collection

	Ghana		Kenya		Nigeria	
	Original sample	Total contacted	Original sample	Total contacted	Original sample	Total contacted

	Ghana		Kenya		Nigeria	
Head teachers in primary schools	6	6	6	5	6	6
RTs in primary schools	6	6	6	6	6	6
Club mentors in primary schools	6	6	6	6	6	6
Members who are part of the CAP process in primary schools	12	12	12	11	12	12
Girls in primary schools (in clubs and remedial classes)	12	11	12	14	12	12
Cohort girls	18	18	18	19	18	18
Parents of cohort girls	18	18	18	19	18	18
Head teachers in Phase 2 schools	3	2	3	3	3	3
DP-2 trained teachers in Phase 2 schools	3	3	3	3	3	3
Impact(Ed) staff	3	4	3	4	3	3
MOE staff	3	5	3	6	3	4

2.5.2 Attrition analysis

In this section, we compare the baseline characteristics of those girls who we were able to track successfully at endline with those who were lost from either the learning or transition cohort at any point in the evaluation.

In Ghana and Nigeria, girls who are lost from the learning cohort are more likely to be living in extreme poverty, have a household head who has no education, live far away from a secondary school, and have poorer attendance and learning outcomes on average. In Kenya, girls who are lost from the learning cohort have poorer attendance and learning outcomes on average, but do not differ from girls who could be recontacted on their personal characteristics.

Across all three countries, girls who are lost from the transition cohort are more likely to be living in extreme poverty, have a household head who has no education, live far away from a secondary school, and more likely to have poorer attendance and learning outcomes.

Therefore, in general, girls who have been lost from the sample tend to be more educationally marginalised and to have poorer learning outcomes. Non-response at endline was driven to a large extent by households who did not have functioning phones. These households are likely to be amongst the most vulnerable in the sample.

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 sample ensures that treatment girls and control girls are matched on key characteristics, and the sample is therefore not unbalanced. Therefore, the internal validity of the analysis is not affected and the impact estimates remain valid.

However, when girls with certain characteristics are lost from the sample at a greater rate than other girls, this affects the external validity of the sample. The sample at endline is less representative of DP-2's target population than it was at baseline, because certain types of girls are less likely to have remained in the sample.

Table 19: Characteristics of girls lost from learning cohort

	Re-contacted for learning cohort	Lost from learning cohort	
	Mean	Mean	p-value
Ghana			
Age	12.4	12.7	0.01***
Disability status (%)	8.8	11.2	0.09*
Likelihood of living in extreme poverty (%)	7.9	11.7	<0.001***
Household head has no education (%)	70	78.1	<0.001***
Long distance to secondary school (%)	57.3	72	<0.001***
Attendance (%)	92.6	88.2	<0.001***
Maths score	62.2	57.9	<0.001***
English score	23.9	16.9	<0.001***
Self-efficacy	64.4	64.1	0.76
Kenya			
Age (years)	11.1	11.2	0.21
Disability status (%)	5.2	6.3	0.27
Likelihood of living in extreme poverty (%)	24.5	25.6	0.44
Household head has no education (%)	24.9	26.6	0.40
Long distance to secondary school (%)	31.5	31.1	0.85
Attendance (%)	96.1	94.9	<0.001***
Maths score	80.1	77.6	<0.001***
English score	57.5	54.4	<0.001***
Self-efficacy	60.9	61.1	0.73
Nigeria			
Age (years)	11.4	11.3	0.31
Disability status (%)	2.7	1.5	0.05**
Likelihood of living in extreme poverty (%)	22.1	26.8	<0.001***
Household head has no education (%)	38.4	50.3	<0.001***
Long distance to secondary school (%)	38.5	46.2	<0.001***
Attendance (%)	80.4	72.6	<0.001***
Maths score	36	27.3	<0.001***
English score	3	1.9	<0.001***
Self-efficacy	67	68.2	0.13

Table 20: 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	12.6	0.10*
Disability status (%)	9.5	10.5	0.54
Likelihood of living in extreme poverty (%)	8.2	12.7	<0.001***
Household head has no education (%)	70.4	80.7	<0.001***
Long distance to secondary school (%)	59.5	73.0	<0.001***
Attendance (%)	91.9	88.2	<0.001***
Maths score	61.2	58.6	<0.001***
English score	22.6	17.0	<0.001***
Self-efficacy	86.5	87.5	0.58
Kenya			
Age (years)	11.0	11.4	<0.001***

	Re-contacted for transition cohort	Lost from transition cohort	
Disability status (%)	5.5	5.9	0.72
Likelihood of living in extreme poverty (%)	22.9	32.8	<0.001***
Household head has no education (%)	22.2	38.1	<0.001***
Long distance to secondary school (%)	28.7	41.6	<0.001***
Attendance (%)	95.9	94.9	<0.001***
Maths score	79.9	76.8	<0.001***
English score	57.6	52.5	<0.001***
Self-efficacy	87.9	88.0	0.97
Nigeria			
Age (years)	11.5	11.3	0.03**
Disability status (%)	2.6	1.6	0.11
Likelihood of living in extreme poverty (%)	21.9	27.5	<0.001***
Household head has no education (%)	38.7	50.8	<0.001***
Long distance to secondary school (%)	38.5	46.7	<0.001***
Attendance (%)	79.9	72.7	<0.001***
Maths score	35.7	27	<0.001***
English score	3	1.9	<0.001***
Self-efficacy	89.6	88.3	0.34

2.5.3 Construction of balanced treatment and control groups at endline through CEM

The design of the CEM process is described in section 2.2.2. In this section, we present results from the matching that was conducted at endline. We show the differences that existed in the sample of girls prior to matching, and how the matching has resulted in balanced treatment and control groups.[22] Baseline information is used for the matching.

We conducted matching for two different cohorts for the two impact outcomes:

- Learning cohort for the impact analysis on self-efficacy[23]
- Transition cohort for the impact analysis on transition

Matching was limited to girls for whom information on self-efficacy and transition was available at all three points of the evaluation.[24] For the self-efficacy outcome, girls who had responded with 'Don't know' to four or more statements on the self-efficacy scale were excluded from the analysis. For girls who had responded with

[22] In previous rounds of the evaluation, we conducted matching at the school level to examined impact on teacher outcomes. This was not done at endline given that teacher-level outcomes could not be measured at endline as a result of COVID-19.
[23] In addition, we also conducted additional matches for one subgroup: girls attending DP-2 supported girls' clubs. For this match, the treatment group was limited to the girls from the endline sample who attend girls' clubs at midline and this sample was then matched against all endline control group girls. The match achieved similar levels of balance as for the full sample of girls and are not shown here.
[24] There were low levels of missing data on the self-efficacy variable, resulting from 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.

'Don't know' to three or fewer statements, the 'Don't know' response was replaced with the median response from other girls. For the transition outcome, girls' transition status at baseline was determined from caregiver reports and was therefore not available for girls for whom a household survey could not be conducted. In addition, there were small levels of missing data on the transition outcome in cases where caregivers did not know the girl's grade in school.

The graphs below show how the matching process has improved the balance between the treatment and control groups. The graphs shows point estimates pre- and post-matching as well as 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. 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. When treatment and control groups are well balanced (on observable characteristics), there should be no substantial relationships between the covariate and the treatment assignment.

Post-matching balance was achieved for treatment and control groups 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 further control for any potential remaining imbalance through the use of covariates in the difference-in-difference estimation, and through robustness checks that test results across different model specifications. These are presented in section 2.6.

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 liner 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.

Figure 3: Pre- and post-match balance for the learning cohort in Ghana

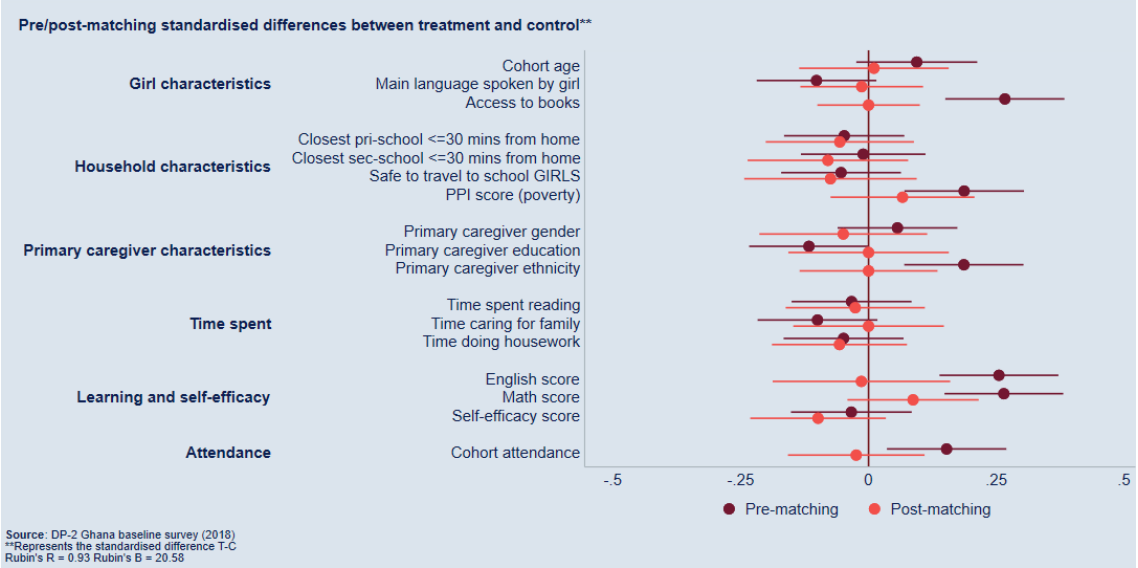


Figure 4: Pre- and post-match balance for the learning cohort in Kenya

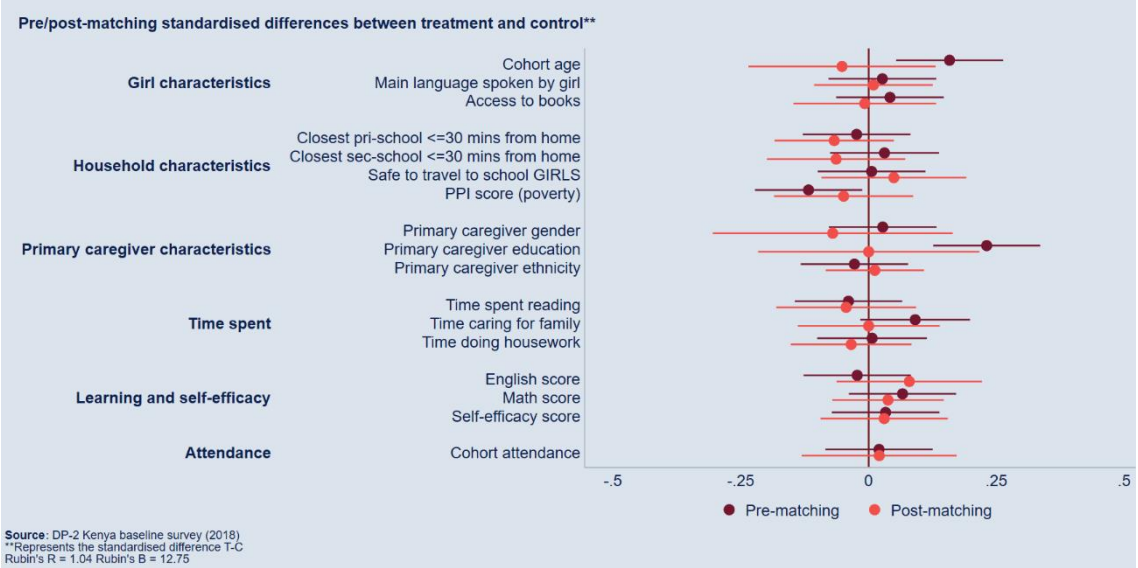


Figure 5: Pre- and post-match balance for the learning cohort in Nigeria

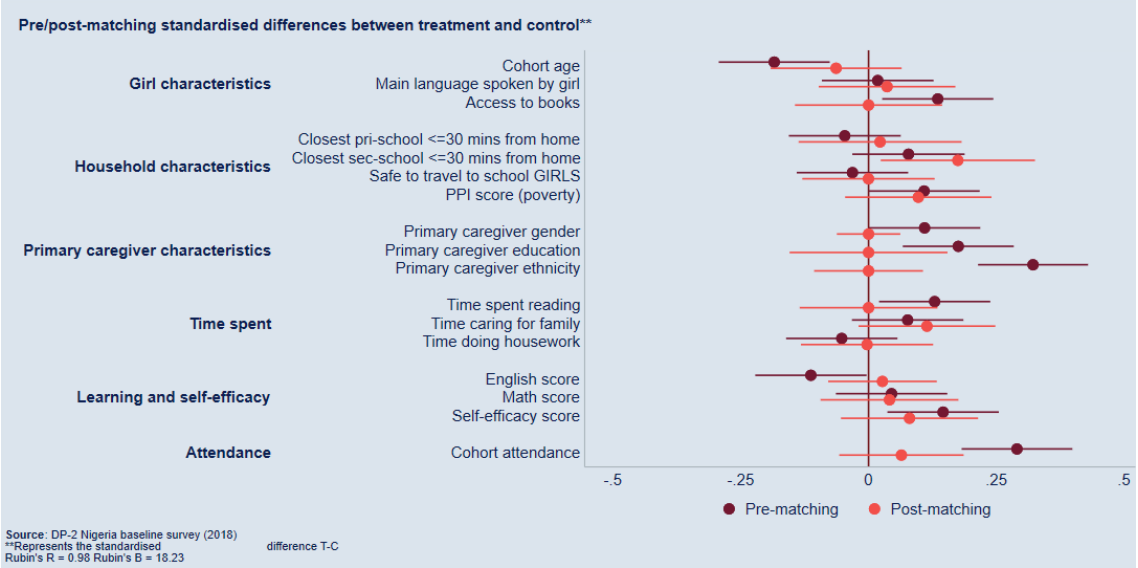


Figure 6: Pre- and post-match balance for the transition cohort in Ghana

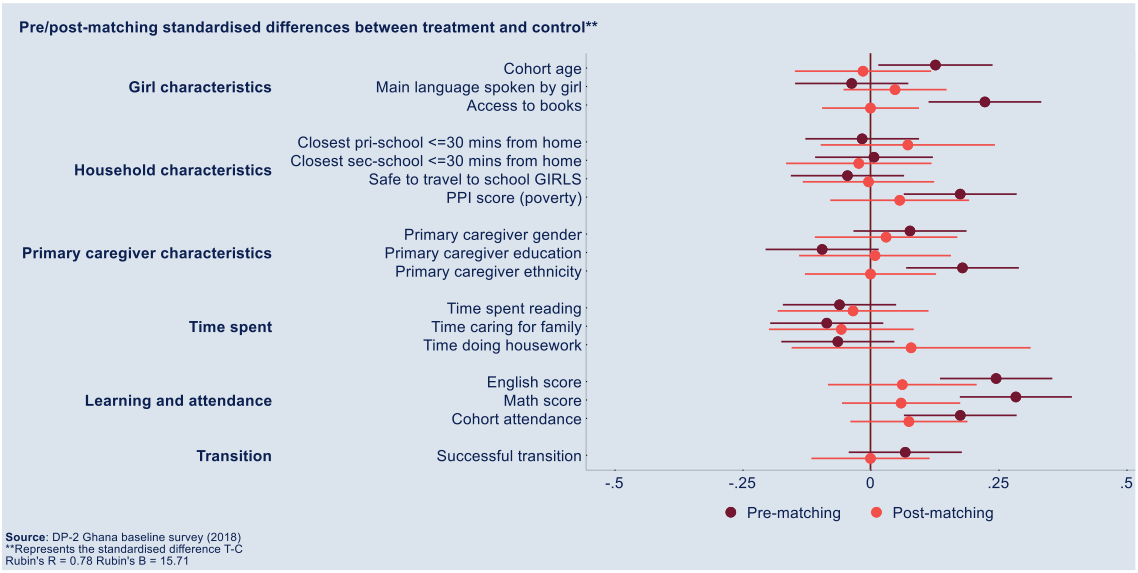


Figure 7: Pre- and post-match balance for the transition cohort in Kenya

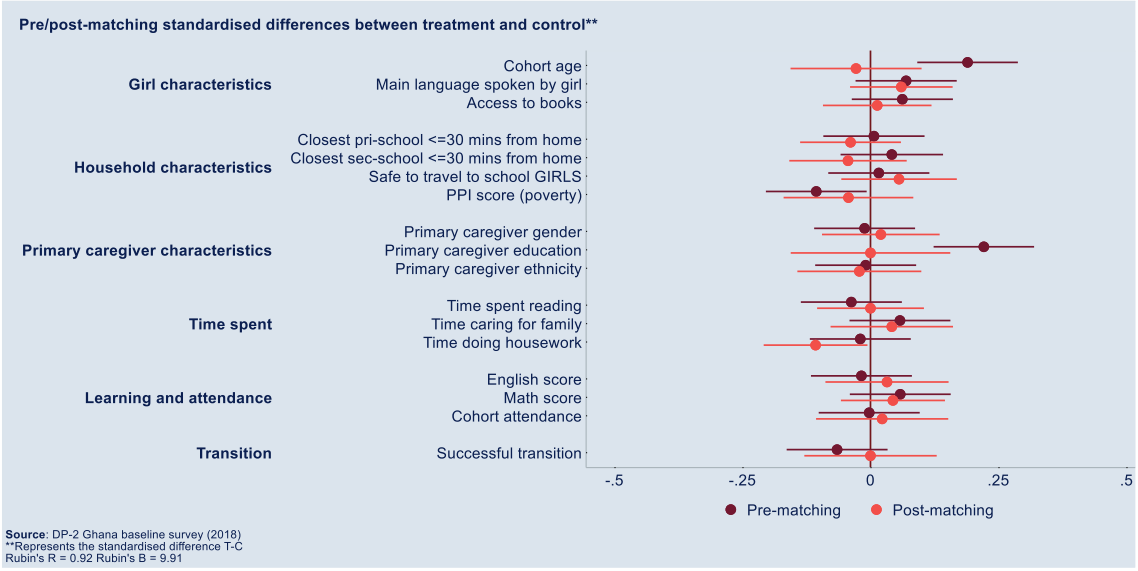
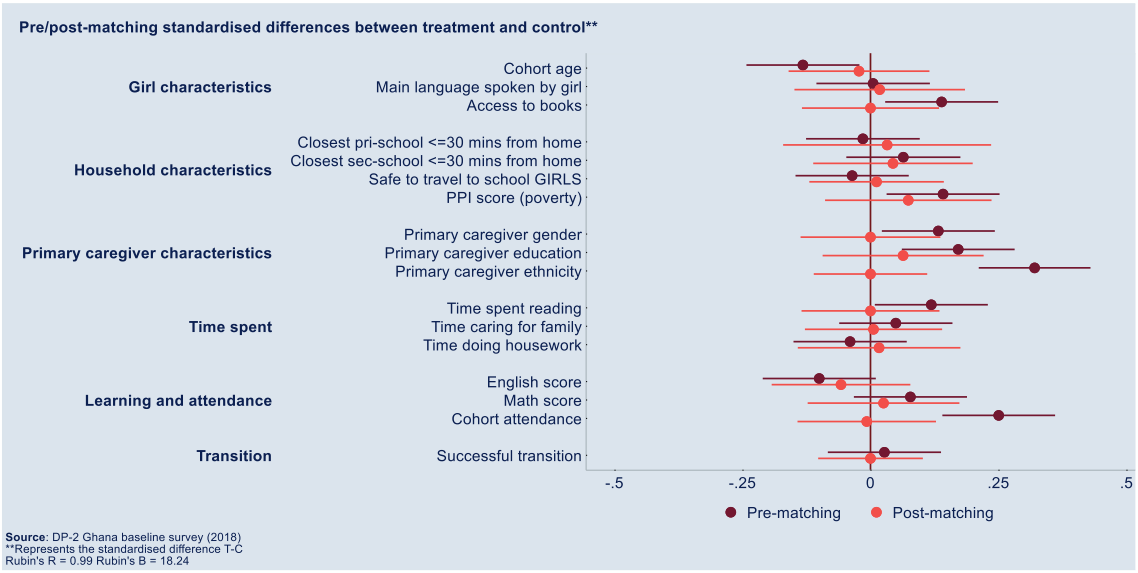


Figure 8: Pre- and post-match balance for the transition cohort in Nigeria



2.5.4 Contamination and compliance

Compliance and exposure

We examine exposure at the school, teacher and girl level.

School level

Schools

In each country, 60 primary schools were sampled as treatment schools at baseline. At the school level, all schools in Kenya and Nigeria are targeted to receive the full

intervention package. In Ghana, there are three different types of treatment schools in the sample as shown in Table 21.[25]

Table 21: Status of Ghana treatment schools in sample

Status	Nr of schools in sample	Description of intervention received
Phase 1 ALP primary schools with MBW pilot	38	These schools receive the full intervention package
Phase 1 ALP primary schools without MBW pilot	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.
Phase 2 primary schools	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 ALP, and therefore not supported to implement remedial classes.

In addition, in 30 treatment schools across five districts (Sagnarigu, Savelugu, Tolon, West Mamprusi, Yendi), DP-2 is working in partnership with CAMFED. CAMFED provides an additional supplement to the DP-2 package to these schools. CAMFED has trained Learner Guides, who are young women who have completed secondary school and were supported by CAMFED while in school. Learner Guides deliver sessions on life and learning skills, including sexual and reproductive health, during a designated time during the school day. They have access to the Impact(Ed) video library and MBW content for these sessions. In JHS, Learner Guides support study groups. CAMFED also provides bursary support to some vulnerable girls, however, exposure to this amongst the cohort sample is low (15% of girls in our endline sample reported that they have received a bursary from CAMFED).

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 regression analysis.

In Nigeria, all 60 treatment schools were targeted to receive the MBW pilot. However, in practice no female club mentors could be identified in six schools, and these schools did not have girls' clubs.

Teachers

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

[25] This was not by design but occurred due to a challenge in targeting schools.

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.

Girl level

This section describes exposure of girls to DP-2 interventions by design. At the girl level, some of DP-2's activities are targeted at particular groups of girls by design. Variations in implementation of these activities are described throughout the DP-2 Endline Report.

Exposure to trained teachers: Given that step-down training is expected to reach all English and mathematics teachers in a school, by design, all girls are expected to have been exposed to teaching from teachers who were either trained directly or who were trained through the step-down training. Since the direct teacher training is targeted at teachers from mid- to upper primary, it is likely that most girls are exposed to at least some teaching by directly trained teachers.

Exposure to learning centre: All girls are expected to be exposed to the learning centre.

Exposure to remedial classes: Remedial classes are targeted at a subset of DP-2 beneficiaries as they are targeted at girls (and boys) who are poor academic performers and require additional remedial support. Students are selected for these classes through a diagnostic assessment. At midline, quite large proportions of cohort girls in the treatment group had been exposed to DP-2 supported remedial classes: 85% of cohort girls in Ghana reported currently attending remedial classes, compared to 52% of girls in Kenya and 70% of girls in Nigeria.

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 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 at midline was 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. At endline, the same proportion of girls in Kenya (60%) reported being members of the girls' club.

Exposure to DP-2 activities since midline: In Ghana and Nigeria, the majority of girls in the sample transitioned to junior secondary school between the midline and endline evaluation.[26] Since the midline was completed in May/June 2019 and girls completed primary school at the end of July 2019, girls in Nigeria have had only one to two months of additional exposure to DP-2 activities in primary schools between midline and endline. Therefore, in Nigeria and Ghana, at endline, the evaluation is primarily measuring a **legacy effect**. It is measuring whether any impact that was observed at midline can be sustained in the absence of the intervention. Where no impact had been

[26] In addition, a small percentage of girls in Ghana and approximately 17% of girls in Nigeria had already transitioned to junior secondary school between baseline and midline

generated by midline, it may be unlikely to expect to observe impact at endline. In Kenya, girls continue in primary school between midline and endline and therefore continue to be exposed to the DP-2 activities described above.

Contamination

Table 22 list some of the education projects currently operating in Nigeria, Kenya and Ghana. All the projects 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 22: List of other education projects operating in Nigeria, Kenya, and Ghana

Project	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
Education Sector Support Project 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 Project	To provide teacher training on the use of low-cost materials and supply of lesson plan to schools	Teacher training, materials for students 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.	Ongoing

Project	Objective	Activity	Status
		Tusome is a government initiative that reaches all public primary schools. It particularly targets the lower primary grades.	
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 students 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 project	To provide children with food at school	Food supplies are provided by NGOs such as the World Food Project, and money for firewood is provided by parents to sustain the school feeding project in schools	
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

Project	Objective	Activity	Status
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 project. 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 project 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
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 Project (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. The data presented in this section was collected at midline. We were not able to collect updated data on these factors at endline due to the shorter nature of the surveys, and because we did not speak to school-level respondents from control schools.

Table 23 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.[27] Similarly, findings from the 2007 SACMEQ study showed that 46% of Primary 6 students in Kenya were receiving paid tuition.[28]

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 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 23: 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%

[27] Uwezo Kenya (2011) Are your children learning? Annual learning assessment report.
[28] Paviot, L. (2010). How widespread is the provision of paid tuition in school subjects?. SACMEQ III, Policy Issue Series

	Ghana		Kenya		Nigeria	
Girl has watched a video in school this year	90.7%	5.5%	61.3%	10.6%	66.8%	1.8%
Girl has watched the MBW broadcast on TV*	n/a	n/a	44.2%	20.2%	n/a	n/a

Notes: * Data on this indicator was collected at endline. Data for the other indicators was collected at midline.

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 24: 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%

2.6 Self-efficacy and transition outcomes estimation

We use two types of models to estimate the impact of DP-2 on self-efficacy and transition. The first model is a difference-in-difference estimation weight by CEM weights and with two specifications (one without covariates and one controlling for the girl's age). This is similar to the model that was implemented at midline, except that the model is now implemented across all three rounds of the evaluation. However, to include covariates in the difference-in-difference estimation, the covariates need to be available across all three rounds of the evaluation. Parent information was not collected at midline, and schools could not be visited at endline, meaning that parent and school characteristics are not available across all three rounds. At the girl level, the short nature of the phone interview at endline meant that the instrument had to focus on collecting the key outcome indicators. Therefore, there is only one covariate (the girl's age) available to be included in the model. As a robustness check, we therefore also implement a first-differences approach. This approach uses baseline, midline and endline values of indicators but only the baseline values of covariates. This approach allows us to adjust for girl, parent and school level covariates but does not allow us to control for any changes in the value of covariates across treatment and control groups between baseline and endline.

The model reported in the DP-2 Endline Report is the difference-in-difference model with girls' age as a covariate. The change in design of primary data collection, and in particular the move to remote data collection necessitated by the COVID-19 pandemic, have restricted the set of available covariates available for impact estimation. For example, the inability to conduct a school survey means that there are no school level covariates available at endline which means that we cannot replicate the approach taken at midline where our primary impact estimation strategy was CEM combined with differences-in-differences with the inclusion of a range of pupil and school covariates.

As such our primary impact estimation strategy at endline is CEM combined with differences-in-differences with the inclusion of a single pupil level covariate, age. Differences-in-differences allow us to control for a range of time-invariant observed and unobserved characteristics (for example, distance to school) and the inclusion of the independent variable age allows us to control for a covariate that may determine self-efficacy (qualitative research indicates that self-efficacy grows as girls grow older) as well as transition status (as girls grow older they are more likely to face additional barriers such as early marriage).

For each outcome of indicator of interest two models are implemented by **difference-in-difference estimation** each of which is weighted by the CEM weights, w_i as discussed in Section 2.2.2, with the impact of DP-2 given by the coefficient on the interaction between the time and treatment dummies, β_3:

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \varepsilon_{it} \dots\dots\dots\dots Model\ 1DD$$

$$Y_{it} = \alpha + \beta_1 D_i + \beta_2 T_t + \beta_3 D_i T_t + \sum_{1}^{k} \gamma_{ik} G_{ikt} + \varphi_{it} \dots\dots\dots\dots Model\ 2DD$$

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. Given that only girl level characteristics (and not parent and school level characteristics) were collected in all three rounds the difference-in-difference estimates are adjusted only by girl level characteristics. Table 25 presents the girl level covariates included in the Model 2 specification.

Table 25: List of baseline covariates included in each model specification

	Model 1DD No covariates	Model 2DD Girl covariates
Girl level covariates		
Age		✓

For each outcome of indicator of interest four models are implemented by **first differences estimation** each of which is weighted by the CEM weights, w_i as discussed in Section 2.2.2, with the impact of DP-2 given by the coefficient on the treatment dummy, β_1:

$$\Delta Y_i = \alpha + \beta_1 D_i + \varepsilon_{it} \dots\dots\dots\dots Model\ 1FD$$

$$\Delta Y_i = \alpha + \beta_1 D_i + \sum_{1}^{k} \gamma_{ik} G_{ikBL} + \varphi_{it} \dots\dots\dots\dots Model\ 2FD$$

$$\Delta Y_i = \alpha + \beta_1 D_i + \sum_{1}^{k} \gamma_{ik} G_{ikBL} + \sum_{1}^{l} \delta_{iq} P_{iqBL} + \epsilon_{it} \dots\dots\dots\dots Model\ 3FD$$

$$\Delta Y_i = \alpha + \beta_1 D_i + \sum_{1}^{k} \gamma_{ik} G_{ikBL} + \sum_{1}^{l} \delta_{iq} P_{iqBL} + \sum_{1}^{m} \delta_{iq} S_{iqBL} + \tau_{it} \dots\dots\dots\dots Model\ 4FD$$

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 *l* parent level covariates, S_q. Model 4 in addition includes a set of *m* school level covariates. Table 26 presents the various girl, parent and school level covariates included in each specification of the estimation model.

Table 26: List of baseline covariates included in each model specification

	Model 1FD No covariates	Model 2FD Girl covariates only	Model 3FD Girl and Parent covariates	Model 4FD Girl, Parent and School covariates only
Girl level covariates				
Age		✓	✓	✓
Girl perceives travel to school to be unsafe		✓	✓	✓
Girl spends time reading		✓	✓	✓
Girl has access to learning materials at home		✓	✓	✓
Parent level covariates				
Primary caregiver has no education			✓	✓
Gender of primary caregiver			✓	✓
PPI (poverty likelihood) score			✓	✓
School level covariates				
Number of days without electricity				✓
Access to drinking water				✓
No separate toilets for girls				✓
Proportion of teachers who are qualified				✓
Proportion of teachers who are female				✓

The tables below show the results from the impact estimation on self-efficacy and transition across the different models.

Table 27: Impact of DP-2 on self-efficacy (difference-in-difference estimation)

	Baseline		Midline		Endline		DID		
	Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL
Ghana									
1DD	63.6	65.5	65.9	63.9	66.4	65.3	3.1	4.0	-0.9
2DD	63.6	65.5	65.9	63.8	66.3	65.2	3.0	4.0	-1.0
Kenya									
1DD	60.4	59.9	63.4	62.7	66.1	67.6	-2.0	0.2	-2.2
2DD	60.4	59.9	63.4	62.7	66.1	67.6	-2.0	0.2	-2.2
Nigeria									
1DD	66.6	65.3	73.8	72.2	80.8	81.6	-2.1	0.3	-2.4
2DD	66.6	65.3	73.8	72.2	80.8	81.7	-2.1	0.3	-2.4

Source: DP-2 girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1.

Table 28: Impact of DP-2 on self-efficacy (first-difference estimation)

	1FD	2FD	3FD	4FD
Ghana				
BL-EL	3.1	3.1	2.6	2.7
BL-ML	4.0	4.0	4.5*	5.1**
ML-EL	-0.9	-0.9	-1.9	-2.5
Kenya				
BL-EL	-2.0	-2.1	-2.0	-2.1
BL-ML	0.2	-0.02	-0.2	0.7
ML-EL	-2.2	-2.1	-1.9	-2.8
Nigeria				
BL-EL	-2.1	-2.4	-2.4	-1.6
BL-ML	0.3	0.3	0.1	0.2
ML-EL	-2.4	-2.6	-2.6	-1.7

Source: DP-2 girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1.

Table 29: Impact of DP-2 on transition (difference-in-difference estimation)

	Baseline		Midline		Endline		DID		
	Mean T	Mean C	Mean T	Mean C	Mean T	Mean C	BL-EL	BL-ML	ML-EL
Ghana									
1DD	89.9	89.9	94.9	98.0	89.3	92.0	-2.6	-3.1	0.5
2DD	89.9	90.0	94.9	98.0	89.3	91.9	-2.5	-3.0	0.5
Kenya									
1DD	88.3	88.3	97.0	95.4	95.9	95.0	1.0	1.6	-0.6
2DD	88.3	88.3	97.0	95.4	95.9	95.0	1.0	1.6	-0.6
Nigeria									

	Baseline		Midline		Endline		DID		
1DD	94.2	94.2	96.8	89.9	78.3	73.3	5.0	6.9*	-1.9
2DD	94.2	94.2	96.8	90.1	78.3	73.4	4.9	6.8*	-1.8

Source: DP-2 household and girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1.

Table 30: Impact of DP-2 on transition (first-difference estimation)

	1FD	2FD	3FD	4FD
Ghana				
BL-EL	-2.6	-2.4	-2.7	-3.3
BL-ML	-3.1	-2.7	-4.7*	-5.0*
ML-EL	0.5	0.3	2.0	1.7
Kenya				
BL-EL	1.0	1.0	1.2	0.5
BL-ML	1.6	1.7	2.0	1.8
ML-EL	-0.6	-0.8	-0.7	-1.3
Nigeria				
BL-EL	5.0	4.8	3.8	-0.2
BL-ML	6.9*	6.6*	6.8**	6.1
ML-EL	-1.9	-1.8	-3.0	-6.3

Source: DP-2 household and girl surveys (2018; 2019; 2020)
Note: Asterisks indicate where differences are statistically significant at the following levels: *** p<.01, ** p<.05, * p<.1.

2.7 Changes to transition and self-efficacy outcome means during the evaluation

At midline, treatment and control groups were matched and means were calculated for these groups and presented in the DP-2 Midline Report. Because of attrition, a new matching was conducted at endline. This means that the sample analysed at endline differs from those analysed at midline. As a result, the means presented in the DP-2 Endline Report differ from the means presented in the DP-2 Midline Report for the baseline and midline rounds of the evaluation.[29]

The table below presents the baseline and midline means for treatment and control groups presented in the DP-2 Midline Report for the self-efficacy and transition outcomes, and the baseline and midline means for treatment and control groups as they are presented in the DP-2 Endline Report.

Table 31: Changes to self-efficacy and transition outcome means

	Means reported in the DP-2 Midline Report		Means reported in the DP-2 Endline Report	
	Baseline	Midline	Baseline	Midline

[29] The means are also different to those presented in the DP-2 Baseline Report for the same reason.

	Means reported in the DP-2 Midline Report				Means reported in the DP-2 Endline Report			
	Treatment mean	Control mean	Treatment mean	Control mean	Treatment mean	Control mean	Treatment mean	Control mean
Ghana								
Self-efficacy	64.6	67.8	66.2	64.8	63.6	65.5	65.9	63.8
Transition	86.7	88.3	95.5	97.2	89.9	90.0	94.9	98.0
Kenya								
Self-efficacy	61.2	61.5	63.9	64.7	60.3	59.5	63.5	62.6
Transition	86.8	89.5	97.0	96.0	88.3	88.3	97.0	95.4
Nigeria								
Self-efficacy	67.3	65.8	72.9	71.2	66.6	65.3	73.8	72.2
Transition	89.0	88.1	95.2	90.6	94.2	94.2	96.8	90.1

Annex 3. Analysis of Phase 2 primary schools

This chapter provides a narrative of how DP-2 was implemented and perceptions of change in Phase 2 primary schools. It explores perceptions of RTs and head teachers regarding teacher training, step-down training, use of learning centres and educational media, and the CAP process, and how these have contributed towards changing learning. The first section briefly describes the methodology. The second section describes experiences of teachers and head teachers of DP-2 interventions in Phase 2 schools followed by a discussion on how these interventions have contributed to bringing about a change in learning in the second section. Three Phase 2 schools were selected in each country at endline. Due to the lack of baseline and midline data, the following analysis cannot comment on trends or impact of DP-2 in these schools.

3.1 Methodology

At the request of the FM, as an addendum to the main endline evaluation report, we prepared a short note on the activities in Phase 2 primary schools based on data collection in a small number of Phase 2 primary schools. The aim of the data collection in Phase 2 primary schools was to identify change stories in these schools, with a focus on teacher training and step-down training, use of the learning centre, and the CAP process.

We interviewed one DP-2 trained teacher from each school. DP-2 trained teachers reported on:

- What DP-2 teacher training and support activities did teachers in Phase 2 primary schools find most useful and why?
- Which skills are they most likely to retain upon return to school and why?

We also interviewed the head teacher at the school on:

- What has been the progress and success of CAP activities in the Phase 2 schools?
- Which DP-2 activities are head teachers most likely to retain upon return to school and why?

We did not interview any girls from these schools because these schools have not previously been part of the evaluation. We have therefore not previously spoken to these girls or their parents and they are not familiar with the evaluation. In the current circumstances, given our lack of previous engagement with the parents or girls, they are likely to find such a phone conversation stressful, and may be shy or reluctant to answer questions.

Selection of schools

We selected three Phase 2 schools in each country using monitoring data. Since the aim of the data collection is to identify progress in Phase 2 schools, we propose to use monitoring data to identify three schools that, based on this data, have had high levels of engagement with DP-2. This will be done by constructing an index using indicators

from monitoring data on the functioning of the learning centre, availability of sustainability plans, and plans and delivery of step-down training.

Interpretation of findings

In the absence of quantitative data collection in Phase 2 schools nor any previous qualitative data collection in these schools, it is important to flag that the data collection in Phase 2 schools will not provide evidence of impact that DP-2 has had in Phase 2 schools, nor will it provide robust evidence of change over time in these schools. Rather, this is a snapshot of the intervention in these schools at endline, under the contextual challenges of COVID-19, where schools have been closed for over three months and recollection of events is likely to be affected. The analysis provides teachers' perceptions of how DP-2's model of teacher training has been useful based on a limited and unrepresentative number of schools.

3.2 DP-2 interventions in Phase 2 schools

Across Phase 2 schools in Ghana, Nigeria and Kenya, all sampled RTs and head teachers perceived an improvement in teaching quality in their schools. They attributed this to improvement in skills of teachers as a result of attending DP-2 teacher training and step-down training. Learning centres set up by DP-2 were being used and considered instrumental in improving teaching quality in both countries. There was no mention of the role of CAP in improving teaching and learning in schools.

3.2.1 Teacher training

In all three countries, all head teachers and RTs said that attending DP-2 Numeracy 1 and 2, Literacy 1 and 2, and leadership training resulted in an improvement in teaching practice. They recalled attending at least one training organised by DP-2. RTs from all three countries considered these trainings to be important and easy to understand. RTs and head teachers in Nigeria and Kenya said they had attended leadership for change trainings, as well as training on how to support students living with disability in Nigeria and training on remedial learning in Kenya. In addition to the literacy and numeracy trainings in Ghana, RTs reported receiving trainings on the use and maintenance of DP-2 equipment and videos and on child welfare.

RTs interviewed across the countries stated that learning new teaching techniques at these trainings improved preparation and delivery of lessons and management of classes. According to them, these new skills provided them with mechanisms that helped them teach slower students by making lessons interesting for students by explaining concepts in an easy way. RTs in Nigeria believed that these trainings played a role in developing better relationships between teachers and their students. RTs across the three countries mentioned that teaching became more interactive by using DP-2 videos, engaging slow students by asking them to come to the board to solve problems, grouping students on the basis of their abilities to teach them, organising remedial classes, introducing new methods including word formation by segmentation and blending, and using teaching aids (such as abacus, bundles of sticks, flash cards, bottle tops, cardboard papers and used cans) to illustrate concepts and demonstrate calculations. Example of this is quoted below by a head teacher in Nigeria.

> *"It is a method whereby a teacher will teach his students in a more simplified manner and on how to teach boys/girls specifically. For example, a teacher could use five children to show an example of how to subtract or add a number by removing a child and ask how many are remaining or add a child to ask how many there are. The teacher can also use his fingers to illustrate addition and or subtraction. You can also [set up a fake] shop with some items in it to illustrate buying and selling. I have used this method and achieved the desired understanding from the students."*
>
> **Interview with head teacher, Phase 2 school, Nigeria**

RTs in the three countries found child-centred teaching and learning particularly useful. Interviews suggest that they have been able to translate trainings to practice. For instance, after trainings, they ask more questions, group students or arrange them in pairs so they can help each other. Teachers, especially in Nigeria, found this technique to be effective in mentoring students in class who were shy or struggling to catch up. Teachers noticed that using this method benefitted students who were shy in class and encouraged them to participate in group tasks. According to head teachers in Nigeria, these child-centred teacher trainings have led to a reduction of corporal punishment in schools because they are taught that they need to create a supportive environment for students so that they could learn and perform better.

RTs perceived the new teaching techniques as more interactive and easier to use than what they were doing previously. This is because they noted that students in primary schools would get easily distracted when they used to teach using old techniques which were centred around the teacher. This is expressed in the quote below:

> *"We went for training in the college but now the methodologies that we learnt in the college are not the same ones we use. You [DP-2] were giving us new tactics."*
>
> **Interview with RT, Phase 2 school, Nairobi, Kenya**

3.2.2 Step-down training

Head teachers and teachers attest that step-down trainings were conducted regularly in the sampled Phase 2 schools across the three countries. RTs found step-down trainings to be useful because they created awareness amongst all teachers in the school and allowed RTs to share new teaching techniques that they learnt at teacher trainings. A few head teachers also perceived teacher trainings as an opportunity for skill-building for teachers as they believed that teachers could continue to apply these skills learnt from the trainings even if they left their current school. **However, step-down trainings received mixed reception from teachers receiving the training in the three countries.** There were instances where teachers found step-down trainings to be engaging whereas some teachers were unwilling to attend them. In Nigeria, there were some challenges in conducting step-down trainings as teachers had busy schedules could not make the time for additional training.

All head teachers and teachers reported that step-down trainings were organised soon after teachers received DP-2 trainings. Step-down trainings were arranged at a time convenient for all teachers to attend and the duration of these trainings were usually at least an hour, but they could last up to three hours depending on the training content.

RT interviews suggest that the step-down trainings were not structured, and their frequency varied from school to school in the three countries. For instance, in Kenya, the frequency of step-down trainings depended on the number of times teachers from a school attended teacher trainings. In Nigeria, the schools tried to hold step-down trainings at least twice per term but scheduling trainings to meet teachers' requirements was especially difficult for RTs in Nigeria. In Ghana, one school conducted step-down training on a need basis and another school organised step-down training every two weeks.

3.2.3 Use of learning centres

Learning centres supported lesson delivery and improved teaching quality in Ghana, Kenya and Nigeria. Head teachers and RTs believed that students were more motivated to learn as they were exposed to the theoretical and practical aspect of any subject is being taught.

Head teachers and RTs in Nigeria recalled and described the use of learning centres in detail. They said that activities at the learning centre were monitored through a log and RTs who used the centre had to indicate their use in the log. A timetable was also followed to ensure that activities at the centre were coordinated. Across the three Phase 2 schools in Nigeria, two head teachers confirmed availability of these logs in their school and that the process was being followed. A quote from a head teacher in Nigeria shows how the learning centre was used in his school in the quote below:

> *"The new method of teaching children by showing pictures and video is quite interesting. For example, when types of animals is to be taught, before the session the children are asked what type of animal is this, what colour is it and what characteristics does the animal have and when these answer are given, he will then show the videos of these animals with their similarities and differences plus their habitat and characteristics."*
>
> **Interview with head teacher, Phase 2 school, Nigeria**

RTs and head teachers in Nigeria shared that they faced several implementation challenges with regards to the use of learning centre, which are similar to evaluation findings in other schools. Some of these challenges were the lack of funds to power generators because of frequent power outages, and extensive workload of teachers. Most of the RTs in Nigeria felt demotivated because they were unable to use the learning centre frequently because of their extensive workload. They felt reluctant to cover a topic in detail because they were mindful of their level of work that they had to deliver for the day. Consequently, they sometimes only delivered the theoretical aspect of a subject without taking the time to pause and explain concepts using the videos in class.

3.2.4 CAP activities

Head teachers in Kenya and Ghana could not provide detailed information about the progress of the action plan in their schools. Our findings are based on the limited information that they could recall on CAP activities over the years. In Nigeria, head teachers had met with CAP participants to finalise their plans, and report progress in community outreach activities despite school closures.

Head teachers from two Phase 2 schools in Ghana said CAP participants had focussed on community level awareness generation to reduce dropouts. Head teachers from Phase 2 schools in Kenya had faced challenges in implementation of CAP activities due to limited financial resources and limited staff and community time to engage in the action plan.

CAP participants in sampled Phase 2 schools in Nigeria were working on a back to school campaign. This was because they assumed that parents would need motivation to send their children back to school as girls were currently helping out at home or involved in other non-academic activities during school closures. In Nigeria, one head teacher reported that CAP participants were involved in the provision of learning materials such as text books, chalk, registers, markers, flip charts and cardboard papers to support vulnerable students to continue to learn, and in the renovation of six classroom ceilings and the provision of desks and chairs to provide a convenient learning environment.

> *"Through the CAP, we have been able to eliminate a lot of the barriers that hinder learning in a [stable] environment. They help renovate three classrooms that were almost falling off, uniforms were sewn for about 12-15 students in the school and textbooks and notebooks were distributed."*
>
> **Head teacher, Phase 2 school, Nigeria.**

3.2.5 Other contributions to improvement in quality of teaching

It emerged from interviews in Nigeria, that besides the DP-2 project, there were other projects that contributed to improving quality of teaching. A head teacher in Nigeria said that they had also attended a training similar to DP-2 training called Teaching at the right level (TARL) organised by a project called Kano Literacy and Maths Accelerator. There they were taught how to take into consideration the abilities or different levels of students while delivering lessons. He further added that, it was a method that could be used to teach the same class of students with different level of understanding. Supervision from school support officers from the MoE also contributed in improving teaching quality in Nigeria.

3.3 Perceptions of changes in learning

Head teachers and RTs sampled from Phase 2 schools across the three countries shared that learning of students improved over the last year. They attributed this change in learning to improved teaching quality which they claimed was a result of DP-2's teacher training, step-down training, and use of learning centres. They found learning how to teach with videos to be particularly useful because they employed these teaching techniques and use of learning centres in their teaching practices which improved learning of students. For instance, a head teacher in Kenya observed that students were able to communicate better and narrate stories because their lessons were integrated with videos which positively affected their learning.

> *"Yes, there's a lot of improvement in English and mathematics. Their performance improved so much because even now the children can be able to express themselves very well in English. They can talk very well, and they can*

even narrate the stories, whatever they have learned. They will be able to narrate if they are the stories and so on and what they have learned."

Interview with head teacher, Phase 2 school, Nairobi, Kenya

Interviews with RTs suggest the learning centres and videos were used frequently in their lessons. They perceive that this use has improved students' learning as pictures and colours from videos make learning exciting especially in subjects that students are not engaged in and helps students visualise and recall new concepts better. Teachers in Phase 2 schools say that the videos have helped teachers build a firm foundation of basic concepts that would improve understanding more complex topics in the future.

"Most students had a negative attitude about mathematics, they believe that this subject is hard before we got the right teaching method. Now it appears to be simpler. So, in order to get the interest of the students, we used the videos that were provided and incorporate teaching process so that they can see the real situation of how it is done. This will raise the interest of the child because they can see as the teacher guides them, then pause where necessary and then clarify and then show them practically. And maybe also asking questions from the simple to complex examples to see the progress of the children and their understanding."

Interview with RT, Phase 2 school, Wajir, Kenya

Head teachers and RTs in Ghana also attributed improvement in attendance to video lessons which generated excitement amongst children who would often talk to their peers and families about the videos, and this excitement would then influence other children to come to school to watch the videos.

In Nigeria, head teachers attribute a rise in slow students catching up with the rest of their peers and a resultant improvement in attendance and transition due to intensive coaching sessions organised by the school for Primary 6. It emerged from interviews in Phase 2 schools in Nigeria that these extra classes were started on DP-2's advice in schools that did not have DP-2 sponsored remedial classes. No change in transition was reported in Kenya as students were reported to drop out of school because of transfer of parents, health reasons, weather, drugs and pregnancies.

In Ghana the head teachers and RTs said that girls' and boys' clubs have contributed to improved learning as they had helped students be more confident about asking questions and speaking to people, and as a result made it easier for them to ask questions to their peers and their teachers. These respondents also reported that these clubs made it easier for the girls to check things with each other and were able to help each other much more.

Several other factors were noted by RTs and head teachers in improving students' learning across the three countries. Some of these factors were government policies, home environment, and community perception towards girls' education. RTs and head teachers in Kenya believed that government policies such as not having children repeat classes and the government's sanitation project, made attending schools comfortable for its students.

3.4 Sustainability of DP-2 interventions

Head teachers in Phase 2 schools in Ghana, Kenya and Nigeria said that they intend to continue with DP-2 activities, but lack a clear plan to do so, and are selective about which activities they want to sustain. Head teachers and RTs in Kenya intend to continue with step-down trainings since they already have DP-2 learning materials. Teachers are also motivated to continue with step-down training because they found that the new teaching methods engage children and improve their learning outcomes. Head teachers in Kenya would also like to continue with girls' clubs and CAP activities because they have become part of their school's process.

Head teachers and teachers in Kenyan Phase 2 schools said that they would face several challenges in continuing with DP-2 activities once the project ends. They said that continuity of step-down training would be dependent on motivation and interest of teachers to continuing with such trainings. Our report has consistently found from baseline that teachers find it challenging to participate in trainings across our sample in Kenya due to a high workload and training fatigue, as there are several concurrent trainings from government and other projects. Head teachers also suggest challenges such as funding constraints, maintenance and security of gadgets in school, and teacher turnover would threaten sustained practice in the school.

In Nigeria, head teachers report sustained use of the learning centre since students are engaged and excited by the media.

> *"So far, the learning centre committee which comprises the head teacher, the club mentor, the community leaders, RTs and learning centre coordinator will meet when the school resume to fashion out how the learning centre will be organised for students to continue to learn when school resumes."*
>
> **Interview with RT, Phase 2 school, Nigeria**

Head teachers and RTs in Ghana found the project to be helpful and intend to continue with DP-2 activities but were unable to share a plan. Limited evidence from Ghana suggests that head teachers and RTs do not have a plan to sustain activities in their schools.

3.5 Conclusion

To conclude, in all three countries, respondents from Phase 2 schools reported that they felt the quality of teaching had improved. Head teachers and teachers reported that the teacher training, step-down training and use of learning centres contributed to this. Although step-down trainings received a mixed response from teachers who were hard pressed for time because of their extensive workload, head teachers and RTs felt that they had improved teaching and learning in schools. RTs said training helped them learn new techniques including lesson planning, lesson delivery and management of their classes and using teaching aids to engage students. Learning centres were also seen to contribute to improving teaching quality as video lessons were interactive and motivated students to attend school because they found these lessons to be exciting and interesting. Improvement in learning of students was credited to better teaching quality. Learning to use videos and teaching aids in lessons was perceived to have supported improvements in learning because it helped students visualise, understand and retain concepts better. It also emerged that learning improved because of girls'

and boys' clubs. Factors such as government policies and positive change in perception of girls' education by the community also aided in improving attendance and learning.

Annex 4. External evaluator declaration

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Name of External Evaluator: Oxford Policy Management

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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

Terdoo Akinyemi (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

Grace Amartey (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)