Worldreader

Ghana District Scale (GDS)

Final Evaluation Report Summary

Overview

The Ghana District Scale (GDS) program was a collaborative initiative between Worldreader and the Municipal Education Office (MEO) of Kwaebibirem in Ghana's Eastern Region. The program established a municipality-wide digital reading program that reached 90 public primary schools over three years (2019-2021) by employing a phased deployment approach that onboarded 12 to 18 schools every January and September term.

The GDS program aimed to develop a replicable, systems-level approach to improving pupil reading behaviours and literacy outcomes through the introduction of digital reading solutions and related teacher training. To this end, Worldreader provided technical support, management expertise and digital content, including storybooks, textbooks and activities. The MEO was responsible for the day-to-day management and implementation of the program in Kwaebibirem's schools.

The program included three main components: the delivery of e-readers and relevant e-books to schools for use by teachers and students; training and systems support for primarily the MEO and its staff to manage the program; and a monitoring and evaluation strategy to measure program outcomes to continuously improve adaptation and scalability.

The final evaluation found that teachers successfully adopted e-readers and e-books into their classrooms during the program and continue to use them. Teachers displayed high levels of knowledge about how to support pupils' usage and navigation of e-readers. A high proportion of teachers reported improved digital skills and changes to their pedagogy as a result of the GDS program.

Acronyms

AFC - Associates for Change

EGRA - Early Grade Reading Assessment

GDS - Ghana District Scale

MEO - Municipal Education Office

PTAs - Parent Teacher Associations

SISOs - School Improvement and Support Officers

SMCs - School Management Committees

Background

Before the Ghana District Scale (GDS) program started in 2019, many teachers reported insufficient reading materials and government textbooks in classrooms. The Municipal Education Office (MEO) of Kwaebibirem recognized the potential of e-readers to meet the need for educational materials that are age-appropriate, culturally relevant and engaging. The challenge was designing a program that could engage all relevant stakeholders, systematically introduce e-readers to classrooms across the public primary schools in the municipality and support continued usage after the end of the program.

The GDS program was designed to introduce digital reading programs to 90 public primary schools across the Municipality covering lower and upper primary grades. The project delivered approximately 4,950 e-readers preloaded with at least one booklist containing 100 unique titles selected in partnership with the MEO. The lower primary booklist has 21 textbooks covering all basic education subjects, including science, maths, religion, English, French, creative arts, and computer skills, with seven storybooks in Akuapem-Twi and the remainder in English.

Devices intended for upper primary grades had a booklist with 26 curriculum textbooks, covering topics across the curriculum, with seven storybooks in Akuapem-Twi or French and the remainder in English. Additional features, such as a built-in dictionary, assisted students in pronouncing and understanding words.

To raise awareness and increase uptake, the program engaged stakeholders at all levels of the education system, including the MEO, Municipal Assembly, head teachers, teachers, parent teacher associations (PTAs) and school management committees (SMCs). The MEO was responsible for selecting schools to be involved in each implementation phase, training teachers, monitoring program implementation through the School Improvement and Support Officers (SISOs), fixing faulty devices and replacing non-functional devices.

At the school level, the program established a shared device model that maximised the impact of a limited number of e-readers. To ensure each student accessed an e-reader for at least five hours per week, program staff designed schedules and timetables that equitably distributed the devices to each classroom. Head teachers reported finding the implementation process well-structured, efficient and informative. The program ensured wider support by engaging PTAs, SMCs and community members through events and briefings.

About the final evaluation

The final evaluation for the GDS program was conducted by Associates for Change (AFC) in March 2022. The study and subsequent report aimed to assess and evaluate the relevance, efficiency, effectiveness, impact, sustainability and scalability of the intervention.

Evaluation design and methodology

The evaluation adopted a mixed-method approach to capture qualitative and quantitative data along key project indicators. AFC's evaluation team targeted six groups for the endline study: head teachers, teachers, students, SISOs, District Education Officers, PTAs and SMCs.

Sampling

The first phase of the sampling process selected the Asuom, Kade B, Otumi and Takyiman circuits because they were onboarded in the first three project deployment cycles and as such, had the longest implementation period. From these four circuits, twelve schools were assessed and selected on the following criteria: schools that had participated in the first three deployments; schools with high and

low enrollment figures and teachers trained on the e-reading project; proximity of schools to each other; and whether the school had access to electricity or solar panels.

Tools

To evaluate the GDS program, AFC conducted interviews, collected feedback with questionnaires and observed in-classroom lessons. Data was disaggregated by locality, target group and gender. It was analysed using descriptive statistics, thematic and narrative approaches.

Restrictions

The COVID-19 pandemic also disrupted the planned monitoring and evaluation of the program. Worldreader contracted School-to-School International to conduct baseline, midpoint, and endline Early Grade Reading Assessments (EGRAs), which measure students' ability to perform on a series of subtasks related to the basic foundational skills required for fluency in reading. While the baseline EGRA and midline observation were successfully carried out in October 2018 and November 2019 respectively, the endline EGRA was scheduled for spring 2020 and couldn't be conducted due to COVID-19 restrictions.

Key Findings

Successful integration of e-readers into the curriculum

Students had improved access to digital reading solutions

AFC's evaluation team assessed the average number of hours students had access to the e-readers per week as an indicator of teachers' integration of the e-reader into their lessons. The findings showed that on average, over 70% of teachers indicated that students had access to e-readers over five hours each school week (29% had five to six hours, and 42% had six hours or more). This result was corroborated by the percentage of students who indicated they had access to the e-readers between six and ten hours per week on average. The endline results are an improvement from the midline evaluation, in which 48.5% of teachers reported that students had access to e-readers for less than five hours per week.

"[E-readers are] used normally during the last period since we are doing a multi-grade teaching. We use [e-readers] for other subjects too apart from "reading." Pupils can have access to them at any time they are free. One class can sometimes keep them for a day because of the combined classes."
- Male Teacher, Asuom Amanfrom L/A Primary

"On the average, we have access to the e-readers for about 6-10 hours per every school week." – **FGD with P6 pupils, Asuom Amanfrom L/A Primary**

Teachers integrated e-readers into lesson delivery

Evaluation results showed that teachers are still implementing the e-reading project at the class level, three years after project-launch, in line with the training provided by Worldreader and the MEO. The dominant pedagogical approach employed by teachers, especially for English comprehension, was 'teacher reads aloud'. 67% of teachers reported using this technique at endline, roughly consistent with the 75% recorded at midline.

Lesson observation sessions across the sampled schools showed all teachers who participated in the training could competently deliver lessons, generally English reading comprehension, using the e-readers. 90% of teachers adopted systematic and participatory approaches and used the e-readers throughout the lesson.

"The lesson was on English comprehension and was entirely delivered using a story on the reader titled 'The three monkeys'. All students were made to identify keywords, tap and hold the words and read the meaning of the words that popped up." – **Male teacher, Otumi Circuit**

50% of the sampled teachers indicated using e-readers for the delivery of English reading lessons. Additionally, 79% of teachers reported using the e-readers for lessons on other subjects, including science, mathematics, and Information, Communication and Technology (ICT). AFC's research shows that all the sampled teachers reported using the storybook feature and a high proportion use e-readers as an alternative for textbooks (96%). This finding is consistent with teachers' reports about the absence of textbooks and resource materials for the curriculum. Some teachers (21%) indicated using the dictionary and the mobile app (17%) to support lesson delivery.

Table 11: Content of E-readers Used

Content of e-readers	Frequency	Percentage
Textbooks	23	96%
Storybooks	24	100%
Worldreader Mobile App	4	17%
In-App Dictionary	5	21%

Source: Teacher interview data, GDS endline survey, November 2021
*Multiple responses

Teachers demonstrated independence in the usage of e-readers

After the introduction of the e-readers and initial training sessions, teachers didn't require additional support from the MEO to integrate e-readers into lesson delivery. Of the twenty-four teachers interviewed, 71% of teachers reported they didn't receive support from the MEO. Seven teachers (29%) indicated the MEO had supported them with periodic training sessions, the repair of non-functional e-readers, monitoring visits to schools, technical support or had participated in organisational training sessions.

Improved digital skills and changes in pedagogy

Teachers reported enhanced relevant digital skills

Teachers' digital skills were assessed prior to the introduction of the project to provide a baseline for measuring progress. Out of the twenty-four teachers interviewed, a relatively high proportion (67%) rated their digital skills as 'medium' before the introduction of the e-reader intervention. This foundational technical knowledge facilitated the rapid adoption and integration of e-readers into lessons.

In post-program interviews, teachers reported an upgrade in their digital skills over the past three years. In lessons, AFC observed that teachers were highly familiar with the components and functions of the e-readers. Teachers demonstrated sufficient knowledge of how to navigate the e-readers to access books, dictionaries, references and other features. They also displayed high levels of competence for guiding pupils' usage of the devices.

96% of the teachers stated that the digital skills gained through the e-reader training sessions have been 'very relevant' in their teaching and learning methodology. The enhanced technical knowledge gained through this program has increased their comfort and confidence when using digital tools in lesson delivery.

Teachers increased the frequency and quality of participatory activities

The head teachers and teachers sampled reported the e-readers positively impacted lesson delivery by providing access to reference materials, stories and activities. The e-readers made teaching easier because students could follow reading materials in class.

The GDS program also generally improved teachers' pedagogical approach. AFC's results reveal that a high proportion of teachers achieved either 'excellent' or 'good' scores across the nine observation indicators. Notably, none of the observed teachers were rated 'poor' on any of the indicators.

Table 13: Performance on Lesson Delivery Indicators

Observation Indicators	Excellent		Good		Needs Improvement		Satisfactory		Total	
	N	%	N	%	N	%	N	%	N	%
Planning	4	33%	4	33%	1	8%	3	25%	12	100%
Pedagogy	5	42%	3	25%	1	8%	3	25%	12	100%
Classroom Environment	4	33%	5	42%	-	-	3	25%	12	100%
Positive Framing	5	42%	3	25%	1	8%	3	25%	12	100%
Independent Learning and Questioning Skills	5	42%	3	25%	-	-	4	33%	12	100%
Gender Sensitivity	4	33%	5	42%	1	8%	2	17%	12	100%
Sensitivity to Diverse Learner Needs	5	42%	3	25%	1	8%	3	25%	12	100%
Use of TLMs	5	42%	5	42%	1	8%	1	8%	12	100%
Teacher Learner Activities	5	42%	3	25%	3	25%	1	8%	12	100%

Source: Lesson Observation Data, GDS endline survey, November 2021

As a result, teachers took a more learner-centred approach to lesson delivery. The e-readers facilitated group work or paired reading by allowing students to work independently. For example, students could look up synonyms on the device and compare them with a partner. This allowed teachers to move around the classroom and monitor the activity. Teachers reported finding the reference function highly practical and expressed improved overall confidence in their teaching techniques.

"Before the e-readers were introduced, explanations in class were abstract without pictures to show, but now children can make reference to e-readers during lessons." – **Male Teacher, Minta Bomeng L/A Primary**

Scalability and sustainability of the intervention

The MEO is committed to supporting the continued use of e-readers

MEO staff validated the GDS program's benefits by observing lessons where the e-readers greatly enhanced the students' learning experience. Interviews with MEO staff indicated enthusiasm for the program and a strong interest in maintaining e-readers in classrooms across the Municipality.

> "With this programme, teachers have acquired basic skills in using digital tools. Teaching is much easier since materials can all be found in the e-reader. We have learned how to integrate technology into lessons." – **Frontline Director, MEO, Kwaebibirem**

Frontline Directors and the SISOs were asked to indicate the degree of likelihood in sustaining the digital reading project. Out of the eight directors and SISOs that were interviewed, 100% indicated that the MEO is 'very likely' to sustain the digital reading program in the Municipality. When twelve headteachers were asked the same question, eight indicated that the MEO is 'likely' to sustain the program, and four indicated 'very likely'.

The MEO plans to scale up the program's coverage

The MEO has prioritised the maintenance or replacement of faulty devices by involving PTAs and SMCs in fundraising activities, installing solar panels in schools without electricity access, and engaging opinion leaders such as members of the assembly, traditional authorities, organisations and institutions within the Municipality that are willing to financially support the program.

The positive results of the GDS program have encouraged the MEO to expand digital reading to some private schools in the Municipality. The MEO intends to solicit support from the PTAs and SMCs at these schools to encourage take up. Across all schools, raising funds from PTAs and SMCs will be instrumental for maintaining the devices, providing training to new teachers and re-orientation of teachers already using the e-readers, and for SISOs to design a standardised monitoring tool for schools.

The MEO made institutional changes to sustain and scale up e-reader coverage

The MEO is taking practical steps to sustain and scale up the GDS program's gains by continuing to support the Technical Team, which was established and trained as part of the program. The Technical Team will guide the MEO on the organisation of reorientation in-service trainings for teachers and annual training sessions for newly recruited teachers to help them use e-readers and effectively incorporate digital materials into their lessons.

To mobilise community support for literacy, the MEO will undertake wider stakeholder consultation, particularly with PTAs and SMCs. The MEO will emphasise the impact of after-school reading on achieving higher education outcomes to encourage parents to download the BookSmart app on their smartphones, which will enable students to access reading materials at home.

Additionally, the MEO will organise community-wide reading festivals to award top-performing teachers and schools. The Education Directorate plans to establish community reading centres to promote literacy across the Municipality.

Expansion of technology's role in literacy instruction

Schools facilitated efficient distribution of e-readers

25-55 e-readers were allocated per school and were shared across eight grade levels, which resulted in an average ratio of 3.49 students per device[1]. To ensure all students had adequate access to e-readers to achieve a minimum of five hours of use per week, schools created new schedules to coordinate the distribution of devices to classrooms. This shared device model was a new approach in schools and proved highly effective at maximising the e-readers' impact.

> "As a result of the limited number of devices allocated to the school, we had to come up with a timetable that allows each class to have access to the devices for at least an hour a day. We also allocated a number of devices for use at the lower primary and another set for the upper primary." – **Female Teacher, Kade R/C Basic School**

Table 1: Sample Timetable						
	Primary	P1	P1	P2	P2	P3
		Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
9:00 – 9:30		Charging time	Charging time	Charging time	Charging time	Charging time
9:30 – 10:30		Charging time	Charging time	Charging time	Charging time	Charging time
10:30 – 11:00	P1 Class A	25 devices	25 devices	25 devices	25 devices	25 devices
11:00 – 11:30		Passing period	Passing period	Passing period	Passing period	Passing period
11:30 – 12:00	P1 Class B	25 devices	25 devices	25 devices	25 devices	25 devices
12:00 – 12:30		Passing period	Passing period	Passing period	Passing period	Passing period
12:30 – 13:00	P2 Class A	25 devices	25 devices	25 devices	25 devices	25 devices
13:00 – 13:30		Passing period	Passing period	Passing period	Passing period	Passing period
13:30 – 14:00	P2 Class B	25 devices	25 devices	25 devices	25 devices	25 devices
14:00 – 14:30		Passing period	Passing period	Passing period	Passing period	Passing period
14:30 – 15:00	P3 Class A	25 devices	25 devices	25 devices	25 devices	25 devices
15:00 – 15:30		Passing period	Passing period	Passing period	Passing period	Passing period
15:30 – 16:00	P3 Class B	25 devices	25 devices	25 devices	25 devices	25 devices
# of Students		150	150	150	150	150

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[1] See Annex 1 for a sample book distribution analysis for District 1.

E-readers supplemented government-issued textbooks

Teachers reported an absence of government-issued textbooks prior to the implementation of the GDS program. To fill this gap, textbooks for Ghana's basic education curriculum were uploaded on the e-readers, and 96% of teachers reported using the digital textbooks.

Challenges

The COVID-19 pandemic disrupted program implementation and affected outcomes

AFC's findings revealed that the closure of schools halted the implementation of the GDS program because all school-related activities were suspended, including using e-readers for teaching and learning. The devices were not used until normal school activities resumed, and some devices malfunctioned during the prolonged period of disuse.

> "The school closures greatly reduced the number of contact hours pupils had access to the devices. It also affected/reduced the gains made in relation to the improvements that had been achieved prior to the emergence of COVID-19." **- Female Teacher, Kade R/C Basic School**

> "The students had forgotten how to use the e-readers after school reopened. Their reading was not good. Teachers had to help students with reading simple stories. Revision of all topics but with less contact hours." –
> **Male Teacher, Kwae Presby Primary**

Lack of electricity at schools made charging the e-readers difficult

Access to electricity is critical for ensuring the continued use of e-readers, but out of the schools sampled by AFC, only 25% had uninterrupted access. 33% had no access to electricity. To charge the devices at these schools, students had to visit church premises (in the case of mission schools) or headteachers' homes (in the case of

other public schools), where charging stations are located. These inconveniences proved to be significant barriers to students' use of e-readers.

Concerns about students damaging the e-readers' restricted out-of-class use

A few teachers (13%) indicated they allow the students to use the e-readers outside the classroom on school premises but not at home. However, parents have the option to guarantee on behalf of their wards to have access to the devices at home by pledging to repair or replace the devices in case of damage or loss. Out of the 13% who allowed out-of-classroom use, 60% reported that students used the devices to read storybooks and 40% accessed textbooks.

> "Some of us think the e-readers should be sent home while others support that they should remain in the schools since they might get spoilt." – **FGD with pupils, Kade R/C Basic School**

A high number of teachers (88%) revealed students are not allowed to use the e-readers outside the classroom because of fear of misuse and possible damage by students. To address these concerns, some schools have begun promoting the BookSmart app, which parents can download on their smartphones, to PTAs and SMCs. The app allows students to access digital reading materials at home and can bolster students' overall academic performance.

The MEO lacks designated funding to sustain and scale the program

While the MEO expressed enthusiasm for the digital reading program, they depend on government funding, which has not allocated specific funds for the expansion of this initiative. The MEO believes they can prioritise the maintenance of existing devices by prioritising this activity in their budget but acquiring new devices will be more difficult.

> "The MEO is not financially sound and depends solely on government funding. However, we can prioritize the maintenance of existing devices but buying new ones might be a challenge. More schools are calling for the devices, so we are incentivized to continue the program. We hope it could be extended to the private schools. We will sustain the project by getting the community and parents involved and taking control of the program." – **Frontline Director, MEO, Kwaebibirem**

However, despite the challenge, the MEO is optimistic they can mobilise community support for digital reading programs by engaging PTAs and SMCs to purchase new devices and replace faulty ones. Private schools could also be involved in scaling up the digital reading initiative to reach more students.

> "The Education Directorate is making efforts to see if additional funds could be secured from other donors to keep the initiative running." – **Frontline Director, Kwaebibirem MEO**

Learnings

AFC's evaluation found that several specific factors contributed to the success of the GDS program.

SISOs provided critical monitoring and supervision support

SISOs effectively monitored, supervised and provided technical support to the schools that needed it, such as helping teachers who had difficulties using the e-readers. SISOs reported their findings to the MEO to ensure the program was implemented as planned and that learnings and improvements were incorporated into each round of deployments.

"We had resource supervisors and circuit supervisors ready to monitor and provide technical support to the schools." **- Frontline Director, Kwaebibirem MEO**

The regular visits by Worldreader and the MEO team to school was also key. Commitment on the part of the education Directorate to the programme." – **Frontline Director, Kwaebibirem MEO**

The MEO's leadership was central to achieving effective program implementation

With Worldreader's support, the MEO systematically implemented the GDS program and consulted stakeholders at all levels, including staff at the MEO, the Municipal Assembly, head teachers, teachers, PTAs, SMCs and other community members. The MEO led the selection of schools for each deployment, organised the teacher training sessions, monitored the program through the SISOs, fixed faulty devices and replaced non-functional devices as needed.

"The implementation process, I think was done in a very systematic and consultative way, bringing on board all stakeholders, including PTAs/SMCs. The implementation approach at the school level of having schedules/timetables for each class to have access to the materials was also very appropriate in the face of a limited number of devices." – **Frontline Director, Kwaebibirem MEO**

E-readers improved students' learning outcomes and increased their interest in school

Evidence from key informants shows that the introduction of e-readers has improved students' literacy, enriched their vocabulary and contributed to higher enrolment levels. Interviewees reported that the storybooks were well-received by students due to the illustrations, interesting narratives and simple, accessible language. Compared to the 2018 baseline study where a majority of students scored zero on almost all subtasks measured by the EGRA (Early Grade Reading Assessment), students

demonstrated enhanced literacy skills by reading in turns during the lesson observation sessions in 2021.

> "It has motivated us to develop an interest in reading. When we come across a new word, we can search for the meaning. We use the skill to operate the smartphones of our parents." **- FGD with pupils in Pramkese Presby Primary' A', Urban**

> "Because kids are attracted to electronic devices, e-readers motivate them to learn. This has led to a significant improvement in reading proficiency at all levels. Most pupils who couldn't read before the program can now read with ease. The program has affected and improved my reading skills. Now, most of our pupils can confidently read. Apart from that, it has given children access to enough books which have also influenced their studying of other subjects." – **Frontline Director, Kwaebibirem MEO**

The GDS program significantly impacted low-performing schools

Interviews with key respondents showed that the program has directly and indirectly impacted all participating schools due to the heightened interest in technology and digital devices. Head teachers indicated an enhanced enthusiasm for integrating technology into education, prompting several teachers to use their own laptops in lesson delivery. Low-performing schools reported the most significant gains in academic performance and student attendance, including encouraging the return of some students who had previously left school.

"The project helped us to better identify the low-performing schools within the Municipality and to support them. The project has also improved reading proficiency in all the beneficiary schools." **- Frontline Director, Kwaebibirem MEO**

"It has developed the skill of many on manipulating ICT tools and understanding some single ICT terminologies. It has improved the interest of many to read. It has promoted healthy reading activity, competition among schools." – **Interview with E-reader coordinator, Kwaebibirem MEO**

Conclusion

Despite challenges such as the COVID-19 pandemic and lack of electricity at some schools, AFC's final evaluation study indicates the GDS program was effectively implemented in the selected schools. The MEO provided adequate support for integrating the e-readers into teachers' lesson delivery, and consistent monitoring and supervision were conducted by SISOs.

The study's findings demonstrate significant improvements in teachers' pedagogy by enabling a shift from teacher-centred to learner-centred participatory approaches. As a result, students were more engaged and attentive in lessons and achieved higher learning outcomes. All stakeholders, including the MEO, head teachers, teachers and students, indicated strong interest and enthusiasm for integrating digital technologies in education. This has led to a shift in attitudes about how technology can improve equitable and consistent access to educational materials and encouraged further innovation in the education sector.

Annex 1: Sample Book per Student Analysis for District 1

Name of school	Enrollment size	Number of paper textbooks	Paper textbooks per enrollee
Okyinso Presby	138	417	3.02
Twapease Primary	178	655	3.68
Asoum Salvation Army	160	684	4.28
Asoum RC	121	494	4.08
Asoum Methodist	119	363	3.05
Abaam Presby	168	405	2.41
Abaam RC	74	354	4.78
Kade LA Primary	189	674	3.57
Abodom LA	76	0	0.00
Kade Wesley Methodist	145	426	2.94
Kade EP	115	564	4.90
Kade RC	223	1145	5.13
Total	**1706**	**6181**	**3.62**

Name of school	Enrollment size	Number of paper storybooks	Paper storybooks per enrollee
Okyinso Presby	138	130	0.94
Twapease Primary	178	116	0.65
Asoum Salvation Army	160	250	1.56
Asoum RC	121	224	1.85
Asoum Methodist	119	162	1.36
Abaam Presby	168	76	0.45
Abaam RC	74	3	0.04
Kade LA Primary	189	152	0.80
Abodom LA	76	130	1.71
Kade Wesley Methodist	145	22	0.15
Kade EP	115	42	0.37
Kade RC	223	44	0.20
Total	**1706**	**1351**	**0.79**

Name of school	Enrollment size	Number of total paper books	Paper books per enrollee
Okyinso Presby	138	547	3.96
Twapease Primary	178	771	4.33
Asoum Salvation Army	160	934	5.84
Asoum RC	121	718	5.93
Asoum Methodist	119	525	4.41
Abaam Presby	168	481	2.86
Abaam RC	74	357	4.82

Kade LA Primary	189	826	4.37
Abodom LA	76	130	1.71
Kade Wesley Methodist	145	448	3.09
Kade EP	115	606	5.27
Kade RC	223	1189	5.33
Total	**1706**	**7532**	**4.42**

Name of school	Enrollment size	e-Books	e-Books per enrollee
Okyinso Presby	138	4000	28.99
Twapease Primary	178	5500	30.90
Asoum Salvation Army	160	4000	25.00
Asoum RC	121	2500	20.66
Asoum Methodist	119	4000	33.61
Abaam Presby	168	4000	23.81
Abaam RC	74	2500	33.78
Kade LA Primary	189	5500	29.10
Abodom LA	76	2000	26.32
Kade Wesley Methodist	145	4000	27.59
Kade EP	115	4000	34.78
Kade RC	223	5500	24.66
Total	**1706**	**47500**	**27.84**

Device per student analysis

Name of school	Enrollment size	Number of devices [2]	Student to device ratio
Okyinso Presby	138	40	3.45
Twapease Primary	178	55	3.24
Asoum Salvation Army	160	40	4.00
Asoum RC	121	25	4.84
Asoum Methodist	119	40	2.98
Abaam Presby	168	40	4.20
Abaam RC	74	25	2.96
Kade LA Primary	189	55	3.44
Abodom LA	76	20	3.80
Kade Wesley Methodist	145	40	3.63
Kade EP	115	40	2.88
Kade RC	223	55	4.05
Total	**1706**	**475**	**3.59**

[2] Student-facing devices only. Each school had additional 5-10 devices dedicated to teachers/staff to the figures represented.