Liberia Empowerment Through Attendance, Reading, and Nutrition (LEARN II)

Baseline Evaluation

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Acronym List

AIR	American Institutes for Research
ANOVA	Analysis of Variance
CART	Center for Action Research and Training
COVID-19	Corona Virus Disease 2019
DEO	District Education Officer
DID	Difference-in-Differences
EGRA	Early Grade Reading Assessment
FGD	Focus Group Discussion
ICC	Intra-Cluster Correlation
IRB	Institutional Review Board
IRC	International Red Cross
IRR	Inter-rater Reliability
KAP	Knowledge, Attitudes, and Practices
KII	Key Informant Interview
LBRA	Literacy Boost Reading Assessment
LEARN	Liberia Empowerment Through Attendance, Reading, and Nutrition
LRP	Local and Regional Procurement
MC	Mercy Corps
MDE	Minimum Detectable Effect
MGD	McGovern-Dole
MOA	Ministry of Agriculture
MOE	Ministry of Education
ORS	Oral Rehydration Salts
PIRE	University of Liberia Pacific Institute for Research and Evaluation
PTA	Parent–Teacher Association
RTI	Research Triangle Institute
SC	Save the Children
SD	Standard Deviation

SES	Socioeconomic Status
SF	School Feeding
SG	School Garden
SHC	School Health Club
SHN	School Health and Nutrition
SMP	School Meal Provider
SRGBV	School-Related Gender-Based Violence
TOR	Terms of Reference
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USAID	United States Agency for International Development
USC	United States Food Commodities
USDA	United States Department of Agriculture
WASH	Water, Sanitation, and Hygiene

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Executive Summary

Project Background and Purpose

Liberia Empowerment Through Attendance, Reading, and Nutrition (LEARN) II is a 5-year program (2021–2026), funded by the United States Department of Agriculture (USDA) McGovern-Dole International Food for Education and Child Nutrition program (McGovern-Dole). Save the Children (SC) is leading the implementation of LEARN II in partnership with SC Liberia, Mercy Corps (MC), and government partners, including the Ministry of Education (MOE), the Ministry of Agriculture (MOA), and the Ministry of Health. LEARN II is a follow-on to the LEARN project, a 5-year project set to end in September 2022.[1] LEARN II will build and expand on the work done during LEARN across the same four counties: Grand Bassa, Grand Gedeh, Rivercess, and River Gee. In addition to LEARN's base package of school feeding services and school health and nutrition (SHN) champions, LEARN II will expand the use of the literacy boost, school health club, and school garden activities. Additionally, LEARN II will introduce the use of local and regional procurement (LRP) commodities to complement those donated by USDA. LEARN II will aim to serve 265,830 direct beneficiaries, including 85,129 pre-primary and primary school children in 234 schools.

LEARN II program activities are designed to achieve USDA's two strategic objectives: (a) improve the literacy of school-age children by enhancing the quality of instruction and increasing student attentiveness and attendance through provision of school meals procured from local communities and (b) increase the use of health and dietary practices by enhancing knowledge of health and hygiene best practices, upgrading sanitation facilities, and improving food safety and storage systems.

Evaluation Methodology

SC selected the American Institutes for Research (AIR) to design and conduct the project and impact evaluations of the LEARN II project from 2022 to 2026. The baseline evaluation, which is the focus of this report, provides a detailed description of LEARN II target beneficiaries, highlights differences across counties, and sets benchmarks to enable future evaluations to address evaluation questions related to program relevance, effectiveness, efficiency, impact, and sustainability.

Below is a snapshot of our evaluation approach for the baseline evaluation:

[1] LEARN aimed to reach 132,780 direct beneficiaries, 60,164 of whom (students) were expected to receive meals through school feeding activities in 220 schools.

Sampling. A sample of 57 schools in which data were collected from Grade 2 and Grade 6 students, teachers, and school meal providers for the performance evaluation and a sample of 70 schools in which data were collected from Grade 2 students for the impact evaluation.

Performance Evaluation

57
Schools

1,107
Grade 2 & Grade 6 Students

57
Teachers

55
School Meal Providers

Impact Evaluation

70
Schools

1,186
Grade 2 Students

Methodology. A mixed-methods approach for a performance evaluation to measure LEARN II progress over time as well as a difference-in-differences framework for an impact evaluation to assess the causal effect of LEARN II interventions on student literacy, health, nutrition, and school-related gender-based violence (SRGBV) outcomes.

Data Sources. Primary quantitative data from 2,376 students, 57 teachers, and 55 school meal providers. Qualitative data from 350 students, caregivers, teachers, principals, cooks, storekeepers, community mobilizers, and district education officers (DEOs) across 12 school communities (48 focus group discussions [FGDs] and 51 key informant interviews [KIIs]); four national SC and MC staff members; four national Government of Liberia staff members; and one county-level Government of Liberia staff member.

2,376
Students

148
Schools

48
FGDs

63
KIIs

350
Community Stakeholders

Analysis. Descriptive analysis and subgroup analysis disaggregated by county, gender, grade, and main language spoken at home; baseline equivalence analysis to assess if the treatment and comparison groups were statistically similar in terms of outcomes and background characteristics; triangulation between quantitative and qualitative data to capture where (a) the qualitative data supported the quantitative data, (b) there were outliers, and (c) nuance was not captured by the quantitative tools.

Findings and Conclusions

Strategic Objective 1: Improved Literacy of School-Age Children

Literacy

- **Reading outcomes were low at baseline**. Less than half of students (46%) showed a good grasp of letter knowledge, defined as being able to identify at least 90% of the letters in the alphabet. Only 9% of the students in the sample were classified as readers, and just 4% could read with comprehension. There were regional differences, with students in Grand Bassa and Rivercess outperforming their counterparts in Grand Gedeh and River Gee.
- **Boys appear to have a head start on girls in terms of literacy**. Results for foundational literacy outcomes show the following: 51% of boys demonstrated letter knowledge, compared to 39% of girls, and boys were able to identify 23% of commonly used words on average, compared to 18% of girls. The qualitative data do not help to explain this—boys and girls show similar levels of excitement for education, ambitions for their future, and perceptions that they are adequately supported by teachers and parents in pursuing their educational goals.
- **Literacy levels in treatment schools were consistently lower than in comparison schools.** The impact evaluation's baseline equivalency analysis found a significant imbalance in literacy skills that was largely driven by the regional differences mentioned above.

Home Literacy Environment

- **Students' home literacy environments are supportive, but there is room for improvement.** Over half of the students reported being helped with their studies by someone at home (68%), being read to by someone (64%), and/or seeing someone else reading (58%). Forty-one percent of students said someone at home told them a story. There were regional differences, with a generally more positive literacy environment in River Gee and a less positive one in Rivercess. The qualitative data suggest that students tend to have support from someone outside of school—usually a family member or sometimes a "home study teacher"—although they acknowledge that they would benefit from more support.
- **Students lack readily available, age-appropriate, non-school books to read at home.** Just 34% reported having any storybooks or comic books at home. About a quarter (22%) of students said that they read non-school books outside of school, with a higher proportion doing so in Grand Gedeh (37%) than in Rivercess (6%). The qualitative data suggest that communities need more learning materials and books. Communities with LEARN Literacy Champions (LCs) in some cases reported that the LCs had books that they were able to lend to students, and in some of those communities SC had trained LCs to help community members create local reading resources for student use.
- **Students in the treatment group tended to have a more engaged home literacy environment.** Although they had slightly fewer reading materials available at home, the treatment group had significantly more literate household members—members more likely to be reading or supporting their children's schoolwork—than households in the comparison group.

School Literacy Environment

- **Almost all students (99%) said that they enjoy coming to school, with the majority (87%) citing learning new things or enjoying lessons as a reason**. The qualitative data support this finding; students revealed high expectations about what they could achieve in the future provided they were able to continue their schooling. The most cited dislikes were related to physical or mental abuse by other students (29%) or by teachers (26%).

Strategic Objective 2: Increased Use of Health and Dietary Practices

Health and Hygiene Knowledge and Practices

- **Most schools have functional handwashing stations (86%).** Across counties, nearly all teachers reported that students use toilets at school, with the percentage varying little by gender (96% for boys and 98% for girls). Qualitative data indicate variation in the hygienic conditions of sanitation infrastructure in schools.
- **Almost all students report washing their hands (93%).** However, in a test of hygiene knowledge and practice, just 22% of students were able to name three critical handwashing moments, and only 16% said they washed their hands at each of these moments. The knowledge–practice gap was almost twice as large for Grade 6 students as for Grade 2 students.
- **Nutritional knowledge among various stakeholders is low at baseline**. Just 2% of students reported knowing what a balanced diet is, and fewer than 1% could prove they knew. Most students could identify foods that provide energy (77%), but just 27% could identify foods that protect against disease. Less than half of teachers (44%) and less than a third of school meal preparers (SMPs) (29%) knew the components of a balanced meal. The qualitative data indicate little to no attention is paid to nutrition by school health committees and PTAs, despite nutrition being part of SHN champion and SHC activities implemented previously through LEARN.
- **A third of students are eating three meals each school day, while a quarter do so on non-school days.** Grade 2 students were significantly more likely to get three meals on school days (36%) than Grade 6 students (28%). There was some regional variation, and students in Rivercess were the least likely to eat three meals on non-school days (11%) but the most likely to do so on school days (61%).
- **Students' meals lack dietary diversity, and most meals are rice based.** Few students reported eating fruits, vegetables, or protein during the day. Interviews with cooks show that they generally cook the commodities given to them (e.g., rice, beans, and oil). Cooks report that protein or vegetables are rarely provided by parents, or that they sometimes pool money to pay for supplementary food.
- **Teachers and SMPs perceived barriers that undermine children's capacity to achieve minimum meal frequency and minimum dietary diversity.** Nearly all teachers perceived barriers impacting children's ability to eat breakfast before their first class (91%), eat three meals a day and snacks (95%), and consume different types of foods at meals (93%). Likewise, most SMPs reported that serving a variety of foods for school meals was difficult (89%), because of the cost (58%) and availability (55%) of diverse ingredients.

School-Related Gender-Based Violence and Gender Norms

- **Teachers and students were aware of the codes of conduct.** Most teachers were aware of the rules that should govern their conduct in school (82%) and their interaction with students (96%). Students were less knowledgeable about the code of conduct for teachers (41%) but most were aware of rules about teacher-student interaction (77%) and their own code of conduct (77%). Students and teachers in all FGDs reported that they were aware of the content of the codes of conduct. However, the qualitative data show that teacher infractions are relatively common, and students indicate that they fear retribution or being ignored if they report an infraction.
- **Teachers and students share a perception that girls have a more positive experience at school.** Both teachers and students said that girls' attendance at school should be prioritized and that girls receive more of the teachers' positive comments, while boys get the bulk of the negative comments and insults. The percentage of girls believing it was important that they attend school was significantly greater than the percentage of boys believing it was important that they attend. Boys and girls also disagreed on who teachers most often called on to answer questions in class.

Limitations

Some potential limitations of the LEARN II baseline evaluation include the following:

Reliance on Self-Reported Data. The main limitation is that the quantitative approach relies on self-reported data from children for several socially and culturally sensitive subjects such as SRGBV. Although AIR adopts best practices in eliciting this information, the data could still have some degree of measurement error, like data collected in other contexts on sensitive topics. To mitigate this limitation, prior to the baseline data collection in 2018 for LEARN, AIR devoted considerable attention to cognitive testing of the survey instrument with students in Grades 2 and 6. In consultation with the local partners, AIR adjusted question phrasing to make sure children could understand the questions and feel comfortable answering. In addition, to further improve data reliability at baseline, AIR incorporated some of these topics in qualitative interviews to allow triangulation with quantitative data. Even then, the qualitative data may be unreliable where respondents have an interest in slanting what they say, including the reporting of cooks on their hygiene practices, the reporting of teachers on their use of corporal punishment, and the reporting of parents on the frequency of reading with their children.

Internal Validity of Impact Evaluation. One limitation of the current design arises from the fact that the treatment and comparison schools were selected among schools that had benefited from LEARN for 5 years. Importantly, the treatment schools are in Grand Gedeh and River Gee while the comparison schools are in Grand Bassa, which means that regional differences could be confounded with treatment effects. Moreover, due to low enrollment numbers, schools in the impact sample were selected purposefully rather than randomly. Therefore, impact findings will not be generalizable to all schools from these counties. Finally, we performed propensity score matching on a rather small sample of schools, which limits our ability to find suitable matches. This also contributes to our finding of significant differences between the treatment and comparison groups at baseline. Given these caveats, future results from the impact evaluation should be considered exploratory and interpreted with caution.

Internal Validity of Qualitative Findings. As with all qualitative research, results are not necessarily generalizable but rather show the broad spectrum of types of perspectives that may be encountered across project beneficiaries and stakeholders. Because of this, the communities chosen purposefully represent the broad types of community covered by the LEARN project (rural, peri-urban, and urban; the combined package vs. the base package).

Recommendations

Below, AIR presents recommendations based on key project outcomes, limitations, and lessons learned from the baseline evaluation.

- **Customize literacy interventions to effectively meet the needs of both non-readers and existing readers alike.** Further explore which types of students work with Literacy Champions or engage in other Literacy Boost interventions (e.g., reading clubs and camps) to determine whether those who are already readers tend to seek this support more often. If existing readers tend to seek this help and non-readers do not, this could help explain why students who are already readers tend to improve while non-reading students do not. It may be beneficial to target non-readers or facilitate access to non-readers to Literacy Boost activities. Alternatively, if non-readers are being supported with such activities but still do not improve, then providing customized instruction based on their skill level may better help these less advanced students to progress.
- **Closely monitor MOE-hired teacher trainers to learn more about what they are focusing on as it relates to literacy.** This will help SC to both contextualize literacy outcome findings and provide insights to help intervene where it seems necessary to better improve the desired outcomes (e.g., curriculum reform).
- **Review MOE teacher literacy refresher training tools to try to better meet the needs of non-readers and work as much as possible with MOE to try to apply those changes.** Acknowledging the limited role that SC can have in directly influencing this dimension of MOE's work, this review will at a minimum provide some context around observed outcomes, and hopefully allow SC the opportunity to help MOE make necessary revisions.
- **As was decided during LEARN I, for LEARN II mobilize community volunteer Literacy Champions instead of tasking teachers with the role.** Clarify with the volunteers the reasons their position is not, and will not be, compensated. LEARN endline found that community volunteer Literacy Champions were effective and motivated but did express some concerns with payment in take-home rations only.
- **Produce innovative and locally made reading materials.** Continue empowering students and parents to create their own reading materials when there is a lack of content to read. Literacy Champions have provided good examples of how children can use locally made materials (e.g., flashcards and transcribed stories narrated by community members) to enhance literacy.
- **Continue the effective work with the government under LEARN to better support and maintain teachers and other volunteers supporting education initiatives (e.g., Literacy Champions).** Advocacy in this regard would need to come from multiple partners regularly,

for example as has been done already through the Education Sector Development Committee, but it is critical to acknowledge to the government the degree to which teachers lament being underpaid and overworked and feel the government is not listening to their concerns. In the meantime, instituting strategies to help acknowledge teachers' work and provide supplementary compensation (e.g., through PTAs or the STAR teachers intervention) could further help enhance teacher morale, attendance, and performance. Consider also holding in-depth dialogues and engagements at county and district levels for deeper understanding of the contextually specific issues related to government paid teachers and volunteers. Finally, there remains the need to address the issue of frequent transfer of teachers to other schools, particularly those who have already been trained under LEARN as Literacy Champions or SHN champions.

- **Strengthen PTAs to support schools in the longer term.** PTAs have critical roles in schools beyond LEARN activities. LEARN refresher trainings and meetings with PTAs were effective in re-activating some PTAs that had lost momentum following the COVID-19 closures or had been inactive for years prior. Working with PTAs to ensure that they have their own system for making and carrying out plans and remaining active without outside encouragement such as through LEARN and LEARN II can be critical in helping schools sustain themselves in the face of limited or sporadic government support. PTAs could have a more systematic role in supporting teachers who are feeling forgotten by the government or boosting the morale of Literacy Champions who lament not being paid cash for their work.
- **Attract more parents into PTAs.** Continue stressing to PTA leaders the importance of including multiple parents and community members and train the leaders on strategies to attract parents and community members. One strategy is to convince parents that work done in collaboration with the PTA will ultimately provide compensation in the form of school improvements or parental influence over which activities are chosen. Recruitment of new PTA members should aim for gender parity, equity, and inclusiveness (e.g., including parents from marginalized groups).
- **Continue to emphasize the importance of parents' engagement in their children's education and facilitate dialogues between parents and teachers about the challenges parents face in engaging with their children's education.** As has already been done as part of LEARN via radio, SMS, home learning cards, teachers and principals can continue to emphasize to parents the critical and constructive role they can play in enhancing their children's education even without being educated themselves. This will also enable teachers to better understand the challenges that parents face and the assistance they need in their efforts to support their children. Together with teachers, develop realistic strategies that

parents and caregivers can use to encourage their children going forward. Consider the use of social media and other technological approaches to encourage parents to engage.

- **Give ample attention to the work towards providing students with Safe Schools where students are safe to learn and develop amongst their peers and teachers, teachers' role-model pro-social behavior, and there is a positive school climate.** To help achieve this, consider community dialogues as part of the scale-up of the LEARN Safe School interventions in four counties such that stakeholders better respect and enforce the school code of conduct so that students can learn in a safe environment. With the revision of the school code of conduct will come opportunities for widespread sensitization around its content, including the opportunity to have dialogues with school personnel, caregivers, and students on their perspectives. This will help elucidate what is limiting enforcement of the code of conduct, such as misunderstanding of the content despite the ability to list items in the code, disagreement with some of the rules, and lack of alternative disciplinary strategies that are in accord with the code (i.e., strategies that could replace corporal punishment).
- **Follow-up with schools on the status of their teacher's code of conduct complaints mechanism to ensure it allows for children's anonymity and protection**, and that school leaders act on complaints made (or justify rationale for inaction) so that the system remains both safe and effective.
- **Enhance PTAs' understanding of the role of school gardens.** Continue sensitizing PTA members to the active role that school gardens can play beyond supplementing school feeding activities. Rather, school gardens can be viewed as an income generation opportunity. For example, a larger garden could generate more income for PTA activities or help individual PTA members cover their children's educational expenses. Accordingly, providing PTAs with training on business management and marketing as part of the VSLA intervention will be helpful. Meanwhile, it is critical that children are not exploited: teachers and students should be made aware that student work in the school garden is not meant to be done as punishment or demanded as free labor. Rather, all students, parents, and teachers can be expected make small contributions to the garden.
- **Reiterate to communities the rationale for providing girls with take-home rations** (THRs): they are aimed at reducing the risk of sex for grades and grooming, demonstrating commitment to equality by giving girls a boost (critical given past and current evidence of boys performing better).
- **Ensure schools have adequate materials and infrastructure to maintain a healthy and safe environment, particularly in kitchens**. While cooks and storekeepers demonstrate adequate understanding of food safety procedures, they lament lack of materials or poor infrastructure to ensure they can keep up to those standards.

- **Work with the government to get a commitment to support institutionalizing and funding school feeding across Liberia schools.** Not only is school feeding popular, but it also increases the attendance and performance of students while alleviating many caregivers' concerns about the well-being of their children. At the same time, a school garden and the PTA alone cannot sustain daily hot lunches; additional commodities are essential. Implementation of the LEARN II school feeding model will provide an important case study in how to effectively roll out and sustain school feeding.
- **Separate WASH and nutrition components, rather than grouping them as SHN, and task different parties to manage each.** SHCs demonstrated willingness and capacity to engage in school cleaning activities, and some were active in teaching fellow students about handwashing. However, improving nutrition was rarely mentioned, likely because of the already difficult task SHCs and SHN champions had in maintaining school cleanliness. Having separate individuals responsible for the nutrition component (e.g., dividing an SHCs into two "wings") may help prevent the important issue of nutrition from being sidelined. Also, emphasis on small-group training that is more interactive and practical may help the SHN champions and SHCs to better apply the skills learnt during the large-group formal training.
- **Conduct a needs assessment focused on existing farming cooperatives, land usage, and land rights in project areas.** Farming cooperatives (or other relevant cooperatives) may already exist in some of the LEARN project communities; also, there may be challenges or tensions around land ownership or use. Conducting a needs assessment will aid in understanding the strengths of these cooperatives and associated land issues and uncovering areas where there is room for improvements. One result is that the partnerships with Kawadah Farms will be better able to leverage current assets and avoid duplication of effort or conflict with existing practices. Also, having a better understanding of any land issues will enable SC to focus on necessary dialogues with associated ministries, including Internal Affairs, MOE, MOA, and county authorities.
- **With PTAs and communities, conduct a thorough needs assessment focused on quality of kitchens in project areas.** Despite the LEARN activities intended to rehabilitate kitchens, there remain concerns that some of the kitchens do not allow easy application of basic food safety measures.
- **Consider additional or nuanced measures of food security and nutrition in future evaluations.** Baseline findings point to very low levels of nutritional knowledge (as measured by knowledge of a balanced diet). Given the increased emphasis on school gardens in LEARN II, additional nuanced indicators related to food security and nutrition may help capture improvement in diet and nutrition. For example, the dietary diversity of students can be

measured using the United Nations Food and Agriculture Organization diversity index (2010), as recommended by the USDA Foreign Agricultural Service.

- **Consider doing a feasibility analysis that includes the livelihoods and income-generating activities of the families of school-going children to strengthen the sustainability of the program effects.** To ensure that school canteens are well provisioned with locally produced commodities, local communities must be empowered to help families increase their livelihoods and income, which will also generally aid them in meeting the nutritional, food diversity, and learning-related needs of their children after LEARN II activities are phased out.
- **Together with the evaluator, consider ways to strengthen the impact evaluation design.** The baseline results suggest that LEARN II treatment and comparison groups were not balanced, which raises concerns regarding the ability to draw causal inferences about the impact of LRP intervention at midline and endline. To address these concerns, consider exploring the feasibility of alternative evaluation designs. For example, should rollout of school gardens and LRP activities allow it, consider a staggered randomized controlled trial (i.e., where rollout activities are staggered randomly). Such a design allows use of data from midline and endline to evaluate average differences between schools that benefited from earlier rollouts and schools that did not. Alternatively, provided school gardens and LRP activities are rolled out gradually (but not randomly) and detailed monitoring and evaluation data are available on the timing of these activities, a difference-in-differences analysis can compare schools that had longer exposure to school gardens and LRP activities with schools that had shorter exposure.
- **Track fidelity of implementation and contextualize findings and recommendations based on what has happened.** Throughout project implementation, conduct regular assessments to identify gaps in implementation and work to fill those gaps appropriately. A monitoring and evaluation system that provides robust and detailed data can be used to closely track fidelity of implementation and will lead to a more refined evaluation of the project's impacts at endline. Further, if other implementers working on similar projects within the project's catchment area are identified, such a system would allow collaboration and the avoidance of complications.

Section 1. Introduction

Project Background

Following the successful implementation of Liberia Empowerment Through Attendance and Reading (LEARN) project between 2017 and 2022, Save the Children (SC) will implement a $25 million second phase, LEARN II, from 2021 to 2026. In partnership with SC Liberia, Mercy Corps (MC), and government partners including the Ministry of Education (MOE), the Ministry of Agriculture (MOA), and the Ministry of Health, LEARN II will build upon LEARN's activities and expand the use of the literacy boost, school health clubs, and school garden activities to support student enrollment, attendance rate and literacy level; improve health, nutrition, and hygiene knowledge; and alleviate food insecurity. In addition, LEARN II will introduce local and regional food procurement (LRP) by women-led farming cooperatives. LEARN II aims to reach 265,830 direct beneficiaries, 85,129 of whom (students) are expected to receive meals through school feeding activities in the same four counties—Grand Bassa, Grand Gedeh, Rivercess, and River Gee. [2]

Exhibit 1. LEARN II Targeted Counties in Liberia

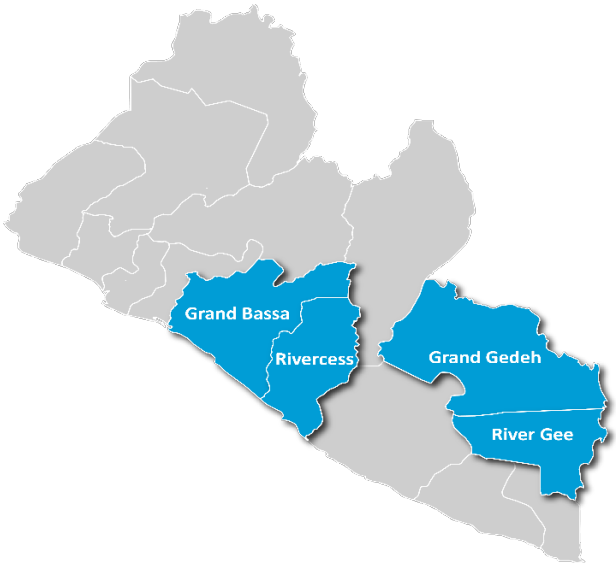


Exhibit 2. LEARN and LEARN II Activities

Source: Terms of Reference (TOR)

[2] There may be positive and negative unintended consequences of the LEARN II programming. On the positive side the local procurement activity can create a new market for local farmers to sell their produce. Not only those with whom LEARN directly works may benefit, but also others may benefit who may learn about the opportunity to sell to new intermediates selling to local schools. This may improve livelihood opportunities in the local communities

To achieve the program's primary objective of carrying out school feeding to reduce hunger and improve literacy and primary education, LEARN II will implement 14 activities related to school feeding, school health and nutrition, literacy, and capacity building (Exhibit 2). As in the LEARN project, LEARN II will implement different package of activities depending on the target county.

Purpose of the Evaluation

The American Institutes for Research (AIR) will use qualitative and quantitative methods to conduct a project and an impact evaluation for LEARN II. The project evaluation will measure changes of key performance indicators over the life of the LEARN II project. The impact evaluation will focus on measuring the causal effect of LEARN II interventions (i.e., local food procurement, school gardens, and U.S. commodities) on literacy, health, and nutrition, as well as knowledge, attitudes, and practices (KAP) outcomes among school-age children in all four LEARN II counties. The evaluation of LEARN II includes three phases—baseline in 2022 (the focus of this report), midterm in 2024, and final in 2026.

AIR designed and conducted the baseline evaluation of LEARN II in parallel with the endline evaluation of LEARN to maximize synergies in data collection and comparability in the outcome indicators and findings. The objectives of the baseline evaluation are to:

- measure pre-implementation values for performance indicators
- provide a detailed description across target counties
- confirm estimated indicator targets
- confirm the comparability of the intervention and comparison group schools for the impact evaluation
- confirm project design assumptions and identify potential threats to project implementation
- conduct gender and power analysis study to inform more gender-sensitive programming

In the following sections, we describe the evaluation approach including sampling, data sources, and analysis, and document field work. Then, we discuss the baseline values of the performance

and improve investment in the health and human capital of the children of farmers. Another positive spillover effect may be that in the presence of any future pandemic or shock that disrupts supplies of foreign food aid to schools, the local community may be more resilient and able to meet the needs of children in schools. However, there may be some unintended negative effects as well. Local purchases may drive up food prices, thereby harming poor, net buyers who do not benefit from selling to schools. Home gardens may not be able to meet the consumption needs of students, so there may be greater reliance on local procurement for meeting food needs. Food supplies might also become riskier in the presence of a local shock that damages local produce.

indicators and assess baseline equivalence between treatment and comparison groups. Finally, we conclude with some discussion and recommendations for LEARN II going forward.

Section 2. Evaluation Approach

The key goal of the baseline study is to provide a detailed description of the target beneficiaries who will receive the LEARN II interventions and highlight differences across gender and counties. The baseline evaluation was designed to set benchmarks such that future midterm and final evaluations could respond to evaluation questions related to relevance, effectiveness, efficiency, sustainability, and impact of key program interventions.

AIR used a mixed methods approach for the baseline project and impact evaluations of LEARN II. Importantly, the LEARN II baseline evaluation was conducted simultaneously with the LEARN endline evaluation relying on synergies in data collection and analysis. See the LEARN endline evaluation report for more detailed description of that evaluation approach. This section describes the baseline sampling methods, data sources, and data analysis methods.

Design and Sampling

The LEARN II quantitative design includes a performance and impact evaluation. The performance evaluation will track trends over time in children's literacy skills, health, and nutrition status, and KAP about health, hygiene, and nutrition, as well as teachers and school meal providers KAP about health, hygiene, nutrition, and meal preparation, respectively. The impact evaluation will provide an estimate of the causal impact of the intervention on children's health and education outcomes. We describe the impact and performance evaluation designs and sampling strategies of LEARN II in detail below.

Impact Evaluation Design and Sampling

The impact evaluation of LEARN II will estimate the impact of school feeding supported by local procurement of commodities and school gardens on Grade 2 children's literacy, health and nutrition outcomes, and perceived cultural appropriateness of school meals (Exhibit 3). The impact evaluation uses a quasi-experimental design with 35 treatment schools in Grand Gedeh and River Gee and 35 comparison schools in Grand Bassa. The treatment group will receive meals prepared with locally procured commodities (LRP) and school garden (SG) produce *in addition* to meals prepared with U.S. food commodities (USC). The comparison group will only receive meals prepared with USC. This design will allow us to measure the incremental effect of receiving local commodities and school garden produce to prepare school meals relative to U.S. commodities only. By measuring the effects at midterm (relative to baseline), the evaluation team can understand the impact of LEARN II activities in the early years of implementation, and measurements of effects at endline (relative to baseline) will reveal the impact of LEARN II activities once they have matured/stabilized over 4 years. AIR will use a difference-in-differences (DID) estimation framework to analyze the student outcome data as summarized in Exhibit 4.

Exhibit 3. LEARN II Impact Evaluation Design

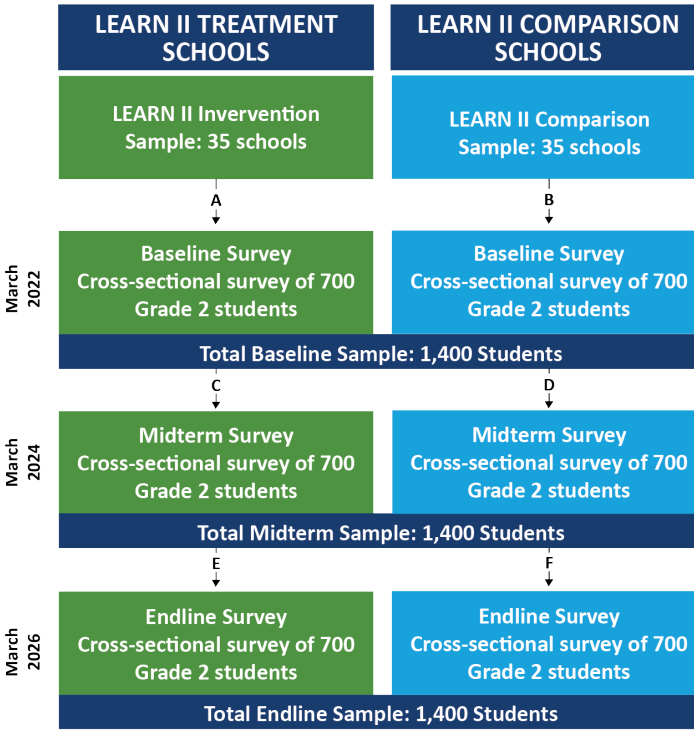


Exhibit 4. Impact Evaluation Measurement Comparisons

Evaluation	Impacts	Measurement
Midterm	2-year effect of LRP + SG interventions (Treatment vs. Comparison)	[C-A] – [D-B]
Endline	4-year effect of LRP + SG interventions (Treatment vs. Comparison)	[E-C] – [F-D]

Note: Measurements in A, B, C, D, E, and F are defined in Exhibit 3 above.

Sampling Schools. To estimate LEARN II impacts, AIR assigned 35 schools in Grand Gedeh and River Gee to the treatment group. Initially, these 35 schools were to be randomly assigned; however, enrollment data for the LEARN II schools revealed that many of the schools did not

have the 20 students required to meet our target sample size. Therefore, AIR assigned the 35 largest schools from the 95 LEARN II schools in Grand Gedeh and River Gee to the treatment group.

The original intention was to then select a matched sample of 35 comparison schools from Grand Bassa, however, only 31 of the 94 LEARN II schools in Grand Bassa had at least the 20 students required to meet our sample target. Therefore, we first chose all schools with at least 15 students and used propensity score matching to choose 35 of those schools that best matched the treatment sample in Grand Gedeh and River Gee. We estimated the propensity score based on school level characteristics including number of students enrolled in each grade, the total number of teachers, teacher–student ratio, number of dropouts, proximity to the nearest all-weather road, and presence of canteen.[3] Identifying schools that were close matches to the treatment group schools minimized threats to internal validity such as the presence of external factors that result in schools in River Gee and Grand Gedeh receiving local commodities and school garden produce to prepare school meals.

Sampling Students. The power analysis confirmed that a sample size of 1,400 students, equally divided into 70 schools, will allow us to detect the minimum detectable effect size (MDE) of 0.40 standard deviation (SD), with a 95% level of confidence.[4] The assumed parameters are consistent with related studies in India, Kenya, and Madagascar; therefore, we consider the sample size adequate for a moderate MDE of 0.40 SD (Duflo, Glennerster, & Kremer, 2008; French & Kingdon 2010).

Rather than following the same students over time, we will select a different sample of students in each round of data collection. A cross-sectional sample of students is preferable to a cohort design because of the substantial probability of student attrition from school. In addition, having independent samples surveyed every period minimizes the probability that the act of measurement itself influences subject behavior (e.g., children from the same cohort may score better in a test when they take the same type of test multiple times, not because they know more, but because they are more used to taking that test) (Feldman & McKinlay, 1994).

Our design called for up to 10 boys and 10 girls randomly selected from Grade 2 to assess the effect of project interventions on their literacy skills at the end of their grade level. At baseline, to ensure that we could reach our target of 20 students, SC collected signed parental consents for each Grade 2 student from pre-established enrollment lists prior to data collection. For selecting students to survey, within each sampled school, AIR selected students by physically

[3] This data was collected by SC in January 2022.
[4] We are using the following additional assumptions: power (β) of 0.80, intra-cluster correlation (ICC) of 0.25, and a correlation of other covariates with the measured outcomes of 0.50.

lining up the boys and girls with parental consent and using a randomization formula to pick a random sample of students. In practice, because of low attendance and difficulty in obtaining parental consent, in many schools all of the available students were surveyed.

Project Evaluation Design and Sampling

Using mixed-methods, the project evaluation will measure the progress of the performance indicators related to core LEARN II activities from baseline (2022) to midterm (2024), and endline (2026). To accurately reflect changes in program performance over time, AIR will measure the same program indicators at all three data collection points. To measure literacy and health KAP indicators, AIR used a two-stage clustered sampling approach to select a cross-section of Grade 2 and Grade 6 students across all four LEARN II counties.[5] First, AIR randomly selected a sample of project schools from each county proportional to the total number of project schools participating in LEARN II. Subsequently, the team randomly chose 10 students each (five girls and five boys) from one randomly chosen Grade 2 and Grade 6 classroom each.

AIR followed the recommendations from the United States Agency for International Development (USAID) early grade reading assessment (EGRA) Toolkit (RTI International, 2015) to confirm the sample size of 1,140 children (570 each in Grades 2 and 6), as indicated in the request for proposal. The sample size was calculated using the following formula:

$$n = 4\left(\frac{t_{\frac{\alpha}{2},n-1}\sqrt{1+(k-1)\rho}\sigma}{CIwidth}\right)^2$$

Where $t_{\frac{\alpha}{2},n-1}$ is the critical value corresponding to a 95% confidence level (set to 1.96), k is the cluster size (set to 10 students per school), ρ is the inter-cluster correlation (set to 0.50 based on previous EGRA studies), σ is the estimated standard deviation (set to 26 based on previous EGRA studies), and $CIwidth$ is the width of the confidence interval (set to 10). The formula yields a desired sample size of 571, which has been adjusted downward to 570 to allow the school sample size in each county to be proportionate to the number of project schools in the county. That is, we sampled 57 schools across the four counties. Using the same method mentioned above in the impact section of obtaining parental consent and randomly selecting students AIR selected a total of 10 students (five boys and five girls) from Grades 2 and 6.

As part of the LEARN II baseline project evaluation, we also administered a health KAP to teachers and school meal providers (SMPs) in each of the 57 schools. Specifically, we selected one Grade 2 teacher and one school meal provider (SMP) in each project evaluation school for the health

[5] For grade 6 students, we only focus on health and nutrition KAP, SRGBV, and perceived gender norms.

KAP. Exhibit 5 shows the representative sample of 57 schools selected proportionally from each county, based on the terms of reference (TOR).

Exhibit 5. Sample Sizes from Each County for the Project Evaluation

County	Number of LEARN II schools	Number of schools selected for project evaluation	Total Grade 2 students	Total Grade 6 students	Total Teachers	Total SMPs
Grand Bassa	95	23	230	230	23	23
Grand Gedeh	56	12	120	120	12	12
Rivercess	44	11	110	110	11	11
River Gee	39	11	110	110	11	11
Total	**234**	**57**	**570**	**570**	**57**	**57**

Baseline data collection for the evaluation of LEARN II occurred simultaneously with the endline data collection for LEARN. We used economies of scale to ensure a more efficient data collection process. Thus, in Grand Bassa, River Gee, and Rivercess counties, the schools for the LEARN II baseline project evaluation overlapped completely with the schools selected to be sampled for the LEARN endline project evaluation. That is, we selected a subset of 23, 11, and 11 schools in Grand Bassa, River Gee, and Rivercess to be surveyed for the LEARN II baseline project evaluation. In Grand Gedeh, out of the 12 schools for the LEARN II baseline project evaluation, six schools overlapped with the schools surveyed for the LEARN endline project evaluation. The remaining six LEARN II baseline project evaluation schools in Grand Gedeh overlapped with the comparison schools surveyed for the LEARN endline impact evaluation.

Building on the approach used for LEARN, the baseline qualitative research for LEARN II focused on the new and expanded activities that will be part of LEARN II. These activities include: strengthening provision of school meals via activities such as cassava processing and supporting women's cooperatives and farming cooperatives, establishing and using new school gardens for feeding, partnering with Kawadah Farms to enhance crop production both to supplement school meals and to create income generating activities for school community members in River Gee and Grand Gedeh, establishing village savings and loan associations (VSLAs) to help parents save for education and other expenses, deworming activities, and teacher training on "positive school culture". The LEARN II baseline evaluation occurred alongside the LEARN endline evaluation, and the sample of respondents was the same for the LEARN II baseline and LEARN endline. As such, the data collected was analyzed for both the endline and baseline, though the specific analysis for LEARN II baseline focused on lessons learned from LEARN that could be utilized in improving implementation for LEARN II.

The qualitative research took place, in three intervention schools in each of the four counties, for a total of 111 Focus Group Discussions (FGDs) or Key Informant Interviews (KIIs) across 12 schools. The purposive sample of communities aimed to capture perspectives from varied schools and communities, based on locale (rural, peri-urban, urban) and intervention package (base package, combined package). Within communities, students were randomly selected from rosters of those in grades 4, 5, or 6. Groups were split between girls and boys, but grade levels were mixed. If students who were selected were not available at the time of research, students from the oversample list were contacted. Caregivers were selected largely by convenience, finding those who were available during the day of research, though efforts were made to include at least two who were members of the Parent–Teacher Association (PTA).

All planned community-level interviews were accomplished except for four (of twelve) District Education Officers (DEO) who were not able to be reached despite multiple attempts in person and by mobile, and one community mobilizer who was away at a workshop at the time of research and was unavailable for interview by phone. Literacy Champions from LEARN were only expected in the communities with Literacy Boost (all River Gee communities and one Grand Gedeh combined package community). Completed interviews are summarized in Exhibit 6.

Exhibit 6. Number of Respondents for the Project Evaluation, by County

Interview Type	Grand Bassa	Grand Gedeh	River Gee	Rivercess	Total
Girl Student FGD	3	3	3	3	12
Boy Student FGD	3	3	3	3	12
Caregiver FGD	3	3	3	3	12
Teachers FGD	3	3	3	3	12
Principals KII	3	3	3	3	12
Community Mobilizer KII	3	3	3	2	11
Cook KII	3	3	3	3	12
Storekeeper KII	3	3	3	3	12
Literacy Champion KII 1	–	1	3	–	4
Literacy Champion KII 2	–	1	3	–	4
DEO KII	1	1	3	3	8
Total Community Level	25	27	33	26	111

There were also six national-level interviews (with relevant government, SC, and MC staff) conducted by the lead qualitative researcher via mobile or Skype.

Data Sources

Because data collection for LEARN II baseline was conducted simultaneously with data collection for the endline evaluation of LEARN, the baseline data collection tools were largely identical to

those for LEARN endline with additional modules added to capture information relevant for LEARN II. This section provides information on each data source.

For the LEARN II baseline evaluation, AIR collected and analyzed two types of data: (a) quantitative data, including student surveys, Literacy Boost Reading Assessment (LBRA), and KAP surveys with teachers and school meal providers; and (b) qualitative data that included key informant interview (KIIs) and focus group discussions (FGDs). In addition, we conducted a school assessment checklist that captured student attendance, health and sanitation features, and food storage and preparation methods.

Student Survey

AIR administered a student survey to Grade 2 and 6 students, which was previously developed and cognitively tested during the LEARN evaluations. The student survey gathered information on seven key topics including background information, hygiene and health knowledge and practices, nutrition knowledge, school-related gender-based violence (SRGBV), school and home environment, disability, food intake recall, diarrhea disease recall, and cultural appropriateness of school meals (Exhibit 7). The topics in italics reflect survey topics that are part of LEARN II baseline specifically; those in plain text are relevant to both LEARN II baseline and LEARN endline.

Exhibit 7. Overview of Student Survey Key Topics

Topics	Types of Questions
Background information	• Demographic information (e.g., students' age, main language spoken at home, etc.)
Hygiene and health knowledge and practices	• Handwashing knowledge (when one should wash hands), including the implication of COVID-19 trainings on their knowledge • Handwashing practices (when students wash their hands), including the implication of – COVID-19 trainings on their practices
Nutrition knowledge	• Knowledge of a healthy diet (e.g., if a student knows what a balanced diet is)
SRGBV	• Knowledge of SRGBV behaviors (sexual and physical violence and harassment; bullying; corporal punishment) • Awareness on the existence of the code of conduct in school and its revised version • Knowledge of / propensity to use / confidence in reporting mechanisms to report instances of SRGBV • Perceived gender norms (Grade 6 only)
School environment	• Attitudes toward their school • Teacher attendance
Home environment	• Home literacy activities (e.g., if anyone reads to students or tell them a story) • Parent's engagement in home learning • Reading culture at home

Topics	Types of Questions
Disability	• Difficulty in seeing, hearing, talking, walking, etc.
Food intake recall	• *Information about student's meals for the day including frequency and content of the meals.*
Diarrhea disease recall	• *Students' experience with receiving care after experiencing bouts of diarrhea*
Cultural appropriateness of school meals	• *Students' satisfaction with the meals they are served in school*

Student Literacy Boost Reading Assessment (LBRA)

In addition to the student survey, Grade 2 students in both the impact and project evaluation samples also took the LBRA. AIR developed the LBRA using Liberia second grade textbooks, calibrated it to the Liberian context through the Liberia MOE, and field-tested it on Grade 2 students in non-project schools during the LEARN baseline. To generate an appropriate comparison with the endline for LEARN and the baseline for LEARN II, AIR used the same LBRA. Using the same instrument between impact and project evaluation samples also helps maximize comparability in literacy outcomes and findings between the two evaluations.

Since the official language of instruction in Liberia is English, all LBRA subtests were in English. The LBRA version used for this evaluation consisted of four subtests:

1. **Letter knowledge:** the number of letter sounds that a student could identify, out of 26.
2. **Word recognition:** the number of words, out of the 20 most-used words from leveled textbooks that a student could read correctly. Recognition is defined as the student's ability to read the word.
3. **Decoding (invented word recognition):** the number of invented words, out of 20, that a student could decode correctly.
4. **Reading comprehension**
    a. **Reading aloud:** Using a short story of 155 words, we assessed:
        i. Fluency: the number of words read correctly in a minute.
        ii. Accuracy: the percentage of words read correctly (untimed).
    b. **Comprehension:** Ten comprehension questions related to the short story were asked orally in one of three conditions:
        i. Reading comprehension, which applied to children who could read at least five words in the story correctly in 30 seconds. These children were identified as "readers."

ii. Listening comprehension, which applied to children who could not read five words in the story correctly in 30 seconds. The enumerator read the story aloud to these children, identified as "non-readers."

iii. Listening comprehension for "readers," which applied to students who read at least five words correctly but gave up before attempting a significant portion of the passage or could not finish the passage. The enumerator read the rest of the story to them.

Teacher and School Meal Provider KAP Surveys

We capture the health and nutrition KAP of teachers and school meal providers (SMPs) through surveys administered at the schools. The teacher tool efficiently yet comprehensively captures all relevant information related to their knowledge and attitudes related to children's health and nutrition. It also includes a module on SRGBV-related knowledge and attitudes of teachers. Similarly, the SMP KAP measures their knowledge and attitudes related to children's health and nutrition and captures their KAP regarding safe food preparation and storage.

Key Informant Interviews and Focus Group Discussions (KIIs and FGDs)

For the qualitative component, the same sample of students, caregivers, teachers, principals, Literacy Champions, cooks, storekeepers, community mobilizers, DEOs, and SC staff answered questions that informed both the LEARN II baseline and the LEARN endline.[6] Some of the questions on their interview protocols applied only to LEARN endline, some questions applied only to LEARN II baseline, and others applied to both. For questions that applied to both baseline and endline, for baseline, the data was analyzed with a baseline-specific lens. For example, information about how LEARN has performed to date was treated as lessons learned to consider in further refining and then rolling out LEARN II activities. The LEARN II baseline research also examined new activities under LEARN II including the potential for strengthening provision of school meals via activities such as cassava processing and supporting women's farming cooperatives, establishing, expanding, and using new school gardens for feeding and income generating activities in River Gee and Grand Gedeh, deworming activities, and teacher training on "positive school culture."

All lines of inquiry that were pursued in FGDs and KIIs (again, the same sample was used for LEARN II baseline and LEARN endline) are summarized in Exhibit 8 (those in italics reflect lines of inquiry that are part of LEARN II baseline specifically; those in plain text are relevant to both LEARN II baseline and LEARN endline). KII protocols were designed for 30- to 45-minute

[6] The research team planned to also speak to baseline-specific informants namely, farming cooperatives and representatives from Kawadah Farms working in Grand Gedeh and River Gee. However, the team found, and SC field staff confirmed, that there were no farming cooperatives in existence in the targeted communities, and also that Kawadah Farms had not yet been expanded into the two counties.

conversations and FGD protocols lasted approximately 90 minutes. Though discussion guides were written in Standard English, the qualitative team used their experience interpreting questions written in Standard English in Liberian English (or local languages, as needed) during interviews, or to otherwise rephrase the wording of the questions to help the participants understand the question being asked.

Exhibit 8. Overview of Topics Covered in Qualitative Protocols

Topics	Types of Questions (asked to groups/individuals)	
Background information	• Background / role in project	All
Access to and value of education	• Access to education in the community; barriers to access and full engagement (who is excluded) • Gender-equity of access • *How confident parents feel in supporting their children's learning and wellbeing*	Caregivers FGD Teachers FGD Principals KII
School feeding/nutrition	• Present organization and activities of local farming cooperatives; potential for additional activities and limitations around cassava production to supply schools • *Existence of and quality of kitchen, gardens* • *Perceived effectiveness of feeding program; successes and areas for improvement* • Status of training of MOE school feeding division officials • *Knowledge of and agreement to ground rules on gardening activities; challenges to date*	Students FGD Caregivers FGD Teachers FGD Principals KII Community Mobilizers KII Cooks KII Storekeepers KII DEO KII Farming Cooperative KII Kawadah Farm Staff KII SC/MC Project Staff KII National-level Ministry of Agriculture (as suggested by SC) KII
School health clubs/water, sanitation, and hygiene (WASH)/nutrition	• *Perceived effectiveness of SHN champions and school health clubs on improving nutrition and WASH practices in schools* • *WASH status in schools* • Progress on development of School Health Clubs and manuals • *Progress on SC collaboration with community education officers (CEOs) and district education officers (DEOs) to provide training to the SHN champions* • *Perceived effectiveness of community mobilizers*	Students FGD Caregivers FGD Teachers FGD Principals KII Community Mobilizers KII DEO KIIs National-level Ministry of Health (as suggested by SC) KII
School literacy environment	• *How much students are exposed to literacy activities within the school environment (e.g., presence of library, teacher reading exercises)*	Students FGD Teachers FGD Principals KII

Topics	Types of Questions (asked to groups/individuals)	
	• *Resources and encouragement provided to students to read outside of school (e.g., can take home library books, working with parents/PTAs to encourage reading at home)*	Literacy Champions KII Community Mobilizers KII National-level Ministry of Education (as suggested by SC) KII
Home/community literacy environment /reading clubs	• *How much students are exposed to literacy activities within the home (e.g., presence of books or other reading materials)* • *Whether literacy is valued in the home (e.g., if reading and doing homework is encouraged)* • *Existence of / quality of community-based reading activities and resources (e.g., book banks, reading clubs, reading festivals (not yet started)), ease of accessibility to materials within* • *Difference between in school / out of school uptake in Summer Reading Clubs* • *Adequacy of training received to be Literacy Champion*	Students FGD Caregivers FGD Teachers FGD Principals KII Literacy Champions KII Community Mobilizers KII
SRGBV	• *Information around the extent to which students, parents, and teachers know about whether they are protected in the school by a) a code of conduct that restricts SRGBV behaviors and b) an effective referral and reporting mechanisms to report such behaviors if they do occur.* • *Positive discipline strategies (as alternative to corporal punishment) in place, and their effectiveness or limitations* • *Teacher and principal understanding of and perspective of aspects related to "positive school culture"* • *Perceived prevalence of SRGBV; existence of/effectiveness of reporting mechanisms for students/teachers to use to report violations of school code of conduct*	Students FGD Caregivers FGD Teachers FGD Principals KII Community Mobilizers KII DEO KIIs National-level Ministry of Education (as suggested by SC) KII
Parent–Teacher Associations	• *Existence and activities of PTAs; specific successes and specific areas for improvement to enhance collaboration and effectiveness.* • *Degree to which parents in PTAs collaborate with teachers/principals* • *Effectiveness of parent engagement messages on literacy*	Caregivers FGD Teachers FGD Principals KII Community Mobilizers KII

School Observation Checklist

AIR conducted a school assessment checklist at previous rounds data collection for LEARN. The same tool was used as the school assessment checklist for the baseline for LEARN II. At baseline for the LEARN II evaluation, we included items in the checklist to collect observational data on safe food preparation, storage practices, and latrine cleanliness. In addition, we added a couple more items to better capture dropout rates for students and teachers. These data can be useful

to triangulate self-reported responses from the interviews, as well as to identify gaps in resources to modify for LEARN II.

Data Analysis

We started our data analysis with an exhaustive assessment of quality for both the quantitative and qualitative data before proceeding with data cleaning and analysis. These quality checks included checking for duplicate responses, missing values, outlier values, survey skip patterns, and other logic checks.

Impact Evaluation Analysis

After data collection, AIR performed initial descriptive analyses with the data. At baseline, we used t-tests to check for balance between the two treatment arms to ensure that the treatment and comparison groups are statistically similar in terms of outcomes and background characteristics. The baseline equivalency analysis indicates the extent to which sampling and propensity score matching led to the creation of statistically equivalent groups.

Performance Evaluation Analysis

For the performance evaluation, we constructed the indicators required by USDA with the survey data. To present an initial snapshot of the findings at baseline, we analyzed the cleaned data descriptively by constructing means and percentages and presented findings in tables, bar charts, histograms, and other visualizations. When applicable, we disaggregated findings by county, gender, grade, and/or main language spoken at home and report any statistically significant or notable findings.

The qualitative data complemented the quantitative data by contextualizing the findings. Qualitative research does not allow for empirically generalizable results. However, it offered critical perspectives to enrich the quantitative data and provided context about the circumstances that might have influenced quantitative findings. The qualitative data from project participants and stakeholders also provided additional information about activities that was not obtained from quantitative surveys, in addition to the perspectives of stakeholders who were not reached with the quantitative component.

The qualitative evaluation team relied on detailed notes and summary forms from the KIIs and FGDs to analyze the data, synthesize the findings, and identify major themes to address key evaluation questions. A Google Sheet–based qualitative database was built for the data collection team to enter their notes in English; this was exported into Excel at the end of data collection. As part of qualitative analysis, codes were established to help assess the relative response types provided across all the notes, paying attention to where (a) the qualitative data supported the quantitative data; (b) there were outliers; and (c) nuance was not captured by the quantitative

tools. Also at this phase, quotations demonstrating key topics were pulled for use in this evaluation report.

Section 3. Fieldwork

This section provides information on human subject protection, enumerator training, instrument field testing, fieldwork, and challenges faced during data collection.

Human Subjects Protection

Prior to collecting data for the baseline evaluation for LEARN II, we received approval for our research protocols and instruments from AIR's Institutional Review Board (IRB), the University of Liberia Pacific Institute for Research and Evaluation (PIRE), and SC's Ethics Review Committee, ensuring that the evaluation (from baseline to endline) complies with local and international rules and procedures and meets the standards for the ethical research of children. This included protocols for ensuring that adequate health and safety measures related to COVID-19 are followed (e.g., distancing and masking during interviews).

During the enumerator training, AIR briefed enumerators on procedures for interviewing respondents, protecting respondents' privacy and confidentiality, following COVID-19 safety protocols during the survey,[7] and securing the data. AIR also invited the SC Liberia team to provide enumerators with a refresher training on safeguarding children at school.

We obtained parental consent to collect survey data from students and conduct focus groups with students. Given the low literacy levels amongst parents, SC facilitated an awareness-building session for PTAs, which included parents of children in the sampled schools. SC explained in detail the content of the consent forms at these meetings. At the end of these sessions, parents were invited to sign the consent forms, and AIR surveyed only those children whose parents had completed the consent forms. Additionally, AIR asked for students' assent before collecting data to assure children that participation was voluntary and that they could terminate the survey at any point.

For all KIIs and FGDs, AIR received consent from adult participants. AIR also assured respondents that their participation was voluntary with referral mechanisms in place and that they could terminate the interview at any time. If respondents did not consent to recordings, we took detailed notes of the discussion instead.

[7] AIR shared a copy of COVID-19 safety protocol with each of the enumerators. Also, enumerators were provided written agreement that they accept the risks and were comfortable moving forward with the mitigation measures we had in place.

Our qualitative and quantitative field team received training on procedures for contacting respondents, protecting respondent privacy and confidentiality, child safeguarding, and securing data, thus ensuring high compliance with ethical guidelines to conduct research. Furthermore, after data collection, the evaluation team protected the privacy and confidentiality of respondents by storing the data on secure servers and separating personally identifiable information from the survey data. The data will be archived on the server at the end of the contract.

Training and Pilot Testing

AIR partnered with the Center for Action Research and Training (CART) for data collection. CART has worked with us to collect data for LEARN evaluations since the LEARN baseline in 2018. CART hired 33 enumerators—many of whom worked at the LEARN midline evaluation. AIR held an enumerator training from February 22 to 25, 2022. The AIR team led the in-person training of enumerators remotely[8] in collaboration with the CART team leaders and fieldwork managers. Prior to the training, AIR reviewed all training tasks with CART's director and fieldwork managers to ensure that, in case of connectivity issues, she would be able to continue leading the training.

The training consisted of 3 days of theory-based classroom training and one day of pilot testing in a nearby school. During classroom training, enumerators learned: (a) the purpose of each survey question; (b) how to ask questions directed to vulnerable respondents (in this case, children under 18); (c) how to assess students' literacy; (d) how to use tablets to implement the in-person surveys without an internet connection; and (e) how to survey respondents following COVID-19 safety protocols. Pilot testing provided an opportunity for enumerators to practice with real respondents. Afterward, enumerators regrouped with the AIR team remotely to debrief and discuss any issues they encountered.

Prior to data collection, the AIR qualitative lead held multiple remote training and discussion sessions with CART's four qualitative researchers. CART's researchers field-tested selected protocols such as FGDs with teachers and students, based on the availability of respondents in the pilot school, and regrouped remotely with the AIR team to debrief afterward. After pilot testing, the team met to discuss challenges such as comprehension (questions that confused respondents) and duration (insufficient time to complete all questions) and made necessary adjustments to the tools. The meetings also allowed the team to receive follow up training and opportunities to practice facilitation and notetaking to strengthen their interviewing and summarizing skills.

[8] Due to COVID-19, AIR could not undertake in-person training for the baseline evaluation.

Data Collection

Due to the new requirement of collecting parental consent (in prior evaluations consent was obtained from the school), fieldwork was delayed by two weeks while SC obtained consent. The quantitative team conducted fieldwork from March 16 to April 15, 2022. CART organized enumerators into two teams. Each team then split into groups of 2–4 who traveled to each school. One team focused on Grand Bassa, which had the largest sample, while the other team visited Grand Gedeh, Rivercess, and River Gee. The fieldwork managers, in collaboration with the MOE and school district offices, coordinated their school visits with school principals. All enumerators regrouped with their supervisors several times during the data collection to debrief, submit daily paper-based data collection logs, submit electronic surveys, and review and plan for the next days of data collection. The CART director and fieldwork managers were responsible for updating AIR's project director on challenges and decisions. The AIR data specialist regularly downloaded the data through a secure server to run quality assurance checks and flagged the findings back to the team in the field to make additional decisions and adjustments as needed.

For the qualitative data collection, two teams of two CART researchers each (three women and one man) collected data in the targeted schools. During the interviews and focus groups, one person led the discussion, while the other took notes. The male researcher was not present in any of the girl student FGDs (the female researcher took her own notes while facilitating). The local qualitative team summarized the main points of each session using a structured summary "field form" with one discussion question per page that paralleled the structure of the focus group or interview protocol. The summary synthesized the major points and salient themes and included verbatim quotations that addressed the supplemental evaluation questions.

With the respondents' permission CART also recorded all KIIs and FGDs as a back-up for the qualitative team to fill in gaps in their notes, as needed, on the same day that data collection occurred. The finalized detailed notes were entered into a Google Sheets database, which was exported to Excel for the lead qualitative researcher's subsequent coding and analysis. For quality assurance, within 48 hours after the first school's KIIs and FGDs were completed, samples of notes pages and description of activities completed, and challenges encountered were sent to the lead qualitative researcher via WhatsApp. Feedback was provided to help to ensure high-quality and complete data. The notes and recordings from the KIIs and FGDs were not shared outside the evaluation team.

Throughout the fieldwork, all possible COVID-19 protocols were followed to ensure the safety of our team, project stakeholders, and beneficiaries. The field team wore masks and followed social distancing when administering the evaluation instruments. They also carried hand sanitizers and extra disposable masks for respondents to wear, if comfortable, when collecting data. AIR also

monitored COVID-19 developments and relevant government guidelines closer to the fieldwork and worked closely with SC to in case a new contingency plan was needed for the endline evaluation, which ended up not being necessary.

Fieldwork Challenges

The data collection team faced several challenges. First, collecting parental consent added a new step to the process which delayed data collection and reduced the number of available students to survey. While almost all parents consented, reaching those parents and then finding the students at schools proved difficult due to highly variable attendance. It was clear early on during fieldwork that many of the students whom we had consent to survey were not in attendance and many of the students who were at school, had not been reached with the consent forms. To mitigate this, CART began sending a small group of enumerators to the schools' towns ahead of time to seek out parents for their consent.

Another challenge was the low enrollment and attendance in schools. The CART team reported 13 schools where there was no enrollment of Grade 2 or 6 students at all. The team learned several reasons for low enrollment or attendance: (a) some students were dismissed for not paying tuition fees; (b) students were engaged in economic activities such as gold mining; (c) some schools have limited teaching staff, which discourages students from attending; (d) many of the schools closed for a semester break and after which many students failed to return to school. These school closures were another challenge the team faced. Many of the schools closed unexpectedly for a week, delaying the team's efforts.

To mitigate these challenges the team oversampled in any school that had extra students. Additionally, the team coordinated with the DEOs, principals, and SC field staff to assist with communication for the team's visits. Finally, CART sent small teams to revisit certain schools multiple times in an effort to reach the target sample. In one case, the team visited a school five times in hope of finding additional students but instead found that most of the students were working on their families' farms. In the end, the team was able to survey approximately 75% of the target sample.

One challenge with the qualitative data collection was that the team was not able to identify existing farming cooperatives or women's groups, with whom the team had planned to speak to learn more about some of their current activities and needs to provide SC with information that may contribute to the LEARN II partnership with Kawadah Farms. Local community members and SC community mobilizers helped the team to try to identify these, but it was ultimately confirmed that they did not exist in any of the sampled areas. This challenge was overcome by asking community members in depth questions about their own current farming activities; also, the lack

of these cooperatives was treated as a finding as it provided some verification of the need for the Kawadah Farms partnership.

Another challenge with qualitative data collection was around the difficulty in interviewing district education officers (DEOs) in four of the twelve communities, despite many efforts made to speak to them with assistance from SC field staff. Also, there was a relatively low response rate in requests for interviews with national and regional-level government staff, but the major entities (MOE and MOA), were well-represented so this was not considered to be a major limitation.

Section 4. Project Evaluation Baseline Findings

Project Evaluation Sample

To measure the pre-implementation status of the LEARN II schools, we followed the sampling strategy outlined in Section 2 to select 625 Grade 2 students and 382 Grade 6 students from 57 schools in the four counties where LEARN II is active. Additionally, we sampled 57 teachers and 55 SMPs in these schools.[9] Although we aimed to survey 10 students in each grade, we were only able to meet this target for Grade 2 students. We found that many schools had no Grade 6 students available at all. Some of the challenges that the data collection team faced are recounted in Section 3. Exhibit 9 disaggregates the sample sizes by county.

Exhibit 9. Sample Sizes for the Project Evaluation at Baseline, by County

County	Schools	Grade 2 students	Grade 6 students	Teachers	SMPs
Grand Bassa	23	249	132	23	21
Grand Gedeh	12	154	107	12	12
Rivercess	11	67	35	11	11
Rive Gee	11	155	108	11	11
Total	57	**625**	**382**	**57**	**55**

Source: Student survey, teacher survey, SMP survey. Authors' calculations; Note: Grand Gedeh baseline figure is the total sample size for Grand Gedeh in the project evaluation only. Additional schools and students were sampled in Grand Gedeh for the impact evaluation sample described in Section 5.

Student Characteristics

The student sample was balanced by gender, with small differences in each grade (Exhibit 10).

[9] Two schools had no SMPs available to survey.

Exhibit 10. Gender, by Grade

Source: Student survey. Authors' calculations. N = 625 in Grade 2 and N = 382 in Grade 6.

At baseline, the average student was 12 years old in Grade 2 and 16 years old in Grade 6, with the age ranges 7–22 and 10–25 years of age, respectively (Exhibit 11). According to World Bank data, Liberia has the second largest share of over-age primary school students in the world (47%), behind only South Sudan.[10] The high average ages and wide age ranges are likely the result of delayed education due to the Liberian Civil War and a 2001 government policy that eliminated school fees and required primary school enrollment.

Exhibit 11. Age Distribution, by Grade

Grade	Mean	Median	Range
Grade 2	12	12	7–22
Grade 6	16	16	10–25

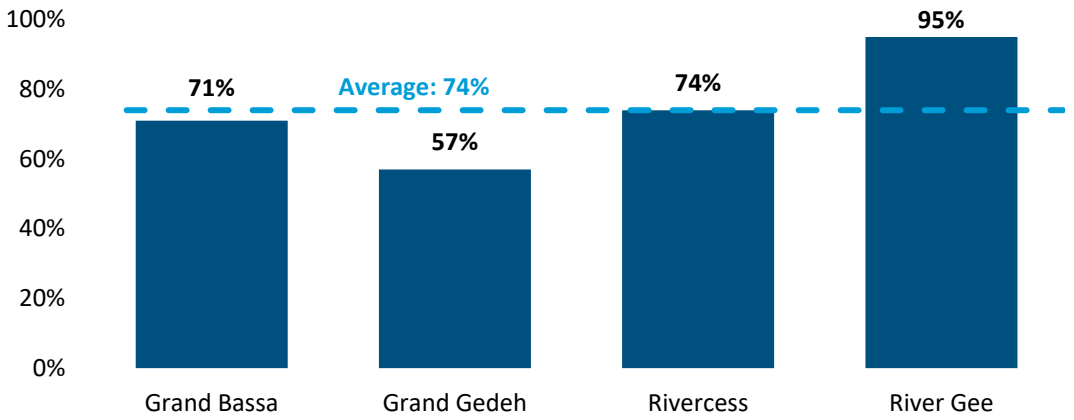
Source: Student survey. Authors' calculations. N = 1,007.

The average household size was 7.4 people, with no major differences by county or gender. Household sizes ranged from 2 to 18 household members; however, 19% of students reported a household size with over 10 people. Three quarters of students (76%) reported that their mother was their primary caregiver, whereas 16% reported their father held this role. This was consistent across counties except for Rivercess, where 88% of students reported their mother as their caregiver, with 5% naming their father. Girls (77%) were more likely to report their mothers as their caregivers than boys (70%), a difference that is significant at the 1% level. On the flip side, boys (20%) were significantly ($p < 0.01$) more likely to identify their fathers as their caregivers than were girls (13%).

[10] The World Bank, World Development Indicators (2020). *Over-age students, primary (% of enrollment)* [Data file]. https://data.worldbank.org/indicator/SE.PRM.OENR.ZS?end=2017&locations=LR&most_recent_value_desc=true&start=2006&view=map.

Overall, 74% of the students reported English as the language they speak most at home (Exhibit 12). There were large variations by county, ranging from 57% in Grand Gedeh to 95% in River Gee. The most common primary language after English was Bassa (11%), which was almost entirely reported by students in Grand Bassa and Rivercess. Additionally, 96% of students reported speaking multiple languages.

Exhibit 12. Proportion of Students for Whom English Is Their Main Language

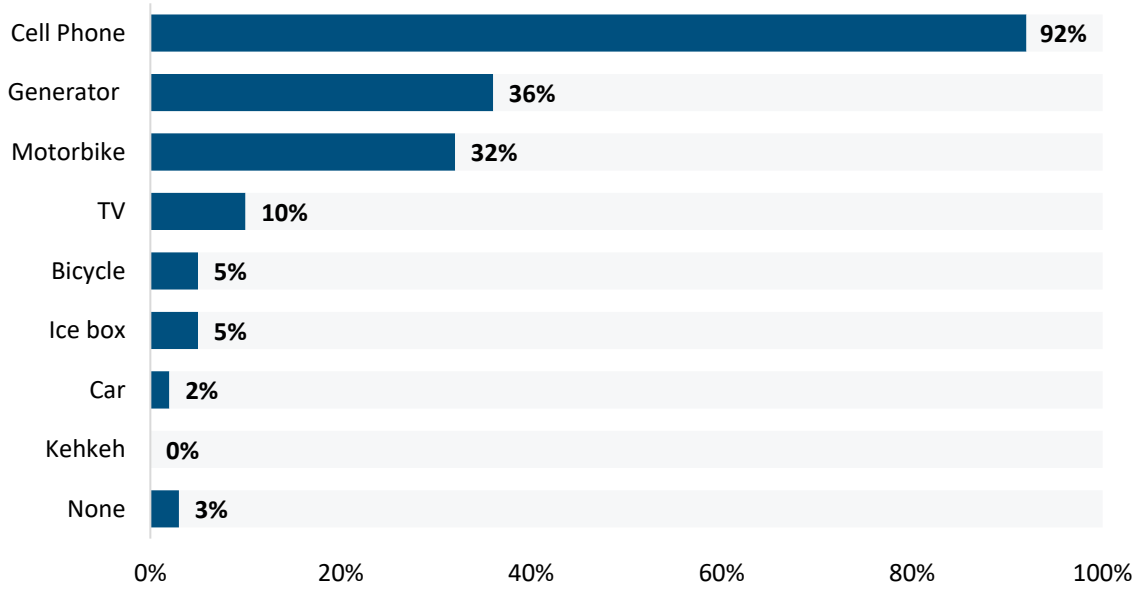


Source: Student survey. Authors' calculations. N = 1,007.

To gauge students' socioeconomic status, we asked if their household owned any of eight different assets (Exhibit 13). On average, students reported having two of eight assets—the most common being cell phones (92%), followed by generators (36%) and motorbikes (32%). There were some regional differences that hint at a lower socioeconomic status in River Gee and a higher one in Grand Gedeh compared to the other counties. For example, 49% of households in Rivercess and 48% in Grand Gedeh had generators, compared to just 27% in River Gee. Further, 46% of households in Grand Gedeh had motorbikes, while just 22% in River Gee did. In fact, River Gee was at or below the overall average for each of the eight assets, whereas Grand Gedeh was always at or above the average.

There were also some significant differences in socioeconomic status by students' main language. English speakers were less likely to own bicycles and motorbikes, by 5 and 7 percentage points, respectively, than non-English speakers. These differences were significant at the 1% and 5% levels, respectively.

Exhibit 13. Students' Socioeconomic Status



Source: Student survey. Authors' calculations. N = 1,007.

Teacher Characteristics

Teachers in our sample were predominantly male (91%). By county, Grand Gedeh had the largest concentration of female teachers (17%) in the sample, whereas Rivercess had none (Exhibit 14).

Exhibit 14. Teacher Respondents, by Gender and County

Source: Teacher survey. Authors' calculations. N = 57.

At baseline, the average teacher was 49 years old and had 13 years of experience as a teacher and 21 years of experience living in the community in which they teach (Exhibit 15). A quarter of the sampled teachers were relatively new to the profession, with 5 or fewer years of experience.

Exhibit 15. Teacher Age Distribution and Years of Experience

Teacher	Mean	Median	Range
Age (years)	49	50	21–75
Years working as a teacher	13	12	1–35
Years living in the community	21	18	0–75

Source: Teacher survey. Authors' calculations. N = 57.

School Meal Provider Characteristics

Like the teacher sample, the SMP sample was not balanced by gender, but unlike the teacher sample, nearly all SMPs were female (96%) (Exhibit 16).

Exhibit 16. School Meal Provider Respondents, by Gender and County

Source: School meal preparer survey. Authors' calculations. N = 55.

On average, SMPs were slightly younger than teachers and had fewer years of experience, but they had lived longer in the community in which they serve as an SMP than had teachers (Exhibit 17). In fact, most surveyed SMPs were relatively new to their position, with a majority reporting 5 years of experience or less working as a food preparer (70%). On average, SMPs in Grand Gedeh were more experienced (8 years) than their counterparts in Rivercess (6 years), River Gee (6 years), and Grand Bassa (5 years).

Exhibit 17. SMP Age Distribution and Years of Experience

SMP	Mean	Median	Range
Age (years)	45	43	28–77
Years working as an SMP	6	4	1–23
Years living in the community	24	18	1–77

Source: School meal preparer survey. Authors' calculations. N = 55.

Project Evaluation Qualitative Sample and Characteristics

We interviewed 350 community-level stakeholders (n=166 female and n=184 male) from the 12 intervention sites. Boy (n=80) and girl (n=78) students were in Grades 4, 5, or 6 and ranged in age from 11 to 20, with an average age of 16 and a median age of 16. The 50 female and 22 male parents/caregivers ranged in age from 22 to 89, with a median age of 42. Of those, just over half (n=38) had no education; the remainder had elementary (n=10), junior high (n=14), or high school education (n=10). Teachers were mostly male (n=45 males and n=12 females); all but one principal was male. Most teachers had college education (50% of female teachers and 65% of male teachers, noting the small sample size of female teachers(n=12); most of the remainder had high school education; just one, who was a female volunteer teacher, had only junior high education. Except for one principal with only high school education, all of the principals had college education (Exhibit 18).

Exhibit 18. Respondents' Educational Attainment

Education Level	Students (n=158)	Teachers (n=58)	Caregivers (n=72)	Principals (n=12)	Literacy Champions (n=8)	Cooks (n=12)	Storekeepers (n=12)	DEOs (n=8)
College / Teaching Certif.	0%	62%	0%	83%	88%	0%	0%	100%
High School	0%	36%	14%	17%	13%	0%	42%	0%
Jr. High	0%	2%	19%	0%	0%	0%	0%	0%
Primary	100%	0%	14%	0%	0%	0%	17%	0%
None	0%	0%	53%	0%	0%	100%	42%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: 2022 Baseline qualitative interviews in all 12 intervention sites for a total of 340 stakeholders at school and community levels (excludes 10 SC staff community mobilizers for whom education data was not collected). Authors' calculations.

To learn more about the LEARN II context, including perceived successes and challenges from LEARN implementation, plans for LEARN II, and insights about preliminary findings from the LEARN endline and LEARN II baseline, we also held key informant interviews via phone or Skype in April and May 2022 with:

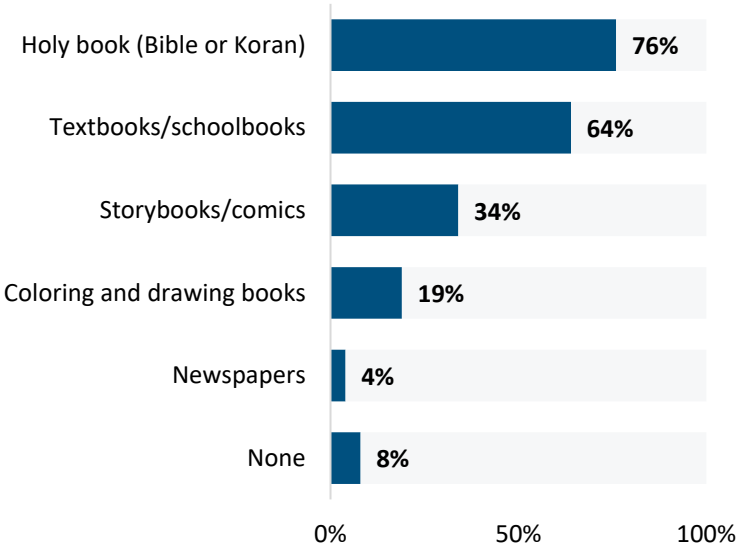
- Three senior staff from SC Liberia and one from MC Liberia;

- Three national staff from the Government of Liberia (MOA School Garden Division [n=1] and MOE School Feeding Unit [n=2]);
- One MOE County Education Officer (Grand Gedeh).

Student Reading-Related Outcomes

This section describes the status of Grade 2 students in LEARN II schools in terms of their responses to survey questions about the literacy environment at school and at home and their ability to read with comprehension. The survey questions focused on the availability of reading materials in and out of school, students' home literacy environment, their attitudes toward schooling, the presence of teachers in schools, and students' reading outcomes. In this section, we examine these outcomes by county and gender, noting any substantial differences. Interpretation of these findings should consider the fact that the LEARN II schools were previously exposed to the LEARN interventions, including literacy-focused programming in River Gee and some schools in Grand Gedeh. The LEARN II intervention expands the literacy programming to Grand Bassa, Rivercess, and the remaining schools in Grand Gedeh while excluding the schools in Grand Gedeh and River Gee that were exposed during LEARN.

Exhibit 19. Availability of Reading Materials at Home



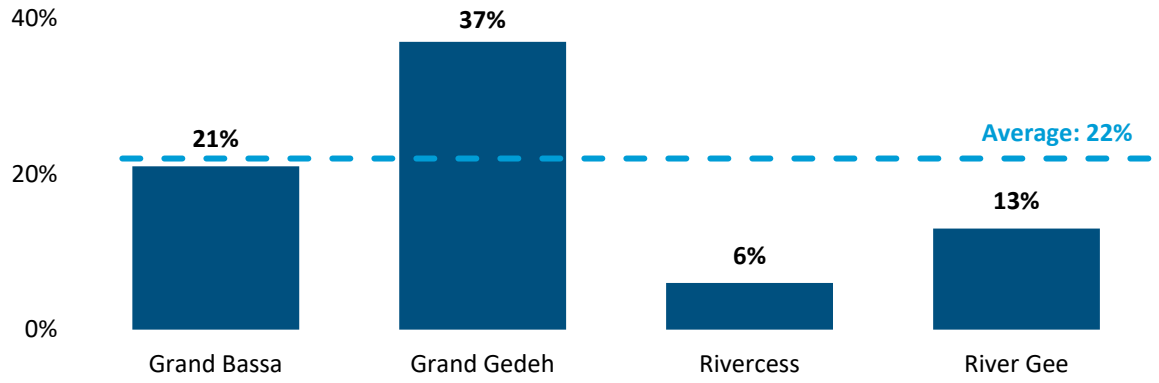
Source: Student survey. Authors' calculations. N = 1,007.

Reading Materials Availability

Exhibit 19 shows the different types of reading materials that students reported having in their homes. Overall, students lacked age-appropriate, non-schoolbook reading materials at home, with just 34% having access to storybooks or comic books. Most students reported having holy books or schoolbooks in their homes. There were some county differences (see Exhibit B1 in Appendix B for details). Students in Rivercess were more likely to report having a holy book (87%), while students in River Gee were more likely to have schoolbooks (78%). Finally, students in Grand Bassa and Grand Gedeh were much more likely (42% and 38%, respectively) to have storybooks compared to students in Rivercess and River Gee (24% and 21%, respectively). There was also one significant difference by gender. Boys (69%) were more likely to have schoolbooks compared to girls (59%), a difference

significant at the 1% level. Additionally, students who reported English as their main language were less likely to have storybooks (31% vs. 41%), coloring books (17% vs. 22%), or holy books (74% vs. 82%) in their homes. The gaps in storybook and holy book ownership represent significant differences at the 1% level, while the difference in coloring book ownership was significant at the 10% level. As shown in Exhibit 20, an average of 22% of students reported reading books other than textbooks outside of school. Again, the percentage varied widely by county, ranging from 6% in Rivercess to 37% in Grand Gedeh.

Exhibit 20. Proportion of Students Who Read Books Other Than Textbooks Outside of School, by County

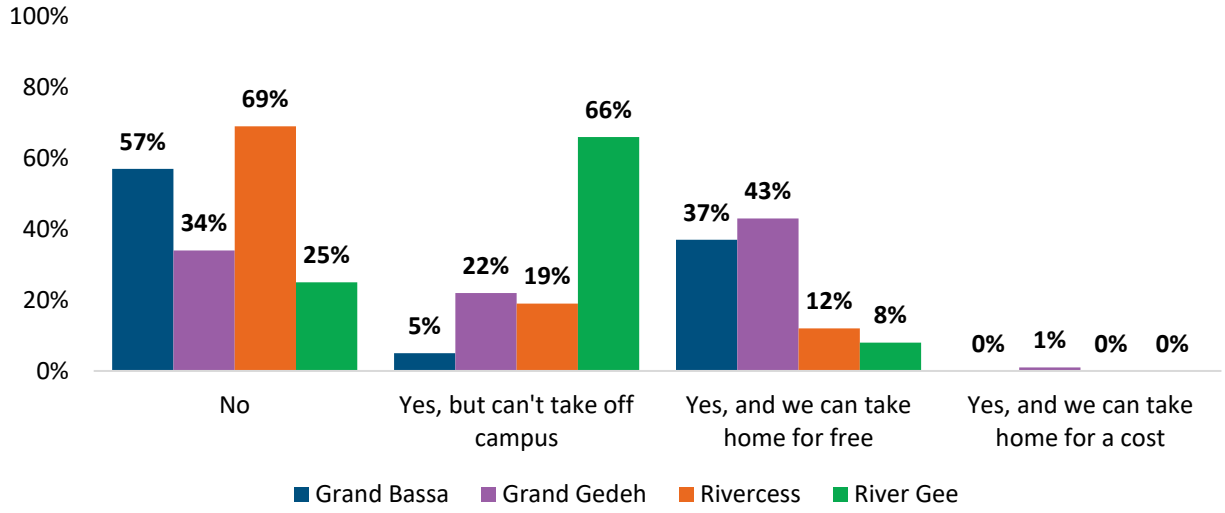


Source: Student survey. Authors' calculations. N = 248 in Grand Bassa, 154 in Grand Gedeh, 67 in Rivercess, and 154 in River Gee.

The data collection team also asked students about the availability of books at school and if they were able to take them home to read. Overall, 55% of students reported that their schools had books available for them to read, but just 29% said that they were allowed to take them home. Exhibit 21 shows the large variation in responses between counties. In Rivercess, 69% of students reported that their school did not have non-textbooks, and just 12% said that their school had books that could be borrowed. On the other hand, 43% of schools in Grand Gedeh had books that could be taken home. In River Gee, most schools had non-textbooks available (74%), but of those schools, only 8% said they could be taken home.[11] The gap between Grand Gedeh/River Gee and Grand Bassa/Rivercess could be related to the formers' exposure to the literacy intervention during LEARN.

[11] These differences may be explained by the fact that some Grand Gedeh schools and all River Gee schools received the Literacy Boost intervention, which included the provision of books.

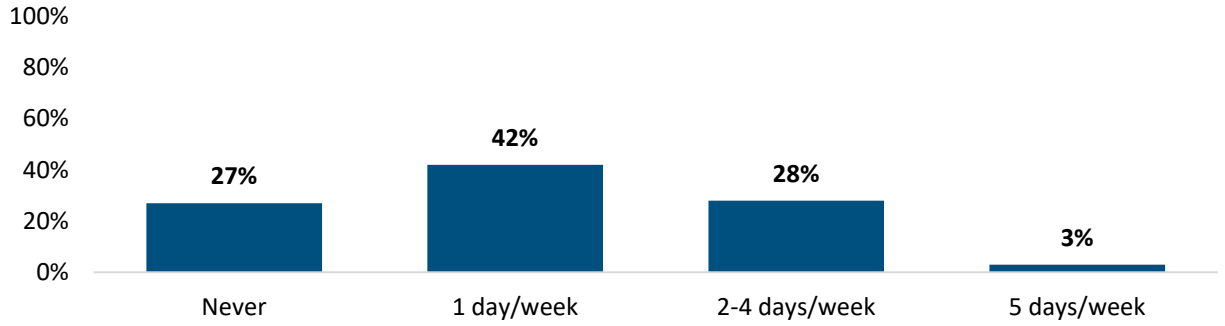
Exhibit 21. Access to Non-Textbook Reading Materials in Schools, by County



Source: Student survey. Authors' calculations. N = 247 in Grand Bassa, 152 in Grand Gedeh, 67 in Rivercess, and 154 in River Gee.

Of the students who said they could bring books home, 73% reported doing so at least once per week (Exhibit 22). There were some large county differences (see Exhibit B2 in Appendix B for details), although these differences should be interpreted with caution due to the small sample size within each county. There were no significant differences by gender. In general, we found that students in Grand Bassa and Grand Gedeh were more likely to say they did not borrow books at all than students in Rivercess and River Gee.

Exhibit 22. Frequency With Which Students Borrowed Non-Textbook Reading Materials to Take Home



Source: Student survey. Authors' calculations. N = 181. Note: This question was only asked of students who reported taking home a non-textbook reading material.

The qualitative data tell a similar story: Students were eager to read but lacked resources. At home, they reported reading whatever resources to which they had access, which—in nearly all cases—were not storybooks but rather their own notes taken during school, textbooks, or

religious texts. Few students mentioned having storybooks at home that their caregivers had purchased. All communities mentioned the need for more learning materials, especially books. In two of the four Literacy Boost communities, Literacy Champions reported having books that they were able to lend to some students to take home but said there were too few books to loan to all who wanted them. In the other two Literacy Boost communities, the Literacy Champions reported having no books to lend. Also, in the Literacy Boost communities, the books were said to be only good for Grade 2 and under, limiting any benefit for older readers. One older student in the Grand Gedeh Literacy Boost community said that students had to buy reading books from the school.

In response, and utilizing training they received from SC for LEARN, Literacy Champions in one Literacy Boost community in Grand Gedeh attempted to overcome this challenge by making their own materials. They also taught community members how to make their own reading materials. For example, one Literacy Champion said:

"We developed materials [to teach the students how] to make letters. We have also developed toys to help them. I have trained them how to read well."

—Literacy Champion, Grand Gedeh

This Literacy Champion believed that such materials helped students to read fluently. The other Literacy Champion in this community said:

"I developed some items [to] teach the children how to fix their own books….I was taught about some local materials like fixing flash cards, and how to teach it to the children."

—Literacy Champion, Grand Gedeh

In the LEARN communities that did not receive the Literacy Boost intervention, students reported not having free access to books other than textbooks, except in two cases where non-LEARN projects provided them.[12] In one of those communities, students reported that the school worried books would not be returned:

[12] In one of the qualitative schools in Rivercess, students said they had access to books that were provided to them by another intervention (Bridge Academy). In another in Grand Bassa, students said they accessed books given to them by Risen Academy.

"We have books in the office but they [won't] give it to us."

—Girl student, Grand Bassa

In contrast to the quantitative data, the qualitative data suggested that paying for books might be relatively common. In three communities across three counties, there were reports of students paying teachers for books. As one student said:

"I get my books from people that are selling it, my teacher collects my money to buy my books. I pay 150 [Liberia Dollars] to him."

—Boy student, Grand Bassa

There were reports of students paying for photocopies of books:

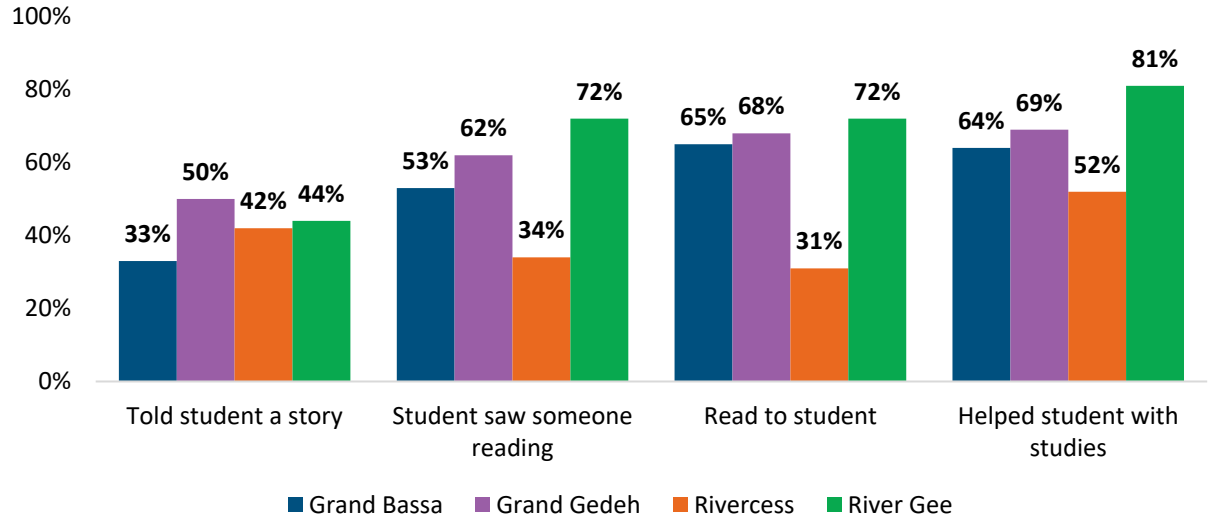
"The principal can photocopy the reading book and we can buy it to go read. We can pay 20 [Liberian Dollars]. The school doesn't have reading books."

—Girl student, Rivercess

Home Literacy Environment

We asked students about the literacy support they received in their homes, as research has shown connections between the home literacy environment and reading outcomes (Kim, 2009; Dowd, Pisani & Borisava, 2016). Exhibit 23 shows different literacy activities that the students were exposed to at home, by county. Almost across the board, River Gee had the highest engagement with literacy activities, while Rivercess had the lowest. Again, the relatively higher rates in River Gee and Grand Gedeh could be explained by their exposure to the literacy interventions during LEARN. Disaggregating these questions by the main language spoken at home, we find that students whose main language is English (38%) were less likely to have reported that someone in their family told them a story than someone who primarily speaks a different language (49%), a difference significant at the 5% level. We also asked students if they felt supported by their families, and 99% agreed or strongly agreed that they did.

Exhibit 23. Household Literacy Activities in the Past Week, by County



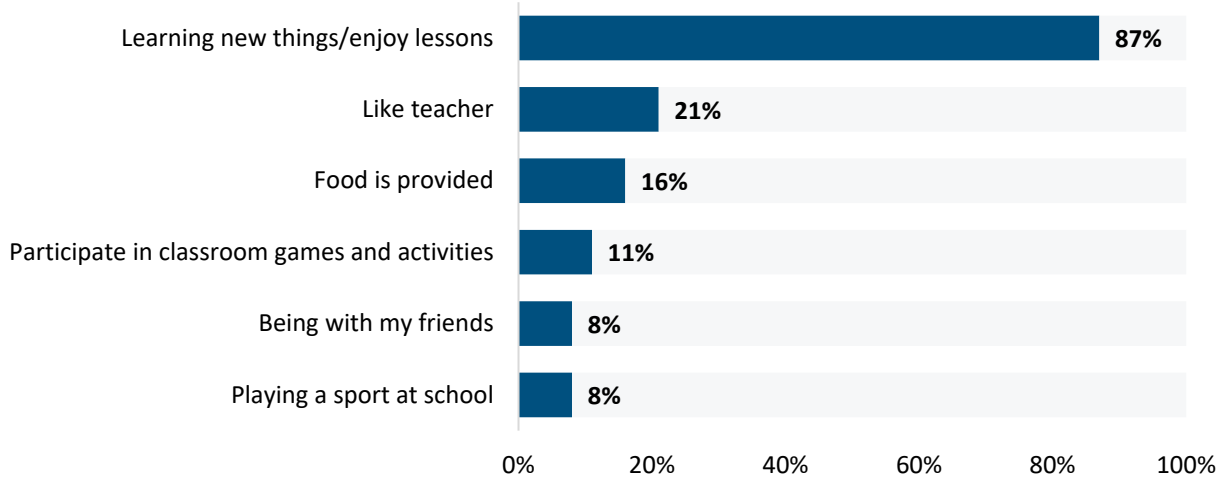
Source: Student survey. Authors' calculations. N = 249 in Grand Bassa, 154 in Grand Gedeh, 67 in Rivercess, and 154 in River Gee.

According to qualitative data, parent engagement was common but also some students reported needing to seek help from older siblings or friends. Though students felt generally well-supported, they also said that additional support from parents or others such as "study class teachers' (e.g., tutors), would be helpful.

Student Attitudes Toward Schooling

To assess students' attitudes toward school, we asked Grade 2 students what they liked and disliked about school. Most students listed "learning new things" as something they enjoy. Girls said they enjoyed learning new things significantly more than boys (90% and 85%, respectively), a difference significant at the 5% level. Girls (9%) were significantly less likely to enjoy classroom games and activities than boys (14%), a difference significant at the 10% level. We also asked students specifically if they enjoyed reading, and the vast majority (97%) said they agreed or strongly agreed that they do.

Exhibit 24. What Students Enjoy About School



Source: Student survey. Authors' calculations. N = 625. Note: this question was only asked of Grade 2 students. Responses under 2% are omitted from this graph.

The qualitative data also indicated that students enjoyed school and needed little convincing of its value. Students also revealed high expectations about what they could achieve in their future, provided they were able to continue their schooling. For example, boy students said:

"P1- I want to learn so that I can be big person in the country. I want to be a president; I'm going to school because I want to be a lawyer.

P2- I love school because I want to work in the hospital.

P3- I love school because I want to be a clan chief. I want to control my parents and help make them rich."

—Boy students, Grand Gedeh

Similarly, girl students said:

"P3-I come to school to learn book because when you graduate from high school, nobody will bluff you, I want to make my own money.

P4- I come to school to learn so that I won't depend on anybody in the future and be able to write my own letter.

P5- I come to school because I want be a doctor, I want treat people and also want to lean about health because it tells you more about the human body.

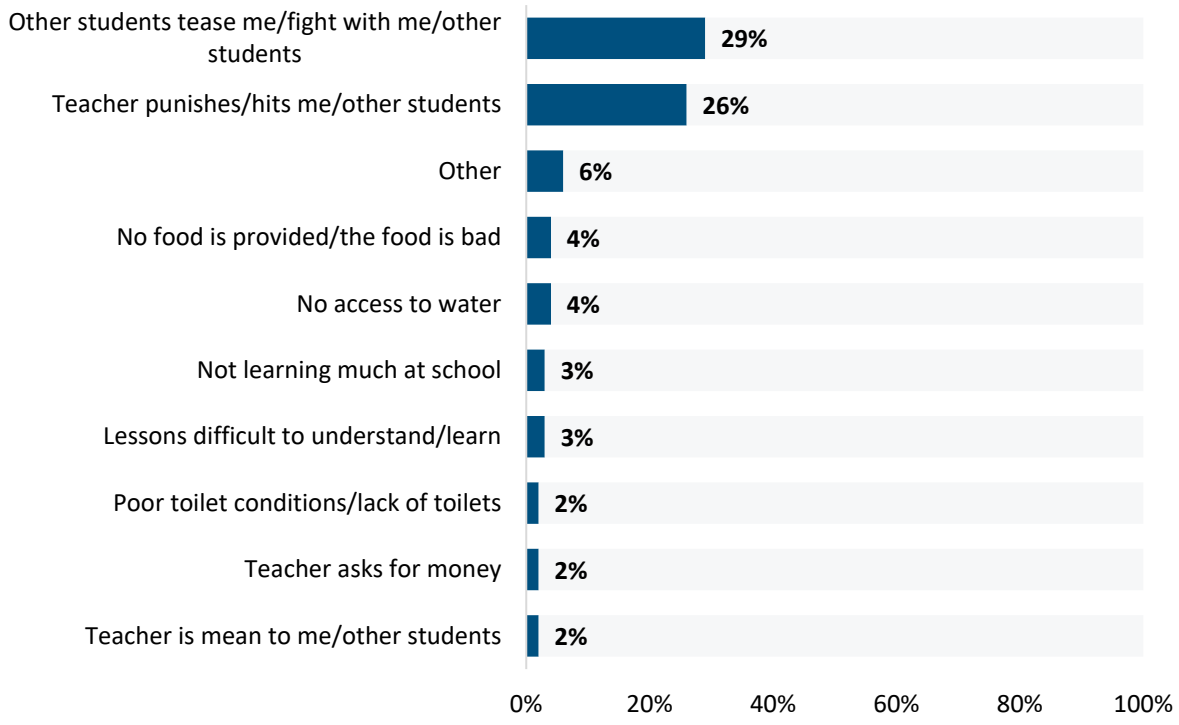
P6- when you learn you can be someone good in the future. I want to be nurse because we don't have nurse in our family, I want to treat people and have my own drugstore."

—Girl students, Grand Gedeh

Only occasionally did students or teachers report that 'some' students did not take school seriously or did not like learning, but this was not reflected in any of the interviews with boys or girls when speaking about themselves.

The quantitative data shows that students were more divided about what they did not like about school. The two most common responses, being teased or fought with by students and being punished by teachers, are both more related to being personally put down by others than the teaching or infrastructure of the school. Non-English speakers (5%) were more likely to list lessons being difficult to understand than English speakers (2%), a difference significant at the 5% level. They were also more likely (4% vs. 1%, $p < 0.05$) to report being asked for money by the teacher as a reason for not liking school. While it is still a low percentage, this may imply that non-English speakers were more worried about not being able to pay school fees. Finally, English speakers (5% vs. 1%) were more likely to list the lack of access to water at school as a reason they dislike school, a difference significant at the 5% level.

Exhibit 25. What Students Dislike About School



Source: Student survey. Authors' calculations. N = 625. Note: this question was only asked of Grade 2 students. Responses under 2% are omitted from this graph.

The qualitative data tell a slightly different story, though it is important to note that the qualitative sample was of older students from Grades 4, 5, and 6. While students overwhelmingly liked school, as already described, they were nonetheless able to identify some aspects of school that they did not like. For example, as in the quantitative data, when asked specifically what aspects of school they did not like, boys and girls relatively often said that they did not like teachers' behaviors, including beating punishments (6 of 24 FGDs) and physical labor punishments (3 of 24 FGDs). More often, students said they did not like teachers' absenteeism or teachers' lack of attention and lack of academic support (9 of 24 FGDs). Lastly, students said some of the things that they did not like about school was that it was dirty (8 of 24 FGDs), and that the quality of the food provided was sometimes unsanitary or poor (e.g., uncooked beans, bugs in beans, or dirty pots). While none of the students in the FGDs indicated that these reasons discouraged them from coming to school, one may assume that they could in future discourage them or could have discouraged other students already.

Reading Outcomes

According to the LBRA collected from Grade 2 students, 46% of students could identify at least 90% of the letters in the alphabet. 14% of second graders could read and just 4% could read with

comprehension (Exhibit 26). There were some large regional variations. In general, Grand Bassa and Rivercess performed higher than their counterparts in Grand Gedeh and River Gee. This contrasts with the findings above that showed higher than average outcomes for students' literacy environments. The LBRA revealed few gender gaps and almost no differences between primarily non-English and English speakers.

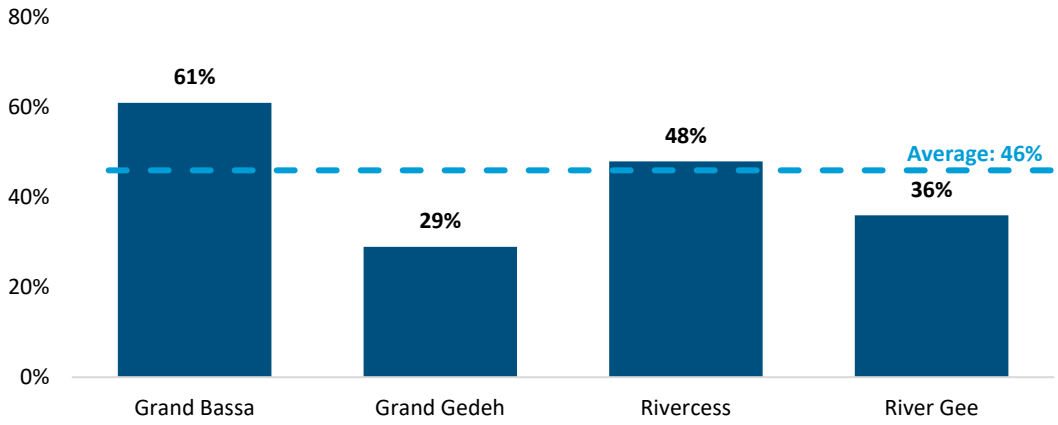
Exhibit 26. Reading Outcomes, by County

Literacy Indicator	Grand Bassa	Grand Gedeh	Rivercess	River Gee	Overall
Letter knowledge (identified >90% of letters)	61%	29%	48%	36%	**46%**
Most used words (% identified)	28%	13%	22%	16%	**21%**
Invented words (% identified)	1%	1%	2%	1%	**1%**
Readers	14%	3%	12%	7%	**9%**
Accuracy (% of words in passage read correctly)[a]	48%	34%	50%	72%	**52%**
Fluency (words/minute)[a]	21	10	16	28	**21**
Listening comprehension (readers)[a]	14%	25%	0%	0%	**10%**
Reading comprehension (readers)[a]	68%	0%	80%	82%	**67%**
Listening comprehension (non-readers)	12%	14%	15%	15%	**13%**
Reading comprehension	5%	<1%	6%	6%	**4%**

Source: Student survey. Authors' calculations. N = 249 (58 readers) in Grand Bassa, 154 (4 readers) in Grand Gedeh, 67 (8 readers) in Rivercess, and 155 (11 readers) in River Gee.
[a]Among readers only

To assess students' letter knowledge, enumerators showed students a chart of 26 letters in English and asked them to identify the sound of each letter. As shown in Exhibit 27, Grade 2 students in Grand Bassa (61%) were more likely to be able to identify at least 90% of the letters in the alphabet while Grand Gedeh's students were the lowest performers at 29%. There was also a large gender gap with 51% of boys and 39% of girls being able to identify letters proficiently ($p < 0.01$) (See Exhibit B3 in Appendix B). While most students could not identify 90% of the letters, 81% could identify at least 80% of the letters and only 5% could name 10 letters or fewer (about 40% of the letters). Overall, on average, students could identify 84% of the letters correctly.

Exhibit 27. Letter Knowledge, by County

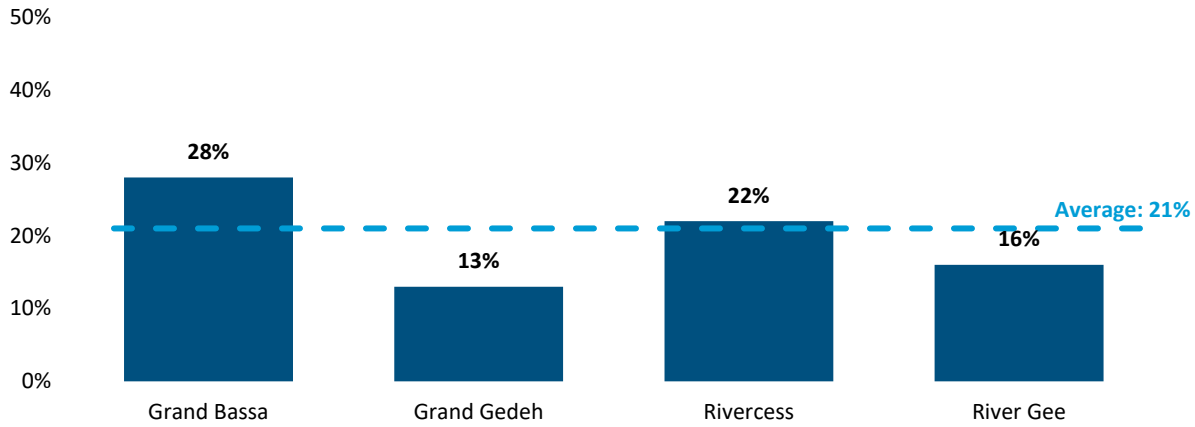


Source: Student survey. Authors' calculations. N = 249 in Grand Bassa, 154 in Grand Gedeh, 67 in Rivercess, and 155 in River Gee.

To assess children's ability to recognize words, students were given a chart of 20 words that we developed based on the most frequently used words from their textbooks. As shown in Exhibit 28, similar to letter knowledge, students in Grand Bassa (28%) outperformed the other counties (13% to 22%) in their ability to identify common words. Again, there was a gender gap with boys identifying 23% of the words compared to 18% of girls ($p < 0.01$).

We also included a decodable word test in the LBRA to measure the ability of students to recognize basic sounds and phonemes. We rearranged the 20 most common words from the word recognition test to form "pseudo words" and asked students to decode them. This subtest proved to be a struggle for students who, on average, could only identify 1% of the invented words.

Exhibit 28. Most Used Words Knowledge, by County

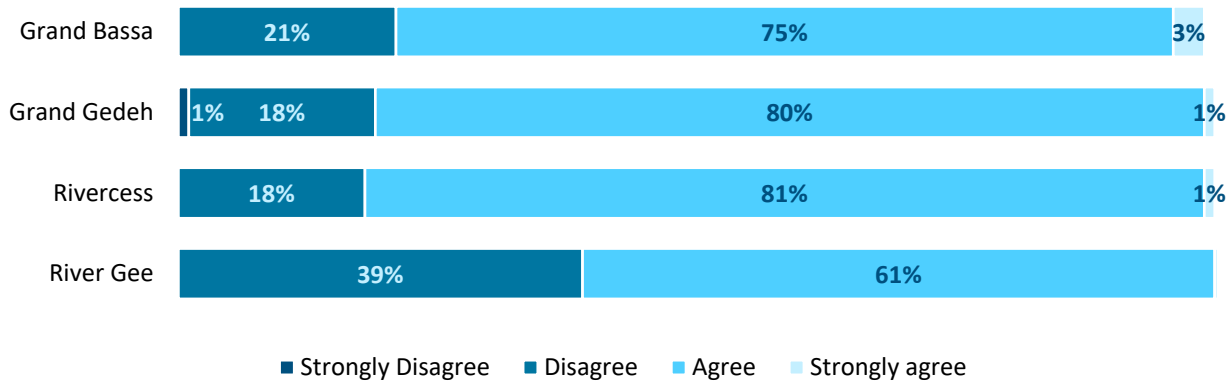


Source: Student survey. Authors' calculations. N = 249 in Grand Bassa, 154 in Grand Gedeh, 67 in Rivercess, and 155 in River Gee.

The reading comprehension section of the LBRA began by asking students to read a 155-word story. Students were classified as readers if they could read at least 5 words in the first 30 seconds. If the student was deemed a reader, they were given time to read the whole passage. If the student was a reader but could not complete the passage or if the student was not a reader, then the enumerator read the passage to them. As shown in Exhibit 30 below, 9% of the students were classified as readers at baseline. Literacy was higher in Grand Bassa and Rivercess (14% and 12%, respectively) compared to River Gee and Grand Gedeh (7% and 3%). There were no significant differences by gender or main language spoken.

The low readership numbers contrast with students' self-reported ability to read. Most students in each county saw themselves as good readers (Exhibit 29). This points to a mismatch in expectations between students and the educational system. The low literacy levels in students' communities could indicate that students are generally good readers relative to their community—even if they are not truly readers yet as defined by the LBRA.

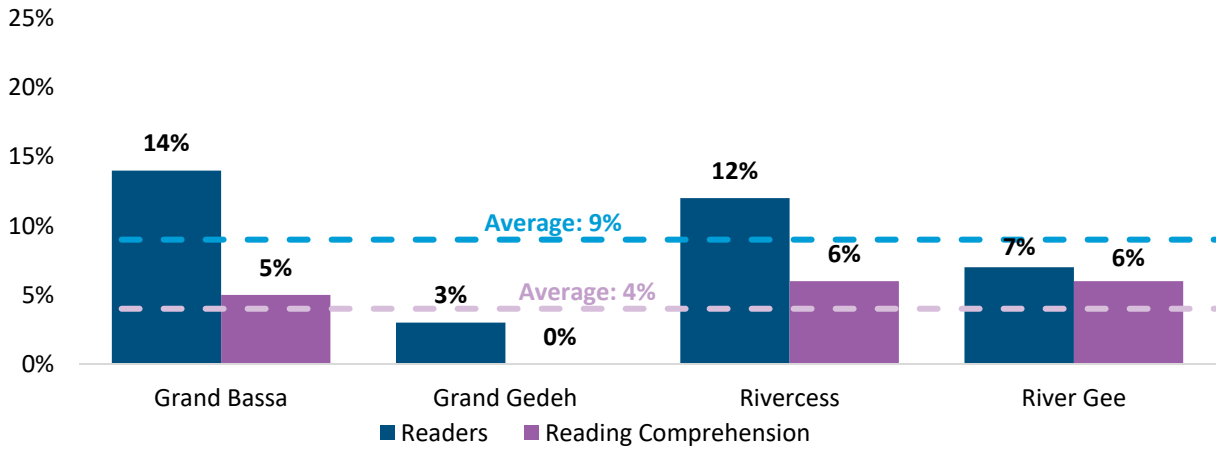
Exhibit 29. Proportion of Students Who Consider Themselves a Good Reader, by County



Source: Student survey. Authors' calculations. N = 248 in Grand Bassa, 154 in Grand Gedeh, 67 in Rivercess, and 153 in River Gee.

Exhibit 30 compares the proportion of readers and readers with comprehension in each county. Few students demonstrated the ability to read with comprehension (4%) at baseline. This was consistent across counties except for Grand Gedeh, where no students were able to read with comprehension. There were no differences by gender or main language spoken.

Exhibit 30. Proportion of Students Who Can Read with Comprehension, by County



Source: Student survey. Authors' calculations. N = 249 in Grand Bassa, 154 in Grand Gedeh, 67 in Rivercess, and 155 in River Gee.

We also looked at comprehension based on type of reader—a reader who could read the whole passage, a reader who could not finish the passage, or a non-reader. Enumerators read the passage to readers who could not complete the passage and to non-readers. Comprehension was the highest among the readers who could read the whole passage themselves, with 67% of these students successfully comprehending the passage. There were large regional variations among these students, ranging from 0% in Grand Gedeh to 82% in River Gee. However, these results should be interpreted with caution given the small sample of 39 readers who could read the complete passage. Listeners struggled to understand the passage with 13% of non-readers and 10% of readers who could not complete the passage, successfully comprehending the text.

Other Student Outcomes

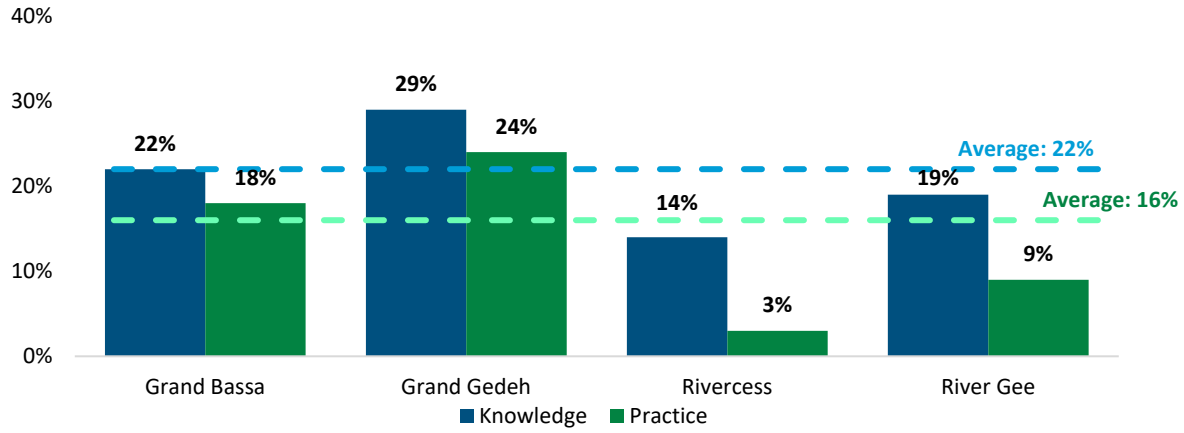
This section describes the results for key project evaluation outcome indicators pertaining to health and hygiene, nutrition knowledge and practice, SRGBV, gender norms, and disability. Enumerators asked questions about these topics of both Grade 2 and 6 students, except for questions about gender norms, which enumerators only directed to Grade 6 students.

Hygiene and Handwashing Practices

To gain a better understanding of students' hygiene knowledge and practices, we first asked students to name the critical times when they should wash their hands and then asked them when they actually wash their hands. The critical handwashing moments include after using the toilet to defecate, after using the toilet to urinate, and before consuming food. 22% of students reported that they should wash their hands at each of these critical times. Most students knew that they should wash their hands after defecating (87%); however, fewer knew to do so after

urinating (45%) or before eating (56%). As shown in Exhibit 31, there was some variation in handwashing knowledge by county, ranging from 14% in Rivercess to 29% in Grand Gedeh. Additionally, students in Grade 6 (28%) were significantly more likely to report that they should wash their hands at these critical times compared to Grade 2 students (19%), a difference significant at the 1% level.

Exhibit 31. Handwashing Knowledge Versus Practice, by County



Source: Student survey. Authors' calculations. N = 381 in Grand Bassa, 261 in Grand Gedeh, 102 in Rivercess, and 263 in River Gee.

Almost all students (93%) reported that they washed their hands the previous day. Of those students, 91% said they washed their hands with soap and water while 7% used water only. These numbers were consistent across counties except for Grand Bassa where 81% of students used soap and water while 15% used water only. By grade, students in Grade 6 were more likely to use soap and water than Grade 2 students by a margin of 94% to 88%, a difference significant at the 1% level. It should be noted that handwashing data is known to be subject to social desirability bias and therefore should be interpreted with caution (Contzen, De Pasquale, & Hans-Joachim 2015).

Despite the high proportion of students saying they washed their hands, just 16% said they did so at each of the three critical moments. The regional differences follow the same pattern as handwashing knowledge, ranging from 3% in Rivercess to 24% in Grand Gedeh. The gap between knowledge and practice was also larger in Rivercess and River Gee (11 and 10 percentage points) compared to Grand Bassa and Grand Gedeh (4 and 5 percentage points). Again, most students said they washed their hands after defecating (82%) while smaller proportions said they did so after urinating (40%) or before eating (42%). Students in Grade 6 (19%) were more likely to report that they washed their hands at the three critical moments compared to Grade 2 students (14%), a difference significant at the 5% level. The gap between knowledge and practice was almost

twice as large for Grade 6 students at 9 percentage points compared to Grade 2 students at 5 percentage points.

The qualitative data highlight the general water, sanitation, and hygiene (WASH) situation in schools at baseline which, according to students, had been increasingly problematic. It appears COVID-19-related WASH measures had been strongly enforced and WASH materials were adequate in the months following school re-openings in 2021. However, momentum had since been lost, as one girl in Grand Bassa said:

"The school health club was active last year but this year it is not active."

—Girl student, Grand Bassa

Similarly, a teacher in Rivercess said:

"The school had a health club but it is not here now. It was here before the virus but after the virus it stopped."

—Teacher, Rivercess

Another teacher in River Gee said:

"The school health club was very active especially during the COVID time. We use to place handwashing buckets at strategic locations on the campus. We also located dump site. We haven't taken messages to the community from the time the school health clubs were established. We used to tell students to wash their hands when they come to school and the information should be extended to - every community."

—Teacher, River Gee

This was despite the presence of school health committees, which were established as part of LEARN in Rivercess and Grand Gedeh combined package schools, but which also appeared (likely via school health and nutrition [SHN] champions) in other LEARN schools post-COVID-19 closures, whose responsibility was to clean the school and share knowledge around hygiene practices such as handwashing. Baseline data for LEARN II suggest that these committees were often inactive and struggled with lack of materials and mandates for implementing WASH activities. Across the twelve qualitative communities, student respondents in six said that school health clubs (SHC) were inactive or did little. Notably, there were disagreements in perspective on this, though in three communities, students disagreed as to whether there was an active SHC, and notably, principals in nine of the communities and teachers in six said that there was an active SHC (perspectives were not offered by teachers or principals in three of the communities).

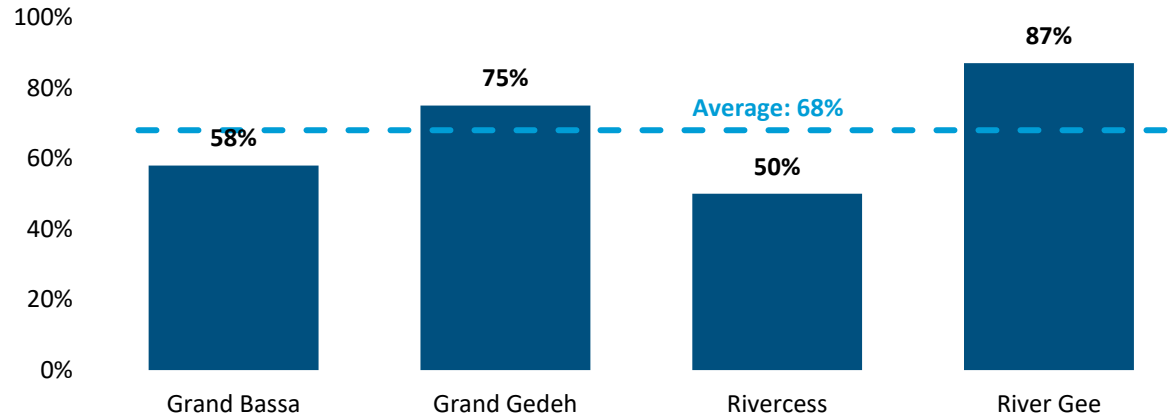
Importantly, respondents in Rivercess and the Grand Gedeh combined package site tended to agree that SHCs remained active; however, complaints about school cleanliness were common in all communities.

Diarrhea Disease

For the LEARN II evaluation, we added questions on the prevalence of diarrhea and how it is treated. A relatively low proportion of students (7%) reported experiencing diarrhea in the past two weeks. The remaining diarrhea questions were only asked to these students, so the sample sizes are small, and results should be interpreted with caution. Students who had diarrhea reported eating much less than usual. 77% said they ate "much less than usual" while another 4% said they did not eat at all.

Exhibit 32 shows the regional variations among the students who sought treatment for diarrhea, ranging from 50% in Rivercess to 87% in River Gee. Among these students, the plurality reported seeking treatment from a government hospital or health center (41%). 22% sought treatment from a private facility while 16% utilized community health workers. Boys (54%) were about twice as likely to seek treatment from a government hospital than girls (26%), a difference significant at the 5% level.

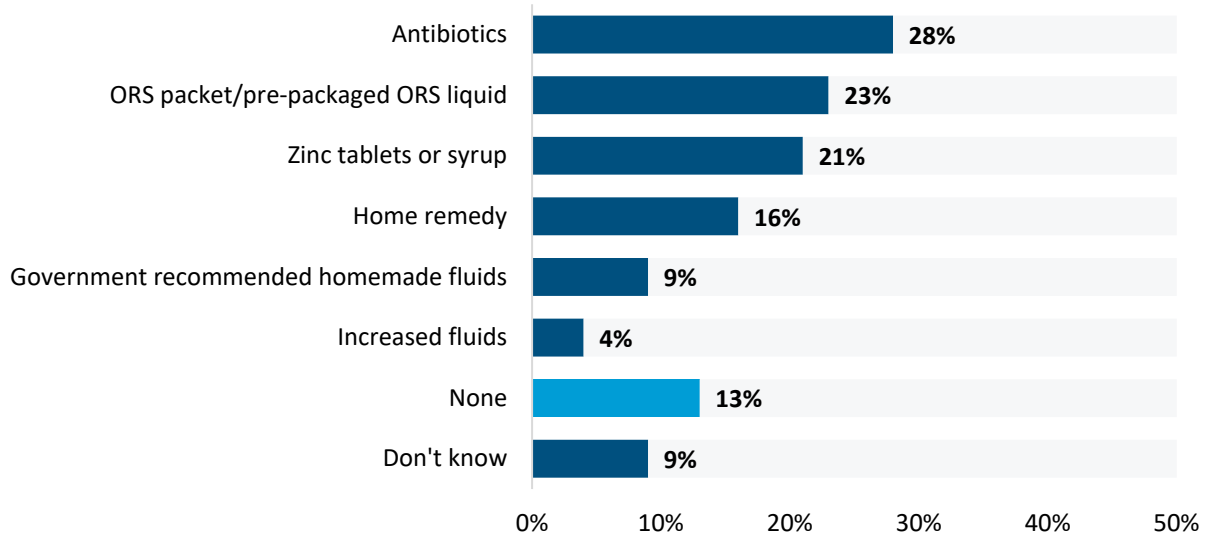
Exhibit 32. Proportion of Students Who Sought Treatment for Diarrhea, by County



Source: Student survey. Authors' calculations. N = 36 in Grand Bassa, 20 in Grand Gedeh, 4 in Rivercess, and 10 in River Gee.

As shown in Exhibit 33, the most common treatment used by students with diarrhea were antibiotics (28%), followed closely by Oral Rehydration Salts (ORS) packets (23%) and zinc tablets or syrup (21%). 13% of students used no treatment at all. There were few significant differences between treatments for boys and girls, but boys were more likely to receive zinc (32% vs. 11%), a difference significant at the 5% level.

Exhibit 33. Treatments Received by Students for Diarrhea



Source: Student survey. Authors' calculations. N = 75. Note: this question was asked only of students who said they had diarrhea recently.

Disability

We assessed visual, auditory, or physical impairments that may impede students' ability to learn in the classroom by asking students a shortened set of questions from the Washington Group Questions (2020). These questions reflect current thinking and measurement of child functioning. Almost no students in the sample reported trouble seeing (2%), walking (2%), or hearing (<1%), and there were no differences by gender, grade, or county.

Nutrition Knowledge

To gauge students' nutritional knowledge, we asked students if they knew what a balanced diet was and then asked if they could identify different types of foods by food groups. Only 2% of students said they knew what a balanced diet meant and fewer than 1% were able to prove it. To pass this balanced diet test, students had to describe go, grow, and glow food groups. Among students who said they knew what a healthy diet was most (77%) could identify "go" foods (foods that give us energy), half (50%) identified "grow" foods (food that help us grow), but just 27% could describe "glow" foods (foods that protect us from disease).

We then asked all students to name foods that belong to each of these nutritional groups. For "go" foods, students overwhelmingly named grains (91%), followed by roots (57%). In fact, just 1% of students could not name any "go" foods. Students gave a wider variety of answers for "grow" foods including beans (44%), red meat (37%), fish (29%), poultry (13%), and eggs (9%). Additionally, 12% named other foods, which included mostly rice, fruits (especially bananas), and

tubers. 20% of students could not name any "grow" foods. Similar to the balanced diet test, students demonstrated the least knowledge of "glow" foods—22% could not name any at all. The most common "glow" foods cited were green leafy vegetables (55%) and fruits (41%). 16% of students admitted that they did not know any. The confusion that students exhibit in understanding which foods belong to the three nutritional groups highlights a lack of knowledge of the nutritional benefits of protein among some students. Another explanation may be related to confusion in the terminology used in the survey and what students have been familiar with. SC used to train students using the "Go, Glow, and Grow" terms, however, in many cases schools used the Ministry of Health guidance which uses different terminology.

The qualitative data suggest that nutrition education was generally not provided across schools, and conversations about nutrition were uncommon. None of the students across all FGDs mentioned that nutrition education was part of SHN activities. For example, one boy in River Gee said, "Yes, we are aware of school health clubs, but we don't know about the school health nutrition" (boy student, River Gee). While LEARN activities in SHN schools (Rivercess and combined package schools in Grand Gedeh) aimed to enhance both WASH and nutrition, the endline evaluation suggests that the nutrition component was secondary to WASH activities and education. Thus, at LEARN II baseline, we see relatively low knowledge of nutrition despite exposure to LEARN activities.

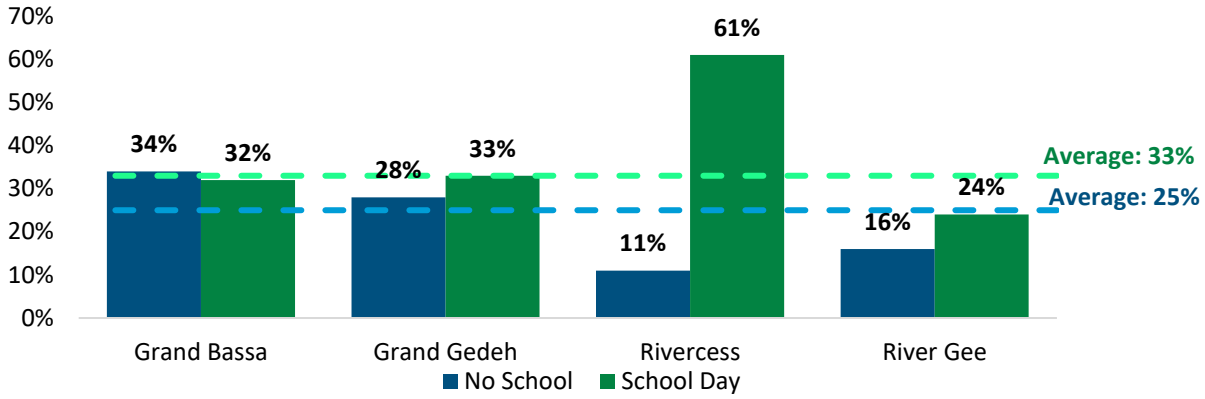
Food Intake

Next, we asked students about their food consumption. We first asked them how many meals they typically eat on a school day and on non-school days (e.g., weekends, holidays). On average, students ate about the same – 2 to 3 meals on per school day and non-school days They were more likely to eat three meals per day on school days, an indication that the school meals were helping several students meet their minimum consumption needs. Overall, 16% of the students reported eating 2 meals on non-school days and 3 on school days. Still, a low proportion of students (33%) reported getting three meals per day on school days, while 25% did so on non-school days.

As shown in Exhibit 34, Rivercess was the main driver of the school day/non-school day gap with 61% receiving 3 meals on school days but only 11% on non-school days. While there was no gender gap on school days, girls were more likely to report eating three meals per day on non-school days (30% vs. 21%), perhaps a reflection of the take-home rations provided to girls as part of LEARN. The 8-percentage point gap is statistically significant at the 1% level. Looking at the different grades, Grade 2 students (36%) were more likely to be eating three meals per day on school days than Grade 6 students (28%), a difference significant at the 1% level. There was no

difference between the grades during non-school days, suggesting the gap is driven by a focus on feeding younger students at school.

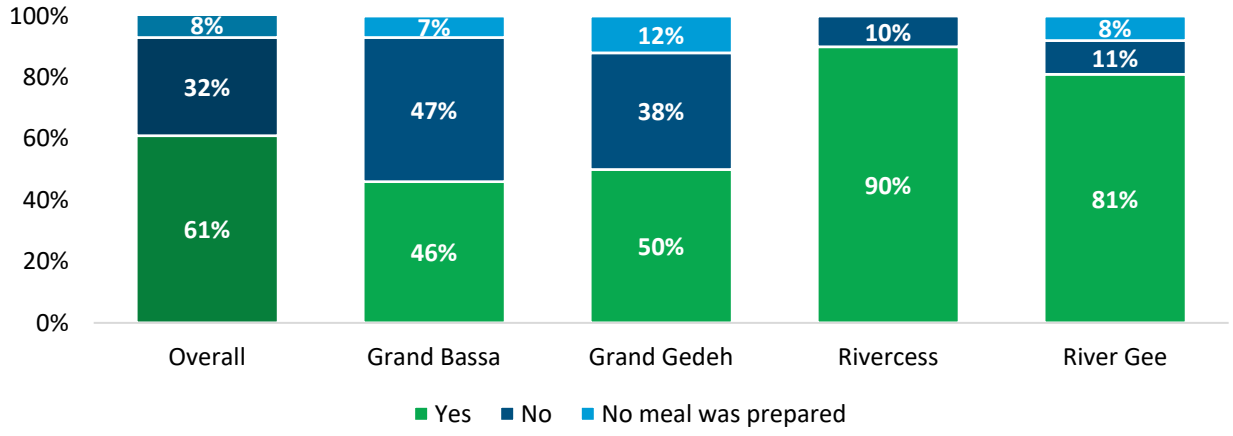
Exhibit 34. Proportion of Students Who Ate Three Meals per Day, by County



Source: Student survey. Authors' calculations. N = 381 in Grand Bassa, 261 in Grand Gedeh, 102 in Rivercess, and 263 in River Gee.

We asked students specifically if they ate the meal provided by their school and the majority (61%) reported that they did. Exhibit 35 shows this finding by county. There was a large regional variation with 90% of students in Rivercess and 81% in River Gee saying they ate the school meal compared to 46% and 50% in Grand Bassa and Grand Gedeh, respectively. 8% of students reported no meal being served at all, none of which were in Rivercess. The majority (82%) said they ate lunch at school while 20% said they had breakfast. See Exhibit B4 in Appendix B for more details.

Exhibit 35. Proportion of Students Who Ate the Provided School Meal, by County



Source: Student survey. Authors' calculations. N = 380 in Grand Bassa, 260 in Grand Gedeh, 102 in Rivercess, and 263 in River Gee.

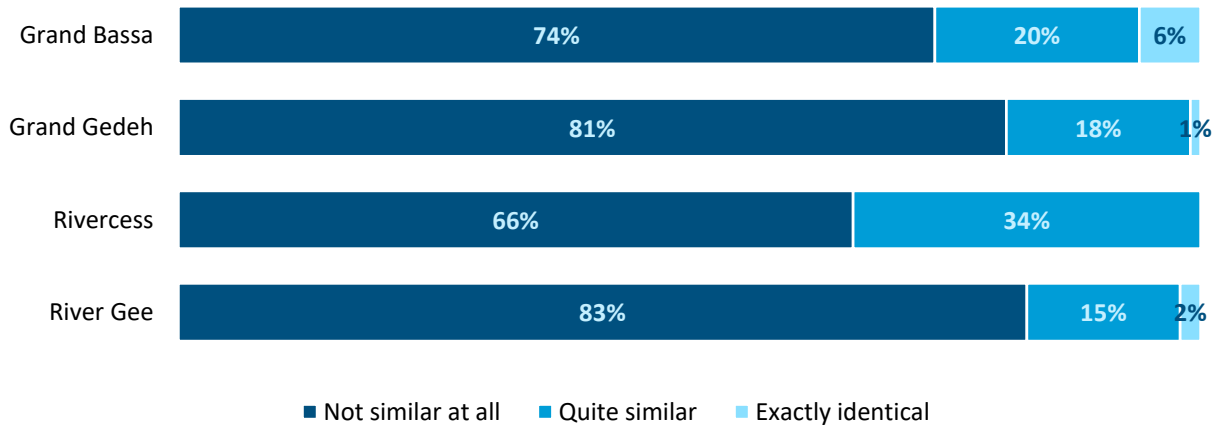
We asked students what they ate for each meal, if anything. Most meals were heavily carbohydrate-based—74% of students had at least one carbohydrate for breakfast, 82% for lunch, and 87% for dinner. The most cited food was rice for each meal. The only other food with a significant number of mentions was fufu, which was named by 5% of students including 21% of students in Rivercess.

Breakfast was the students' most likely source of vegetables but still just 5% of students reported having any. 10% of students reported having fruit for a snack during the day, much more than any other meal. Protein, including meat, legumes, nuts, and milk was very uncommon, with no more than 2% of students reporting eating any protein for any meal. On average, students reported eating under one food per meal, suggesting a lack of dietary diversity. Indeed, just 1% of students report eating more than one food for lunch or dinner, while 5% said they ate multiple foods for breakfast.

Cultural Appropriateness of School Meals

To better understand whether school meals were suitable for the students' cultural practices, we asked how the school meals compared to what they ate at home. Most students (77%) said that the school meals were not similar at all to their meals at home. This finding contradicts the lack of dietary diversity reported by the students; however, it is possible the students were eating the same foods prepared in different ways at home and at school. Despite saying the school meals were not what they ate at home, less than 1% of students said they were being served foods at school that their parents tell them not to eat for cultural reasons. Further, 70% said that they enjoyed the school meals. There were some regional differences, ranging from 61% in River Gee to 77% in Rivercess. River Gee was also the county where the most students reported the school meals being different from what they typically ate at home (see Exhibit 36).

Exhibit 36. Similarity of School Meals to Meals Eaten at Home, by County



Source: Student survey. Authors' calculations. N = 380 in Grand Bassa, 249 in Grand Gedeh, 101 in Rivercess, and 262 in River Gee.

The qualitative data suggest that while there is broad appreciation for school meals, students would appreciate more diversity:

> *"The food can't be sweet [it does not taste good], every day is one soup, but at least it can make us stay in school and listen to the teachers."*
>
> *—Girl student, River Gee*

Also, in 8 of 24 student FGDs, encompassing 8 schools, there were reports of meals not being prepared well. For example, some students said that there were bugs in the prepared beans or the beans were not fully cooked:

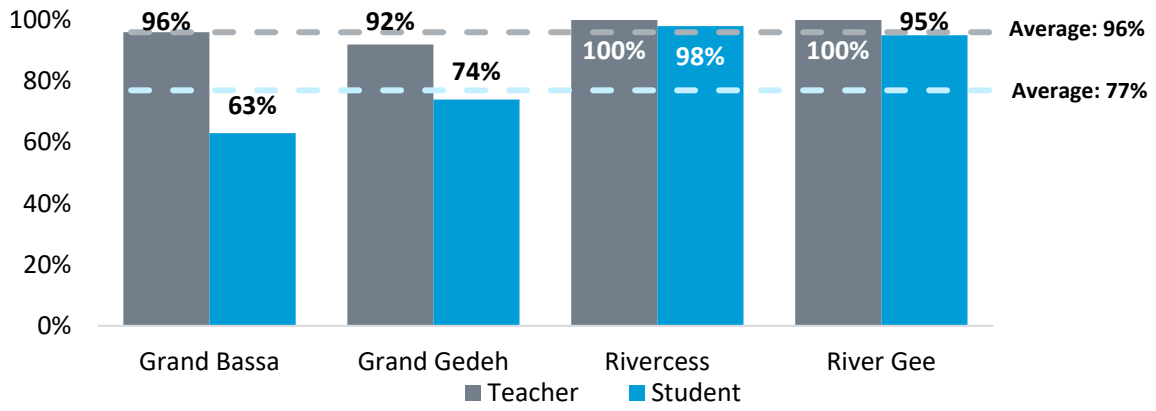
> *"The food can't be sweet [it does not taste good]; [there is] not enough pepper, salt, or [flavoring] cube. The bugs can be in the beans because they can keep it for long."*
>
> *—Girl student, Grand Bassa*

Sexual and Gender-Based Violence and Gender Norms

To better understand gender differentials in the school setting and evaluate potential risks for sexual and gender-based violence, we asked both students and teachers about school rules and gender norms. In doing so, we specifically sought to identify (1) knowledge gaps in terms of teachers' code of conduct, which could exacerbate power differentials in the classroom environment, and (2) prevailing gender norms within and outside the classroom.

Broadly put, teachers were more aware of school rules than students, on average. More specifically, most surveyed teachers were aware of the rules that should govern their conduct in school generally (82%) and in interacting with students (96%). Though students were less cognizant of general rules for teacher conduct (41%), they were generally aware of those for teacher–student interactions (77%) as well as for their own code of conduct (77%). By county, both teachers and students in Grand Bassa and Grand Gedeh were less familiar with these rules relative to their counterparts in Rivercess and River Gee (see Exhibit B5 and Exhibit B6 in Appendix B).

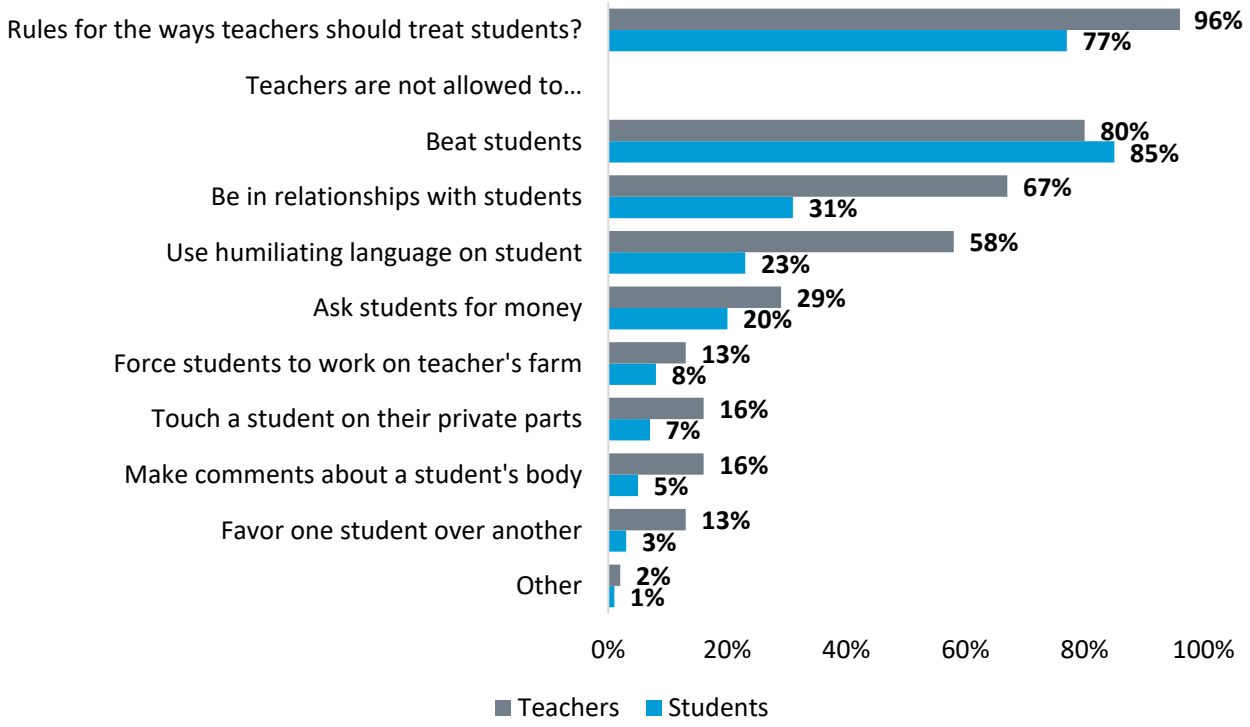
Exhibit 37. Knowledge of Rules for Teacher Treatment of Students, by County and According to Teachers and Students



Source: Teacher survey and student survey. Authors' calculations. N = 57 (teachers) and 945 (students). For teachers, N = 23 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee. For students, N = 374 in Grand Bassa, 250 in Grand Gedeh, 90 in Rivercess, and 231 in River Gee.

Teachers and students expressed different expectations of the rules for how teachers should treat students. In specifying these rules, both teachers and students often mentioned rules that prohibit beating students (80% and 85%, respectively); otherwise, recognition of specific rules mostly diverged among teachers and students. For example, while most teachers acknowledged rules that prohibit relationships with students (67%) and using humiliating language on students (58%), less than half of students mentioned these rules (Exhibit 38). In combination with the comparatively small share of students who reported student–teacher relationships are prohibited (31%), the small share of students and teachers who acknowledge that sexual harassment (i.e., making comments on a student's body) and sexual abuse (i.e., touching a student on their private parts) are prohibited begs the question of how prevalent sexual and gender-based violence is in schools. It is important to note that sensitive survey questions may also be affected by some measurement error or response bias as students may be embarrassed to mention rules related to sexual harassment and sexual abuse.

Exhibit 38. Rules for the Ways Teachers Should Treat Students in School, According to Teachers and Students



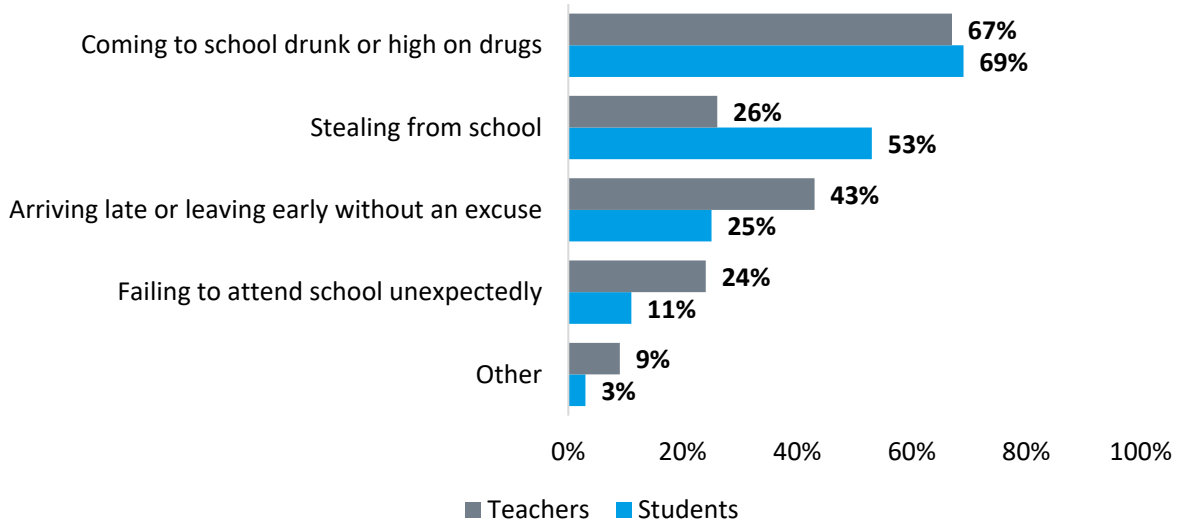
Source: Teacher survey and student survey. Authors' calculations. N = 57 (teachers) and 945 (students). Teachers and students were asked to cite specific rules only if they confirmed there are rules for the ways that teachers should treat students in school.

At baseline, teachers' knowledge of rules was not universal across counties. Among the most cited rules for teacher treatment of students, teachers emphasized different prohibited behaviors toward students (Exhibit B7 in Appendix B).

In specifying general rules for teacher conduct in school, teachers and students often mentioned different rules, suggesting that they emphasize different prohibited behaviors. Most teachers and students noted that teachers should not come to school intoxicated on alcohol or drugs (67% and 69%, respectively), but unlike students, less than half of teachers mentioned that they are not allowed to steal from school (Exhibit 39). Likewise, less than half of teachers acknowledged rules that prohibit absenteeism, specifically rules that prohibit unexcused (43%) and unexpected absences (24%). Low awareness of these rules among teachers, however, does not necessarily map into teacher absenteeism: when surveyed, most students reported that their teacher was not absent (82%) or tardy (77%) in the past week. To this end, variation in the prohibited behaviors teachers and students mentioned does not necessarily imply a lack of knowledge of school rules; rather, the differential emphasis on specific prohibited behaviors for teachers

suggests teachers and students do not share a common understanding of the contents of school rules.

Exhibit 39. Prohibited Behaviors for Teachers in School, According to Teachers and Students



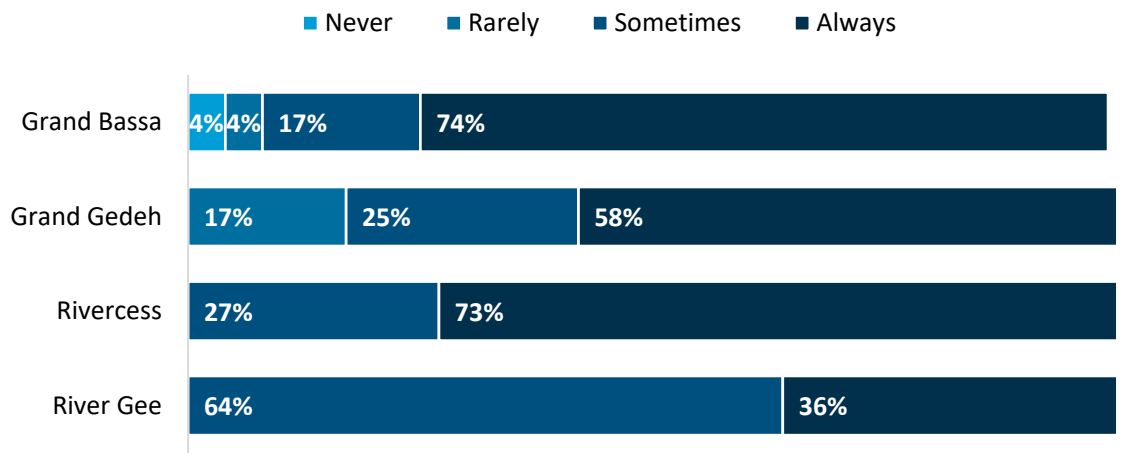
Source: Student and teacher survey. Authors' calculations. N = 816 (students) and 46 (teachers).

If teased or touched in a way they found discomforting, students often reported incidences to teachers (79%), followed by school principals (48%) and parents (17%). Teachers' responses to a similar question mirrored this trend, noting that students often confided in their teacher (67%), the school principal or registrar (58%), or their parents (19%). As reported by students, confiding in teachers was more common in River Gee (90%) relative to the other counties where approximately three quarters of the students stated they would report an incidence to their teachers. In addition, while most students in Grand Gedeh (64%) and River Gee (57%) would report to their school principal, roughly a third would do so in Grand Bassa (36%) and Rivercess (30%). These responses are broadly consistent with teachers' responses. However, relative to student responses across counties, a larger share of teachers in Grand Gedeh (75%), Rivercess (64%), and River Gee (64%) thought students would report to their school principal or administrator.

When students report violent incidences to their teachers and other school officials, it often translates into corrective action according to teachers. Across counties, most teachers reported they sometimes or always respond to such reports by taking action (93%). Except for River Gee, teachers appeared resolute in their responses to these reports, with a majority reporting they always actively respond when students report violence (63%). Even so, responsiveness to students' reports of violence was not guaranteed; nearly a third of teachers and school officials only sometimes responded to reported violence (30%) and some rarely (5%) or never (2%) did

so. This was particularly apparent in Grand Gedeh where 17% of teachers stated that they rarely acted on these reports and in Grand Bassa where a small share reported that they never did so (4%) (Exhibit 40).

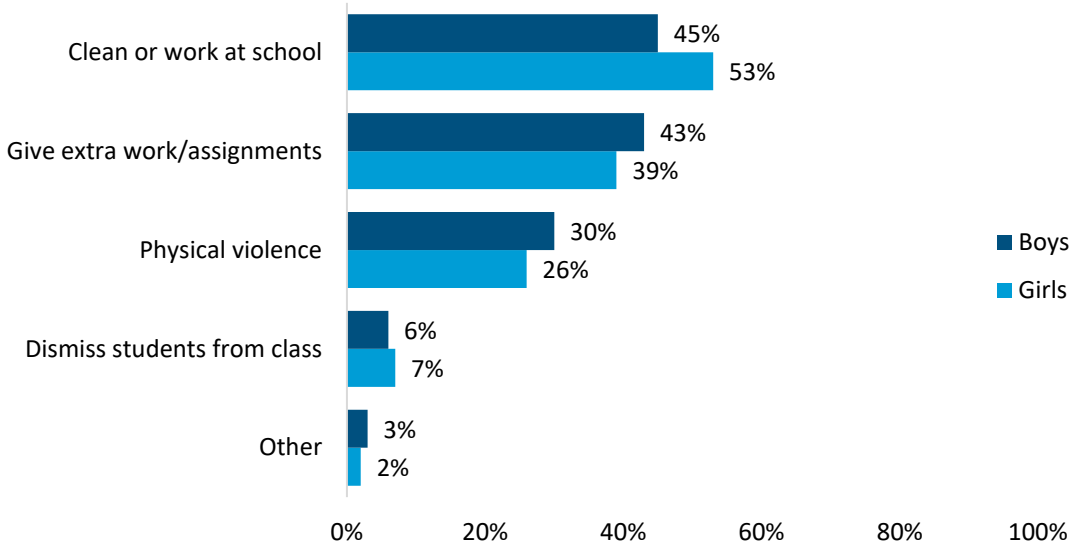
Exhibit 40. Frequency Teachers or Other Officials Take Action When Students Report Violence, by County



Source: Teacher survey. Authors' calculations. N = 23 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

At school, disciplinary action was moderately gendered at baseline. As reported by students, teachers' methods for disciplinary action often included having students clean or work at school and giving students additional assignments. We asked students how teachers disciplined students of each gender. Girls were more likely to be asked to clean or work at school while boys were slightly more likely to be given additional schoolwork or physically punished (Exhibit 41). There were almost no differences in the perception of how students of both genders were punished. The only mismatch was that girls were slightly more likely to report that girls were dismissed from class compared to boys (8% and 5%, respectively), a difference significant at the 5% level. Teachers reported similar methods and gender differences as students for disciplinary action; on average, however, a notably smaller share of teachers reported using physical violence on boys or girls (9% and 5%, respectively).

Exhibit 41. How Teachers Discipline Students at School According to Students, by Gender



Source: Student survey. Authors' calculations. N = 1,007.

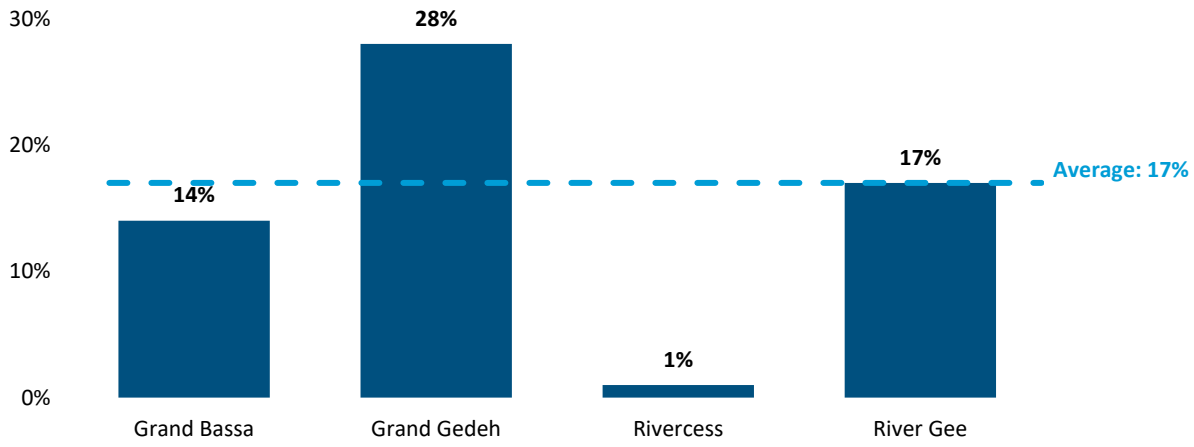
The qualitative data largely mirrored the quantitative findings: students and teachers in all FGDs reported that they were aware of the content for the codes of conduct. When asked to specify this content, respondents mentioned that teachers and staff must not partake in bribery, abuse, or rape; have relationships with students; commit corporal punishment; discriminate by sex; discriminate against children with disabilities; commit fraud; have persistent absences; use humiliating language; use drugs and alcohol; or practice favoritism. However, there were multiple reports across the student FGDs of teachers beating students and giving them manual labor tasks as punishment:

"The thing I don't like the school for is because they can beat on students and give you hard punishment to do when you misbehave; [another student] yes oh, they can beat too much and they can give you large grass to hook."

—Girl student, Grand Gedeh

As shown in Exhibit 42, the quantitative data backs this up. Overall, 17% of students reported witnessing violence in the classroom in the past week. There were substantial differences by county ranging from 1% in Rivercess up to 28% in Grand Gedeh. There was no significant difference between girls and boys.

Exhibit 42. Proportion of Students Who Witnessed Violence in the Classroom in the Previous Week



Source: Student survey. Authors' calculations. N = 379 in Grand Bassa, 260 in Grand Gedeh, 100 in Rivercess, and 261 in River Gee.

There were also indications that students continued to acknowledge corporal punishment as acceptable, as when one girl said:

"I like how the teachers can behave. They can be treating us fair. For example, if some people are causing noise in class and the teacher beats them some of the students can say the teacher is not treating them fair because the teacher didn't beat the whole class. So, the teacher can only beat those who did wrong."

—Girl student, River Gee

In one community, students said physical abuse had become less prevalent:

"Teachers used to beat on us before but now they are not beating on us again."

—Girl student, River Gee

Other non-physical but harmful punishments included being sent out of the classroom, in some cases for two weeks, and not being given a chance to make up the work:

"When we are taking test and you do something, they will send you outside to hook grass then you will miss your test and they will not give it to you."

—Girl student, Grand Gedeh

The qualitative data differed from the quantitative data as it relates to reporting. In the FGDs, students conveyed that they generally understood that a process for reporting a teacher for a violation of the code of conduct would involve elevating it to a principal or DEO, or telling one's parents, who would then speak to the principal. Others noted that certain violations should involve the police. However, rather than saying that reports resulted in positive actions to discipline the teachers for their infractions, students instead often noted that reporting teachers could result in repercussions and therefore they feared doing so. For example, one girl said:

"When we find out the everyone is involved, we should take the complaints to the police station or carry the complaint to our parents. And when we carry their complaints, they will beat on us and they will not give us good grades and they will make you shame in front of everybody and take you to class to class and ask the others students to boo at you."

—Girl student, Grand Gedeh

In two groups, students said that they feared reporting to the principal because if they did not have adequate evidence of their claim, they would be given an "NTR—Never to Return":

"No, I won't feel comfortable to report if a teacher says he want me because, I will be afraid to tell the principal because when I tell the principal and the teachers is asked he will say he didn't tell me anything and the principal will tell me I am lying on the teacher and if I do it again, he will give me NTR (never to return)."

—Girl student, River Gee

Similarly, boys in another school said that teachers would give physical labor chores or suspensions to students who complained:

"[Respondent 6] Yes, I can be afraid because they can punish us by brushing. [Respondent 4] I can be afraid because they can suspend you or they can give you portion to brush. [Respondent2]- The students are to carry complain. But if you carry complain they can ask you to cut grass. [Respondent] 3- Girls can be afraid also because they can punish them by cleaning the toilet. It happened before, and we carry the teachers complain to the PTA and the teachers asked us to cut grass."

—Boy students, Grand Gedeh

Students in Grand Bassa and Rivercess mentioned a complaint box from MC where they could anonymously report that helped them to "be brave" or as a girls' FGD said:

"The boys and girls can be afraid to carry their complaint [to the principal] because they will fail us so we will just write it put it in the box."

—Girl student, Rivercess

Even if they felt comfortable reporting and retribution was not likely, students in general felt as though reporting would not lead to anything in terms of teacher punishment:

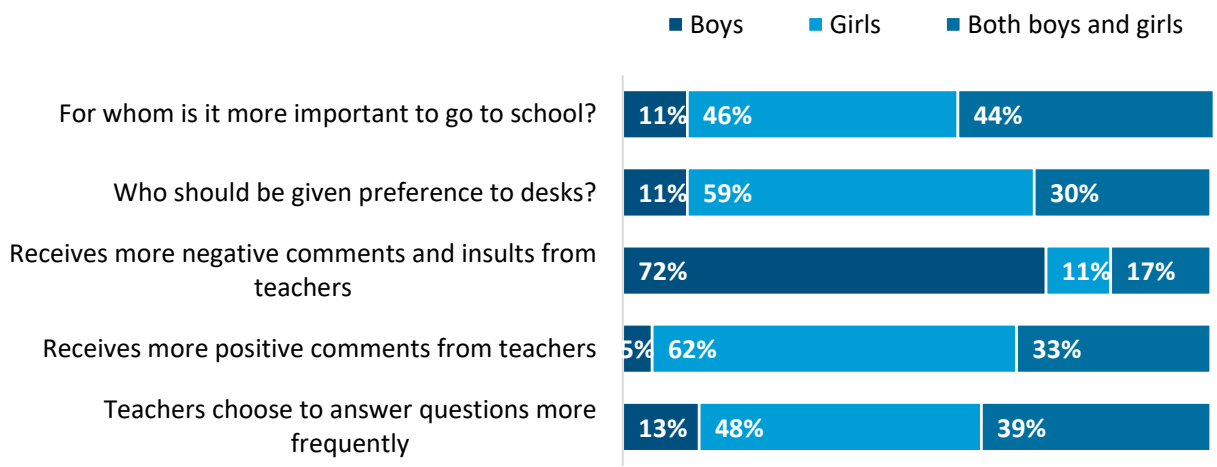
"We can put our complaints in the box…we can feel comfortable [but] the last time we reported a teacher pressing tete (breast) but he denied it to the principal and nothing was done about it. The teacher is still around."

—Boy student, Rivercess

Gender Norms

In the classroom environment, teachers tended to indicate preferential treatment for girls rather than boys, and in a broader context, they reinforced traditional gender roles. In the classroom environment, teachers seemingly gave priority to girls in terms of access to resources (i.e., desks) and providing positive feedback (Exhibit 43). Regardless of county, teachers affirmed girls receive more positive comments than boys and boys receive more negative comments and insults than girls, except for teachers in Grand Gedeh, most of whom reported that boy and girls equally receive negative comments from them. Likewise, most teachers in Grand Bassa (70%), Rivercess (60%), and River Gee (55%) thought girls should be given preference to desks. Despite giving preference to girls in the classroom setting, some teachers demonstrated attitudes that support gender equality in certain domains: while most teachers in Rivercess indicated it was more important for girls to attend school rather than boys (55%), most teachers in the other counties indicated that it was equally important for both boys and girls to attend school.

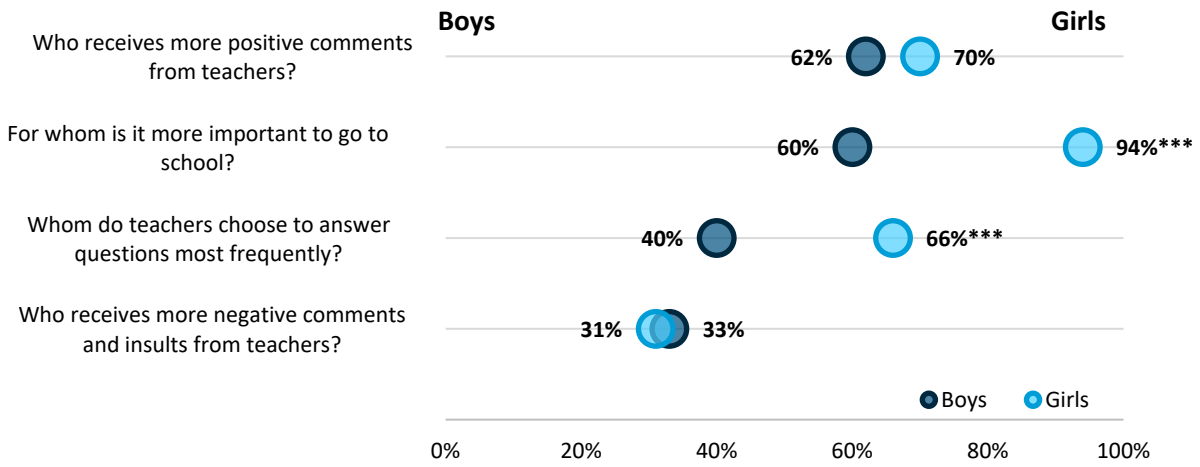
Exhibit 43. Teachers' Perceived Gender Norms at School



Source: Teacher survey. Authors' calculations. N = 57.

As shown in Exhibit 44, teachers' perceptions aligned with those of students who also reported a more positive experience for girls at school. However, within the student sample, girls and boys differed in their perceptions. Girls were much more likely to believe that it was more important for girls to attend school (94%) than boys (60%) and were more likely to perceive teachers as calling on girls more often than boys (66% and 40%, respectively). These gaps are significant at the 1% level. Students of both genders agreed that girls receive the bulk of teachers' positive comments while boys receive most of the negative comments.

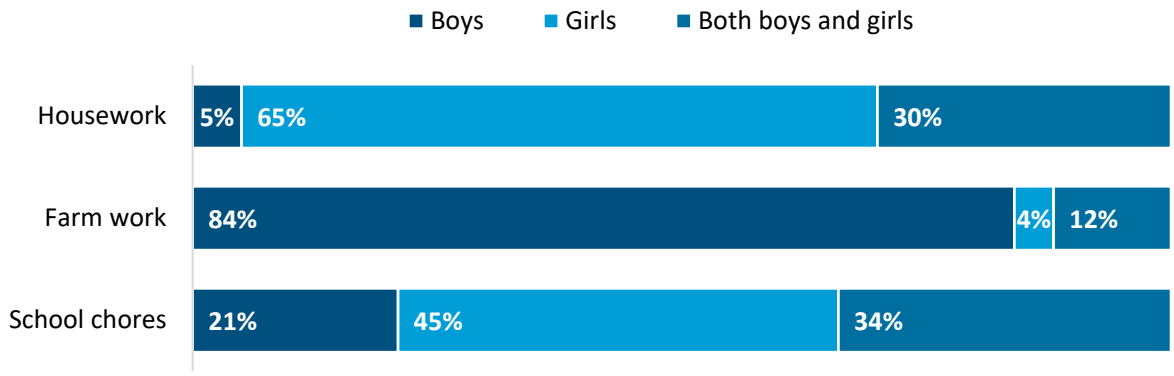
Exhibit 44. Students' Perceived Gender Norms at School, by Gender



*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. N = 182 for boys and 199 for girls. Note: This question was only asked of Grade 6 students. A small number of students said they didn't know. They are excluded from this graph.*

Outside the classroom, a majority of teachers said girls should help more with housework and boys should help more with farm work, reinforcing traditional gender roles. While approximately a third of teachers indicated that boys and girls should share equal responsibility in helping with housework (30%) and school chores (34%), they were less inclined to indicate as such for farm work (12%) (Exhibit 45).

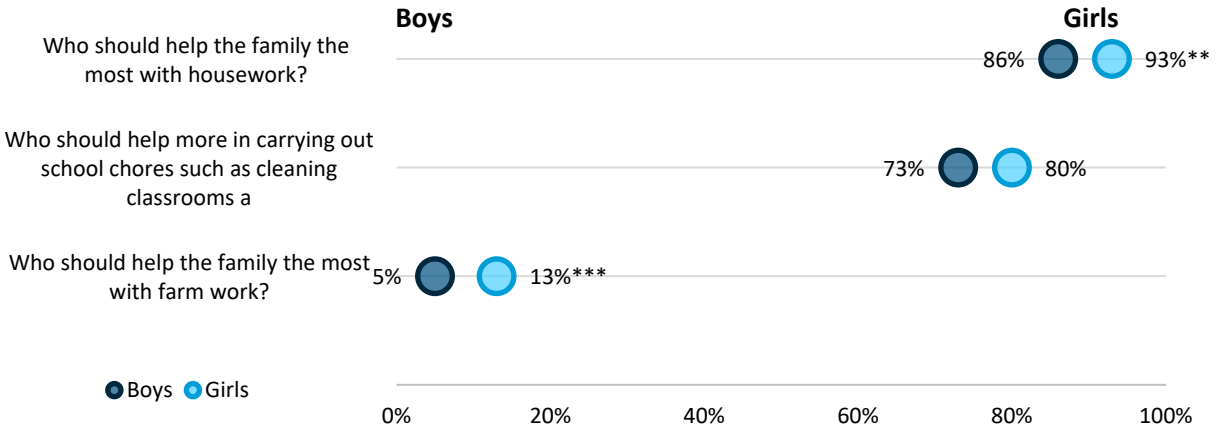
Exhibit 45. Teachers' Perceived Gender Roles for Students



Source: Teacher survey. Authors' calculations. N = 57. One teacher in Grand Gedeh did not respond to the question regarding school chores.

Students perceived their gender roles similarly to their teachers with the majority believing girls should focus on housework (90%) and school chores (77%), while boys should do most of the farm work (91%). Again, there were differences in how each gender perceived their own roles. While they followed the same pattern, girls were more likely to say that girls should help with housework (93% vs. 86%, $p < 0.05$) and farm work (13% vs. 5%, $p < 0.01$) than boys.

Exhibit 46. Students' Perceived Gender Roles, by Gender

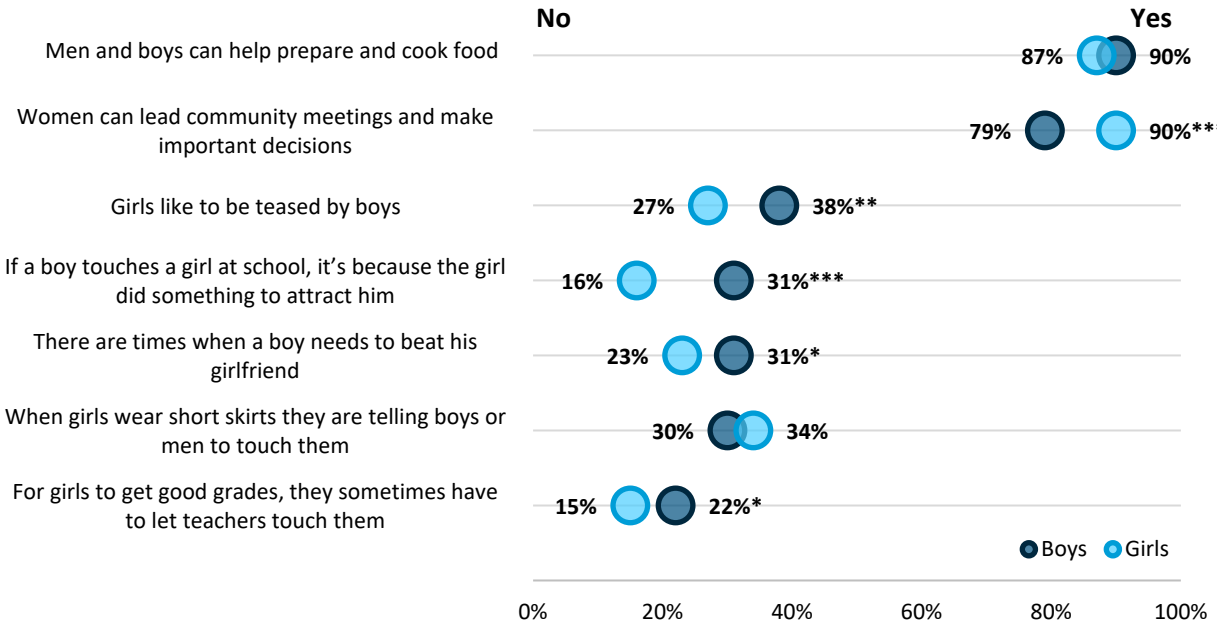


*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. N = 183 for boys and 199 for girls. Note: This question was only asked of Grade 6 students. A small number of students said they didn't know. They are excluded from this graph.*

We also asked students to respond to some yes or no questions about gender norms at school. In each case, most students answered in support of gender equality; however, there were some notable differences in perception by gender. As shown in Exhibit 47, girls (90%) were more likely to believe that girls can lead meetings and make important decisions than boys (79%). On the

other hand, boys were more likely to believe that girls like to be teased (38% vs. 27%, $p < 0.05$) and that when a boy touches a girl, it is because the girl did something to attract him (31% vs. 16%, $p < 0.01$).

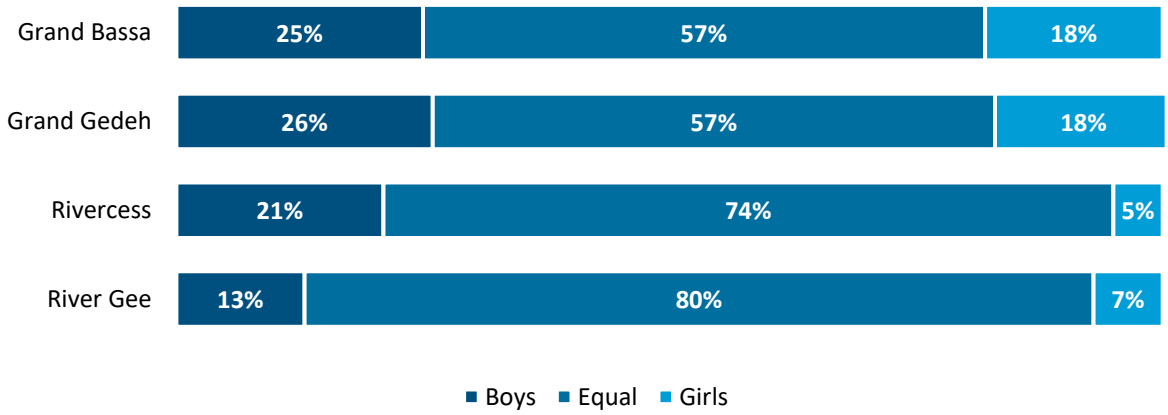
Exhibit 47. Students' Perceived Gender Norms at School



*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. N = 183 for boys and 199 for girls. A small number of students said they didn't know. They are excluded from this graph*

Students generally agreed that boys and girls should receive equal priority to food with 65% saying food should be divided equally. There were some regional variations with 57% of students in Grand Bassa and Grand Gedeh saying food should be equally divided as opposed to 80% in River Gee (Exhibit 48). Looking at the responses by gender, most boys and girls agreed that food should be divided equally, but when they diverged from this belief, they were more likely to say that their own gender should be prioritized.

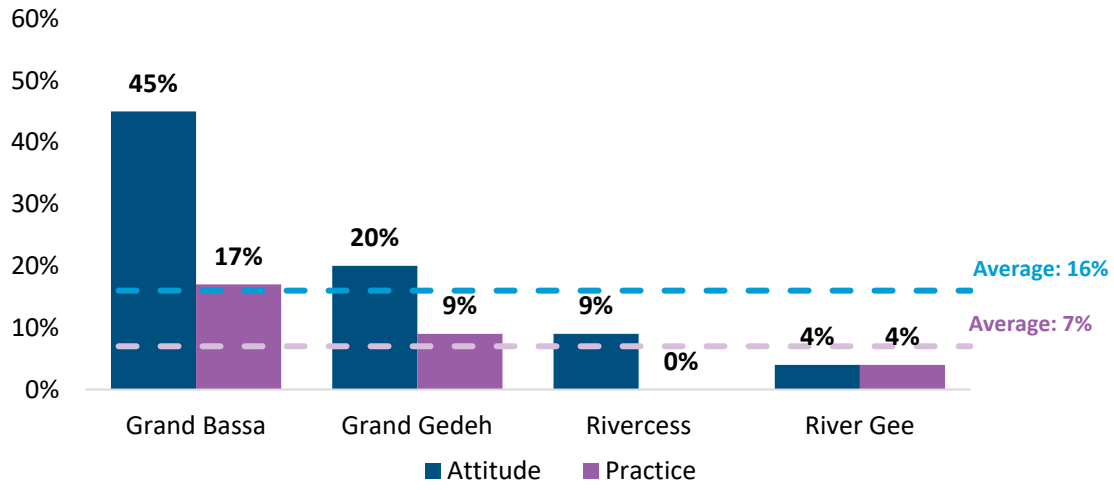
Exhibit 48. Students' Perceived Gender Priority for Feeding, by County



Source: Student survey. Authors' calculations. N = 379 in Grand Bassa, 256 in Grand Gedeh, 100 in Rivercess, and 261 in River Gee.

Like students, teachers demonstrated broad support for equal allocation of food among boys and girls. A small proportion of teachers indicated that boys *should* receive certain foods before girls (16%)[13] and reported that they prioritized feeding boys over girls in practice (7%), potentially suggesting stronger gendered attitudes rather than practices. By county, these gendered attitudes and practices were more common among teachers in Grand Gedeh and Grand Bassa (Exhibit 49).

Exhibit 49. Proportion of Teachers Who Think Boys Should Receive Certain Foods Before Girls and Who Prioritize Feeding Boys Over Girls, by County



Source: Teacher survey. Authors' calculations. N = 57. A small proportion of teachers responded they did not know when asked about their attitude. They are excluded from this graph.

[13] Teachers who reported boys should receive certain foods before girls (n = 9) indicated boys should receive starches and carbs (56%), protein (44%), fat (33%), fiber (22%), and vitamins and minerals (22%) before girls.

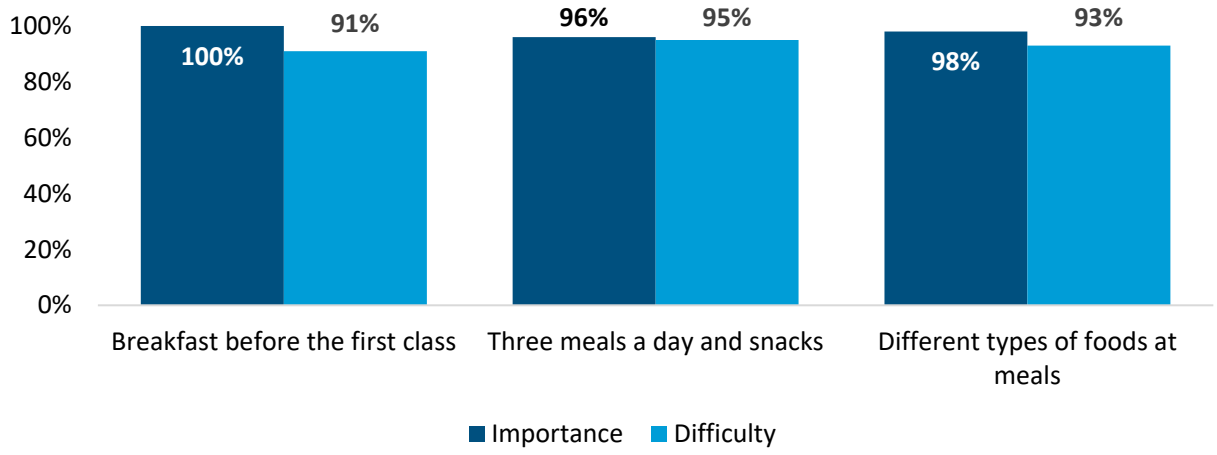
Teacher Outcomes

This section delineates teachers' knowledge, attitudes, and practices (KAP) regarding nutrition, WASH, and other health matters among students. The teacher survey specifically sought to elicit this information to identify domains in which teachers might undermine, reinforce, or otherwise influence student health-related outcomes. Where relevant, we disaggregate teacher responses by county, highlighting areas where we observe notable county-level trends in teacher KAP. However, the small sample size limits interpretation and generalizability of these findings; county-level differences may simply reflect individual-level differences among respondents rather than systematic differences across counties.

Nutrition

At baseline, teachers demonstrated strong support of recommended nutrition practices for children, namely minimum meal frequency and dietary diversity, yet casted doubt on the feasibility of following such practices. Among surveyed teachers, nearly all indicated the importance of children eating breakfast before their first class (100%), having three meals a day and snacks (96%), and consuming different types of foods at meals (98%) (Exhibit 50). Nevertheless, most teachers also perceived barriers that undermine children's capacity to follow these recommended practices, with perceived barriers highest for children's ability to maintain minimum meal frequency (95%) and dietary diversity (93%) (Exhibit 50).

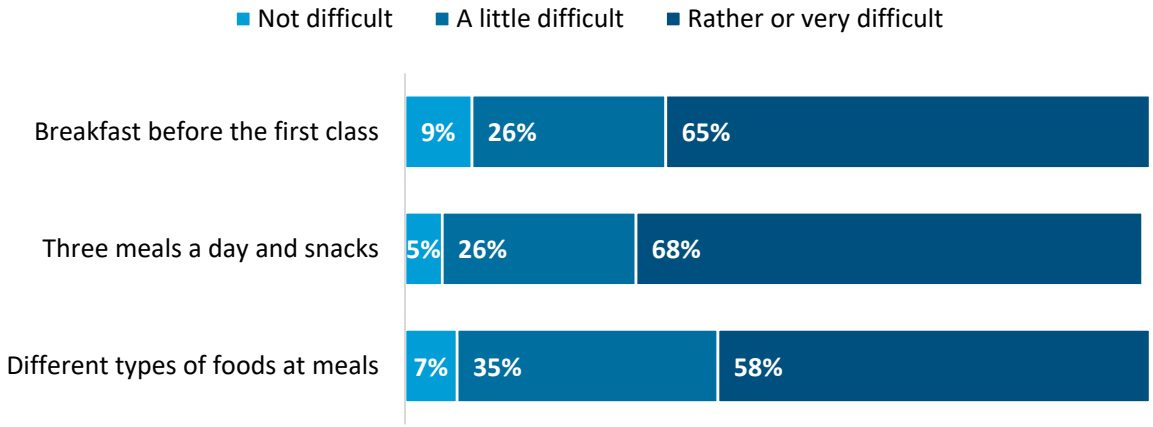
Exhibit 50. Perceived Importance and Difficulty of Recommended Nutrition Practices



Source: Teacher survey. Authors' calculations. N = 57.

While perceived barriers were pervasive regardless of the recommended nutrition practice, challenges appeared most acute for meal frequency, specifically children's ability to consume three meals a day and snacks, according to teachers.[14] Over two thirds of surveyed teachers perceived this practice as very or rather difficult for children (68%) (Exhibit 51); by county, this perception was more prevalent among teachers in River Gee (82%) and Rivercess (73%) who unanimously reported this practice as at least a little difficult to achieve. In Grand Gedeh and Grand Bassa, by contrast, more teachers perceived this practice as slightly difficult (17% and 35%, respectively) or not difficult (17% and 4%, respectively) for children to follow (see Exhibit B8 in Appendix B). Across nutrition practices, perceived barriers were most pronounced among teachers in River Gee: all surveyed teachers in this county reported some degree of difficulty for children to follow any of the recommended nutrition practices.

Exhibit 51. Degree of Perceived Difficulty, by Recommended Nutrition Practice



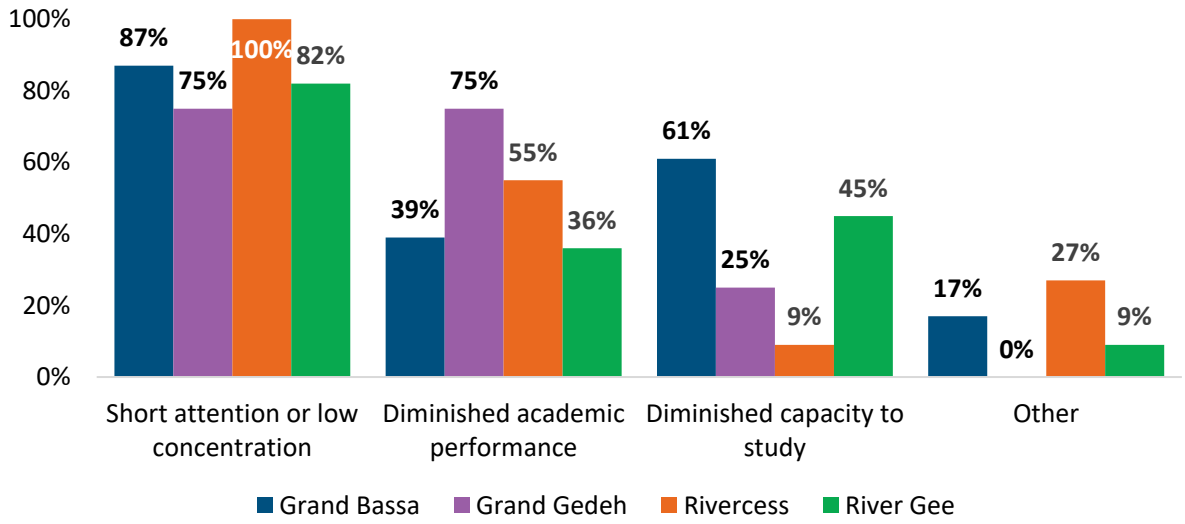
Source: Teacher survey. Authors' calculations. N = 57 (breakfast before class and different types of food at meals) and 56 (three meals a day and snacks). One teacher in Grand Bassa refused to answer when asked about the importance of children eating three meals a day and snacks.

Although teachers indicated widespread support for recommended nutrition practices among children, the extent of their knowledge of these practices varied widely across domain and by county. For instance, less than half of teachers (44%) could accurately cite components of a nutritious meal,[15] and on average, teachers could only cite two important nutritional practices for a child's growth. Nevertheless, teachers' ability to identify signs of hunger in school children was promising insofar as all teachers could identify at least one potential side effect if a child forgoes breakfast before school. More specifically, most teachers recognized that missing breakfast before school can diminish children's concentration (86%), and a comparatively smaller

[14] Teachers' responses generally reflected students' self-reported meal frequency. On school days, students reported consuming an average of 2.3 meals per day, with only a third consuming three meals per day.
[15] To determine whether teachers knew the components of a balanced diet, the survey asked teachers to identify the three components of a nutritious meal, defined as a meal that contains protein, starches and carbs, and vitamins and minerals.

share also recognized that missing breakfast could undermine children's academic performance (49%) and capacity to study (40%) (Exhibit 52).

Exhibit 52. Teacher Knowledge of Signs of Hunger in School Children, by County



Source: Teacher survey. Authors' calculations. N = 57.

Across counties, teachers seemingly held differing perceptions or awareness of what counts as most important for specific nutrition practices. In some instances, these differences reflected incorrect knowledge. For example, by county, knowledge of nutritious meals seemingly lagged among teachers in Grand Gedeh and Grand Bassa, with teachers in these counties reporting the importance of vitamins and minerals—a key component of nutritious meals—less often on average relative to teachers in Rivercess and River Gee. In other instances, however, teachers' varying perceptions on knowledge-based questions reflected different interpretations or awareness of which factors are most pertinent for children's nutrition (e.g., nutrition practices important for children's growth). This suggests nutrition knowledge among teachers was not unified, especially across counties.

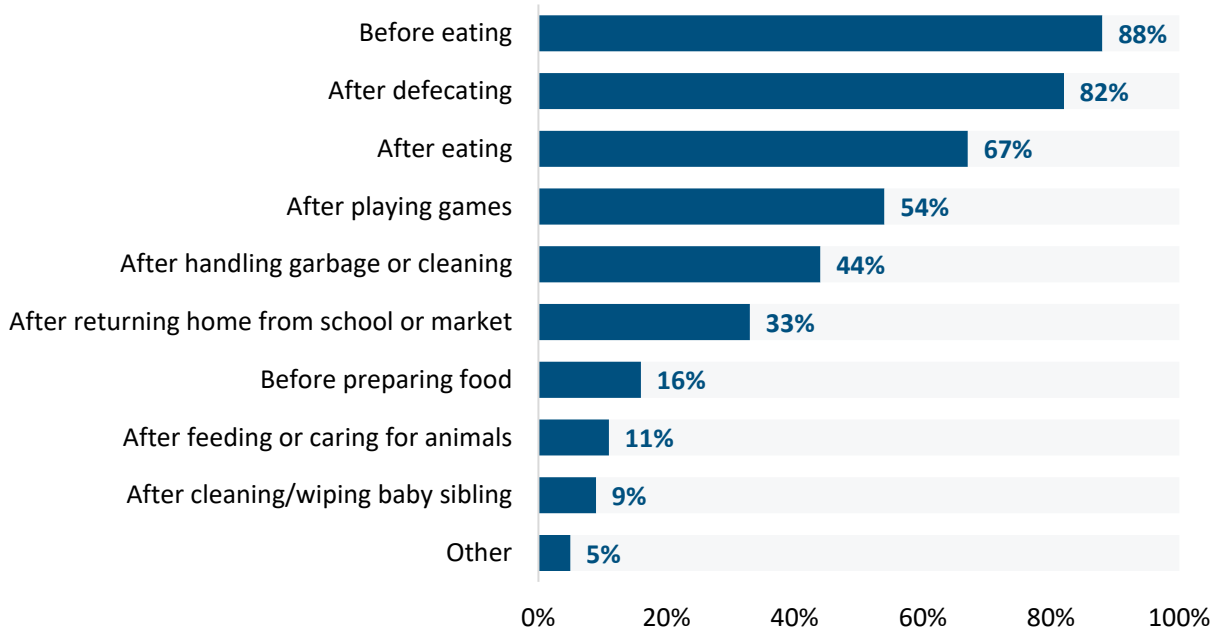
The qualitative data show relative inattention to nutrition awareness or practices among teachers, including principals who have been part of SHN activities through LEARN. For example, in FGDs and KIIs, none of the teachers or principals provided examples of nutrition-related activities when asked to describe the kinds of school activities conducted at school. Rather, they emphasized WASH activities (e.g., school cleaning, handwashing stations); WASH advocacy (e.g., promoting handwashing and hygiene); and, rarely, family planning education.

WASH

Teachers' WASH knowledge mirrored trends in their nutrition knowledge: teachers demonstrated basic knowledge of WASH topics yet also exhibited differing perceptions on knowledge-based questions across counties. More specifically, teachers demonstrated basic handwashing and water treatment knowledge, but within these domains, they emphasized different practices.

Most surveyed teachers (81%) were able to describe at least one recommended handwashing practice (e.g., washing hands under running water rather than still water, washing hands with soap or ash). By county, this knowledge was less common among teachers in Grand Gedeh (67%) and Grand Bassa (78%) relative to those in Rivercess and River Gee (91% each). On average, teachers cited four critical moments in which students should wash their hands; this average was slightly higher among teachers in River Gee (five critical moments) and slightly lower in Grand Gedeh (three critical moments). The most frequently cited critical moments for handwashing include before eating (88%), after defecating (82%), after eating (67%), and after playing games (54%) (Exhibit 53).

Exhibit 53. Critical Moments Students Should Wash Their Hands, According to Teachers

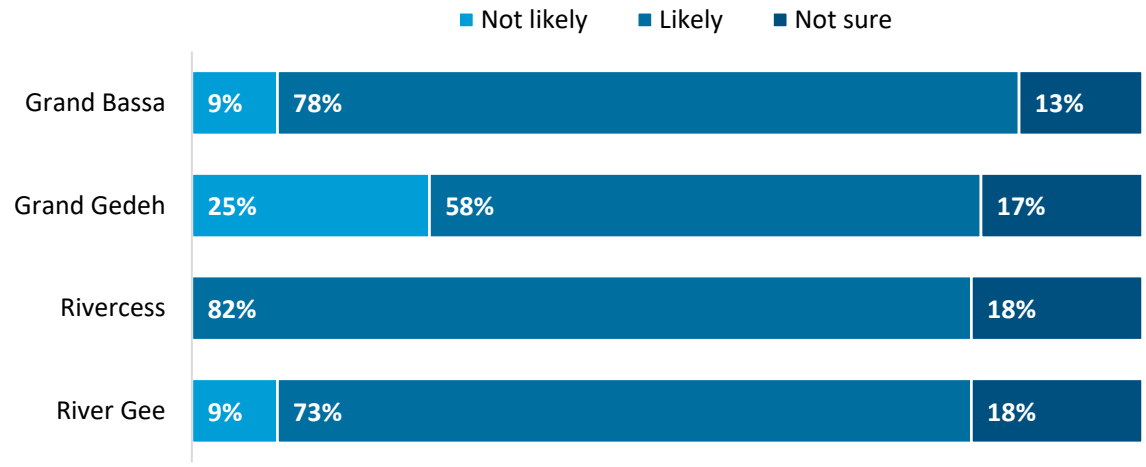


Source: Teacher survey. Authors' calculations. N = 57.

In general, teachers recognized the importance of boiling water for cooking and for drinking. On average, most surveyed teachers viewed boiling water prior to cooking as rather or very important (88%) while 11% thought this practice was only a little important. Likewise, most

teachers acknowledged that a child could become sick from drinking untreated water despite holding differing perceptions on the likelihood of this occurring (Exhibit 54).

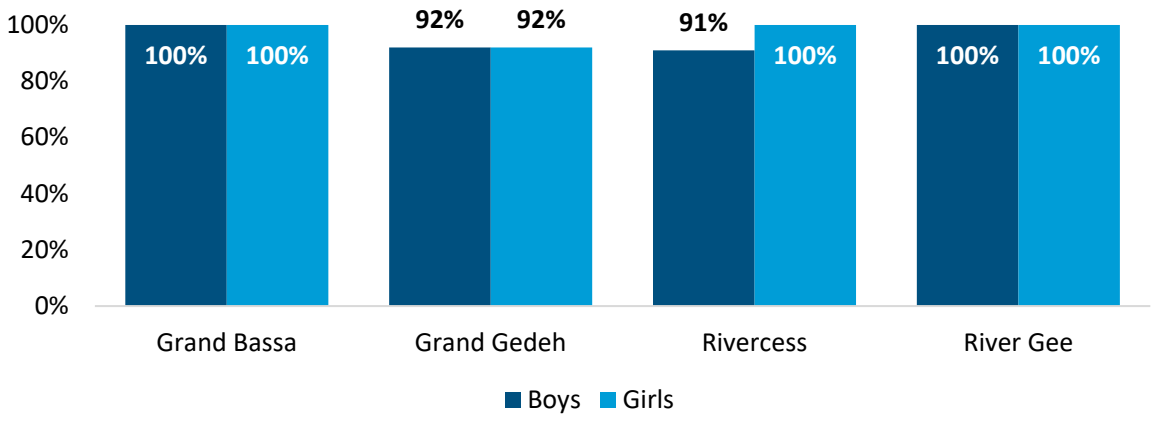
Exhibit 54. Perceived Likelihood of a Child Becoming Sick From Drinking Untreated Water, by County



Source: Teacher survey. Authors' calculations. N = 23 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

To the extent possible, children seemingly follow recommended WASH practices as reported by teachers. Across counties, nearly all teachers reported students use toilets at school, which varies little by student gender (96% for boys and 98% for girls) (Exhibit 55). Likewise, among schools with functional handwashing stations (86%), all teachers reported that some or most students wash their hands after using the bathroom and before meals (Exhibit 55).

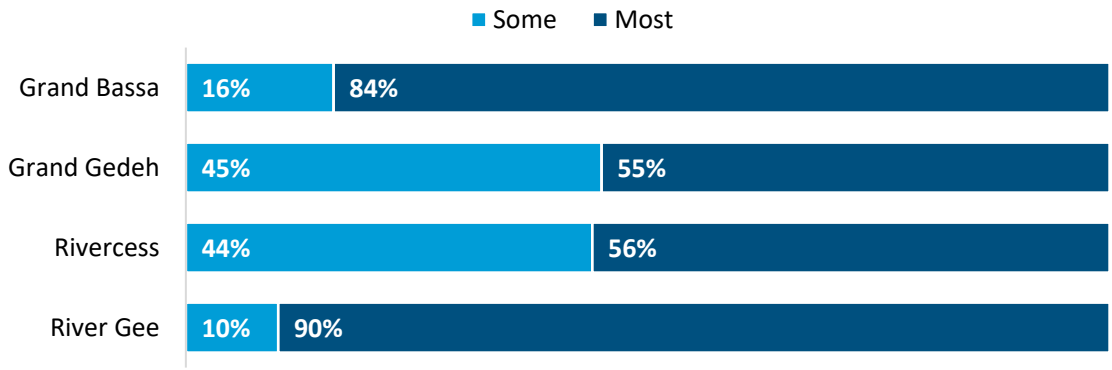
Exhibit 55. Proportion of Teachers Who Report Children Use Toilets at School, by County and Student Gender



Source: Teacher survey. Authors' calculations. N = 57.

Despite promising basic handwashing practices at baseline, student's handwashing regularity at critical moments varied by county (Exhibit 56). The proportion of teachers who reported children only sometimes engage in handwashing at critical moments suggests lagging handwashing practices among children in Grand Gedeh and Rivercess in particular. This variation appears to be weakly associated with access to functional handwashing stations or inputs for handwashing, namely soap and water (Exhibit 56). While handwashing regularity and access to a functional handwashing station was lower on average in Rivercess relative to the other counties, schools in Grand Gedeh, by contrast, appeared to have the highest access to handwashing resources yet children in these schools exhibited less frequent handwashing at critical moments as reported by teachers.

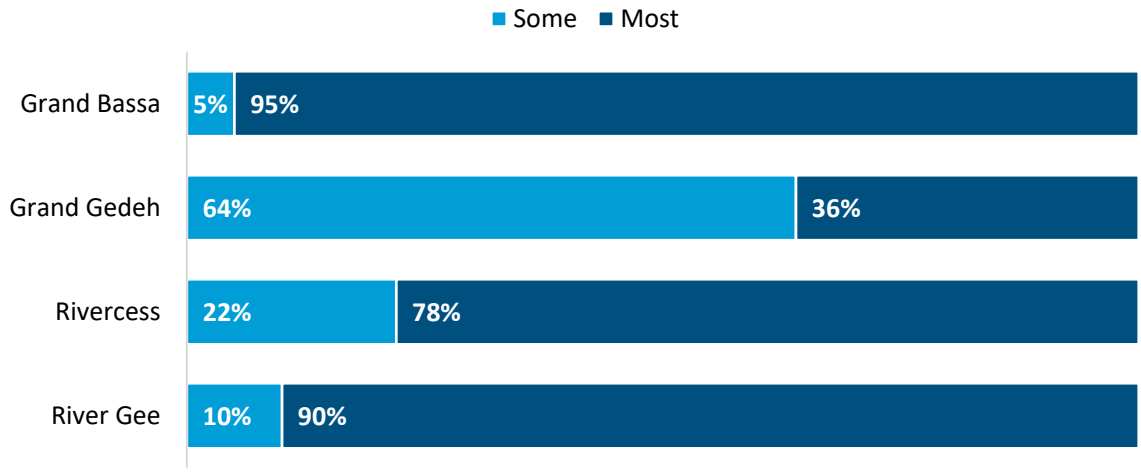
Exhibit 56. Proportion of Teachers Who Report Children Wash Hands After Using the Bathroom, by County



Source: Teacher survey. Authors' calculations. N = 19 in Grand Bassa, 11 in Grand Gedeh, 9 in Rivercess, and 10 in River Gee. This question only applied to teachers who reported their school has a functional handwashing station.

When compared to students' self-reported handwashing behaviors, it seems teachers tended to overstate the prevalence of students' handwashing behavior at critical moments. Although handwashing after using the bathroom was common according to students, with 88% reporting doing so after defecation and 40% doing so after urination, less than half of students reported handwashing before meals (42%). While an imperfect comparison, this contradicts most teachers (78%) who reported *most* students wash their hands at this critical moment. In addition, at the county-level, teachers' knowledge of student handwashing behavior seems mismatched with students' self-reported behaviors. While lapses in handwashing practices were most pronounced in Rivercess and River Gee according to students, teachers' responses suggest handwashing practices were weakest in Grand Gedeh and Rivercess.

Exhibit 57. Proportion of Teachers Who Report Children Wash Hands Before Meals, by County



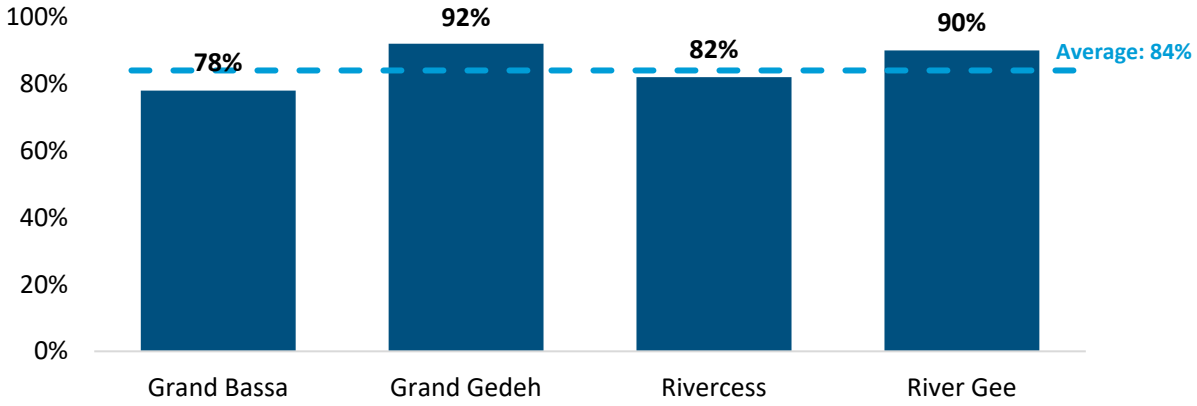
Source: Teacher survey. Authors' calculations. N = 19 in Grand Bassa, 11 in Grand Gedeh, 9 in Rivercess, and 10 in River Gee. This question only applied to teachers who reported their school has a functional handwashing station.

To better understand the availability of WASH resources at school, we asked teachers a series of questions on their access to water, handwashing stations, and soap at school. Most surveyed teachers reported their school had access to a functional handwashing station (86%), which was more common in Grand Gedeh and River Gee (92% and 91%, respectively) than in Grand Bassa and Rivercess (83% and 82%, respectively). Among these schools, most also had access to both soap and water (88%) at the handwashing station; only 6% had access to just water and 4% did not have access to either handwashing inputs. This is consistent with student responses insofar as 91% of students reported using soap and water for handwashing whereas 7% reported only using water.

Like access to functional handwashing facilities, which was generally high despite county-level variation, access to improved drinking water[16] sources were common among schools according to teachers. At baseline, most teachers reported access to an improved drinking water source at school (84%). At the county-level, access was lowest among schools in Grand Bassa (78%) and highest among schools in Grand Gedeh (92%) according to teachers (Exhibit 58). Among improved drinking water sources, teachers most cited hand pumps (46%), piped water (29%), and wells (23%); unimproved water sources most frequently included surface water (e.g., creeks, streams) (89%). Regardless of water source, no teachers reported receiving boiled water in school.

[16] According to the USDA McGovern Dole Food Assistance Indicators and Definitions (2019), improved water sources includes (1) piped water into dwelling, plot, or yard; (2) public tap or standpipe; (3) tube well or borehole; (4) protected dug well; (5) protected spring; (6) rainwater collection.

Exhibit 58. Proportion of Teachers Who Reported Access to at Least One Improved Drinking Water Source at School, by County



Source: Teacher survey. Authors' calculations. N = 23 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

Disease Knowledge

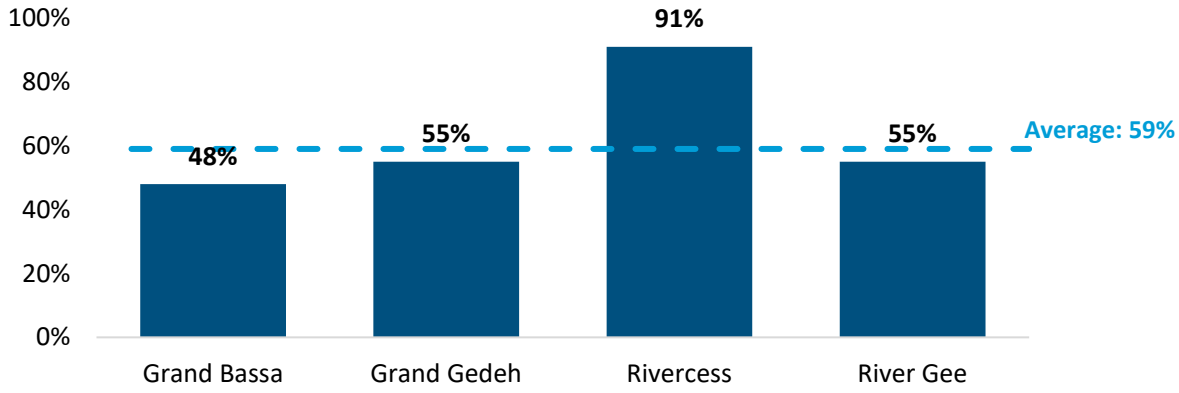
In contrast to their basic knowledge of nutrition and WASH topics, surveyed teachers demonstrated highly selective awareness and knowledge of specific diseases. A small proportion of teachers were aware of trachoma (23%) or dengue fever (7%); however, most were aware of intestinal worms (55%). Among teachers who were aware of trachoma (n = 13), most could cite at least one symptom of the disease (92%) and at least one prevention method (54%), yet less than half could identify at least one cause (38%) of the disease. By contrast, most teachers who were aware of intestinal worms (n = 31) were able to cite at least one cause (81%) and one method to prevent (84%) intestinal worms.

Menstruation Education

According to teachers, access to menstruation-related information in school diverges across counties. Just over a third (35%) of teachers reported that menstrual management materials are available at their school in case of an emergency. Most schools in Grand Gedeh (64%) and Rivercess (55%) offered these materials whereas comparatively less did so in Grand Bassa (26%) and none did so River Gee (0%). Despite varying access to these resources in schools across counties, most teachers received training on menstruation as part of their pre-service or in-service trainings (59%), potentially suggesting that most teachers were knowledgeable of menstruation even if their school did not provide menstruation-related information.

Among schools that provided menstrual management materials (n = 10), most offered these materials free of charge (90%) and all also provided menstrual education, with half offering such education to girls only and half offering this education to both boys and girls. Half reported menstrual education in their school begins at Grade 3 (50%), followed by Grade 4 (20%), Grade 6 (10%) and Grade 2 (10%); one teacher did not know at which grade this education begins.

Exhibit 59. Proportion of Teachers Who Received Training on Menstruation, by County

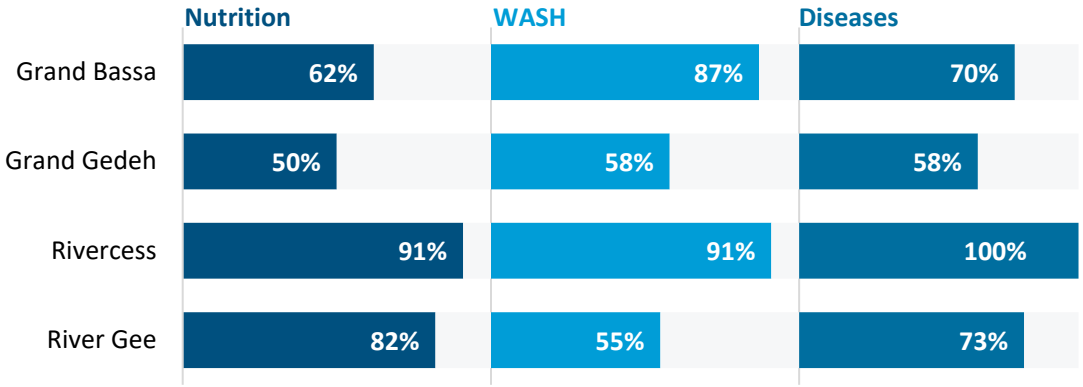


Source: Teacher survey. Authors' calculations. N = 23 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee. One teacher in Grand Gedeh responded they did not know whether they received training on menstruation as part of their pre-service or in-service trainings.

Information Sources on Health Topics

Across health topics, namely nutrition, WASH, handwashing, and disease-related topics, most teachers received information at least once a month (Exhibit 60) and most often received this information from Save the Children, teacher trainings, and health workers (Exhibit 60). On average, teachers received WASH (75%) and disease-related information (74%) more frequently than nutrition information (69%).

Exhibit 60. Proportion of Teachers Who Received Health-Related Information at Least Once a Month, by Health Topic

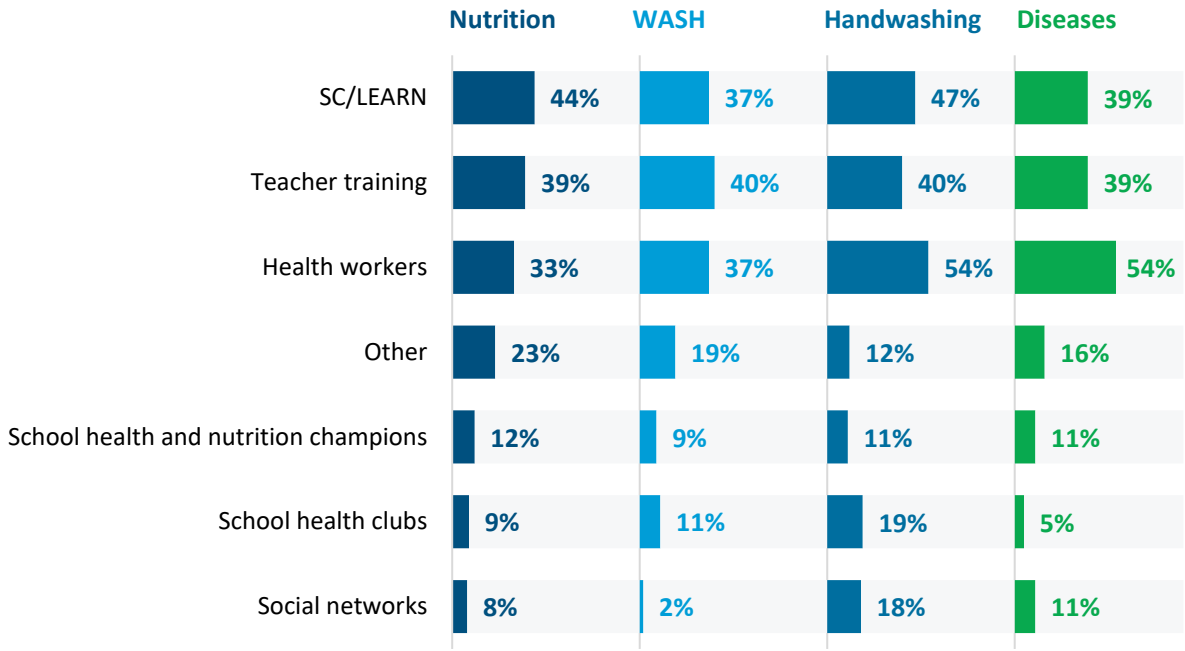


Source: Teacher survey. Authors' calculations. N = 57.

By county, teachers in Grand Bassa and Grand Gedeh received nutrition information less often, on average, relative to teachers in Rivercess and River Gee (Exhibit 61). County-level differences in the frequency of information dissemination can potentially explain why less than half of teachers in Grand Bassa and Grand Gedeh could cite the three components of a nutritious meal,

unlike their counterparts in Rivercess and River Gee. Similarly, teachers in Grand Gedeh (58%) and River Gee (55%) received WASH knowledge less often than their counterparts in Grand Bassa (87%) and Rivercess (91%). Even with these differences in receiving information, a vast majority of teachers shared WASH materials with PTA members (84%), which was most common among teachers in Rivercess (91%) and Grand Bassa (87%) than in Grand Gedeh (58%) and River Gee (55%). The extent to which the frequency and specific information sources influenced teacher knowledge, practices, and PTA outreach is unclear at baseline, though it is notable that the qualitative data showed almost no mention of nutrition by teachers beyond general understanding of the importance of meals for students.

Exhibit 61. Teachers' Information Sources, by Health Topic



Source: Teacher survey. Authors' calculations. N = 57.

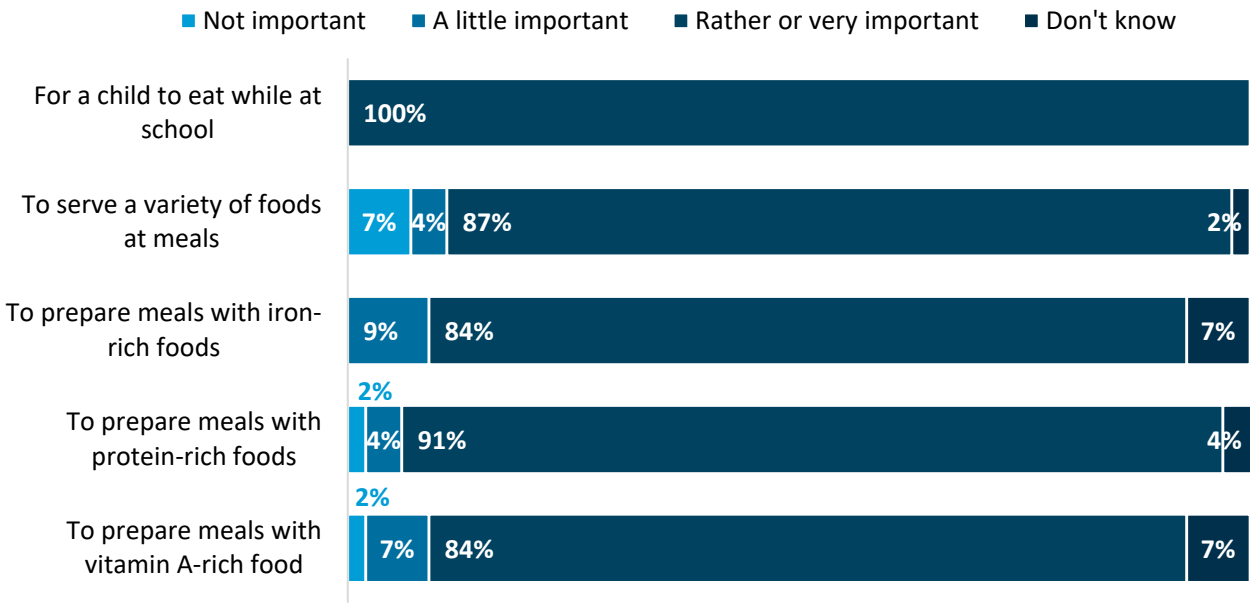
School Meal Provider Outcomes

This section details SMPs' KAP regarding nutrition and food safety, which could potentially influence student nutrition and health outcomes. Through the survey, we attempted to gauge the depth of SMPs' nutrition knowledge, particularly as it relates to micro- and macro-nutrients pertinent for school meal composition. For food safety, we asked SMPs about a range of topics, focusing on potential threats to food safety through departures from recommended food preparation and food storage practices. Where relevant, we disaggregate SMP responses by county, but as with the teacher sample, the small sample size limits interpretation and generalizability of these results.

Nutrition

Like teachers, SMPs expressed widespread support for recommended nutrition practices at baseline, particularly for meal frequency. Most SMPs indicated that it was very or rather important for children to eat while at school (100%) and to prepare meals with protein-rich foods (91%), a variety of foods (87%), iron-rich foods (84%), and vitamin A–rich foods (84%) (Exhibit 62). A small proportion of SMPs seemingly viewed serving diverse meals, including meals rich in macro- and micro-nutrients, as comparatively less important than meal frequency (i.e., for a child to eat while at school), and a small share were uncertain about the relative importance of these nutrition practices.

Exhibit 62. Perceived Importance of Nutrition Topics Among SMPs

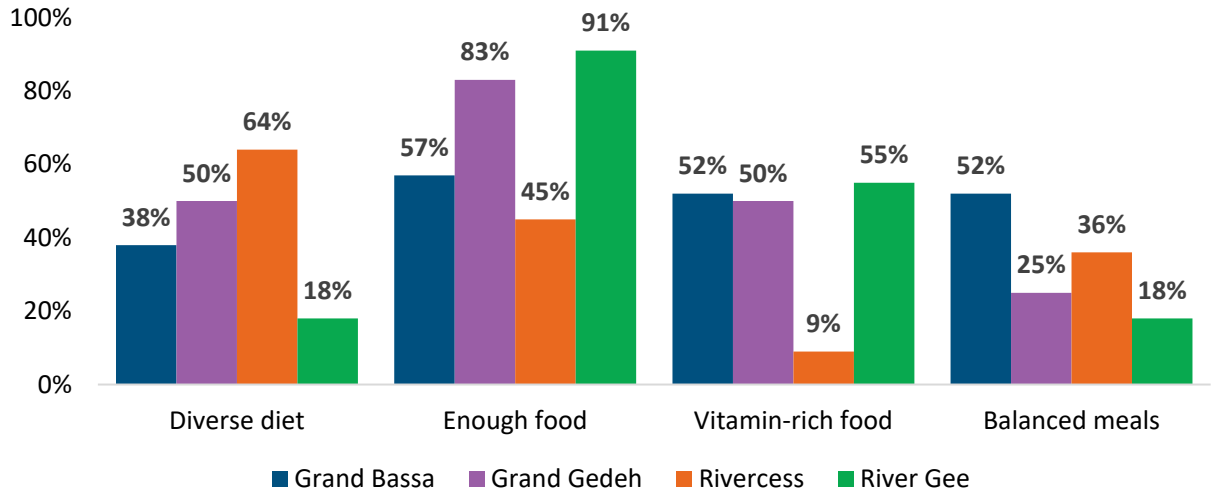


Source: School Meal Provider survey. Authors' calculations. N = 55.

The importance SMPs attributed to meal diversity and nutrient density notably diverged across counties. Although all SMPs in Rivercess perceived serving a variety of foods at meals as important, this perception was not universally held in other counties, with SMPs in Grand Gedeh (17%), River Gee (9%), and Grand Bassa (5%) deeming this meal attribute as unimportant. Also, of the SMPs who did not place importance on serving nutrient-rich foods at meals, 8% in Grand Gedeh regarded vitamin A–rich foods as unimportant for school meals, and 9% of SMPs in River Gee reported as such for protein-rich foods. Given the small sample size of SMPs, these county discrepancies may merely reflect individual differences in perceptions rather than systematic differences across counties.

SMP nutrition attitudes are apparent in their responses to knowledge-based questions: when asked to specify important nutritional practices for school children, SMPs most frequently cited sufficient food (67%), followed by vitamin-rich food (44%), diverse diets (42%), and balanced meals (36%). As with the perceived importance of different nutritional topics, SMPs emphasized different nutritional practices across counties. For instance, the importance of adequate food was particularly pronounced among SMPs in River Gee (91%) and Grand Gedeh (83%) relative to Grand Bassa (57%) and Rivercess (45%) (Exhibit 63). Likewise, SMPs in Rivercess infrequently regarded consuming vitamin-rich food as an important nutritional practice for children (9%), placing greater emphasis on dietary diversity (64%). SMPs in River Gee presented a contrasting pattern, placing more emphasis on vitamin-rich food (55%) than a diverse diet (18%).

Exhibit 63. SMP Knowledge of Important Nutritional Practices for Children, by County



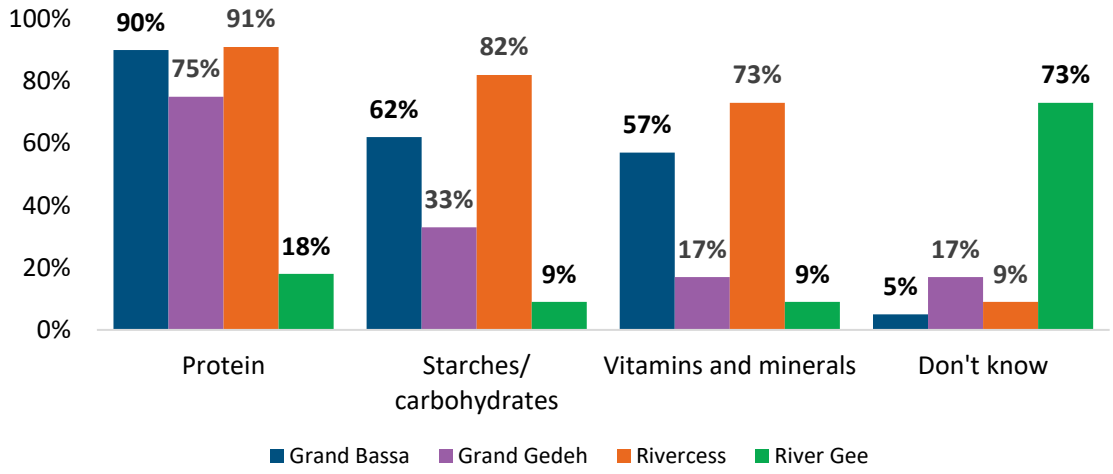
Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee. A small proportion of SMPs who reported other (2%) is not shown in the graph.

At baseline, SMPs lacked accurate information on student micronutrient deficiencies. Among children in their school, nearly half of SMPs, on average, were unsure whether vitamin A deficiency was pervasive among students (45%), and just over a third did not know whether iron deficiency was common among students (37%). Of the SMPs that remarked on the prevalence of these micronutrient deficiencies, most viewed them as common afflictions among students, especially for iron deficiency, apart from SMPs in Grand Bassa who indicated vitamin-A and iron deficiency among students were mostly uncommon (43% and 48%, respectively).

Apart from lacking information on student micronutrient deficiencies, most SMPs demonstrated low knowledge levels of recommended meal composition and micronutrient-rich foods. On average, less than a third (29%) of SMPs could correctly cite the three components of a nutritious meal, with distinctive knowledge gaps across counties: while over half (64%) of SMPs in Rivercess

knew these components, a comparatively smaller share possessed this knowledge in Grand Bassa (38%), Grand Gedeh (8%), and River Gee (0%). Where this knowledge was lacking, most SMPs underweighted the importance of starches and carbohydrates as well as vitamins and minerals for meal composition, especially in Grand Gedeh and River Gee where less than half of SMPs indicated these components were important for nutritious meals (Exhibit 64).

Exhibit 64. Food Groups That SMPs Cited for a Nutritious Meal, by County

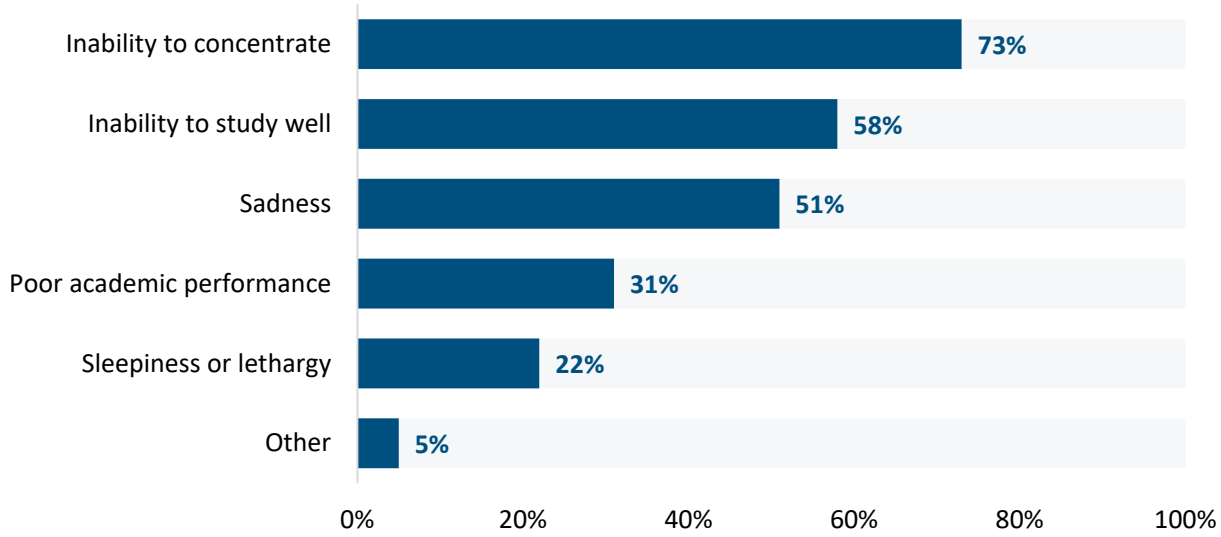


Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee. Responses for fat and fiber are not shown in the graph.

Despite lacking general knowledge on meal nutrition, when asked to provide specific examples of micronutrient-rich foods they served in school meals, three quarters of SMPs could identify at least one vitamin A–rich food and nearly all could identify at least one iron-rich food (91%). This knowledge, however, appears shallow, with most SMPs citing one to two examples of each nutrient-rich food. On average, SMPs in Grand Bassa could cite more examples of vitamin A–rich foods (two foods) than their counterparts in other counties; and, conversely, SMPs in River Gee could cite fewer examples of iron-rich foods (one food) relative to SMPs in other counties (two foods).

Although SMPs' nutrition knowledge varied across topics at baseline, most SMPs—like teachers—were able to identify at least one sign of hunger in a child (98%), often citing inability to concentrate (73%), inability to study well (58%), and sadness (51%) as primary indicators that a child missed a meal (Exhibit 65). In general, SMPs were also adept at identifying signs of nutrient deficiencies in children, demonstrating knowledge of at least one symptom of vitamin A (71%), iron (80%), and protein (80%) deficiency.

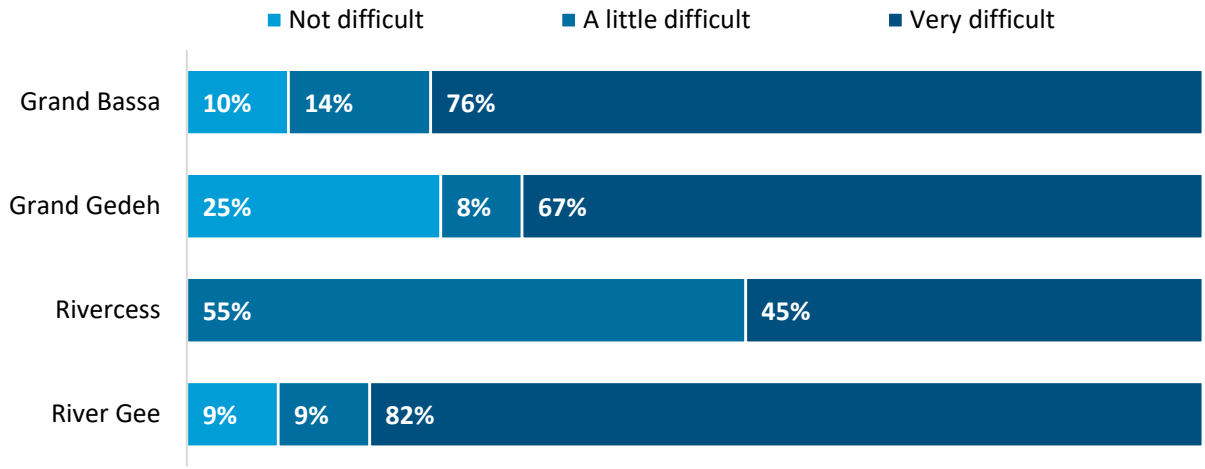
Exhibit 65. SMP Knowledge of Specific Signs That a Child Skipped a Meal



Source: School Meal Provider survey. Authors' calculations. N = 55.

Regardless of their nutrition attitudes or knowledge levels, SMPs seemingly faced severe supply-side constraints regarding school meal composition that undermined their ability to serve nutritious school meals. On average, most SMPs reported difficulties in serving a variety of foods for school meals (89%), attributing challenges to both the cost (58%) and availability (55%) of diverse ingredients. Perceived barriers were particularly pronounced among SMPs in Rivercess—all perceived some degree of difficulty—whereas SMPs in Grand Gedeh less frequently perceived difficulties in providing diverse meals (75%) (Exhibit 66).

Exhibit 66. Perceived Difficulty of Serving a Variety of Foods, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

Perceived barriers in serving diverse meals were evident in school meal composition: during the week of their survey date, only 38% of SMPs were serving any kind of vegetable in school meals and none were serving fruits or eggs. Nevertheless, the extent to which nutrient dense foods are regularly available in school meals was unclear at baseline. As previously mentioned, when asked to provide examples of nutrient-rich foods they served in school meals, SMPs could cite an average of one food rich in vitamin A and two foods rich in iron. Among vitamin A–rich foods, SMPs most frequently mentioned dark green vegetables (49%), palm oil (31%), pumpkin (29%), and orange sweet potatoes (25%); among iron-rich foods, they most often cited flesh meat (69%), fish and seafood (38%), organ meat (24%), and potatoes (20%).

Though not recognized explicitly by cooks as a challenge, qualitative data suggests that they lacked additional food supplies to diversify and enhance meal nutrition. In only three of the twelve communities did cooks and storekeepers mention that they cooked more than beans and rice. One cook indicated that she was aware of the need to diversify meals but that this was not easy:

"They said, we should change the soup we cook for the children because they will get tired with the same beans every day….We are making farm [have a farm that they work on], but the farm can't make it [won't be sufficient], we can only plant cassava and other soup like greens, okra, and bitter ball but it will not be enough."

—Cook, Rivercess

KIIs with other cooks indicate that they did not regularly have access to foods beyond the commodities LEARN provided (rice, beans, oil) and the condiments the PTA provided (Vita [flavor cube], salt, pepper)—though even those condiments were not always available if the PTA had not been successful in procuring them (usually through collecting money from parents).

Qualitative data suggest that access to protein or vegetables depended on whether others in the community provided it, which was not consistent and sometimes imposed costs on parents. For example, a cook in Grand Bassa said:

"The principal can tell the teacher to collect money for the food, they are both men and women. Sometimes, the men can buy meat and the women can buy fish and pig feet for the food."

—Cook, Grand Bassa

Another cook in Rivercess said:

"Sometimes, the principal can ask the children to bring greens to change the soup when we don't have greens in the garden…the students are not responsible to bring the greens but we can just talk to them to bring it."

—Cook, Rivercess

A cook in another community in Grand Bassa said:

"[The community mobilizer] also told us to put fish in the beans every and the money is provided by the students in the sum of 25 Liberian dollars per student per day.…We always cook beans because the children refused to bring potato greens but prefer beans."

—Cook, Grand Bassa

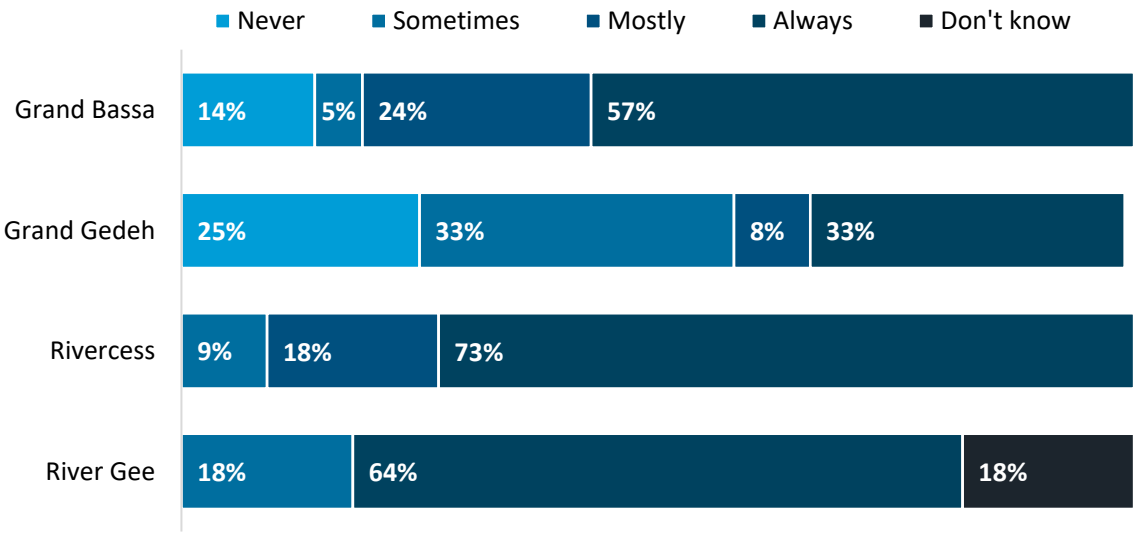
Students perceived these dynamics as well, as one girl said:

"The cook cannot cook different soup unless there is a program. They are always cooking beans."

—Girl student, Grand Bassa

These reported supply-side constraints potentially undermined SMPs' ability to follow recommended nutritional guidelines. Most SMPs reported that the school meals they provide deviated from the MOE's school feeding food and nutritional guidelines (89%), with a small proportion of SMPs in Grand Gedeh (25%) and Grand Bassa (14%) reporting that their school meals never adhered to these guidelines (Exhibit 67). In addition, 40% of SMPs reportedly made adaptations to the MOE recommended menu, often attributing such adaptations to the scarcity (53%) or costliness (42%) of recommended ingredients (53%) or to students' diets (26%).

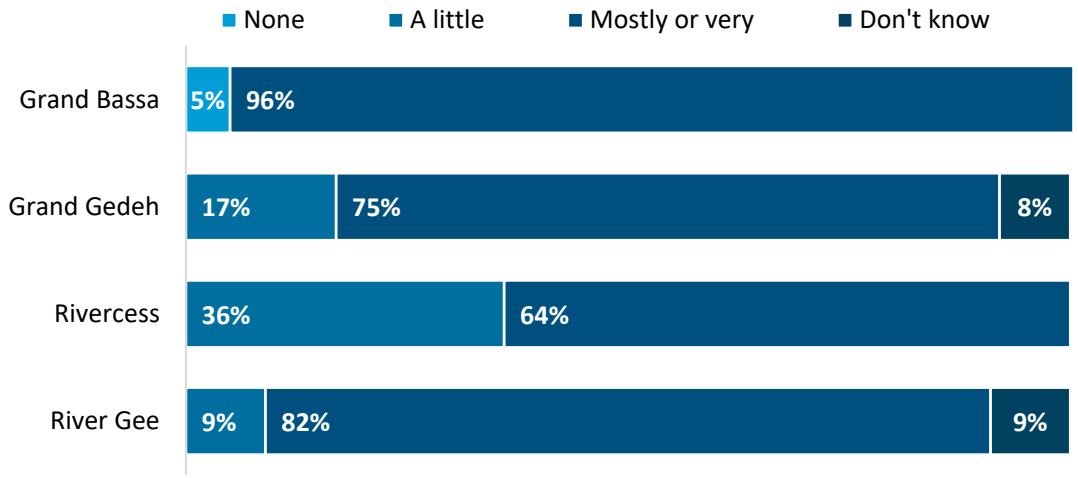
Exhibit 67. Frequency With Which SMPs Provided School Meals Based on the MOE's School Feeding Food and Nutritional Guidelines From the National School Feeding Policy, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

Despite the barriers SMPs encountered in preparing diverse school meals, a majority felt confident preparing healthy and nutritious meals for school children (98%). All SMPs in Rivercess expressed confidence, and only a small proportion of SMPs—all of whom are concentrated in Grand Bassa—did not feel confident. Given that most SMPs recognized challenges in providing nutritious meals, these confidence levels perhaps indicate a sense of self-efficacy in their ability to prepare nutritious meals—even if they lack resources (e.g., knowledge, inputs) to do so. In addition, there appears to be a somewhat inverse relationship between SMP confidence levels and SMP compensation. SMPs who received compensation for their work (87%), particularly those who received in-kind compensation (90%) rather than cash (10%), were more likely to express lower confidence levels. Of the SMPs who expressed little or no confidence, all were paid in-kind; by contrast, all SMPs who were *not* compensated for their work indicated they felt *very* confident in their ability to prepare healthy and nutritious meals. This discrepancy could reflect that SMPs who received in-kind compensation more accurately perceived the limitations of school meal composition and, therefore, more accurately assessed their actual ability to prepare nutritious meals.

Exhibit 68. SMP Confidence Levels in Preparing Healthy and Nutritious Meals for School Children, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

While SMP confidence levels were generally high, their sense of job satisfaction was mixed: of the SMPs who received compensation for their work, just over half (52%) indicated that it was fair compensation for the work they do, suggesting a fairly large proportion of SMPs believed that they should receive additional or alternative compensation. SMPs who received in-kind compensation were more likely to indicate dissatisfaction with their compensation (50%) and that their food preparation work interfered with their other responsibilities (23%) than their counterparts who received cash (20% and 0%). Though their job satisfaction may vary, it does not seem to affect their effort levels: on average, SMPs reported spending four hours each day on food preparation regardless of the kind of compensation they received or if they perceived their compensation as fair. SMPs who did not receive compensation, however, seemingly exerted slightly less daily effort, reporting an average of three hours per day on food preparation. Even so, over a quarter of these SMPs indicated that their food preparation work interfered with other responsibilities (29%), perhaps indicating that these SMPs substituted their time away to different tasks.

Based on the qualitative data, SMP (cooks and storekeepers) morale was generally high. Nearly all of them said they had received adequate training (one who did not was new to his position as storekeeper), were happy about the positive impact the school feeding program had had on students, and felt well-supported by school staff and SC. For example, one storekeeper said:

"[it is not hard for me] to serve the cook. Absolutely I haven't encountered any challenges in this work. But if for any reason I have challenges, I can tell the principal or Z (the Community mobilizer)."

—Storekeeper, River Gee

A cook in Rivercess said:

"Nothing is giving me hard time, everything is okay."

—Cook, Rivercess

When asked to share any challenges, cooks most often reported having kitchens in need of repair (seven of 12 cooks) or basic materials (seven of 12 cooks); storekeepers commented on needing better doors and walls to storerooms to keep out pests (three of 12 storekeepers, all of whom also mentioned that they had since fixed the doors themselves). There were rare reports that some of the food received was not sufficient for distributing to the cooks each the month (two of twelve storekeepers) and reports that food received was sometimes spoiled or had bugs inside (one of 24 cooks and storekeepers who, in response to these instances, would check the food upon receipt and return it to be replaced). Two of the 12 storekeepers complained that their food rations were late, and one said she would prefer cash payment. Importantly, none indicated that they would not continue their jobs without better payment or conditions.

Food Safety Knowledge

At baseline, SMPs exhibited basic food safety knowledge and expressed support for recommended food safety practices. Most SMPs could accurately identify factors that affect food safety (Exhibit 69) in general and, more specifically, could identify signs that certain foods such as soups and stews (91%) and meat (80%) were safe to serve. In addition, all SMPs recognized the importance of basic food preparation practices such as wearing clean clothes when preparing meals (100%) and maintaining a clean cooking space (100%). SMPs also expressed strong support for practices that reduce food contamination, reinforcing the importance of ensuring flies do not touch prepared food (96%); storing meat and cooked food in a clean place (96%); using separate, clean utensils to handle different types of food (93%); and cleaning food preparation surfaces after handling raw meat and before handling fruits and vegetables (87%).

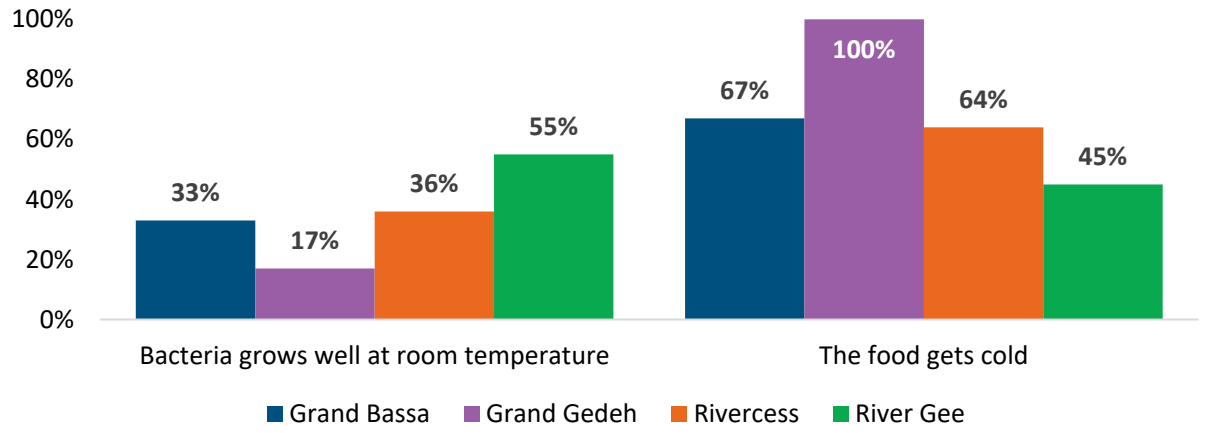
Exhibit 69. Factors That Affect Food Safety, According to SMPs

Source: School Meal Provider survey. Authors' calculations. N = 55.

Despite responses that affirmed the importance of recommended food preparation practices, knowledge gaps exist across counties and on food preparation specifics. For instance, 18% of SMPs indicated support for practices that *undermine* food safety, namely using the same utensils to handle raw meat and other foods (15%) and preparing raw meat that has pests on it (13%). These responses were particularly common among SMPs in Grand Gedeh and Grand Bassa (33% and 24%, respectively). Likewise, when identifying factors that affect food safety, only 75% of SMPs in Grand Gedeh indicated that sneezing, coughing, vomiting, or diarrhea can affect food safety, which compares low to the 91% of SMPs in Rivercess who demonstrated this knowledge. Apart from county-level differences, SMPs also lacked clarity on specific food preparation topics; for example, to ensure produce is safe to serve, just over half of SMPs thought they should wash raw fruits and vegetables with clean water only (51%) whereas just under half thought they should use both clean water and soap (42%).

In addition to knowledge gaps on food safety practices, SMPs were not always cognizant of the underlying importance of these recommended practices, particularly as it relates to serving food. On one hand, most SMPs could cite at least one consequence of not refrigerating leftovers (98%), frequently mentioning that the food was no longer safe (78%) and spoils (60%) and acknowledged that children would likely get sick from eating food that was improperly stored (98%). On the other hand, in explaining the underlying importance of not leaving food out for too long before serving, just over a third mentioned the risks of bacteria growth (35%). Most SMPs simply emphasized that it was important to avoid doing so since the food gets cold (69%). This reasoning was particularly notable among SMPs in Grand Gedeh (Exhibit 70).

Exhibit 70. Importance of Not Keeping Food Out for Too Long Before Serving, by County



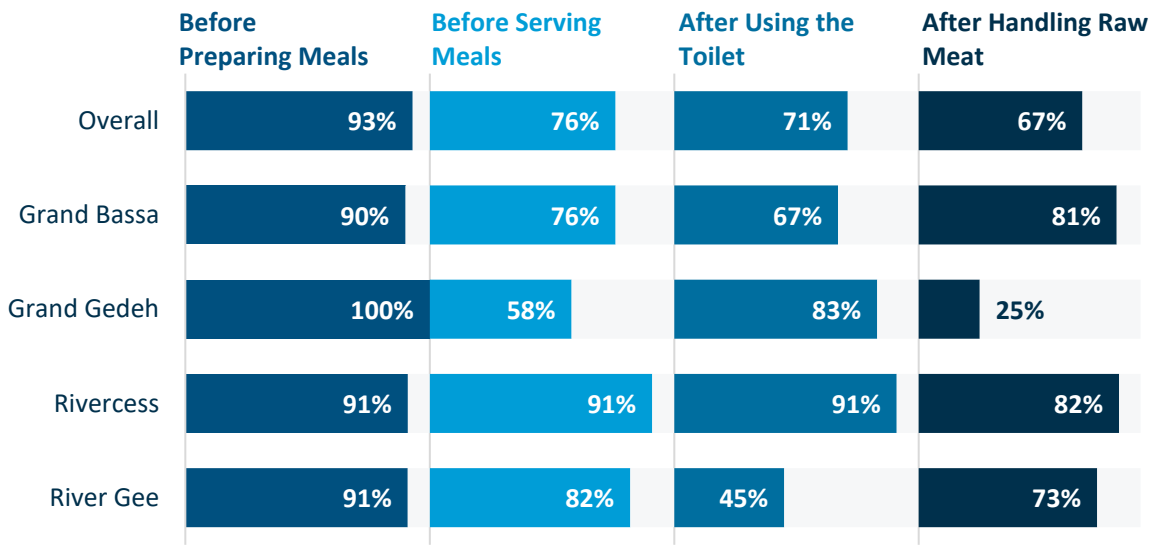
Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

Qualitative data show that all twelve cooks interviewed considered themselves to have been adequately trained, and they could all articulate basic food safety practices they had learned. However, as the quantitative data show, they may have been lacking necessary details about food safety that are necessary to fully apply that knowledge in the kitchen, elaborated below.

Food Safety Practices

Handwashing practices were generally widespread among SMPs but faltered at some key critical moments. On average, SMPs reported washing their hands at four critical moments, which included handwashing before preparing meals (93%), before serving meals (76%), after using the toilet (71%), after handling raw meat (67%), after touching garbage (47%), and after touching money (26%). SMPs across counties emphasized different critical moments and, in turn, demonstrated gaps in their handwashing practices (Exhibit 71).

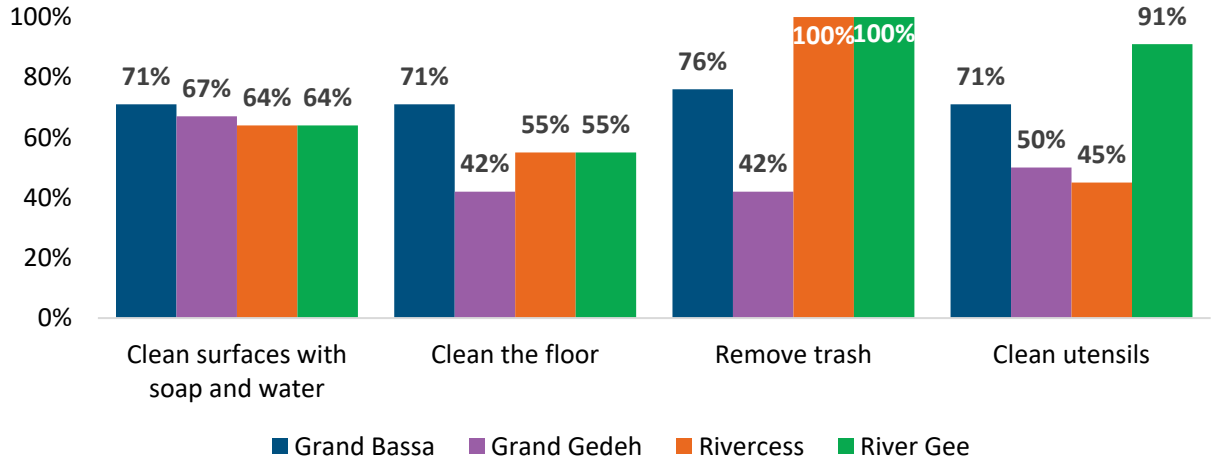
Exhibit 71. Critical Handwashing Moments Among SMPs, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

As with handwashing practices, SMPs emphasized different food safety practices across counties and, in doing so, demonstrated room for improvement with these practices. To clean their food preparation area, most SMPs removed any trash from the area (78%), cleaned surfaces with soap and water (67%), cleaned utensils (65%), and cleaned the floor (58%). Yet, at the county-level, SMPs adhered to these practices to varying degrees. For example, the share of SMPs who reported cleaning utensils in River Gee (91%) far exceeds the share of SMPs who did so in Rivercess (45%) (Exhibit 72).

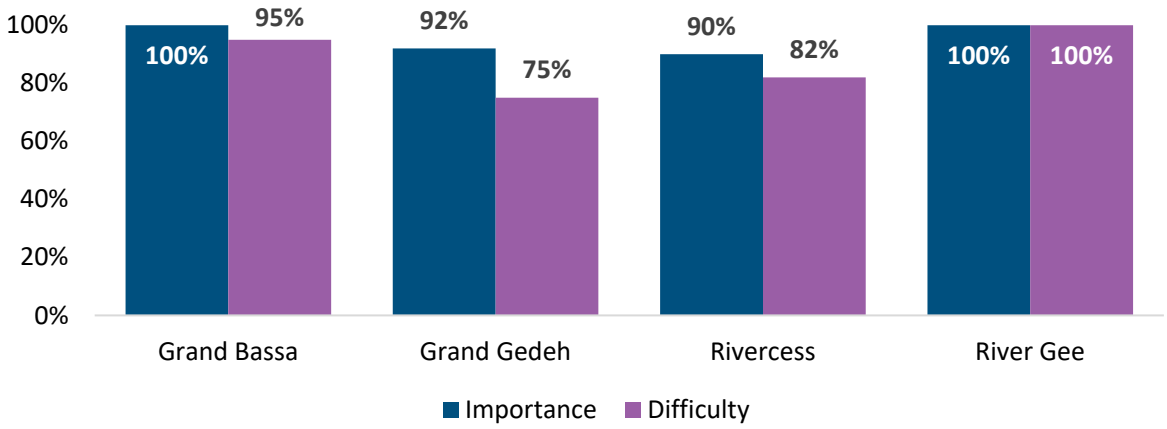
Exhibit 72. Measures to Prepare the Food Preparation Area, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

To the extent possible, SMPs seemingly adhered to recommended food storage practices. Although most SMPs thought it was important to store cooked foods in a cool place (93%), most report difficulties in doing so (89%), with a mere 4% reportedly refrigerating prepared foods. SMPs who experienced barriers in refrigerating prepared food often reported that they did not have access to a refrigerator (86%) or electricity (74%), and nearly a quarter expressed that refrigerators were too expensive (21%). Regardless of access to refrigeration, most SMPs reported that they cover cooked foods (85%), suggesting that most follow food storage practices where possible.

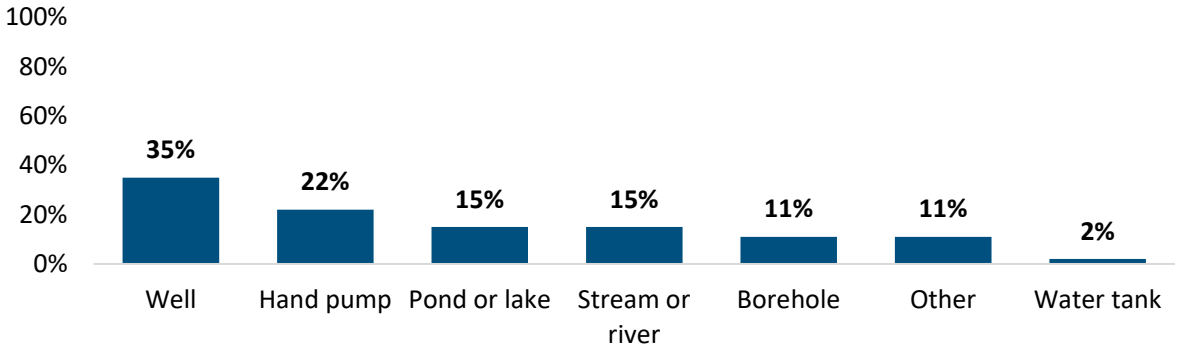
Exhibit 73. Perceived Importance and Difficulty of Keeping Cooked Foods in a Cool Place, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

On average, access to improved water sources for cooking was less challenging than access to resources for food storage, as reported by SMPs. Nearly two thirds of SMPs had access to an improved water source for cooking (65%); access was strongest among SMPs in River Gee (73%) and Grand Bassa (71%) relative to Rivercess (64%) and Grand Gedeh (50%). Regardless of their specific water source, most SMPs indicated it was at least a little important to treat water before drinking (97%), citing the importance of killing germs (87%) and making water safe to drink (55%) in doing so.

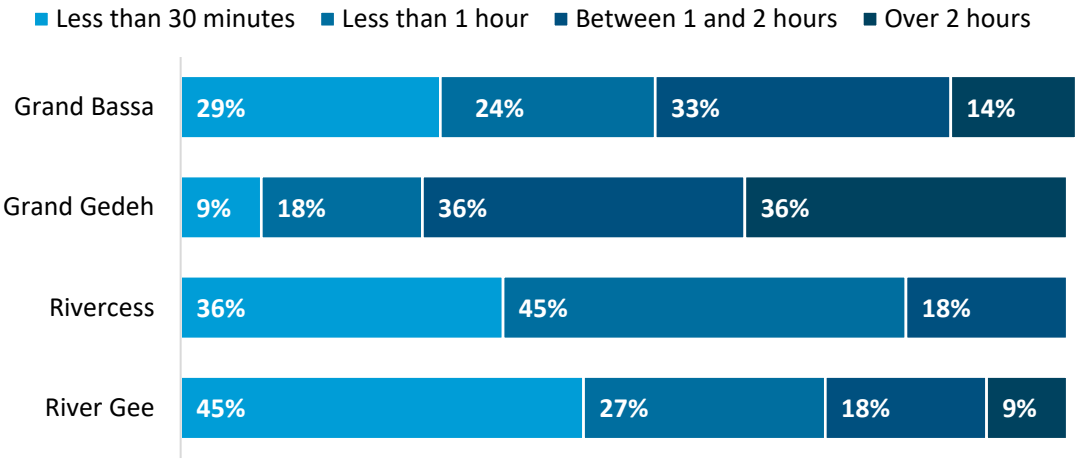
Exhibit 74. Water Source for Cooking



Source: School Meal Provider survey. Authors' calculations. N = 25.

The duration between preparing hot food and delivering it to students varied widely across counties (Exhibit 75). On average, SMPs reported just under an hour (47 minutes) elapsed between preparing meals and delivering them to students; times were longest for SMPs in Grand Bassa (69 minutes), followed by River Gee (43 minutes), Rivercess (41 minutes), and Grand Gedeh (21 minutes). These averages, however, slightly overstated time gaps between meal preparation and delivery to students as these durations varied widely, ranging from one minute to five hours; nearly half of SMPs reported this duration was 30 minutes or less (49%), and a smaller proportion reported this duration was between 30 minutes and an hour (40%) and over an hour (11%). Most SMPs delivered meals after 10 AM (85%) rather than between 8:30 and 10 AM (15%).

Exhibit 75. Time Elapsed Between Preparing Hot Food and Delivering It to Students, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 11 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee. One respondent in Grand Gedeh reported they did not know the elapsed time.

Qualitative data suggest that cooks and storekeepers felt adequately trained for their duties, were able to give examples of some of their responsibilities, and applied those practices regularly:

> *"Save the Children gave us training how to prepare the children food. They say we should prepare the children food and it must be done [cooked]. The food must not burn. Save the Children told us to cover our hair before cooking and we should not wear our ring while cooking. They said maybe while cooking the ring might fall into the food and mistakenly given to any child. Save the Children also told us that if you are sick you shouldn't come to cook. They also said that we should also wear our nose masks when we sharing food. That our kitchen must be clean at all time and we shouldn't keep dirty water in the kitchen. The training has been enough because all that we are suppose to do is what they told us which I have just explain."*
>
> *—Cook, River Gee*

Similarly, another cook said,

> *"Yes, I received training about cooking. They said, when get to the kitchen, I should not allow the students to be there because it will be risky for them, there should be no toilet around the kitchen, cover food because of the flies. The flies will sit on the toilet and it will also sit the food and the children will get sick when they eat the food. We should be clean before coming to work and I think it was Save the Children. Yes, it was good and I am doing all I was taught."*
>
> *—Cook, Grand Bassa*

However, six of the cooks pointed out that it was not always easy to adhere to all food safety guidelines, given challenges with adequate materials and kitchens. Still, they all explained how they went out of their way to try to alleviate the problem to keep the food safe. For example, one cook said that she lacked a table in the kitchen to serve the food, so she fixed her own structure with bricks and wood to prevent serving food on the floor. Two other cooks explained that the clean water source nearby was spoiled, so they walked extra distance to carry water back to the kitchen. One cook explained that:

> *"The kitchen has nothing around it, so the goat and cow can go and scatter the place. The goat can pupu and pepe [defecate and urinate] under the kitchen, I have to take broom and sweep every morning. The principal can complain to the community people that have those cattle to control them but they promise to fence the kitchen. The kitchen was built long time ago but they have rebuilt it yet, we fix the fire halt with dirt and it can always spoil so we have to fix it all the time"*
>
> *—Cook, Grand Gedeh*

In one rare example, a cook shared that she was asked to serve expired food for lack of any non-expired food available:

"If the food expires, we are instructed by the teachers to cook it."

—Cook, Grand Bassa

Reports from students suggest that food safety concerns may be more widespread than cooks realize (or admit). As reported in the section on student attitudes toward school, complaints about the quality of the food were relatively common, with 7 girl and 1 boy student FGDs (across 8 communities) saying that food sometimes had bugs in it, was poorly cooked / uncooked, or was cooked in dirty pots, as two girl students said:

"The beans on the campus have bugs inside and I don't like it. When we eat it our stomach can hurt."

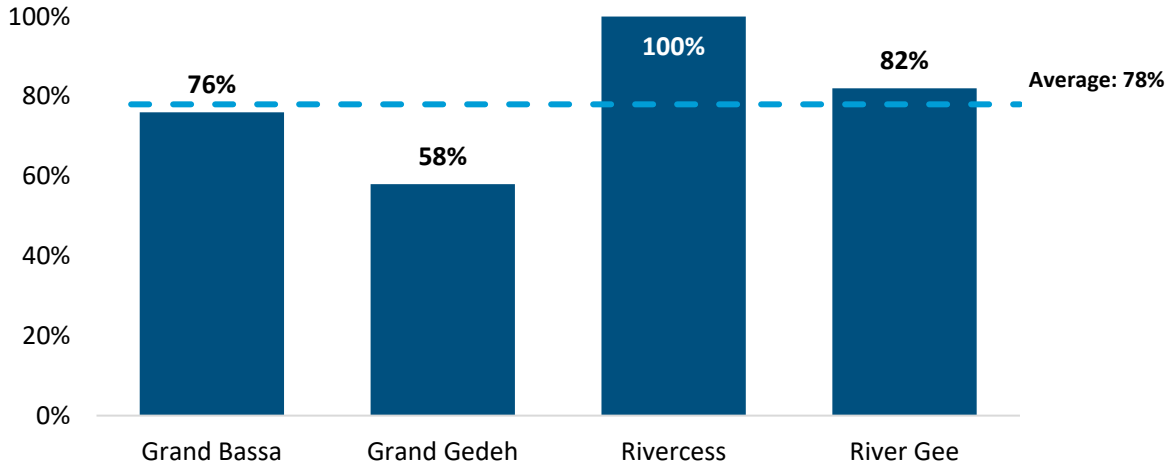
"The beans can't done good that's what I don't like."

—Girl students, Rivercess

Accountability

At baseline, accountability mechanisms already existed for a majority of SMPs, most of whom reported being previously supervised as they prepared meals (78%) (Exhibit 76). This monitoring occurred at least once a week for over half of these SMPs (54%) and predominantly occurred at random (81%) rather than through an arranged supervision (19%). At baseline, SMP monitors included LEARN staff (77%), school principals or head teachers (30%), students' parents (9%), ministry officials (9%), and public health inspectors (9%). In general, SMP supervision appeared most stringent for those who were paid (81%) rather than unpaid (57%), particularly among those who were paid in-kind (84%) rather than in cash (60%).

Exhibit 76. Proportion of SMPs Who Had Been Supervised as They Prepared Meals, by County



Source: School Meal Provider survey. Authors' calculations. N = 21 in Grand Bassa, 12 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee.

School Gardens

School gardens will be a critical component of LEARN II for school meal provision, through the expansion of existing gardening activities (Rivercess and combined package sites in Grand Gedeh), establishment of new gardening activities across other project sites, and SC's partnership with Kawadah Farms to enhance local procurement of commodities. There has been much to learn about the establishment and maintenance of school gardens, overseen and materially supported by PTAs, from LEARN. Evaluations from LEARN found that there was initially limited understanding about why a school garden, meant to supplement school feeding, should be given attention when PTA members and other community members had their own farms or livelihood strategies to pursue. At the same time, there had been delays in delivery of gardening materials that prevented even those eager to start a garden from doing so fully.

A staff member from MOA estimated that about 75% of the schools were reached in time for gardens to have been established by baseline (May 2022), but the remainder were so remote, combined with bad road network, that it was not possible. As a result, having not received materials by May, they missed planting season. Reflecting on more efficient processes going forward, a staff member from the MOE school feeding division recognized the staffing and procedural challenges with school garden implementation:

"The school garden component was not delivered as expected. When I went on the joint monitoring visit, I saw that most of the garden did not do well. There is only one agriculture specialist for both Rivercess and Grand Gedeh and there is no agriculture monitoring system and coordination for each county. There should be coordinator and monitor for each county. They should be able to provide implementation tools and train the PTA to be able to manage the garden."

—Director, School Feeding Unit, MOE

Government stakeholders also recognized the challenge in getting community members on board for the gardens and, even if established, maintaining them to productivity. In addition to supporting delivery of gardening materials, LEARN worked toward advocating for PTAs and other community members to support the gardening activities. They conducted sensitization with parents about the positive role gardens could play both in terms of supplementing school meals, in helping PTAs to raise money by selling produce, and, eventually, expanding gardens into farms to allow parents to earn additional income to support school-related expenses or discourage them from taking their children out of school to work. Also, in some communities, access to land for the garden was an issue. For this, LEARN worked with the Ministry of Internal Affairs (MOIA) to try to relocate locations which further delayed implementation of gardens.

By the end of LEARN, and beginning of LEARN II, there had been progress toward establishing and maintaining gardens in LEARN communities receiving this intervention, and some schools were reportedly using food to supplement school feeding commodities or, if they had not established gardens yet, they had plans to do so. In parents' and teachers' interviews, the potential for gardens was recognized whether there was an established garden or not. For example, some parents noted that school gardens would help diversify the type of food that children get at school, about which there were some complaints that it was becoming boring to children, as one teacher explained:

"We started the garden last year. We have okra, egg plants and greens. We use it to balance our diet. The children cannot eat beans every day. We make the garden to change the flavor of the soup."

—Teachers, Grand Gedeh

A principal said:

"Yes we will continue because we know the importance of garden.…If we don't put seriousness for the garden [take the garden seriously] the food will not continue."

—Principal, Rivercess

A positive finding for LEARN II, parents also noted the potential in PTAs earning income from selling the garden produce; that income could be used to support purchase of condiments, plates, and cutlery, which was part of PTA's recognized responsibilities for LEARN and would need to be sustained after LEARN:

"The PTA understands that the LEARN project will one day come to an end and that is why they have initiated in having a garden for the school. I just want the PTA to focus on the garden even though they said they may need material from the learn project"

—Principal, River Gee

PTAs had struggled through LEARN to fulfil their roles and responsibilities as it related to supporting school feeding, but as of baseline for LEARN II, they had made progress in terms of mobilizing more parents and resource to support school feeding and other school projects such as improving infrastructure and paying volunteer teachers and other school staff.

Also critical for LEARN II, the government recognized the importance of working closely with school communities to encourage ownership, and to try to make the school feeding component of LEARN II more sustainable.

"No, it [school feeding] will not continue [without LEARN, at this point] because they are not taking ownership and what is needed is to encourage the communities and motivate them to take it as their own and take ownership.…Get the communities involved and not individuals.…To get the larger communities involved to feel the project as their own and not put special people in front of it."

—MOA School Feeding Division 1

"If we continue with the schools according to the plan we have and make sure they work in line with us, I am sure they will continue after the project ends. The schools garden will continue especially the planting of the eddoes, cassava and potatoes because the students are having interest in looking at the crops and learning about them and also benefiting from its produce, but it will just be some communities that will continue this."

—MOA School Feeding Division 2

Across the twelve qualitative sites, efforts were made to identify existing farming cooperatives or women's groups that would be leveraged as part of LEARN II activities, to learn more about some of their current activities and needs. None were found, despite good assistance from local community members and SC community mobilizers. This is a finding in itself: there is much room for Kawadah Farms and SC partnership to establish and then enhance the cooperatives that can

contribute to both school feeding and the broader economic livelihoods of the LEARN communities, to help ensure that LEARN II is sustainable.

Section 5. Impact Evaluation Baseline Findings

This section describes the sample of Grade 2 students in Grand Bassa, Grand Gedeh, and River Gee, who were selected for the LEARN II impact evaluation, and the results from the baseline equivalence analysis assessing the similarity of outcomes between the treatment and comparison group. We present the differences between the two groups in terms of their school and student composition, student demographic characteristics, student health, hygiene, and nutrition outcomes, followed by their home and school learning environments. Finally, we examine differences in key literacy outcomes. Measuring these baseline equivalences helps us (1) assess the validity of the design and (2) identify any observed differences to control for in the final regression analysis to improve the precision of the estimated program impacts.[17]

The baseline equivalence analysis shows that:

- There are significant differences between the treatment and comparison groups, but the magnitude of the differences is small.
- Literacy levels are low in both groups but are consistently lower in the treatment schools relative to comparison schools.

We will take these findings into account during the exploratory regression analysis in the midline and endline evaluations.

Impact Evaluation Samples

As explained in Section 2, schools were assigned to the treatment or comparison group based on their location (i.e., schools in Grand Gedeh and River Gee were assigned to treatment group while schools in Grand Bassa were assigned to comparison group). Given the low enrollment in LEARN II schools, we included the 35 largest schools in the treatment sample. After filtering out schools that did not have the enrollment required to reach the target sample, we used propensity score matching to choose 35 comparison schools in Grand Bassa. We sampled all Grade 2 students with consent forms in each school. Exhibit 77 breaks down the impact evaluation sample in terms of geography and treatment group. While the goal was to collect data from 700 treatment and 700

[17] Additional baseline equivalency checks including health, nutrition, and hygiene outcomes can be found in Appendix B.

comparison group students, we managed to reach 697 treatment group and 489 comparison group students. The reasons for the shortfall of students are detailed in Section 3.

Exhibit 77. Sample Sizes for the Project Evaluation at Baseline, by County

County	Schools	Grade 2 students	Group
Grand Bassa	35	489	Comparison
Grand Gedeh	23	472	Treatment
Rive Gee	12	225	Treatment
Total	**70**	**1,186**	

Source: Student survey. Authors' calculation.

Baseline Equivalence Results

Student Composition and Characteristics

Half of the Grade 2 students in the impact sample were girls (Exhibit 78). Students were on average 12 years old. The age of students in the comparison group was about 6 months older than those in the treatment group, a difference significant at the 1% level but not likely a large enough magnitude to sway our findings. Students in the treatment group (4.47) attended more days of school than comparison group students (4.33), a small but significant difference at the 5% level. In terms of socioeconomic status, the groups both owned about the same number of assets (1.89 and 1.88, respectively); however, students in the comparison group (2.65) owned slightly but significantly ($p < 0.01$) more types of reading materials than those in the treatment group (2.24). Finally, on average, households in the treatment group were smaller with 7.27 members than the 7.93 in the comparison group ($p < 0.01$) and had more literate members with 3.08 members compared to 2.53 in comparison homes ($p < 0.01$).

Exhibit 78. Baseline Equivalency: Student Demographics

Variable	Treatment	N	Comparison	N	Difference
Gender (% girls)	50%	697	48%	489	.024
Age	**11.75**	**692**	**12.30**	**484**	**–.55*** **
Did you repeat any grades	30%	695	28%	487	.023
Days of school attended in the past week	**4.47**	**694**	**4.33**	**482**	**.138****
English is the student's main language	69%	697	68%	489	.003
Total number of household assets (out of 8)	1.89	697	1.88	489	.008
Reading Material Index (out of 5)	**2.24**	**697**	**2.65**	**489**	**–.419*** **
Number of household members	**7.27**	**697**	**7.93**	**489**	**–.659*** **
Number of literate household members	**3.08**	**691**	**2.53**	**480**	**.548*** **

*Source: Student survey. Authors' calculation. * p < 0.1 ** p < 0.05 *** p < 0.01.*

Household Environment Outcomes

Students in the treatment group were more likely to have a positive learning environment at

home compared to the comparison group. Treatment group students were at least 10 percentage points more likely to have seen someone in the house reading, having someone help with their studies, and to have been told a story. All these differences are significant at the 1% level (Exhibit 79). There were also significant differences in reading books other than schoolbooks outside of school, 27% of students in the treatment schools said they did compared to 19% in the comparison group ($p < 0.01$). The significant findings in this section align with the geographical differences found in the performance sample (see Section 4) where we found higher levels of engagement on literacy within the home in Grand Gedeh and River Gee (where treatment students are) compared to Grand Bassa (comparison students).

Exhibit 79. Baseline Equivalency: Home Literacy Environment

Variable	Treatment	N	Comparison	N	Difference
In the past week, saw someone in the house reading	**65%**	**697**	**51%**	**487**	**.146*** **
In the past week, someone in the household helped with studies	**73%**	**697**	**61%**	**487**	**.116*** **
In the past week, someone in the household read to student	**64%**	**696**	**58%**	**488**	**.057** **
In the past week, someone in the household told the student a story	**45%**	**695**	**33%**	**486**	**.113*** **
In the past week, the student read books other than schoolbooks outside of school	**27%**	**693**	**19%**	**487**	**.081*** **

*Source: Student survey. Authors' calculation. * p < 0.1 ** p < 0.05 *** p < 0.01.*

School Environment Outcomes

Almost all teachers in both groups attended school at least 2 days each week (Exhibit 80). However, teachers in treatment schools (88%) were more likely to attend every day compared to teachers in the comparison schools (80%), a difference significant at the 1% level. Students in the treatment schools (53%) were more likely to say that they could borrow books than those in comparison schools (46%) ($p < 0.05$). However, among those who could borrow books, students in the comparison group were more likely to be able to take them home by 12 percentage points ($p < 0.01$).

Exhibit 80. Baseline Equivalency: School Environment

Variable	Treatment	N	Comparison	N	Difference
Teacher attends school at least 2 days per week	96%	464	93%	**334**	.025
Teacher attends school 5 days per week	**88%**	**464**	**80%**	**334**	**.073*** **
Students can borrow books from school: No	**47%**	**691**	**54%**	**489**	**–.064** **
Students can borrow books from school: Yes, but cannot take off campus	**32%**	**691**	**14%**	**489**	**.181*** **

Variable	Treatment	N	Comparison	N	Difference
Students can borrow books from school: Yes, and can take home for free	**20%**	**691**	**32%**	**489**	**–.119*****
Students can borrow books from school: Yes, but for a fee	1%	691	0%	489	.002

*Source: Student survey. Authors' calculation. * p < 0.1 ** p < 0.05 *** p < 0.01.*

Reading Outcomes

To assess students' literacy levels, we administered LBRA to all Grade 2 students. The LBRA covers foundational literacy skills and reading comprehension. Overall, the comparison group showed higher levels of literacy than the treatment group (Exhibit 81). Students in the comparison group were significantly ($p < 0.01$) able to identify more letters than those in the treatment group (89% and 79%, respectively). They were also 20 percentage points more likely to be able to identify at least 90% of the letters—the threshold used to determine a passing score in that section. The comparison group was also more successful in identifying 20 commonly used words, identifying an average of 32% of the letters compared to 17% in the treatment group ($p < 0.01$). Both groups struggled equally with decoding invented words, identifying just 2% of words.

The comparison group outperformed the treatment group in reading with 16% of the comparison group students identified as readers compared to 10% of the treatment group ($p < 0.01$). Readers in the comparison group also showed significantly higher levels of fluency and accuracy than the students in the treatment group. When considering all students, just 3% of the treatment group and 6% of the comparison group could read with comprehension ($p < 0.01$). Students struggled the most with the summary question, and this is where we see the only significant gap between treatment and comparison group students. 14% of students in the treatment group and 5% of the comparison group had success on this question. The pattern remains when looking just at readers—28% of the treatment group and 6% of the comparison group readers got the summary question correct. Both differences are significant at the 1% level.

Overall, literacy outcomes of students from the impact sample align with the geographic differences previously discussed in the performance sample. As shown in Section 4, students in River Gee and Grand Gedeh consistently underperform compared to the average while in Grand Bassa they generally performed above average.

Exhibit 81. Baseline Equivalency: Literacy Outcomes

Variable	Treatment	N	Comparison	N	Difference
Percentage of letters correctly identified by children	**79%**	**697**	**89%**	**489**	**–.102*****
Letter knowledge (identified >90% of letters)	**42%**	**697**	**62%**	**489**	**–.201*****

Variable	Treatment	N	Comparison	N	Difference
Most used words (% identified)	**17%**	**697**	**32%**	**489**	**−.144*** **
Invented words (% identified)	2%	697	2%	489	−.003
Readers	**10%**	**697**	**16%**	**489**	**−.056*** **
Accuracy (% of words in passage read correctly)[a]	**41%**	**71**	**61%**	**77**	**−.205*** **
Fluency (words/minute)[a]	**18**	**71**	**28**	**77**	**−10.103*** **
Summary comprehension	**14%**	**697**	**5%**	**489**	**−.09*** **
Literal comprehension	36%	697	40%	489	−.041
Inferential comprehension	74%	697	70%	489	−.039
Evaluative comprehension	60%	697	57%	489	0.03
Reading comprehension (overall)	**3%**	**697**	**6%**	**489**	**−.033*** **
Summary comprehension (readers)	**28%**	**71**	**6%**	**77**	**−.217*** **
Literal comprehension (readers)	63%	71	70%	77	.067
Inferential comprehension (readers)	85%	71	83%	77	.014
Evaluative comprehension (readers)	76%	71	84%	77	.082
Reading comprehension (readers) [a]	53%	40	53%	58	−.009

*Source: Student survey. Authors' calculations. * p < 0.1 ** p < 0.05 *** p < 0.01; [a] Among readers only*

Section 6. Conclusions

Summary of Key Outcomes

In this section, we highlight key findings from the project and impact evaluations at baseline.

Literacy

The project evaluation found that students were generally struggling on key literacy outcomes at baseline. Just 9% of the students in the sample were classified as readers, and overall only 4% could read with comprehension. The average reader could read about half (52%) of the words in a passage correctly.

A higher proportion of students (46%) showed a good grasp of letter knowledge, defined as being able to identify at least 90% of the letters in the alphabet. There were regional differences, with students in Grand Bassa and Rivercess outperforming their counterparts in Grand Gedeh and River Gee. When asked to identify commonly used words, 21% of students could do so. There was a gender gap for letter knowledge and commonly used words. In both cases, boys were significantly more likely to succeed, indicating that they may have a head start on girls when it comes to foundational literacy skills. Qualitative data do not help to explain this—boys and girls show similar levels of excitement for education, ambitions for their future, and perceptions that they are adequately supported by teachers and parents in their educational goals. Also, teachers and parents indicated that boys and girls should have equal access to education and have equal potential. Still, one may assume that in the Liberian context, traditional gender roles that

disadvantage girls, such as assignment of extra domestic duties to girls, may remain despite some respondents' explicit support for equal access to education and that these traditional roles may contribute to lower literacy at baseline.

The impact evaluation's baseline equivalency analysis found an imbalance in literacy skills largely driven by the regional differences mentioned above. Literacy levels were found to be consistently lower in treatment schools than in comparison schools.

Home Environment

Overall, there were mixed results regarding students' home literacy environments. A little more than half of the students reported being helped with their studies by someone at home (68%), being read to by someone (64%), and/or seeing someone else reading (58%). Fewer students said that someone at home told them a story (41%). There were regional differences, with generally more positive home literacy environments in River Gee and less positive ones in Rivercess.

Qualitative data suggest that students tended to have someone who can help them outside of school; most often this person was a parent or older sibling, though some reported access to a "home study teacher" (personal tutor). Even students who reported having help outside of school said that they would benefit from more assistance. Parental engagement is limited because of parents' lack of time, their self-perceived lack of ability (e.g., due to illiteracy), and their lack of concern (a reason cited by teachers in particular).

There was a lack of readily available age-appropriate, non-school books for students to read at home—just 34% reported having any storybooks or comic books at home. About a quarter (22%) of students said that they read non-school books outside of school, with a higher proportion doing so in Grand Gedeh (37%) than in Rivercess (6%).

All communities in the qualitative sample mentioned the need for more learning materials and books. Boys and girls reported often reading their notes at home because of lack of other reading materials. Some communities with LEARN Literacy Champions reported that the Literacy Champions had books they could lend to students, and in some of those communities SC trained Literacy Champions to work with community members to create local reading resources for student use.

The baseline equivalency test found that homes in the treatment group tended to have a more engaged home literacy environment. Although they had slightly fewer reading materials available at home, the treatment group had significantly more literate household members—members more likely to be reading or supporting their children's schoolwork—than households in the comparison group.

School Environment

Overall, 99% of students said that they enjoy coming to school, with the majority (87%) citing learning new things or enjoying lessons as a reason. The qualitative data confirmed that students enjoyed school and needed little convincing of its value. Students also revealed high expectations about what they could achieve in the future provided they were able to continue their schooling. The most cited school-related dislikes concerned physical or mental abuse at the hands of other students (29%) or teachers (26%). The qualitative data tell us that students also do not like teacher absenteeism or lack of attention and academic support (nine of 24 FGDs), they do not like a dirty school campus or dirty facilities (eight of 24 FGDs), and they thought that the quality of the food provided was sometimes unsanitary or poor (e.g., uncooked beans, bugs in beans, or dirty pots) (eight of 24 FGDs).

Health and Hygiene Knowledge and Practices

Almost all students reported that they wash their hands (93%), but in a test of hygiene knowledge and practice, just 22% were able to name three critical handwashing moments, and only 16% said they washed their hands at each of those moments. The knowledge–practice gap was almost twice as large for Grade 6 students as for Grade 2 students. The qualitative data show that while SHN champions and school health committees have been active at some point in all the sampled schools through LEARN, their activities have become less frequent, possibly because COVID-19-related sanitation measures became less strict in the past year.

Nutritional knowledge among students is low at baseline. Just 2% of students reported knowing what a balanced diet is, and fewer than 1% could prove they knew. Most students could identify foods that provide energy (77%), but just 27% could identify foods that protect against disease. Qualitative data show that SHCs and PTAs pay little to no attention to nutrition despite nutrition being part of SHN champion and SHC activities implemented previously through LEARN.

A third of students are eating three meals each school day, while a quarter do so on non-school days. Grade 2 students were significantly more likely to get three meals on school days (36%) than Grade 6 students (28%). There were also some regional variations, with students in Rivercess being the least likely to eat three meals on non-school days (11%) but the most likely to do so on school days (61%).

Students' meals lack dietary diversity, and most meals are rice based. Few students reported eating fruits, vegetables, or protein during the day. Qualitative data show that cooks generally cook the commodities given to them—rice, beans, and oil—and supplementary protein or vegetables are rarely provided by parents, for which they sometimes require payment. Gardens are being established in some locations, with PTAs and parents becoming increasingly supportive of providing material and human resources for their upkeep, given that the gardens will provide

not only supplemental produce for school meals but could be a source of income for PTAs and community members.

School-Related Gender-Based Violence and Gender Norms

Teachers were more aware of school rules than students, on average. Most teachers were aware of the rules intended to govern their conduct in school (82%) and their interaction with students (96%). Students were less knowledgeable about code of conduct for teachers (41%), but most were aware of rules about teacher–student interaction (77%) as well as their own code of conduct (77%). The qualitative data largely confirmed that the codes of conduct were widely known: Students and teachers in all FGDs reported that they were aware of the content of the codes of conduct. However, the quantitative and qualitative data indicated that teacher infractions were relatively common and that students fear retribution or being ignored if they report an infraction. Further, students most common reasons for disliking school are related to teacher or student physical or mental abuse.

Teachers and students shared a perception that girls have a more positive experience at school. Both groups were more likely to say that girls' attendance at school should be prioritized and that girls received more of the teachers' positive comments, while boys received the bulk of the negative comments and insults. The percentage of girls believing it was important that they attend school was significantly greater than the percentage of boys believing it was important that they attend. Boys and girls also disagreed about who teachers most often called on to answer questions in class.

Teachers' Knowledge, Attitudes, and Practices

Teachers' knowledge of recommended nutrition and WASH practices varied by county and reflected different views about which practices were most important for children's health. For nutrition, all teachers were able to identify signs of hunger in a child, yet teachers seemingly lacked knowledge of basic concepts, such as the components that underpin nutritious meal composition, which less than half of surveyed teachers could cite (44%). For WASH, teachers emphasized different critical moments for children's handwashing.

Despite the different levels of knowledge, teachers indicated widespread support for recommended nutrition practices for children (e.g., consuming three meals a day, along with snacks, and consuming diverse foods) and also indicated support for recommended WASH practices. In the case of nutrition practices, however, teachers expressed doubt whether children would be able to follow recommended practices, especially achieving and maintaining minimum meal frequency (95%) and dietary diversity (93%). By contrast, barriers to WASH practices were less commonly cited, with most teachers noting the importance of access to functional

handwashing stations at school (86%), access to soap and water at handwashing stations (88%), and access to an improved drinking water source at school (84%).

At baseline, most teachers reported receiving information on nutrition (69%), WASH (75%), and disease-related topics (74%) at least once a month. Across these topics, teachers most often received relevant information from SC Liberia, teacher trainings, and health workers.

School Meal Providers' Knowledge, Attitudes, and Practices

As with teachers, SMPs' nutrition knowledge reflected a difference in attitudes across counties and general knowledge gaps, most notably lack of knowledge about micronutrient-rich foods and the components of nutritious meals, which less than a third of SMPs knew (29%). Even so, nearly all SMPs were able to identify at least one sign of hunger in a child (98%) as well as signs of micronutrient deficiencies. Like teachers, SMPs also expressed strong support for recommended nutrition practices, yet they simultaneously reported challenges involved in implementing these practices, especially the practice of serving diverse foods for school meals (89%). SMPs often noted that the cost (58%) and availability (55%) of diverse ingredients were obstacles to implementing this latter practice.

At baseline, SMPs exhibited basic food safety knowledge and expressed support for recommended food safety practices. Most SMPs could accurately identify factors that affect food safety; could identify signs that certain foods, such as soups and stews (91%) and meat (80%), were safe to serve; recognized the importance of basic food preparation practices (e.g., wearing clean clothes when preparing meals and maintaining a clean cooking space); and expressed strong support for practices that reduce food contamination (e.g., ensuring that flies do not touch prepared food, storing meat and cooked food in a clean place, using separate and clean utensils to handle different types of food, and cleaning food preparation surfaces after handling raw meat). SMPs seemingly lacked knowledge about specific food safety practices (e.g., how to wash fruits and vegetables for consumption) as well as the underlying reason certain food safety practices were important (e.g., not leaving prepared food out too long before serving).

SMPs emphasized different food safety practices across counties and, in doing so, demonstrated room for improvement. To clean their food preparation area, most SMPs removed any trash from the area (78%), cleaned surfaces with soap and water (67%), cleaned utensils (65%), and cleaned the floor (58%). Yet, at the county level, SMPs adhered to these practices to varying degrees. Likewise, SMPs' handwashing practices at critical moments varied across counties, revealing distinctive county-level gaps in handwashing at critical moments. To the extent possible, SMPs attempted to follow recommended food storage practices. Although a majority of SMPs thought it was important to store cooked foods in a cool place (93%), most reported difficulties in doing so (89%), with a mere 4% reportedly refrigerating prepared foods. Nevertheless, most SMPs

reported that they cover cooked foods (85%), suggesting that most follow food storage practices where possible.

Limitations

Some potential limitations of note that could arise include the following:

Reliance on Self-Reported Data. The main limitation is that the quantitative approach relies on self-reported data from children for several socially and culturally sensitive subjects such as SRGBV. Although AIR adopts best practices in eliciting this information, the data could still have some degree of measurement error, like data collected in other contexts on sensitive topics. To mitigate this limitation, prior to the baseline data collection in 2018 for LEARN, AIR devoted considerable attention to cognitive testing of the survey instrument with students in Grades 2 and 6.[18] In consultation with the local partners, AIR adjusted question phrasing to make sure children could understand the questions and feel comfortable answering. In addition, to further improve data reliability at baseline, AIR incorporated some of these topics in qualitative interviews to allow triangulation with quantitative data. Even then, the qualitative data may be unreliable where respondents have an interest in slanting what they say, including the reporting of cooks on their hygiene practices, the reporting of teachers on their use of corporal punishment, and the reporting of parents on the frequency of reading with their children.

Internal Validity of Impact Evaluation. One limitation of the current design arises from the fact that the treatment and comparison schools were selected among schools that had benefited from LEARN for 5 years. Importantly, the treatment schools are in Grand Gedeh and River Gee while the comparison schools are in Grand Bassa, which means that regional differences could be confounded with treatment effects. Moreover, due to low enrollment numbers, schools in the impact sample were selected purposefully rather than randomly. Therefore, impact findings will not be generalizable to all schools from these counties. Finally, we performed propensity score matching on a rather small sample of schools, which limits our ability to find suitable matches. This also contributes to our finding of significant differences between the treatment and comparison groups at baseline. Given these caveats, future results from the impact evaluation should be considered exploratory and interpreted with caution.

Internal Validity of Qualitative Findings. As with all qualitative research, results are not necessarily generalizable but rather show the broad spectrum of types of perspectives that may be encountered across project beneficiaries and stakeholders. Because of this, the communities chosen purposefully represent the broad types of community covered by the LEARN project

[18] AIR conducted the baseline, midline, and final evaluation of the first phase of LEARN.

(rural, peri-urban, and urban; the combined package vs. the base package).

Recommendations

Below, AIR presents recommendations based on key project outcomes, limitations, and lessons learned from the baseline evaluation.

- **Customize literacy interventions to effectively meet the needs of both non-readers and existing readers alike.** Further explore which types of students work with Literacy Champions or engage in other Literacy Boost interventions (e.g., reading clubs and camps) to determine whether those who are already readers tend to seek this support more often. If existing readers tend to seek this help and non-readers do not, this could help explain why students who are already readers tend to improve while non-reading students do not. It may be beneficial to target non-readers or facilitate access to non-readers to Literacy Boost activities. Alternatively, if non-readers are being supported with such activities but still do not improve, then providing customized instruction based on their skill level may better help these less advanced students to progress.
- **Closely monitor MOE-hired teacher trainers to learn more about what they are focusing on as it relates to literacy.** This will help SC to both contextualize literacy outcome findings and provide insights to help intervene where it seems necessary to better improve the desired outcomes (e.g., curriculum reform).
- **Review MOE teacher literacy refresher training tools to try to better meet the needs of non-readers and work as much as possible with MOE to try to apply those changes.** Acknowledging the limited role that SC can have in directly influencing this dimension of MOE's work, this review will at a minimum provide some context around observed outcomes, and hopefully allow SC the opportunity to help MOE make necessary revisions.
- **As was decided during LEARN I, for LEARN II mobilize community volunteer Literacy Champions instead of tasking teachers with the role.** Clarify with the volunteers the reasons their position is not, and will not be, compensated. LEARN endline found that community volunteer Literacy Champions were effective and motivated but did express some concerns with payment in take-home rations only.
- **Produce innovative and locally made reading materials.** Continue empowering students and parents to create their own reading materials when there is a lack of content to read. Literacy Champions have provided good examples of how children can use locally made materials (e.g., flashcards and transcribed stories narrated by community members) to enhance literacy.

- **Continue the effective work with the government under LEARN to better support and maintain teachers and other volunteers supporting education initiatives (e.g., Literacy Champions).** Advocacy in this regard would need to come from multiple partners regularly, for example as has been done already through the Education Sector Development Committee, but it is critical to acknowledge to the government the degree to which teachers lament being underpaid and overworked and feel the government is not listening to their concerns. In the meantime, instituting strategies to help acknowledge teachers' work and provide supplementary compensation (e.g., through PTAs or the STAR teachers intervention) could further help enhance teacher morale, attendance, and performance. Consider also holding in-depth dialogues and engagements at county and district levels for deeper understanding of the contextually specific issues related to government paid teachers and volunteers. Finally, there remains the need to address the issue of frequent transfer of teachers to other schools, particularly those who have already been trained under LEARN as Literacy Champions or SHN champions.
- **Strengthen PTAs to support schools in the longer term.** PTAs have critical roles in schools beyond LEARN activities. LEARN refresher trainings and meetings with PTAs were effective in re-activating some PTAs that had lost momentum following the COVID-19 closures or had been inactive for years prior. Working with PTAs to ensure that they have their own system for making and carrying out plans and remaining active without outside encouragement such as through LEARN and LEARN II can be critical in helping schools sustain themselves in the face of limited or sporadic government support. PTAs could have a more systematic role in supporting teachers who are feeling forgotten by the government or boosting the morale of Literacy Champions who lament not being paid cash for their work.
- **Attract more parents into PTAs.** Continue stressing to PTA leaders the importance of including multiple parents and community members and train the leaders on strategies to attract parents and community members. One strategy is to convince parents that work done in collaboration with the PTA will ultimately provide compensation in the form of school improvements or parental influence over which activities are chosen. Recruitment of new PTA members should aim for gender parity, equity, and inclusiveness (e.g., including parents from marginalized groups).
- **Continue to emphasize the importance of parents' engagement in their children's education and facilitate dialogues between parents and teachers about the challenges parents face in engaging with their children's education.** As has already been done as part of LEARN via radio, SMS, home learning cards, teachers and principals can continue to emphasize to parents the critical and constructive role they can play in enhancing their children's education even without being educated themselves. This will also enable teachers

to better understand the challenges that parents face and the assistance they need in their efforts to support their children. Together with teachers, develop realistic strategies that parents and caregivers can use to encourage their children going forward. Consider the use of social media and other technological approaches to encourage parents to engage.

- **Give ample attention to the work towards providing students with Safe Schools where students are safe to learn and develop amongst their peers and teachers, teachers' role-model pro-social behavior, and there is a positive school climate.** To help achieve this, consider community dialogues as part of the scale-up of the LEARN Safe School interventions in four counties such that stakeholders better respect and enforce the school code of conduct so that students can learn in a safe environment. With the revision of the school code of conduct will come opportunities for widespread sensitization around its content, including the opportunity to have dialogues with school personnel, caregivers, and students on their perspectives. This will help elucidate what is limiting enforcement of the code of conduct, such as misunderstanding of the content despite the ability to list items in the code, disagreement with some of the rules, and lack of alternative disciplinary strategies that are in accord with the code (i.e., strategies that could replace corporal punishment).
- **Follow-up with schools on the status of their teacher's code of conduct complaints mechanism to ensure it allows for children's anonymity and protection**, and that school leaders act on complaints made (or justify rationale for inaction) so that the system remains both safe and effective.
- **Enhance PTAs' understanding of the role of school gardens.** Continue sensitizing PTA members to the active role that school gardens can play beyond supplementing school feeding activities. Rather, school gardens can be viewed as an income generation opportunity. For example, a larger garden could generate more income for PTA activities or help individual PTA members cover their children's educational expenses. Accordingly, providing PTAs with training on business management and marketing as part of the VSLA intervention will be helpful. Meanwhile, it is critical that children are not exploited: teachers and students should be made aware that student work in the school garden is not meant to be done as punishment or demanded as free labor. Rather, all students, parents, and teachers can be expected make small contributions to the garden.
- **Reiterate to communities the rationale for providing girls with take-home rations** (THRs): they are aimed at reducing the risk of sex for grades and grooming, demonstrating commitment to equality by giving girls a boost (critical given past and current evidence of boys performing better).
- **Ensure schools have adequate materials and infrastructure to maintain a healthy and safe environment, particularly in kitchens**. While cooks and storekeepers demonstrate adequate

understanding of food safety procedures, they lament lack of materials or poor infrastructure to ensure they can keep up to those standards.

- **Work with the government to get a commitment to support institutionalizing and funding school feeding across Liberia schools.** Not only is school feeding popular, but it also increases the attendance and performance of students while alleviating many caregivers' concerns about the well-being of their children. At the same time, a school garden and the PTA alone cannot sustain daily hot lunches; additional commodities are essential. Implementation of the LEARN II school feeding model will provide an important case study in how to effectively roll out and sustain school feeding.
- **Separate WASH and nutrition components, rather than grouping them as SHN, and task different parties to manage each.** SHCs demonstrated willingness and capacity to engage in school cleaning activities, and some were active in teaching fellow students about handwashing. However, improving nutrition was rarely mentioned, likely because of the already difficult task SHCs and SHN champions had in maintaining school cleanliness. Having separate individuals responsible for the nutrition component (e.g., dividing an SHCs into two "wings") may help prevent the important issue of nutrition from being sidelined. Also, emphasis on small-group training that is more interactive and practical may help the SHN Champions and SHCs to better apply the skills learnt during the large-group formal training.
- **Conduct a needs assessment focused on existing farming cooperatives, land usage, and land rights in project areas.** Farming cooperatives (or other relevant cooperatives) may already exist in some of the LEARN II project communities; also, there may be challenges or tensions around land ownership or use. Conducting a needs assessment will aid in understanding the strengths of these cooperatives and associated land issues and uncovering areas where there is room for improvements. One result is that the partnerships with Kawadah Farms will be better able to leverage current assets and avoid duplication of effort or conflict with existing practices. Also, having a better understanding of any land issues will enable SC to focus on necessary dialogues with associated ministries, including Internal Affairs, MOE, MOA, and county authorities.
- **With PTAs and communities, conduct a thorough needs assessment focused on quality of kitchens in project areas.** Despite the LEARN activities intended to rehabilitate kitchens, there remain concerns that some of the kitchens do not allow easy application of basic food safety measures.
- **Consider additional or nuanced measures of food security and nutrition in future evaluations.** Baseline findings point to very low levels of nutritional knowledge (as measured by knowledge of a balanced diet). Given the increased emphasis on school gardens in LEARN II, additional nuanced indicators related to food security and nutrition may help capture

improvement in diet and nutrition. For example, the dietary diversity of students can be measured using the United Nations Food and Agriculture Organization diversity index (2010), as recommended by the USDA Foreign Agricultural Service.

- **Consider doing a feasibility analysis that includes the livelihoods and income-generating activities of the families of school-going children to strengthen the sustainability of the program effects.** To ensure that school canteens are well provisioned with locally produced commodities, local communities must be empowered to help families increase their livelihoods and income, which will also generally aid them in meeting the nutritional, food diversity, and learning-related needs of their children after LEARN II activities are phased out.
- **Together with the evaluator, consider ways to strengthen the impact evaluation design.** The baseline results suggest that LEARN II treatment and comparison groups were not balanced, which raises concerns regarding the ability to draw causal inferences about the impact of LRP intervention at midline and endline. To address these concerns, consider exploring the feasibility of alternative evaluation designs. For example, should rollout of school gardens and LRP activities allow it, consider a staggered randomized controlled trial (i.e., where rollout activities are staggered randomly). Such a design allows use of data from midline and endline to evaluate average differences between schools that benefited from earlier rollouts and schools that did not. Alternatively, provided school gardens and LRP activities are rolled out gradually (but not randomly) and detailed monitoring and evaluation data are available on the timing of these activities, a difference-in-differences analysis can compare schools that had longer exposure to school gardens and LRP activities with schools that had shorter exposure.
- **Track fidelity of implementation and contextualize findings and recommendations based on what has happened.** Throughout project implementation, conduct regular assessments to identify gaps in implementation and work to fill those gaps appropriately. A monitoring and evaluation system that provides robust and detailed data can be used to closely track fidelity of implementation and will lead to a more refined evaluation of the project's impacts at endline. Further, if other implementers working on similar projects within the project's catchment area are identified, such a system would allow collaboration and the avoidance of complications.

Appendices

A. References

B. Additional Tables and Complementary Outcomes

C. McGovern-Dole Performance Indicators

D. Inter-rater Reliability

E. Survey Instruments

Appendix A. References

Dowd, A.J., Pisani, L. & Borisava, I. (2016). "Evaluating Early Learning from Age 3 to Grade 3" in Understanding What Works in Oral Reading Assessments. Montreal: UNESCO Institute for Statistics (UIS).

Duflo, E., Glennerster, R. & Kremer, M. (2008). Using randomization in development economics research: A toolkit. In T. Schultz & J. Strauss, Eds., Handbook of development economics. Vol. 4. Amsterdam: North Holland. https://economics.mit.edu/files/806.

Contzen N, De Pasquale S, Mosler HJ. (2015). Over-Reporting in Handwashing Self-Reports: Potential Explanatory Factors and Alternative Measurements. PLoS One. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4547747/

Feldman, H. A., & McKinlay, S. M. (1994). Cohort versus cross-sectional design in large field trials: Precision, sample size, and a unifying model. Statistics in Medicine, 13, 61–78.

Fleiss, J. L., & Cohen, J. (1973). The equivalence of weighted kappa and the intraclass correlation coefficient as measures of reliability. Educational and psychological measurement, 33(3), 613–619.

French, R. J., & G. Kingdon. (2010). The relative effectiveness of private and government schools in Rural India: Evidence from ASER data. London: Institute of Education

Kim, Y. S. (2009). The relationship between home literacy practices and developmental trajectories of emergent literacy and conventional literacy skills for Korean children. Reading and Writing, 22(1), 57–84.

RTI International. (2015). Early Grade Reading Assessment (EGRA) Toolkit, Second Edition. Washington, DC: United States Agency for International Development.

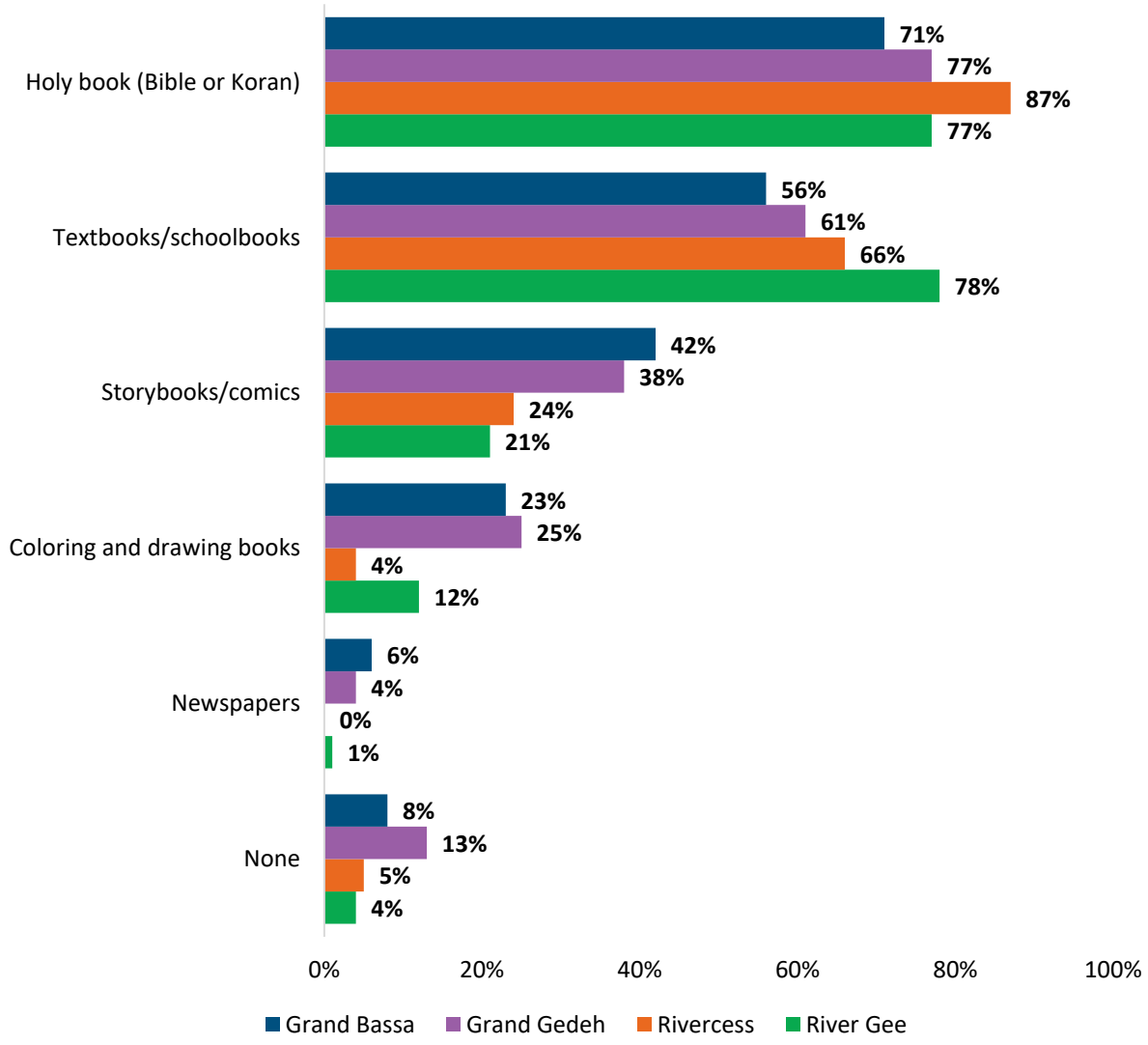
The World Bank, World Development Indicators. (2020). Over-age students, primary (% of enrollment) [Data file]. Retrieved from: https://data.worldbank.org/indicator/SE.PRM.OENR.ZS?end=2017&locations=LR&most_recent_value_desc=true&start=2006&view=map

USDA. (2018). Food Assistance Indicators and Definitions. Retrieved from: https://www.fas.usda.gov/sites/default/files/2019-06/fad_indicator_handbook_feb_2019_0.pdf

Washington Group on Disability Statistics. (2020). WG Short Set on Functioning (WG – SS). Retrieved from: https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-wg-ss/

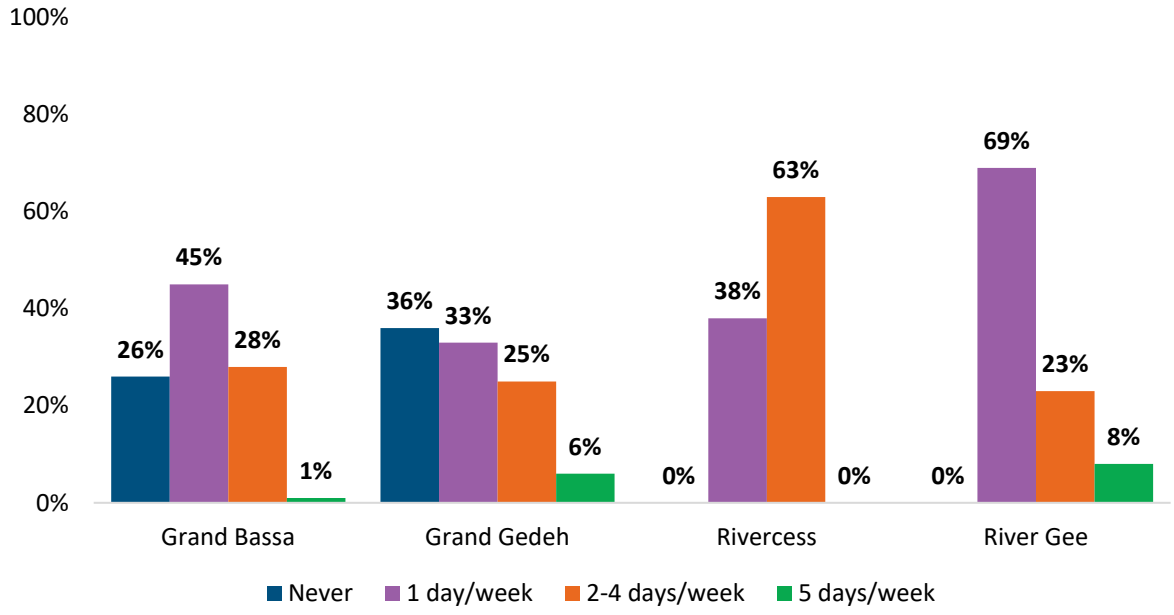
Appendix B. Additional Tables and Complementary Outcomes

Exhibit B1. Access to Non-Textbook Reading Materials in School, by County



Source: Student survey. Authors' calculations. N = 381 in Grand Bassa, 261 in Grand Gedeh, 102 in Rivercess, and 263 in River Gee.

Exhibit B2. Frequency With Which Students Borrowed Non-Textbook Reading Materials to Take Home, by County

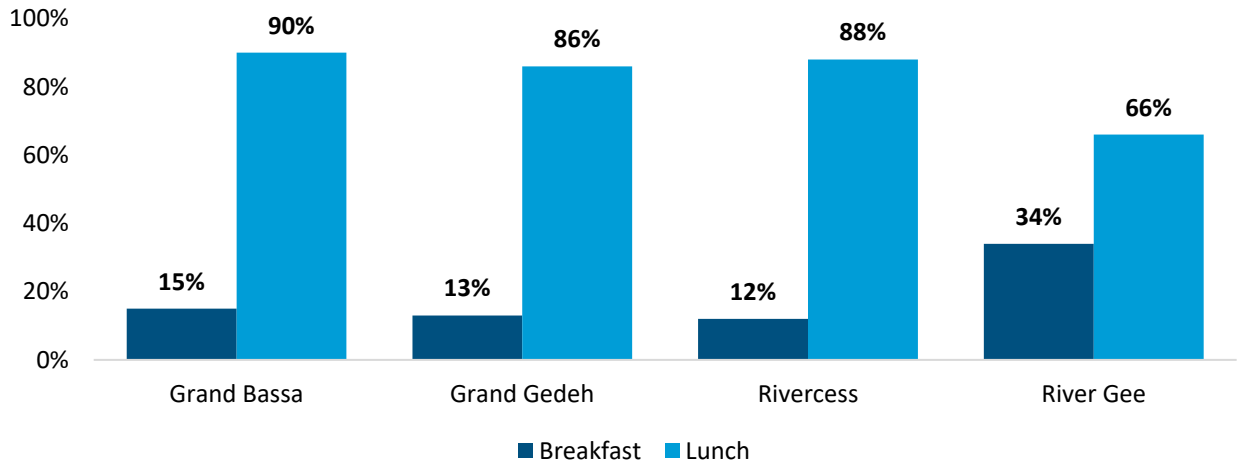


Source: Student survey. Authors' calculations. N = 93 in Grand Bassa, 67 in Grand Gedeh, 8 in Rivercess, and 13 in River Gee.
Note: this question was only asked to students who reported they could borrow books from school.

Exhibit B3. Student Letter Knowledge by Gender

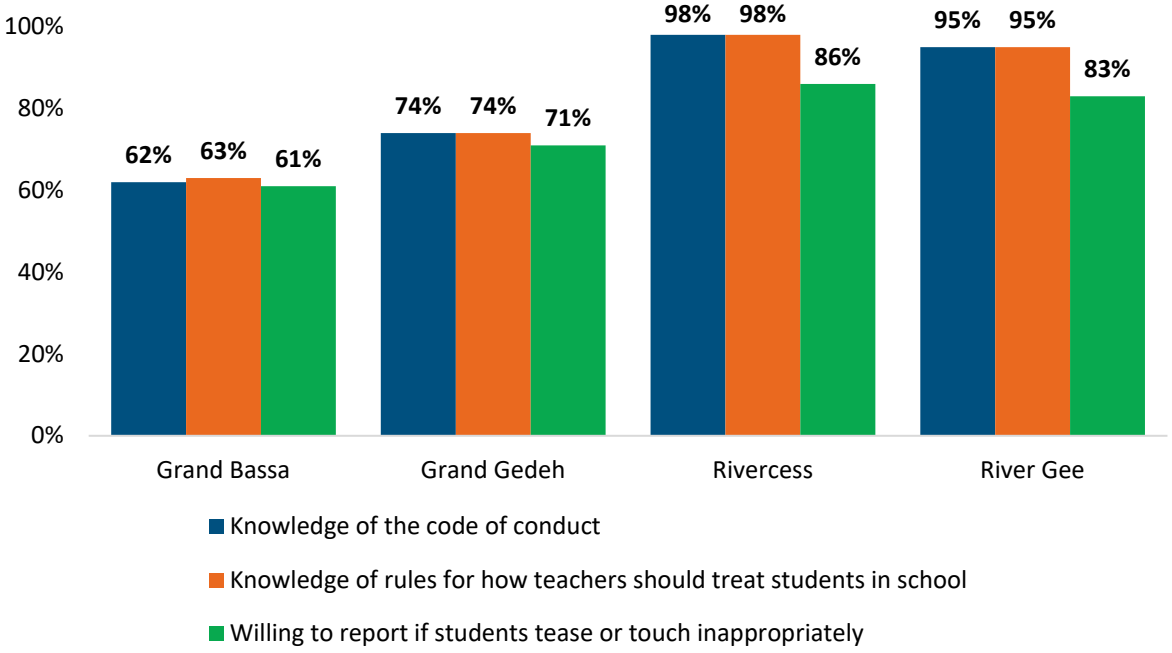
*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. N = 33 boys and 292 girls.*

Exhibit B4. Proportion of Students Who Ate Breakfast and/or Lunch at School



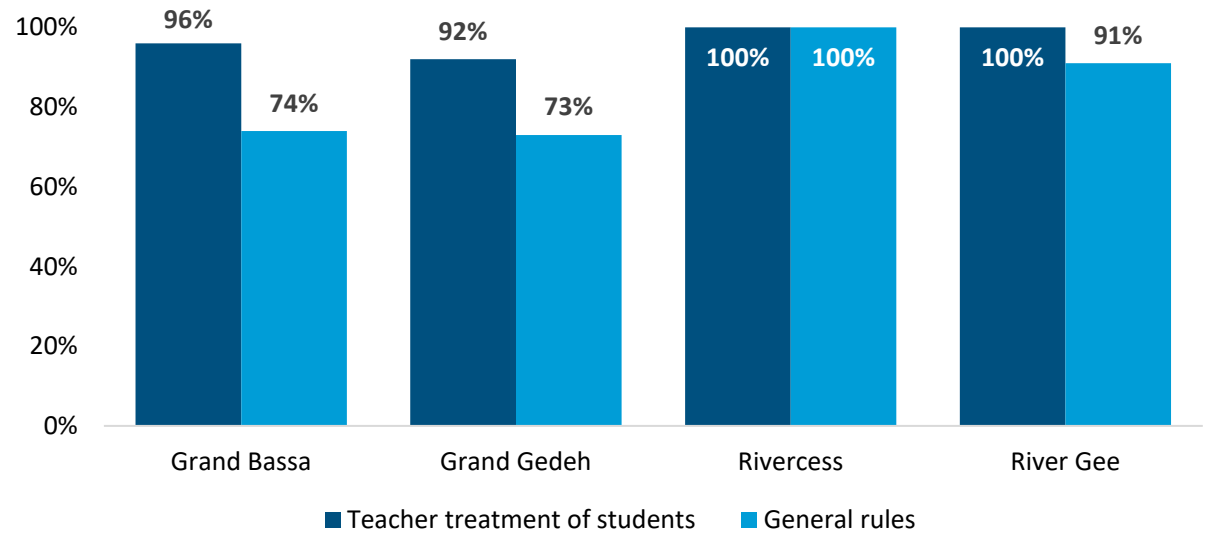
Source: Student survey. Authors' calculations. N = 309 in Grand Bassa, 196 in Grand Gedeh, 95 in Rivercess, and 225 in River Gee. Note: 1% of students report eating snacks or dinner at school. They are excluded from the graph.

Exhibit B5. Student Knowledge and Use of Rules for Teacher Conduct, by County



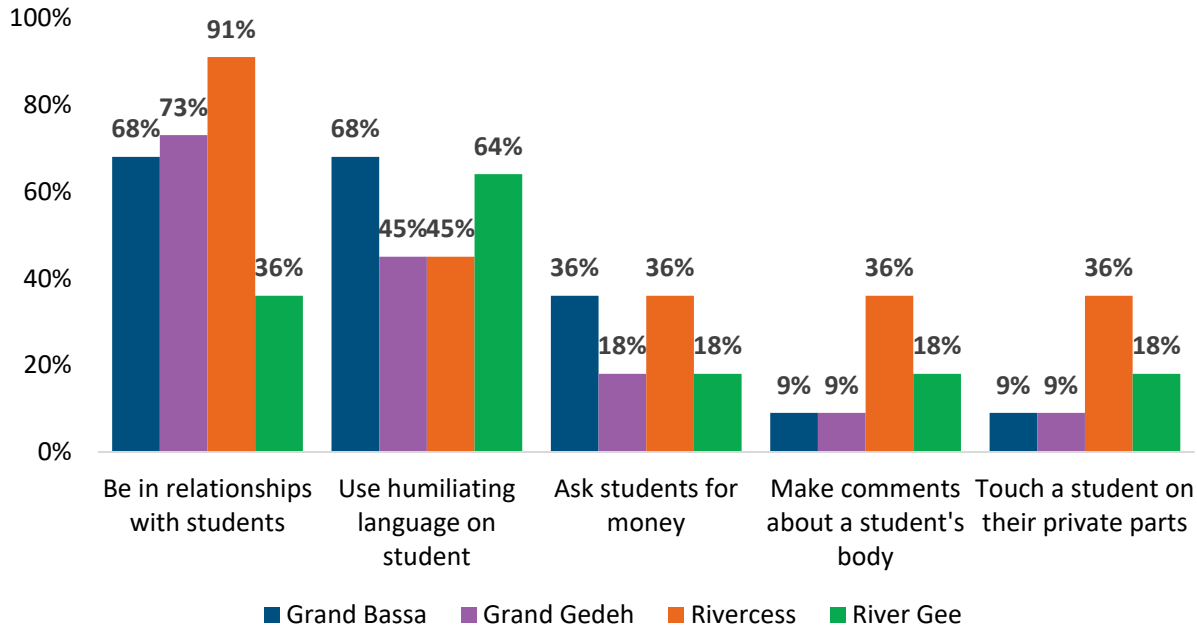
Source: Student survey. Authors' calculations. N = 381 in Grand Bassa, 261 in Grand Gedeh, 102 in Rivercess, and 263 in River Gee.

Exhibit B6. Teacher Knowledge of Rules of Conduct, by County



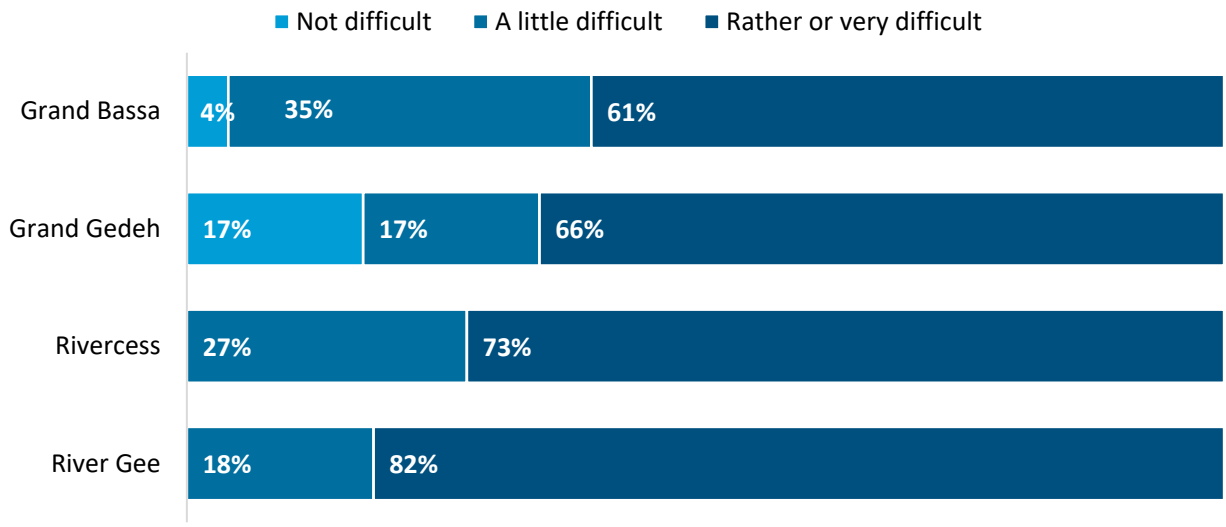
Source: Teacher survey. Authors' calculations. N = 57.

Exhibit B7 Proportion of Teachers Who Know Prohibited Behaviors, by County and Rule



Source: Teacher survey. Authors' calculations. N = 22 in Grand Bassa, 11 in Grand Gedeh, 11 in Rivercess, and 11 in River Gee. Teachers responded to this question only if they confirmed there are rules for the ways that teachers should treat students in school.

Exhibit B8. Degree of Perceived Difficulty: Students' Ability to Consume Three Meals a Day and Snacks, According to Teachers



Appendix C. McGovern-Dole Performance Indicators

McGovern-Dole Indicators (MGD)	Data Collection Methods	Data Source	Baseline (Percentage or Number)	Life of Project Target
MGD 1: Percent of students who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text	Evaluation	LBRA	Boys: 4% Girls: 4% Overall: 4%	20%
MGD 30: Number of individuals participating in USDA food security program	SC/Monitoring	SC	0	176,958
MGD 31: Number of individuals benefiting indirectly from USDA-funded interventions	SC/Monitoring	SC	0	361,402
MGD 32: Number of schools reached as a result of USDA assistance	SC/Monitoring	SC	0	234
Custom: Percentage of children reported reading outside of school in the last week	Evaluation	Student Survey	Boys: 22% Girls: 21% Overall: 22%	25%
MGD 2: Average student attendance rate in USDA supported classrooms/schools	SC/Monitoring	SC	54%	80%
Custom: Number of schools with a strengthened support structure for a code of conduct policy	SC/Monitoring	SC	220	234
Custom: Percentage of children in target schools who demonstrate improved knowledge and practices toward SRGBV prevention and response	Evaluation	Student Survey	Boys: 73% Girls: 71% Overall: 72%	90%
MGD 19: Number of individuals who demonstrate use of new child health and nutrition practices as a result of USDA assistance	SC/Monitoring	SC	0	95

McGovern-Dole Indicators (MGD)	Data Collection Methods	Data Source	Baseline (Percentage or Number)	Life of Project Target
MGD 20: Number of individuals who demonstrate use of new safe food preparation and storage practices as a result of USDA assistance	SC/Monitoring	SC	0	936
MGD 16: Number of daily school meals (breakfast, snack, lunch) provided to school-age children as a result of USDA assistance	SC/Monitoring	SC	0	50,049,750
MGD 17: Number of school-age children receiving daily school meals (breakfast, snack, lunch) as a result of USDA assistance	SC/Monitoring	SC	0	85,129
MGD 14: Quantity of take-home rations provided (in metric tons) as a result of USDA assistance	SC/Monitoring	SC	0	819.6
MGD 15: Number of individuals receiving take-home rations as a result of USDA assistance	SC/Monitoring	SC	0	1,126
MGD 18: Number of social assistance beneficiaries participating in productive safety nets as a result of USDA assistance	SC/Monitoring	SC	0	88,405
MGD 24: Number of children under five (0–59 months) reached with nutrition-specific interventions through USDA-supported programs	SC/Monitoring	SC	0	61,355
LRP 5: Cost of commodity procured as a result of USDA assistance (by commodity and source country)	SC/Monitoring	SC	0	$914,92922
LRP 6: Quantity of commodity procured (MT) as a result of USDA assistance (by commodity and source country)	SC/Monitoring	SC	0	714.79
LRP 4: Cost of transport, storage and handling of commodity procured as a result of USDA assistance (by commodity)	SC/Monitoring	SC	0	$532,436
LRP 7: Value of annual sales of farms and firms receiving USDA assistance	SC/Monitoring	SC	$22,400	TBD
LRP 8: Volume of commodities sold by farms and firms receiving USDA assistance	SC/Monitoring	SC	80MT	TBD

McGovern-Dole Indicators (MGD)	Data Collection Methods	Data Source	Baseline (Percentage or Number)	Life of Project Target
LRP 9: Total increase in installed storage capacity (dry or cold storage) as a result of USDA assistance	SC/Monitoring	SC	0	TBD
LRP 11: Number of individuals who have received short term agricultural sector productivity or food security training as a result of USDA assistance	SC/Monitoring	SC	0	100
LRP 12: Number of individuals in the agriculture system who have applied improved management practices or technologies with USDA assistance	SC/Monitoring	SC	34	80
Custom: Number of days in the past month school meals have included LRP commodities	SC/Monitoring	SC	0	2
Custom: Number of schools receiving school meals with locally procured commodities as result of USDA assistance	SC/Monitoring	SC	0	95
MGD 12: Number of public-private partnerships formed as a result of USDA assistance	SC/Monitoring	SC	0	1
MGD 11: Value of new USG commitments, and new public and private sector investments leveraged by USDA to support food security and nutrition	SC/Monitoring	SC	0	$660,000
Custom: Number of school gardens established as a result of USDA assistance	SC/Monitoring	SC	64	95
MGD 22: Number of individuals trained in safe food preparation and storage as a result of USDA assistance	SC/Monitoring	SC	0	52
MGD 8: Number of educational facilities (i.e. school buildings, classrooms, and latrines) rehabilitated/ constructed as a result of USDA assistance	SC/Monitoring	SC	0	TBD
MGD 23: Number of individuals trained in child health and nutrition as a result of USDA assistance	SC/Monitoring	SC	0	2,240
Custom: Percentage of Grades 2 and 6 students in target schools who can identify the components of a healthy diet	Evaluation	Student Survey	Grade 2: 0%	75%
			Grade 6: 1%	95%
MGD 29: Number of students receiving deworming medication(s)	SC/Monitoring	SC	0	85,129
MGD 28: Number of schools with improved sanitation facilities	SC/Monitoring	SC	220	TBD

McGovern-Dole Indicators (MGD)	Data Collection Methods	Data Source	Baseline (Percentage or Number)	Life of Project Target
MGD 3: Number of teaching and learning materials provided as a result of USDA assistance	SC/Monitoring	SC	0	1,710
MGD 4: Number of teachers/educators in target schools who demonstrate use of new and quality teaching techniques or tools as a result of USDA assistance	SC/Monitoring	SC	0	1,030
MGD 5: Number of teachers/educators/teaching assistants trained or certified as a result of USDA assistance	SC/Monitoring	SC	0	1,872
Custom: Percentage of teachers in target schools who attend and teach at least 90% of the scheduled school days	SC/Monitoring	SC	83%	95%
MGD 9: Number of students enrolled in schools receiving USDA assistance	SC/Monitoring	SC	48,458	85,129
MGD 6: Number of school administrators and officials in target schools who demonstrate use of new techniques or tools as a result of USDA assistance	SC/Monitoring	SC	0	234
MGD 7: Number of school administrators and officials trained or certified as a result of USDA assistance	SC/Monitoring	SC	0	234
MGD 13: Number of Parent–Teacher Associations (PTAs) or similar school governance structures supported as a result of USDA assistance	SC/Monitoring	SC	0	234
Custom: Number of Village Savings and Loans Associations formed and supported as a result of USDA assistance	SC/Monitoring	SC	0	95
Custom: Number of government officials trained as a result of USDA assistance	SC/Monitoring	SC	39	70

Appendix D. Inter-rater Reliability

Reading Assessment

To measure the reliability and level of homogeneity of enumerators' scores on children's literacy skills, 10% of the baseline performance sample (140 out of 1,466) of Grade 2 students were assessed by two different enumerators simultaneously. Long one-way Analysis of Variance techniques, which is used to determine whether the mean of a dependent variable is the same in two or more unrelated and independent groups, were used to calculate the intra-class correlation within pairs of assessors for a measure of inter-rater reliability. Adapted from Fleiss et al. (1973), we interpreted the intra-class correlations as it follows:

- Less than .40 – Poor
- Between .40 and .75 – Good or fair
- Greater than .75 – Excellent

Exhibit D1 shows the percent of agreement between the raters, as well as inter-rater reliability (IRR) ratings for the project evaluation sample. Overall, the IRR across the project evaluation sample was excellent for all of the literacy skills measures showing high internal validity of the scores. For literacy, reading comprehension, and listening comprehension there were no variations in the proportion of children who were able to answer at least 80 percent of comprehension questions. Therefore, the Analysis of Variance (ANOVA) test could not calculate the IRR. Given that this means the results were identical, it is a positive result.

Exhibit D1. Inter-rater Reliability by Literacy Skill Subtest for Performance Sample

Literacy Skill Subtest	IRR	Rating
Letter Knowledge	90%	Excellent
Word Recognition	98%	Excellent
Reader	n/a	n/a
Fluency	100%	Excellent
Accuracy (out of the whole passage)	100%	Excellent
Accuracy (out of the words attempted)	98%	Excellent
Reading Comprehension	n/a	n/a
Listening Comprehension	n/a	n/a

Source: Student survey. Authors' calculations. N = 67 Grade 2 students.

Exhibit D2 shows the IRR results for the impact sample. The enumerators conducted paired interviews for 9% of the treatment group and 10% of the comparison sample. Similar to the

project evaluation sample, the IRR was excellent for most measures. Again, there was no variation in the reading comprehension measure.

Exhibit D2. Inter-rater Reliability by Literacy Skill Subtest for Impact Sample

Literacy Skill Subtest	IRR	Rating
Letter Knowledge	93%	Excellent
Word Recognition	100%	Excellent
Reader	94%	Excellent
Fluency	100%	Excellent
Accuracy (out of the whole passage)	100%	Excellent
Accuracy (out of the words attempted)	96%	Excellent
Reading Comprehension	n/a	n/a
Listening Comprehension	91%	Excellent

Source: Student survey. Authors' calculations. N = 66 Grade 2 students.

Appendix E. Survey Instruments

Student survey & LBRA

ENDLINE AND BASELINE DATA COLLECTION FOR USDA FOOD FOR EDUCATION (LEARN AND LEARN II) IN LIBERIA

IMPACT AND PROJECT EVALUATION

Student Survey

Start Time _____ **Date**

INTRODUCTION

This section is for enumerators to fill		
County	1. Grand Bassa 2. Grand Gedeh 3. Rivercess 4. River Gee	
Districts	Enter the name of the district ----------	
School Name	Enter the school name ----------	
School ID	Enter the school's ID number (EMIS) _____	
Enum	Enter your name ----------	
Enum_fem	What is the gender of the enumerator? 0. Male 1. Female	
Consent	Has the parent given consent for the child to participate in this survey? 0. No →thank them and terminate the survey and select the next child on your list. 1. Yes →stcode1	I__I
Please get the student code from the team leader. It is very important to use the correct student code, so please enter the code twice. If you are unsure, please check again with the team leader		
stcode1	Please enter the student code CAREFULLY----------	
stcode2	Please enter the student code CAREFULLY again ----------	

Reliab	Is this an individual assessment or a pair assessment? 0. Individual → "nickname" 1. Pair assessment →"reliabtype"	I__I
Reliabtype	Talking enumerator or observing enumerator? 0. Observing 1. Talking	I__I

Dear student:

Hello my name is ___, and I am with Center for Action Research and Training. I am here asking some questions from children like you to understand more about a reading program. Your answers will help us make Liberia's education system better. Your parents, your classmates and your teachers will not know your answers to the questions. Everything you say will be kept a secret. There aren't any right or wrong answers. I want you to answer honestly and as best as you can. It will take only 35 minutes. Do you have any questions for me? You can interrupt me to ask a question at any time. Also, if you don't know the answer to a question or don't want to answer it, just let me know and we can skip it. I will just start with a few questions to know you better, and then we will play a reading game. Are you ready to begin?

Ask students' assent from *everyone*			
assent	Do you agree to answer the questions I have? 0. No, thank him/her, terminate the survey, and proceed to the next child on your list. 1. Yes, continue to the background section.	I__I	
If child says No, thank him/her, terminate the survey, and proceed to the next child on your list.			

Background information [DON'T READ TO THE CHILD]

Ask this section from students in *both* grades (Second and Sixth)	
Fname	What is your first name?
Lastname	What is your last name?
Caregivername	What is the name of the person that takes care of you at home most of the time?
Caregiver	Who is (caregivername)'s to you? 1. Mother 2. Father

	3. Older sister 4. Older brother 5. Grandmother 6. Grandfather 7. Other female relative 8. Other male relative 9. Female non-relative 10. Male non-relative 11. Other (Specify) 888. Don't know		
Caregiverschool	Did (caregivername) go to school when she/he was small? 0. No 1. Yes 888. Don't know/No response		*Select only one option
female	0. Male 1. Female	I__I	*Ask only if necessary
age	How old are you?	……	*RECORD AGE >=5 & <25 *Mark 888 if no response/don't know
⚠ Only ask Newsch1 to Newsch1 to newsch3b from Grade 2 students in Grand Gedeh			
Newsch1	Did you move to this school in the last three years? 0. No → newsch4 1. Yes 888. Don't know	I__I	*Select only one option *Probe to ensure the kid understands the sense of time *Ask only from Grade 2 in Grand Gedeh
Newsch2	When did you start? 1. Before 2018 2. 2018 3. 2019 4. 2020 5. 2021	I__I	*Select only one option *You can probe with asking students which semester they start
Newsch3a	Which school did you attend before the current school? School name: School ID: Write "Not listed" if it is not on the list, and add 888 as the school ID and pass to Newsch4.	I__I	NOTE: Find the school mentioned by child on your own tablet and select. If a paper survey, find the school on your school list, and write the full school name and ID on the survey.

Newsch3b	For how many years did you study in "newsch3a" school?	….	*Add a number from 1 to 6 *Enter 888 if no response/don't know
Newsch4	When you started at this school, which grade were you in? 1. Preschool/ABC 2. KG 3. Grade 1 4. Grade 2 5. Grade 3 6. Grade 4 7. Grade 5 8. Grade 6 888. Don't know	I__I	*Select only one option *This is regarding the present school that they are enrolled. *It has to be asked from all students across four counties.
grade	Which grade/class are you in? 1. Grade 2 2. Grade 6 3. Other → **Thanks the child and terminate the survey**	I__I	*Select only one option
everrpt	Did you repeat any grades? 0. No → studattend 1. Yes ➔ everrpt_b 888. Don't know/ No response → studattend	I__I	*Select only one option
Everrpt_b	Which grades have you repeated? 0. KG→Everrpt_kg 1. Grade 1 →Everrpt_c1 2. Grade 2 →Everrpt_c2 3. Grade 3 →Everrpt_c3 4. Grade 4 →Everrpt_c4 5. Grade 5 →Everrpt_c5 6. Grade 6 →Everrpt_c6 888. Refuse to answer	I__I	*Select all that apply
Everrpt_c0	How many times did you repeat Kindergarten?	…	*Enter the frequency *Select if everrpt_b=0
Everrpt_c1	How many times did you repeat Grade 1?	…	*Enter the frequency *Select if everrpt_b=1

Everrpt_c2	How many times did you repeat Grade 2?	…	*Enter the frequency *Select if everrpt_b=2
Everrpt_c3	How many times did you repeat Grade 3?	…	*Enter the frequency *Select if everrpt_b=3
Everrpt_c4	How many times did you repeat Grade 4?	…	*Enter the frequency *Select if everrpt_b=4
Everrpt_c5	How many times did you repeat Grade 5?	…	*Enter the frequency *Select if everrpt_b=5
Everrpt_c6	How many times did you repeat Grade 6?	…	*Enter the frequency *Select if everrpt_b=6
studattend	During the last week of school, how many days did you attend school?	….	*Make sure there was a normal week without a test or a holiday or a cultural ceremony. *Record attendance >=0 & <5 for one week *Mark 888 if the child does not know the answer/refuse to answer *If Grand Bassa, make sure that count Friday as working is part of their school activity.
mainlang	What language do you speak at home most often? 1. English 2. Kpelle 3. Grebo 4. Krahn 5. Bassa 6. Kru 7. Lorma	I__I	*Do not read options *Select only one option

	8. Belleh 9. Sapo 10. Other, specify_____ 888. Don't Know		
otherlang	At home, do you speak any other languages? 1. English 2. Kpelle 3. Grebo 4. Krahn 5. Bassa 6. Kru 7. Lorma 8. Belleh 9. Sapo 10. Other specify _____ 11. No 888. Don't Know	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	*Select all that apply *Do not read the options
ses	In your home, do you have any of the following items that I will read to you? 1. CELL PHONE 2. CURRENT/LIGHT/GENERATOR/SOLAR PANEL/POWER BANK 3. ICE BOX 4. BICYCLE 5. TV 6. MOTORBIKE/PEMPEM 7. CAR 8. KEHKEH 9. RADIO → SES2 10. None 888. Don't know	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	*Please read all the options to the child and select all that apply *Define home for the child as their own family that they spend most of their time with and not other households living with them in one place.
Radio	Is the radio functional? 0. No 1. Yes 888. Don't know	I__I	*Do not read options *Select only one option

book	At home do you have: 1. TEXTBOOKS/SCHOOLBOOKS 2. NEWSPAPERS 3. STORYBOOKS/COMICS 4. COLORING AND DRAWING BOOKS 5. HOLY BOOK (BIBLE OR KORAN) 6. None 888. Don't know	I__I I__I I__I I__I I__I I__I I__I	*Please read all the options to the child and select all that apply

WASH [DON'T READ TO THE CHILD]

Okay, now I have some questions about hygiene.

Ask this section from students in *both* grades (Second and Sixth)			
Hand1	Did you wash your hands at all *yesterday*? 0. No→ hand4 1. Yes 888. Don't know	I__I	*Select only one option
Hand2	At what point did you wash your hands *yesterday*? 1. After using the toilet (poo poo) 2. After using the toilet (pee pee) 3. Before eating food 4. When they were dirty 5. After eating 6. After playing 7. Before preparing food 8. After helping someone else use the toilet 9. Right after coming home 10. After coughing or sneezing 11. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I	* Probe if the child refers to the time s/he washed he/his hands, ask them why they washed their hands at that time *Do not read the options to the child. *Select all that apply.
Hand3	What did you use to wash your hands *yesterday*? 1. Water only 2. Water and soap 3. Ash 4. Hand sanitizer 5. Other, specify _____ 888. Don't know 999. Refuse to answer	I__I	*Do not read the options to the child. *Select only one option

Hand4	At what point <u>should</u> you wash your hands? 1. After using the toilet (poo poo) 2. After using the toilet (pee pee) 3. Before eating food 4. When they were dirty 5. After eating 6. After playing 7. Before preparing food 8. After helping someone else use the toilet 9. Right after coming home 10. After coughing or sneezing 11. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	*Do not read the options to the child. *Select all that apply.
Hand5	When schools were closed because of COVID-19, did anyone teach you about washing your hands? 0. No 1. Yes → eatfreq 2. Knew before closures 888. Don't know	I__I	*Select only one option
Hand7	When schools were closed because of COVID-19/Coronavirus, where did you learn more about handwashing? 1. Through SMSs/phone text messages received from the SC LEARN team 2. Teaching by radio-based messages 3. My parents 4. Learned them from LEARN/Save the Children when I (or my parents) went to collect my take-home rations 5. Volunteers from the community 6. Teachers (school health and nutrition champions) 7. Knew before closures 8. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I	*Do not read the options to the child. *Select all that apply.

Food Security [DON'T READ TO THE CHILD]

Thank you! Now, I would like to ask you some questions about food.

Ask this section from students in *both* grades (Second and Sixth)			
eatfreq	How many times do you eat per day? 1. More than three times per day 2. Three times per day 3. Twice per day 4. Sometimes two times, sometimes one time 5. Once per day 6. I eat once a day and sometimes not eat at all 888. Don't know 999. Refuse to answer	I__I	*Select only one option
diet1	Do you know what does a "balanced diet" mean? 0. No→diet3 1. Yes→diet2 888. Refuse to answer → diet3	I__I	*Do NOT probe if the child does not understand *Select only one option
diet2	Can you explain to me what a balanced diet is? 1. Eating foods that give us energy to play, work, learn (Go) 2. Eating foods that help us grow (Grow) 3. Eating foods that protect us from disease (Glow) 4. None of the above 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	*Probe if needed but do NOT read the options to the child *Select all that apply *For programming purpose - restrict selection of None of the above and 888 with other options.
diet3	Can you name foods that give you energy to play and learn? 1. Grains like maize (corn), rice, fufu, bulgur, or pasta 2. Sweet foods like sugarcane, sugar, or honey 3. Roots like potato, yam, cassavas, eddos, or sweet potato 4. Fats like margarine (butter), or oils 5. Other (Specify)	I__I I__I I__I I__I I__I I__I	*Probe if needed but do NOT read the options to the child *Select all that apply *For programming purpose - restrict selection of None of the above and 888 with other options.

	888. Don't know 999. Refuse to answer		
diet4	Can you name foods that help your body grow? 1. Dairy products like milk, yogurt, and cheese 2. Red meat 3. Poultry (chicken) 4. Fish 5. Eggs 6. Beans, peas, legumes/pulses like seeds and nuts 7. Other (specify) 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	*Probe if needed but do NOT read the options to the child *Select all that apply *For programming purpose - restrict selection of None of the above and 888 with other options.
diet5	Can you name foods that protect your body from disease? 1. Green leafy vegetables like potato greens, spinach, collard green, cassava greens, watergreens 2. Fruits like mango, banana, pawpaw, oranges, pineapple, watermelon, or cucumber 3. Okra 4. Cauliflower 5. Pumpkin 6. Other (specify) 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	*Do NOT read the options to the child *Select all that apply *For programming purpose - restrict selection of None of the above and 888 with other options.
diet6	How do you think the food should be divided between boys and girls? 1. Boys should get more 2. Girls should get more 3. Boys and girls should get equal amounts 888. Don't know 999. Refuse to answer	I__I	*Select only one option *Probe if necessary but do not lead them to an answer *Do not read the options to them
canteen1	Did you eat a meal that was prepared at school for free *yesterday*? 0. No 1. Yes 2. No food was prepared	I__I	*Select only one option *Probe if necessary *If the interview is on Monday, ask the child about Friday or the last time the child was at

	888. Don't know 999. Refuse to answer		school. If the child was absent yesterday, ask about the last time the child was at school.

SCHOOL ENVIRONMENT AND PARTICIPATION [DON'T READ TO THE CHILD]

That's great! You did a good job! Now I want to ask you a couple of questions about your school.

The following questions are *only* for Grade 2 students.			
Enviro0	Do you like coming to school? 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	*Select only one option
enviro1	What do you like best about your class and school? 1. Like teacher 2. Learning new things/enjoy lessons 3. Participate in classroom games and activities 4. Playing a sport at school 5. Access to water 6. Access to clean toilet 7. Food is provided 8. Being with my friends 9. Other (specify)_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I	*Select all that apply. *Do not read the options to the child.

enviro2	What do you not like about your class and school? 1. Teacher is mean to me/other students 2. S/he punishes me/ hits me/other students 3. Teacher asks for money 4. Lessons difficult to understand/learn 5. Not learning much at school 6. Poor toilet conditions/lack of toilets 7. No access to water 8. No food is provided/the food is bad 9. Other students tease me/fight with me/other students 10. I don't feel safe at school 11. Lack of uniform 12. Lack of learning materials 13. Lessons are boring 14. Other (specify) 888. Don't Know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	* Do not read the options to the child * Select all that apply *Note to enumerators: Mean can be yelling, laughing at students, or humiliating them, etc.
Enviro2a	Do you feel valued and respected at school by teachers? 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	*Select only one option
enviro3	How many times **in the last week** did your teacher come to class? 1. Every day (5 days) 2. A few times during the week (2-4 days) 3. Once during the week 4. Never → enviro5 888. Don't know 999. Refuse to answer	I__I	*Read the list to the respondent, but don't read 'don't know' *Select only one *Make sure there was a normal week without a test or a holiday or a cultural ceremony. *Don't ask if the child did not attend school for the full week last week

enviro4	How many times **in the last week** did your teacher come late or miss a portion of the class? 1. EVERY DAY (5 DAYS) 2. A FEW TIMES DURING THE WEEK (2-4 DAYS) 3. ONCE DURING THE WEEK 4. NEVER 888. Don't know 999. Refuse to answer	I__I	*Read the list to the respondent, but don't read "don't know" *Select only one *Don't ask if the child did not attend school for the full week last week
enviro5	Does your school have books other than textbooks/schoolbooks for you to borrow? If yes, is it free, or do you have to pay money? 0. No → nhhold 1. Yes, we can take books, but not off campus → nhhold 2. Yes, we can take books home and it is free → enviro5a 3. Yes, we can take books home, but it costs money →enviro5a 888. Don't know 999. Refuse to answer	I__I	*Select only one option
enviro5a	How many times **in the last week** did you borrow books other than textbooks/school books from school to take home to read? 1. EVERY DAY 2. A FEW TIMES DURING THE WEEK; 3. ONCE DURING THE WEEK; 4. NEVER 888. Don't know 999. Refuse to answer	I__I	*Read the list to the respondent, but don't read 'don't know' *Select only one

<u>Household Environment</u> [DON'T READ TO THE CHILD]

We are almost done! We have a few more questions about your home.

The following questions are *only* for Grade 2 students.			
Nhhold	How many people are there in your household, including yourself?	**…….**	*Define the household for the child as a place where its members live with each other, eat out of the same pot *Record the number > 0 & < 40
Nhhold 3	Among all these people in your household, how many are able to read and write?	……	*Enter 0 if they have none in any of the categories

			*Enter 888 if do not know *Record the number >= 0
Nhhold2	Can you tell me the total number of sisters and brothers who live with you in the same house? 1. Older sisters 2. Younger sisters 3. Older brothers 4. Younger brothers	....	*Enter 0 if they have none in any of the categories *Enter 888 if do not know *Record the number >= 0
hh1	In the last week, did you see anyone in your house reading? 0. No → hh2 1. Yes → hh1a 888. Don't know 999. Refuse to answer	I__I	*Select only one option
hh1a	Who did you see reading last week? 1. Mother 2. Father 3. Older sister 4. Younger sister 5. Older brother 6. Younger brother 7. Grandmother 8. Grandfather 9. Other female relative 10. Other male relative 11. Female non-relative 12. Male none-relative 888. Don't know	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	*Select all that apply *Do not read the options to them
hh2	In the past week, did anyone in your household help you with your studies/school work? 0. No → hh3 1. Yes → hh2a 888. Don't know 999. Refuse to answer	I__I	*Select only one option
hh2a	Who helped you study? 1. Mother 2. Father 3. Older sister 4. Younger sister	I__I I__I I__I I__I I__I	*Select all that apply *Do not read the options to them

	5. Older brother 6. Younger brother 7. Grandmother 8. Grandfather 9. Other female relative 10. Other male relative 11. Female non-relative 12. Male none-relative 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I	
hh3	In the past week, did anyone in your house read to you? 0. No → hh4 1. Yes → hh3a 888. Don't know	I__I	*Select only one option.
hh3a	Who read to you? 1. Mother 2. Father 3. Older sister 4. Younger sister 5. Older brother 6. Younger brother 7. Grandmother 8. Grandfather 9. Other female relative 10. Other male relative 11. Female non-relative 12. Male none-relative 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	*Select all that apply *Do not read the options to them
hh4	In the past week, did anyone in your house tell you a story? 0. No →readout1 1. Yes → hh4a 888. Don't know 999. Refuse to answer	I__I	*Select only one option.
hh4a	Who told you a story? 1. Mother 2. Father 3. Older sister 4. Younger sister 5. Older brother	I__I I__I I__I I__I I__I I__I	*Select all that apply *Do not read the options to them

	6. Younger brother 7. Grandmother 8. Grandfather 9. Other female relative 10. Other male relative 11. Female non-relative 12. Male none-relative 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	
readout1	During the last week, did you read books other than textbooks/schoolbooks outside of school? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
readout2	Outside of your school or home, where else can you go to read or borrow books (other than textbooks)? 1. Community library 2. Church/Mosque or any other religious building 3. Reading clubs 4. Friends or relatives 5. Other 888. Don't know → readout2_enum 999. Refuse to answer → readout2_enum	I__I I__I I__I I__I I__I	*Select all that apply *Do not read the options to them
readout2_enum	FOR ENUMERATORS ONLY [DO NOT ASK THE CHILD] Why did you choose "888"or "999" in the previous question? 1. The child did not know the answer/refused→readenjoy1 2. The child mentioned s/he has nowhere to go outside of school for reading → readenjoy1 3. Other (Specify) → readenjoy1	I__I	*Select only one option
readout3	Did you read books (other than textbooks) in any of those places you mentioned before [readout2 option]? 0. No 1. Yes	I__I	*Select only one option

	888. Don't know 999. Refuse to answer		
readenjoy1	Do you enjoy reading? 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Readenjoy2	Do you consider yourself to be a good reader? 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Readenjoy3	Have you used the 'I help my child to learn' tool with your parent/caregiver? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Readenjoy4	Do you feel supported by your parents/caregivers in your learning and well-being? 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	*Select only one option

<u>Sexual and Gender-based Violence [DON'T READ TO THE CHILD]</u>

Thank you! Now, I would like to ask your opinion about something. There is no right or wrong answer.

Ask this section from students in *both* grades (Second and Sixth)			
Conduct1	Have you ever heard of a teacher lying to get something they want or to get out of trouble? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option

Conduct1a	Have you ever heard of a teacher stealing things from school? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct2	Have you ever heard of a teacher offering money to get something they want, or taking money from someone to give them what they want? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct3	Have you ever heard a teacher make a comment about a student's body, or their in-front part, or behind part, or their chest part? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct4	Have you ever heard about a teacher touching a child on their behind part, chest part, or their in front part? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct5	Did you hear of any teachers coming to school drunk or high on drugs last week? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct6	Did you hear of any teachers teasing/calling children names in the last week? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct6_a	In the last week, how many times did you hear about this happening to boys?	....	Ask if conduct6 = Yes

Conduct6_b	In the last week, how many times did you hear about this happening to girls?	….	Ask if conduct6 = Yes
Conduct7	Did you see a teacher treating one student better than any of the other students last week? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct8	Last week, did any teacher fail to show up at school? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct8_a	In the last week, how many teachers in your school were absent, including your own teacher?	….	*Enter a number and add 888 if the students do not know the answer
Conduct9	Did you see a teacher use corporal punishment last week? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct9_a	In the last week, how many times did you see this happening to boys?	….	Ask if Conduct9=Yes
Conduct9_b	In the last week, how many times did you see this happening to girls?	….	Ask if Conduct9=Yes
Conduct10	If a teacher or school administrator acted violently towards you, would you tell anyone? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Conduct11	Did you witness any violence in the classroom in the past week? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option *Explain that violence can include hitting, verbal abuse, humiliation, sexual comments
sgbv1	Are there rules for the ways that teachers should treat students in school? 0. No -> sgbv3	I__I	Probe if needed

	1. Yes -> sgbv2 888. Don't know		
sgbv2	What are they? 1. Teachers are not allowed to be in a relationship with students 2. Teachers are not allowed to beat students 3. Teachers are not allowed to use humiliating language on students 4. Teachers are not allowed to ask students for money 5. Teachers should not favor one student over the other 6. Teachers are not allowed to make a comment about students' body, or their private parts (sexual harassment). 7. Teachers are not allowed to touch a student on their private parts (sexual abuse). 8. Teachers are not allowed to force students to work on their teacher's farm as a punishment 9. Other (specify)_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	* Do not read the options to the child * Select all that apply *Note that this is an illustrative list and their answers do not need to follow the exact wording. For example, if a child respond teachers should not love students, this can go under "Teachers are not allowed to be in a relationship with students".
Sgbv2_c	Are there any other general rules for teachers in school? 0. No -> sgbv2_b 1. Yes -> sgbv2_d 888. Don't know	I__I	*Select only one option
Srgbv2_d	What are they? 1. Teachers are not allowed to come to school drunk or high on drugs 2. Teachers should not steal from school 3. Teachers are not allowed to arrive late or leave school early with no excuse 4. Teachers are not allowed to fail to show up at school unexpectedly 5. Other specify_____ 888. Don't know		*Select all that apply *Do not read out the options

	999. Refuse to answer		
Sgbv2_b	How did you learn about the rules? 1. Rules posted in the school 2. Head teacher/principal 3. Your teacher 4. Parents 5. Other students 6. Other (Specify) 888. Don't know 999. Refuse to answer	I__I	*Select only one option
sgbv3_boys	How do teachers discipline **boys** at school? 1. Give extra work/assignments 2. Dismiss students from class 3. Physical violence (hitting students) 4. Humiliating language 5. Made to clean or work at the school 6. Other (specify) 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	* Probe if needed *Do not read the options to the child * Select all that apply
Sgbv3_b_boys	In your opinion, are **boys** afraid to go to school for fear of punishment? 0. Never 1. Rarely 2. Some of the time 3. Always 888. Don't know 999. Refuse to answer	I__I	*Select only one option
sgbv3_girls	How do teachers discipline **girls** at school? 1. Give extra work/assignments 2. Dismiss students from class 3. Physical violence (hitting students) 4. Humiliating language 5. Made to clean or work at the school	I__I I__I I__I I__I I__I	* Probe if needed *Do not read the options to the child * Select all that apply

	6. Other (specify) 888. Don't know 999. Refuse to answer		
Sgbv3_b_girls	In your opinion, are **girls** afraid to go to school for fear of punishment? 1. Never 2. Rarely 3. Some of the time 4. Always 888. Don't know 999. Refuse to answer	I__I	*Select only one option
sgbv4	If children are teased or touched in a way they don't like at school, what do they do? 1. Tell their teacher 2. Tell the principal or registrar 3. Tell their parents 4. Tell Management Committee 5. Tell the Police 6. Tell the Community leader (Village chief leader) 7. Tell Child services NGO (UN hotline, WONGOSOL, or LEARN Orange hotline) 8. Nothing 9. Other (specify) 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	* Probe if needed *Do not read the options to the child * Select all that apply
Sgvb5	Do teachers or school officials take action when students report violence? 0. Never 1. Rarely 2. Some of the time 3. Always 888. Don't know 999. Refuse to answer	I__I	*Select only one option *It could be any violence that may happen in school (gender based or physical or any other types)
Sgbv6	Have you listened to at least 2 safe school stories on the radio in the past week? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option

Gender norms

I'm going to read you things that some children agree with and some children disagree with. After I read each one, please tell me if yes you agree or no you disagree.

The following questions are only for Grade 6 students.			
gender1	If a boy touches a girl at school, it's because the girl did something to attract him 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
gender2	There are times when a boy needs to beat his girlfriend/female friend 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
gender3	Girls like to be teased by boys 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
gender4	When girls wear short skirts, they are telling boys or men to touch them 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
gender5	For girls to get good grades, they sometimes have to let their teachers touch them or love them 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
Gender6	Women can lead community meetings and make important decisions 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
Gender7	Men and boys can help prepare and cook food 1. Disagree 2. Agree 888. No response/Not sure	I__I	*Select only one option
Gender8	Who should help the family the most with housework? 0. Boys 1. Girls 2. Both boys and girls	I__I	*Select only one option

	888. Don't know		
Gender9	Who should help the family the most with farm work? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Gender10	For whom is it more important to go to school? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Gender11	Who should help more in carrying out school chores such as cleaning classrooms and toilets? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Gender12	Who receives more negative comments and insults from teachers? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Gender13	Who receives more positive comments from teachers? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know 999. Refuse to answer	I__I	*Select only one option
Gender14	Whom do teachers choose to answer questions most frequently? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know 999. Refuse to answer	I__I	*Select only one option

Disability [DON'T READ TO THE CHILD]

Thank you! You are doing a great job!

Ask this section from students in *both* grades (Second and Sixth)			
dis1	Do you have difficulty seeing? For example, is it difficult to see the chalkboard when you are at school, even if you sit near the front of the classroom, or when you wearing your glasses (mention this example if they wear glasses)? What about when you sit at the back of the classroom? 0. No – no difficulty 1. Yes – some difficulty 2. Yes – a lot of difficulty 3. Cannot do at all 888. Don't know	I__I	*Select only one option ***Make sure difficulty is not because students are blocked by taller students in front of them
dis2	Do you have difficulty hearing? For example, if you were in the main room of your house, could you hear someone talking in a normal voice on the other side of the room, or even when you wearing your hearing aid (only ask if you see they have hearing aid)? 0. No – no difficulty 1. Yes – some difficulty 2. Yes – a lot of difficulty 3. Cannot do at all 888. Don't know	I__I	*Select only one option
dis3	Do you have difficulty walking or climbing steps? For example, is it difficult to move around in your home? 0. No – no difficulty 1. Yes – some difficulty 2. Yes – a lot of difficulty 3. Cannot do at all 888. Don't know	I__I	*Select only one option

Diarrhea Disease Recall [DON'T READ TO THE CHILD]

You are doing a great job! We are almost done!

Ask this section from students in *both* grades (Second and Sixth)			
diar1	Have you had diarrhea in the last 2 weeks? 0. No -> cult1 1. Yes 888. Don't know	I__I	*Select only one option

	999. Refuse to answer		
diar2	When you had diarrhea, did you eat as much as usual, less than usual, more than usual, or nothing? 1. Much less 2. Somewhat less 3. About the same 4. More 5. Stopped food 6. Never ate food 888. Don't know 999. Refuse to answer	I__I	*Select only one option **If less, probe: less than usual or somewhat less?
diar3	Did you seek advice or treatment for the diarrhea from any source? 0. No -> diar5 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
diar4	Where did you seek advice or treatment? 1. Government hospital/health center/health post 2. Community health worker 3. Private hospital/clinic/doctor/pharmacy 4. NGO hospital/clinic 5. Traditional practitioner/shop/market 6. Other specify _____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	*Select all that apply
diar5	Were you given any of the following at any time since you started having diarrhea? 0. No treatment was given 1. Increased fluids 2. ORS packet/pre-packaged ORS liquid 3. Zinc tablets or syrup 4. Government recommended homemade fluids (RHF) 5. Antibiotics 6. Home remedy 7. Other specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	*Select all that apply **If "0" is chosen, no other option can be chosen

Cultural appropriateness of school meals [DON'T READ TO THE CHILD]

Thank you! You are doing a great job! We are almost done! Then we can play the reading game!

Ask this section from students in *both* grades (Second and Sixth)			
cult1	How similar is the school meal you receive to what you eat at home? 1. Not similar at all 2. Quite similar 3. Exactly identical 888. Don't know 999. Refuse to answer	I__I	*Select only one option
cult2	Are you served different types of foods in your school meals? 0. No 1. Yes 888. Don't know 999. Refuse to answer	I__I	*Select only one option
cult3	Are you served anything at school which your parents tell you to not eat for cultural/religious reasons? 0. No → cult5 1. Yes 888. Don't know→cult5	I__I	*Select only one option *Examples include: catfish, honey, pumpkin, palm kernel, oil, duck
cult4	Can you name these items?	-----	*Enter 888 if don't know
Cult5	Do you enjoy the meals that you are served at school? 0. No 1. Yes 2. I like some of the food and dislike some of the food 3. 888. Don't know 4. 999. Refuse to answer	I__I	*Select only one option

Food intake recall [DON'T READ TO THE CHILD]

Thank you! You are doing a great job! We are almost done! Then we can play the reading game!

Ask this section from students in *both* grades (Second and Sixth)			
foodintake1	How many meals do you usually have each day on a school day (i.e., weekday during the school year)?	___	*Enter 888 if don't know

foodintake3	Do you eat any of your meals at school? 0. No 1. Yes	I__I	*Select only one option
foodintake2	How many meals do you usually have <u>each day</u> when you are not in school (i.e., weekend, school holiday)?	___	*Enter 888 if don't know
foodintake4	Which meals do you eat at school? 1. Breakfast 2. Lunch 3. Dinner 4. Snack 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	*Ask if foodintake3=Yes *Select all that apply
foodintake5	Who provides the meals you eat at school? 1. School 2. Caregiver →foodintake5b 3. Self 4. Other, specify 888. Don't know	I__I I__I I__I I__I	*Ask if foodintake3=Yes *Select all that apply
Foodintake5b	Is this person a man or a woman? 1. Man 2. Woman 888. Don't know 999. Refuse to answer	I__I	*Select only one option Ask only if foodintake5 = "Caregiver"
foodintake6	Which of the following food and drink did you consume for <u>breakfast yesterday</u>? 1. Nothing was consumed 2. Rice 3. Soup 4. Fufu 5. Dumboy 6. Mango 7. Pawpaw 8. Banana 9. Plantain 10. orange 11. Breadfruit 12. Butter pear 13. Yam 14. Eddo 15. Cassava 16. Watermelon		*Select all that apply *Read out options to students

	17. Pumpkin 18. Peanut soup 19. Goat meat soup 20. Potato greens 21. Palava sauce 22. Fish 23. Rice bread 24. Chicken gravy 25. Torborgee 26. Kanyah 27. Palm butter soup 28. Pepper soup 29. Water 30. Juice 31. Milk 32. Other, specify 888. Don't know 999. Refuse to answer		
foodintake7	Which of the following food and drink did you consume for a <u>snack yesterday</u>? 1. Nothing was consumed 2. Rice 3. Soup 4. Fufu 5. Dumboy 6. Mango 7. Pawpaw 8. Banana 9. Plantain 10. orange 11. Breadfruit 12. Butter pear 13. Yam 14. Eddo 15. Cassava 16. Watermelon 17. Pumpkin 18. Peanut soup 19. Goat meat soup 20. Potato greens 21. Palava sauce 22. Fish 23. Rice bread		*Select all that apply *Explain that snacks are foods that are eaten in between meals, breakfast, lunch, and dinner *Read out the options

	24. Chicken gravy 25. Torborgee 26. Kanyah 27. Palm butter soup 28. Pepper soup 29. Water 30. Juice 31. Milk 32. Other, specify 888. Don't know 999. Refuse to answer		
foodintake8	Which of the following food and drink did you consume for <u>lunch yesterday</u>? 1. Nothing was consumed 2. Rice 3. Soup 4. Fufu 5. Dumboy 6. Mango 7. Pawpaw 8. Banana 9. Plantain 10. orange 11. Breadfruit 12. Butter pear 13. Yam 14. Eddo 15. Cassava 16. Watermelon 17. Pumpkin 18. Peanut soup 19. Goat meat soup 20. Potato greens 21. Palava sauce 22. Fish 23. Rice bread 24. Chicken gravy 25. Torborgee 26. Kanyah 27. Palm butter soup 28. Pepper soup 29. Water 30. Juice		*Select all that apply *Read out the options

	31. Milk 32. Other, specify 888. Don't know 999. Refuse to answer		
foodintake9	Which of the following food and drink did you consume for <u>dinner yesterday</u>? 1. Nothing was consumed 2. Rice 3. Soup 4. Fufu 5. Dumboy 6. Mango 7. Pawpaw 8. Banana 9. Plantain 10. orange 11. Breadfruit 12. Butter pear 13. Yam 14. Eddo 15. Cassava 16. Watermelon 17. Pumpkin 18. Peanut soup 19. Goat meat soup 20. Potato greens 21. Palava sauce 22. Fish 23. Rice bread 24. Chicken gravy 25. Torborgee 26. Kanyah 27. Palm butter soup 28. Pepper soup 29. Water 30. Juice 31. Milk 32. Other, specify 888. Don't know 999. Refuse to answer		*Select all that apply *Read out the options
foodintake10	Was yesterday a typical day in terms of the types of food you consumed? 0. No	I__I	*Select only one option

	1. Yes 888 Don’t know 999. Refuse to answer		

The literacy assessment is *only* for Grade 2 students.			
Observational Questions **This Question is for the enumerator – DO NOT ASK THIS QUESTION FROM THE CHILD** **If a Grade two student, check this question at the end of the literacy assessment.**			
Canteen1_obs	DOES THE SCHOOL HAVE A CANTEEN? 0. No, there is no canteen available in the school 1. Yes, there is an inactive canteen 2. Yes, there is an active canteen 3. Other (Specify) ----------	I__I	*An inactive canteen means it is no longer functional **not** that it is temporarily closed because it is not meal time at the moment

LITERACY BOOST ASSESSMENT

Understanding Letters

1. Give the child the list of letters and say to the child:
2. Say: *Let's look at some letters. Can you start here* (point to first letter) *and tell me what these letters are moving in this direction?* (indicate left to right direction) *Do you understand? Ok, you can begin.*
3. Mark the letters correct or incorrect as the child reads.
4. Correct letters are:
   - the letter name in the home language or language of instruction
   - any sound that is acceptable for in the home or instructional language
   - a response which says "It begins like…" giving a word for which the letter is the initial letter
5. If the child read the letters out of order, then remember to bring his/her attention to the ones they might have skipped.
6. Make sure you marked all of the letters
7. Move to the Most Used Words section.

What to do if a student is struggling:

- If the student is struggling, and hesitates at any letter for five seconds, ask to follow up questions: *Do you know its name? What sound does it make? Do you know a word that starts with this letter?*
- If the student still hesitates for five seconds, ask: *Can you tell me any of these letters?*
- If the student still hesitates for five seconds, then stop and thank him/her for trying his/her best.
- Mark letters not identified or not attempted as incorrect.
- Move to the Most Used Words section.

x	v	s	o	a
k	g	c	f	b
p	l	h	d	z
t	q	m	i	e
w	u	r	n	j
y				

Most Used Words

1. Give the pupil the laminated copy of the "Most Used Words" list.
2. Say: *I would like you to read some words to me. They are words from your textbook. Please point to and say each of these words starting here* (point to first word) *and moving across each line like this* (indicate left to right direction). *Do you understand? Ok, you can begin.*
3. Mark the words correct or incorrect as the child reads
4. Remember that pronunciations of words with local accent are acceptable.
5. If the child read the words out of order, then remember to bring his/her attention to the ones they might have skipped.
6. Make sure you marked all of the words.
7. Move to the Decoding Section.

What to do if a student is struggling:

- If the student is struggling, and hesitates at any words for five seconds ask the child, *Are there any words on the list that you know? Tell me or say the words you know.* Repeat the request to encourage the child to continue.
- If the student still hesitates for five seconds, then stop and thank him/her for trying his/her best.
- Mark words not identified or not attempted as incorrect.

your	his	uncle	we
school	girls	want	help
and	said	story	room
go	she	will	ask
not	was	mother	did

Invented words

1. **Give the pupil the laminated copy of the "Invented Words" list.**
2. **Say:** *I would like you to read another list of words to me. These words are not real words, rather they are words that we made up ourselves. But they can still be read. Please point to and say each of these words starting here* **(point to first word)** *and moving across each line like this* **(indicate left to right direction).** *Do you understand? Ok, you can begin.*
3. Mark the words correct or incorrect as the child reads.
4. Remember that pronunciations of words with local accents are acceptable.
5. If the child read the words out of order, then remember to bring his/her attention to the ones they might have skipped.
6. Make sure you marked all of the incorrect words.
7. Move to the Reading Passage section.

What to do if a student is struggling:

- If the child hesitates at any word for five seconds, ask the child, *Are there any words on the list that you know? Tell me or say the words you know.* Repeat the request to encourage the child to continue.
- If the student still hesitates for five seconds, then stop and thank him/her for trying his/her best.
- Mark words **not identified or attempted as incorrect**.
- Move to the Reading Passage section.

jour	mir	undle	ne
sprood	kirls	vakt	gelb
alt	baid	flory	koom
vo	phe	yill	asb
dok	sar	rothem	thu

COMPREHENSION PASSAGES AND QUESTIONS

1. **Give the pupil the reading passage.**
2. **Say**: *I am going to give you a reading passage to read. When I say 'begin,' start reading aloud from the title on this page. Try to read each word. If you come to a word you don't know, I'll tell it to you. Be sure to try to do your best reading. Do you understand what I want you to do*?
1. **Say:** *'Begin'* **and when the pupil begins to say the first word of the title press START.**

2. As the pupil reads, follow along on your screen. Click on words read incorrectly (they will turn with a line through them).

3. If the pupil stops reading before the end of the passage, encourage the pupil to keep reading. Show the pupil where he/she stopped, if necessary. Follow along on your copy. If the child does not want to or cannot read anymore, stop the timer and select the last word the child read. Thank the child for reading it and read it out to him/her.

4. After 30 seconds, a message will flash, "Please mark the item being attempted." Mark the word that the child was reading when the message came, and a blue box will appear around it.

5. When the screen flashes at the end of 30 seconds, do a quick count of the correct words.

    - If the pupil has read less than 5 words correctly, then:
        - **Politely stop the child and Press "Finish" box to stop the timer. Say: Thank you.**
        - **Read the passage to them.**
        - **On the next page, mark NONREADER**
        - **And ask them comprehension questions.**

    - If the pupil has read 5 or more words correctly, then:
        - Select the box under the word being read/attempted by the child at 30 seconds.
        - Allow the pupil to finish the passage.
        - Continue marking which words are read incorrectly by clicking on them.
        - As soon as the pupil finishes the last word of the passage, click the FINISH button. Say: Thank you.
        - On the next page, for the question, 'Was the student a reader or nonreader?' mark READER.
        - Move to the Reading Comprehension questions

What to do if a student is struggling:

- If the pupil is struggling and fails to correctly pronounce a word within five seconds, **tell him/her the word and mark it as an error by clicking on it** (the word should appear with a line through it).

The Lone Star Kite! One hot day, all the children were outside playing. Many were flying kites high in the sky. Moses looked at the kite that his older sister Mary made for him. It had red and white stripes and a blue lone star at the top. It looked great. Moses was proud of his kite. He ran up the hill. Moses ran so fast that he fell down and broke his kite. Moses began to cry. Mary came down from the hill. "Why are you crying?" she asked. "My kite is broken," said Moses. "I will fix it," said Mary. Moses trusted his sister. Mary fixed the kite with glue. She handed it to Moses. "Try it now!" Moses ran and the wind carried the kite in the air. All the children came running to look at the beautiful Lone Star kite. Moses was right – his big sister always knew what to do.

Question to enumerator – DO NOT ASK THIS QUESTION FROM THE CHILD			
reader	Is child a reader or a non-reader? 0. A non-reader read fewer than 5 words accurately 30 seconds) à reader_confirm 1. A reader (read correctly 5 per 30 seconds) à nonreader_confirm	I__I	Select only one option
Reader_ comfirm	What kind of reader did you survey? 1. A perfect reader who finished the passage in less than 6 minutes on her/his own 2. A reader who was not able to finish the passage in 6 minutes, and I read the remainder of the passage to her/him after 6 minutes	I__I	Select only one option

	3. A reader who could not read the entire passage or gave up in the middle and I read the remainder of the passage to her/him		
nonreader_ confirm	What kind of non-reader did you survey? 1. A non-reader who was not able to read at all and I read the passage to her/him after 30 second 2. A non-reader who was only able to read 1-4 words and I read the passage to her/him after 30 second	I__I	Select only one option

Comprehension Questions

Comp1	What happened in the story? 1. Moses wants to fly the kite that his sister made 2. Moses falls and breaks his kite 3. Moses's sister fixes the kite 4. Moses is able to fly the kite 5. None	I__I	mark every main point mentioned by the child
Comp2	Who made the kite for Moses? (His older sister, Mary) 0. False 1. True	I__I	Don't read the answer to them
Comp3	What did the kite look like? (Lone Star/red and white stripes with blue star) 0. False 1. True	I__I	Don't read the answer to them
Comp4	How did the kite break? (Moses tripped and dropped it) 0. False 1. True	I__I	Don't read the answer to them
Comp5	Who fixed Moses's kite? (his sister, Mary) 0. False 1. True	I__I	Don't read the answer to them
Comp6	How did Mary fix the kite? (with glue) 0. False 1. True	I__I	Don't read the answer to them
Comp7	Does the kite fly at the end of the story? (yes) 0. False 1. True	I__I	Don't read the answer to them

Comp8	Why was Moses proud of his kite? (his sister made it for him/it was a Lone Star kite) 1. Student could explain their answer with information from the story 2. Student could NOT explain their answer with information from the story	I__I	Don't read the answer to them
Comp9	How did Moses feel after he broke his kite? (Sad or depressed) 0. False 1. True	I__I	Don't read the answer to them
Comp10	Why do you think Mary was a good sister? 0. False 1. True		True if student can support opinion with details from story
Thank you very much for answering my questions.			

End time …….. Comment ……

BASELINE DATA COLLECTION FOR USDA FOOD FOR EDUCATION (LEARN II) IN LIBERIA
IMPACT AND PROJECT EVALUATION

Nutrition and Food Safety KAP (Teacher)

Start Time **Date**

INTRODUCTION

This section is for enumerators to fill	
County	5. Grand Bassa 6. Grand Gedeh 7. Rivercess 8. River Gee
Districts	Enter the name of the district ----------
school name	Enter the school name ----------
enum	Enter your name ----------

Dear teacher:

Hello my name is ___, and I am with Center for Action Research and Training. I am here asking some questions from teachers to understand more about teachers' knowledge of nutrition and food safety in Liberia. Your participation in this interview is voluntary. The survey will take approximately 30-40 minutes. If, at any time, you wish to discontinue participation, you may do so without penalty. If you accept, please respond to all questions as honestly as possible. If you do not know the answer to a question, you may simply say so. All responses will be kept strictly confidential.

Ask for the respondent's assent			
assent	Do you agree to answer the questions I have? 2. No, thank him/her, terminate the survey, and proceed to the next respondent on your list. 3. Yes, continue to the background section.	I__I	
If respondent says No, thank him/her, terminate the survey, and proceed to the next respondent on your list.			

Background information

Fname	What is your first name?		
Lastname	What is your last name?		
female	Is the respondent a man or a woman? 0. Man 1. Woman	I__I	*Ask only if necessary
Age	How old are you?	I__I	Enter age in years Enter -888 if they do not know Enter -999 if they refuse to answer
Exp1	How many years have you been a teacher?	I__I	Enter -888 if they do not know Enter -999 if they refuse to answer
Exp2	How many years have you lived in this community?	I__I	Enter -888 if they do not know Enter -999 if they refuse to answer
Training	Have you ever participated in a gender equity training? 1. Yes 0. No	I__I	Select only one answer Enter 888 if they do not know Enter 999 if they refuse to answer

Module 1: Nutrition [DON'T READ]

Okay, now I have some questions about nutrition.

Nut1a	Are there certain foods boys should get before girls? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Nut1b	Which foods? 1. Starch/carbohydrates (Go foods) 2. Protein (Grow foods) 3. Fiber 4. Fat 5. Vitamins and minerals (Glow foods) 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Ask if Nut1a = Yes Select all that apply Do not read.
Nut1c	Do you prioritize feeding boys over girls? 1. Yes	I__I	Select only one option

	0. No 888. Don't know 999. Refuse to answer		
Nut2	How important do you think it is for children to have breakfast before the first class/period? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	- "Not important" means you do not have to have breakfast before class - "A little important" means you could have breakfast before class, but it is not that important - "Rather important" means you should have breakfast before class if you can - "Very important" means you should try your very best to have breakfast before class Select only one option
Nut3	How difficult is it for children to have breakfast before the first class/period? 1. Not difficult 2. A little difficult 3. Rather difficult 4. Very difficult 888. Don't know 999. Refuse to answer	I__I	Select only one option
Nut4	How important do you think it is for children to have three meals a day? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Nut5	How difficult is it for children to have three meals a day and snacks? 1. Not difficult 2. A little difficult 3. Rather difficult 4. Very difficult 888. Don't know	I__I	Select only one option

	999. Refuse to answer		
Nut6	How important do you think it is for children to have different types of foods at meals? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Explain that eating different types of foods means eating not only grains or only vegetables, but eating, for example, some grains, some vegetables, some meat or tofu, some dairy and some fruits. Select only one option
Nut7	How difficult is it for children to have different types of foods at meals? 1. Not difficult 2. A little difficult 3. Rather difficult 4. Very difficult 888. Don't know 999. Refuse to answer	I__I	Select only one option
Nut8	What can happen if children do not have breakfast before school starts? 1. Have short attention/have low concentration 2. Cannot study well 3. Do not do as well at school as you could 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Select all that apply. Do not read response options.
Nut9	Which three food groups should a nutritious meal consist of? 1. Starch/carbohydrates 2. Protein 3. Fiber 4. Fat 5. Vitamins and minerals 888. Don't know 999. Refuse to answer	I__I I__I I__I	Select three options. Do not read response options.

Nut10	Which foods make a child grow? 1. Different kinds of foods, diverse diet 2. Enough food 3. Food rich in vitamins 4. Balance meals (vegetables + starch + meat or fish) 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply. Do not read response options.
Nut11	Which foods are good for your eyes? 1. Pumpkin 2. Squash 3. Carrots 4. Orange/yellow sweet potatoes 5. Dark green vegetables 6. Ripe mangoes (not green) 7. Ripe papayas (fresh or dried) 8. Palm oil 9. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read response options.
Nut12	Which foods are good for your blood? 1. Organ meat (liver, heart, kidney) 2. Flesh meat 3. Insects 4. Fish/Seafood 5. Soybeans 6. Dark leafy greens 7. Potatoes 8. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read response options.
Nut13	Why should children avoid too much of sticky and sugar-rich foods, such as sweets and candies? 1. Because they can cause tooth decay 2. Because they are not nutritious 3. Because they interfere with appetite 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Select all that apply. Do not read response options.

I am going to ask you about where you got information about nutrition. Nutrition information includes information about foods that are good for you, frequency of meals, the importance of certain meals for growing and performing well in school.			
Nut_Info1	Where did you receive information about nutrition? 1. Teacher training 2. Health workers 3. Community 4. Family 5. Friends 6. Save the Children/LEARN 7. School health and nutrition champions 8. School health clubs 9. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply.
Nut_Info2	How often do you receive nutrition information at school? 1. Every day 2. Once a week 3. Once or twice per month 4. Once or twice a semester 5. Once or twice a year 6. Less than once per year 888. Don't know 999. Refuse to answer	I__I	Select only one option Either in regular lessons or in Health Clubs.
Nut_Info3	What materials does [teacher/staff] use to teach children about nutrition? 1. Print materials (leaflets, books) 2. Posters/bulletin boards 3. Games, competitions (active learning) 4. Lecture 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Either in regular lessons or in Health Clubs. Select all that apply.

Module 2: Water and Sanitation

Thank you! Now, I would like to ask you some questions about water and sanitation.

Toilet1_b	Do **boys** generally use toilets at school when they need to go to the bathroom? 1. Yes →toilet1_g 0. No 888. Don't know → toilet1_g 999. Refuse to answer→ toilet1_g	I__I	Select only one option
Toilet1_why_b	Why not? 1. There is no toilet 2. No toilet paper 3. No soap in the toilet 4. No water in the toilet 5. No privacy 6. Out of order 7. Smells bad 8. Dirty 9. Not safe 10. Mixed with students of opposite gender 11. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	Ask if Toilet1_b = 0 Select all that apply. Do not read response options.
Toilet1_g	Do **girls** generally use toilets at school when they need to go to the bathroom? 1. Yes →toilet2 0. No 888. Don't know → toilet2 999. Refuse to answer→ toilet2	I__I	Select only one option
Toilet1_why_g	Why not? 1. There is no toilet 2. No toilet paper 3. No soap in the toilet 4. No water in the toilet 5. No privacy 6. Out of order 7. Smells bad 8. Dirty 9. Not safe 10. Mixed with students of opposite gender 11. Other, specify_____ 888. Don't know	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	Ask if Toilet1_g = 0 Select all that apply. Do not read response options.

	999. Refuse to answer		
Toilet1_where	Where do **children** go when they need to urinate/defecate? 1. Bush 2. River 3. Went home to use latrine 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Select only one option
Toilet2_where	Where do **adults** go when they need to urinate/defecate? 1. Bush 2. River 3. Went home to use latrine 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Select only one option
Water1	Where do you get your water for drinking from at school? 1. The school give us boiled water 2. The school give us unboiled water 3. Piped water 4. Tank 5. Well 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply.
Water2	How important is it to boil water that will be used for drinking or cooking? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Water3	Can children become sick, such as having stomachache or diarrhea, from drinking unboiled water? 1. Not likely 2. Not sure	I__I	Select only one option

	3. Likely 888. Don't know 999. Refuse to answer		
Water4	Why is it important to boil water that will be used for drinking or cooking? 1. Kills germs, microorganisms 2. Makes water safe to drink 3. Reduces chance of illness (diarrhea) 4. Gives water better taste 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply. Do not read response options.
Water5	How long does water need to be boiled to ensure it is safe? 1. Less than 1 minutes 2. 1-5 minutes 3 More than 5 minutes 888. Don't know 999. Refuse to answer	I__I	Select only one option
I am going to ask you about where you got information about sanitation and safe water. Information about sanitation includes information on using latrines, and what water is safe to drink.			
Water_info1	Where did you receive information about water and sanitation? 1. Teacher training 2. Health workers 3. Community 4. Family 5. Friends 6. Save the Children/LEARN 7. School health champions 8. School health clubs 9. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply.
Water_info2	How often do you receive water and sanitation information at school? 1. Every day 2. Once a week 3. Once or twice per month 4. Once or twice a semester 5. Once or twice a year	I__I	Either in regular lessons or in Health Clubs. Select only one option

	6. Less than once per year 888. Don't know 999. Refuse to answer		
Water_info3	What materials do you use to teach children about water and sanitation? 1. Print materials (leaflets, books) 2. Posters/bulletin boards 3. Games, competitions (active learning) 4. Lecture 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply.
Water_info4	Do you share any of the materials regarding water and sanitation information with PTA members? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Materials could be print materials, books, posters, etc. regarding water and sanitation information Select only one option

Module 3: Handwashing

Thank you! Now, I would like to ask you some questions about handwashing.

Hand1	Is it important for children to wash their hands throughout the day? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hand2	Can you describe how students should wash their hands? 1. Washes hands in a bowl of water (sharing with other people) — poor practice 2. With someone pouring a little clean water from a jug onto one's hands — appropriate practice 3. Under running water — appropriate practice	I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read response options.

	4. Washes hands with soap or ashes 5. Hand sanitizer 6. Other, specify _____ 888. Don't know 999. Refuse to answer		
Hand3	At which moments should students wash their hands? 1. Before eating 2. After eating 3. After defecation 4. After playing games 5. After throwing out the garbage or cleaning 6. After coming home from school or market 7. After feeding or caring for animals 8. After cleaning/wiping baby brother or sister 9. Before preparing food 10. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply Do not read response options.
Hand4	Are there functional handwashing stations at school? 1. Yes 0. No →hand8 888. Don't know 999. Refuse to answer	I__I	A handwashing station can be a sink, a tap with a bucket, a tippy tap - anything that provides clean running water. Select only one option
Hand5	Are both soap and water currently available at the handwashing facilities? 1. Yes, soap and water 2. Water only 3. Soap only 0. Neither water nor soap 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if hand4=yes
Hand6	What portion of your students wash hands after using the bathroom? 1. None 2. Some 3. Most	I__I	Select only one option Ask if hand4 = Yes

	888. Don't know 999. Refuse to answer		
Hand7	What portion of your students wash hands before meals? 1. None 2. Some 3. Most 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if hand4 = Yes
Hand8	Why is it important to wash hands? 1. Prevents from getting sick 2. Cleans hands/removes dirt 3. Is good hygiene 4. Prevents dirt from getting into mouth 5. Prevents dirt from getting into food 6. Removes germs 7. Smells good 8. Looks/feels clean 9. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I	If the respondent says "because they are dirty", probe e.g. "Why? What's wrong with dirty hands?" Select all that apply. Do not read response options.
hand_info1	Where did you receive information about handwashing? 1. Teacher training 2. Health workers 3. Community 4. Family 5. Friends 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply.
hand_info2	How often do you receive handwashing information at school? 1. Every day 2. Once a week 3. Once or twice per month 4. Once or twice a semester 5. Once or twice a year 6. Less than once per year 888. Don't know 999. Refuse to answer	I__I	Select only one option

hand_info3	What materials do you use to teach children about handwashing? 1. Print materials (leaflets, books) 2. Posters/bulletin boards 3. Games, competitions (active learning) 4. Lecture 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply.

Module 4: Health

Thank you! Now, I would like to ask you some questions about health and diseases.

Health1	What do you do when you cough or sneeze? 1. Cover mouth or nose with hand 2. Cover mouth or nose with elbow 3. Cover mouth or nose with tissue or handkerchief 4. Nothing 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Do not read the response options Select only one option
Mhm1	At the time of the survey, are menstrual management materials available at the school in case of an emergency? 1. Yes, at a cost 2. Yes, for free 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Mhm2	Does your school provide menstrual education? 1. Yes for girls only 2. Yes for girls and boys 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Mhm3	At what grade do students start getting menstrual education? 1. Grade 1	I__I	Select only one option Ask if Mhm2=1 or Mhm=2

	2. Grade 2 3. Grade 3 4. Grade 4 5. Grade 5 6. Grade 6 888. Don't know 999. Refuse to answer		
Mhm4	What is the age range in this grade? Low: ____ High: ____	I__I	Ask if Mhm2=1 or Mhm=2
Mhm4	Do teachers receive training on menstruation education as part of pre-service training or in-service trainings? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Eye1	Have you ever heard of trachoma? 1. Yes 0. No →fever1 888. Don't know →fever1 999. Refuse to answer→fever1	I__I	Select only one option
Eye2	What causes trachoma or other eye infections? 1. Dirty face/not washing face 2. Dirty hands / not washing hands 3. Flies 4. Using a dirty towel/sharing a towel 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply. Ask if eye1=Yes
Eye3	How can you tell if a child has trachoma or another eye infection? 1. Eye pain/itch/discomfort 2. Blindness 3. Cannot see well 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Ask if eye1=Yes Select all that apply.

Eye4	What can a child do to prevent eye infection or trachoma? 1. Wash face in the morning 2. Keep face clean throughout the day 3. Wash hands with soap 4. Avoid flies 5. Use clean towels/don't share towels 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Ask if eye1=Yes Select all that apply.
Fever1	Have you heard of dengue fever? 1. Yes 0. No →Worms1 888. Don't know → Worms1 999. Refuse to answer → Worms1	I__I	Select only one option
Fever2	What causes dengue fever? 1. Mosquitoes 2. Lack of hygiene 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if fever1 = Yes
Fever3	How can you tell if a child has dengue fever? 1. Fever 2. Headache 3. Shivering-feeling cold 4. Sweating 5. Joint or muscle pains 6. Vomiting nausea, don't want to eat, diarrhea 7. Weakness and tiredness 8. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read the response options. Ask if fever1 = Yes
Fever4	How can a child prevent getting dengue? 1. Window screens 2. Sleep under bed nets 3. Burning mosquito coils 4. Insect repellant / spray 5. Destroying all standing water around the house 6. Drain mosquito breeding sites, like pools of standing water	I__I I__I I__I I__I I__I I__I I__I	Select all that apply Ask if fever1 = Yes

	7. Take medicine 888. Don't know 999. Refuse to answer		
Fever5	How can a child be treated for dengue? 1. Give the child rest 2. Take the child to the clinic/hospital 3. Give the child paracetamol 4. Give the child aspirin or ibuprofen 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply Ask if fever1 = Yes
Worms1	Have you heard of intestinal worms? 1. Yes 0. No→Worm 4 888. Don't know →Worm 4 999. Refuse to answer→Worm 4	I__I	Select only one option
Worms2	What causes intestinal worms? 1. Unwashed fruit and vegetables 2. Untreated water 3. Walking barefoot 4. Eating without washing hands 5. Not cooking food thoroughly 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply. Ask if worms1=Yes Do not read the response options.
Worms3	How can you prevent children from getting intestinal worms? 1. Wear shoes 2. Use latrines 3. Wash hands before eating 4. Wash food before eating 5. Cook food thoroughly 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply. Ask if worms1=Yes Do not read the response options.

Worms4	Have children at your school ever received deworming treatment? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Covid1	What are the most important actions for preventing Covid-19 infection? 1. Wash your hands with soap and water after being in a public place 2. Avoid close contact with people who are sick 3. Maintain a physical distance of 1 meter from anyone not in your household 4. Cover your mouth and nose with a mask when around others 5. Cover your cough and sneezes 6. Clean frequently touched surfaces daily 7. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I	Select all that apply
Covid2	What are common Covid-19 symptoms 1. Cough 2. Sneezing 3. Runny nose 4. Fever or chills 5. Nausea/vomiting 6. Diarrhea 7. Shortness of breath/difficulty breathing 8. Fatigue 9. Sore throat 10. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply.
Covid3	How can you treat Covid-19? 1. Untreatable 2. Over the counter medicines 3. Prescription medicines 4. Hospital intervention 5. Traditional medicine	I__I	Select only one option

	6. Other, specify_____ 888. Don't know 999. Refuse to answer		
Covid4	What should you do if a child in your classroom tests positive for Covid-19? 1. Contact their parents 2. Make them stay home from school for 10 days 3. Contact the parents of other students in your class to let them know 4. Get a Covid-19 test yourself 5. Self-quarantine for 10 days 6. Tell the principal or school administrator 7. Tell the public health inspector 8. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply.
I am going to ask you about where you got information about these diseases.			
health_info1	Where did you receive information about diseases/health issues? 1. Teacher training 2. Health workers 3. Community 4. Family 5. Friends 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply.
health_info2	How often do you receive diseases/health issues at school? 1. Every day 2. Once a week 3. Once or twice per month 4. Once or twice a semester 5. Once or twice a year 6. Less than once per year 888. Don't know 999. Refuse to answer	I__I	Select only one option

health_info3	What materials do you use to teach children about diseases/health issues? 1. Print materials (leaflets, books) 2. Posters/bulletin boards 3. Games, competitions (active learning) 4. Lecture 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply.

Module 5: Sexual and gender-based violence and gender norms

Thank you! Now, I would like to ask you some questions about sexual and gender-based violence and gender norms

tsgbv1	Are there rules for the ways that teachers should treat students in school? 2. No →tsgbv3 3. Yes 888. Don't know	I__I	Probe if needed
tsgbv2	What are they? 10. Teachers are not allowed to be in a relationship with students 11. Teachers are not allowed to beat students 12. Teachers are not allowed to use humiliating language on students 13. Teachers are not allowed to ask students for money 14. Teachers should not favor one student over the other 15. Teachers are not allowed to make a comment about students' body, or their private parts (sexual harassment). 16. Teachers are not allowed to touch a student on their private parts (sexual abuse). 17. Teachers are not allowed to force students to work on their teacher's farm as a punishment 18. Other (specify) 888. Don't know	I__I I__I I__I I__I I__I I__I	* Do not read the options * Select all that apply *Note that this is an illustrative list and their answers do not need to follow the exact wording. For example, if someone responds that teachers should not love students, this can go under "Teachers are not allowed to be in a relationship with students".

tsgbv3	Are there any other general rules for teachers in school? 2. No →tsgbv5 3. Yes 888. Don't know	I__I	*Select only one option
tsgbv4	What are they? 6. Teachers are not allowed to come to school drunk or high on drugs 7. Teachers should not steal from school 8. Teachers are not allowed to arrive late or leave school early with no excuse 9. Teachers are not allowed to fail to show up at school unexpectedly 10. Other 888. Don't know	I__I I__I I__I I__I I__I	* Do not read the options * Select all that apply
tsgbv5	If children are teased or touched in a way they don't like at school, what do they do? 10. Tell their teacher 11. Tell the principal or registrar 12. Tell their parents 13. Tell Management Committee 14. Tell the Police 15. Tell the Community leader (Village chief leader) 16. Tell Child services NGO (UN hotline, WONGOSOL, or LEARN Orange hotline) 17. Nothing 18. Other (specify) 888. Don't know/No response	I__I I__I I__I I__I I__I	* Probe if needed *Do not read the options * Select all that apply
tsgvb6	Do you or other school officials take action when students report violence? 4. Never 5. Rarely 6. Some of the time 7. Always 888. Don't know/No response	I__I	*Select only one option *It could be any violence that may happen in school (gender based or physical or any other types)

tsgbv7_b	How do you discipline **boys** at school? 7. Give extra work/assignments 8. Dismiss students from class 9. Physical violence (hitting students) 10. Humiliating language 11. Made to clean or work at the school 12. Other (specify) 888. Don't know/No response	I__I I__I I__I I__I I__I	* Probe if needed *Do not read the options * Select all that apply
tsgbv7_g	How do you discipline **girls** at school? 1. Give extra work/assignments 2. Dismiss students from class 3. Physical violence (hitting students) 4. Humiliating language 5. Made to clean or work at the school 6. Other (specify) 888. Don't know/No response	I__I I__I I__I I__I I__I	* Probe if needed *Do not read the options * Select all that apply
Tsgbv8	Teachers have the right to shout at pupils, insult them, and call them names 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Tsgbv9_b	Do you whip boys to maintain discipline in school or class? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Tsgbv9_g	Do you whip girls to maintain discipline in school or class? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Tsgbv10	Who should help the family the most with housework? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option

Tsgbv11	Who should help the family the most with farm work? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option
Tsgbv12	For whom is it more important to go to school? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option
Tsgbv13	Who should help more in carrying out school chores such as cleaning classrooms and toilets? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option
Tsgbv14	Who receives more negative comments and insults from teachers? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option
Tsgbv15	Who receives more positive comments from teachers? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option
Tsgbv16	Whom do teachers choose to answer questions most frequently? 3. Boys 4. Girls 5. Both boys and girls 888. Don't know	I__I	*Select only one option
Tsgbv17	Who should be given preference to desks? 0. Boys 1. Girls 2. Both boys and girls 888. Don't know	I__I	*Select only one option

BASELINE DATA COLLECTION FOR USDA FOOD FOR EDUCATION (LEARN II) IN LIBERIA
IMPACT AND PROJECT EVALUATION

Nutrition and Food Safety KAP (Food preparer)

Start Time **Date**

INTRODUCTION

This section is for enumerators to fill	
County	9. Grand Bassa 10. Grand Gedeh 11. Rivercess 12. River Gee
Districts	Enter the name of the district ----------
school name	Enter the school name ----------
enum	Enter your name ----------

Dear Food Preparer:

Hello, my name is ___, and I am with Center for Action Research and Training. I am here asking some questions from food preparer to understand more about food preparers' knowledge of nutrition and food safety in Liberia. Your participation in this interview is voluntary. The survey will take approximately 20-25 minutes. If, at any time, you wish to discontinue participation, you may do so without penalty. If you accept, please respond to all questions as candidly as possible. If you do not know the answer to a question, you may simply say so. All responses will be kept strictly confidential.

Ask for the food respondent assent			
assent	Do you agree to answer the questions I have? 4. No, thank him/her, terminate the survey, and proceed to the next respondent on your list. 5. Yes, continue to the background section.	I__I	
If respondent says No, thank him/her, terminate the survey, and proceed to the next respondent on your list.			

Background information [DON'T READ]

Fname	What is your first name?		
Lastname	What is your last name?		
female	Is the respondent a man or a woman? 0. Male 1. Female	I__I	*Ask only if necessary
Age	How old are you?	I__I	Enter age in years Enter 888 if don't know Enter 999 if refuse to answer
Exp1	How many years have you been a food preparer?	I__I	Enter 888 if they do not know Enter 999 if refuse to answer
Exp2	How many years have you lived in this community?	I__I	Enter 888 if they do not know Enter 999 if they refuse to answer

Module 1: Work [DON'T READ]

Thank you, now I'm going to ask you some questions about your job

Hours1	On average, how many hours do you work as a food preparer each week?	I__I	Enter 888 if they do not know Enter 999 if they refuse to answer
Hours2	How many hours does the food preparation take each day?	I__I	Enter 888 if they do not know Enter 999 if they refuse to answer Enter number between 0 and 24
Hours3	Does working on the food preparation interfere with your other responsibilities? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Paid1	Are you compensated for your work as a food preparer? 1. Yes, I am paid money 2. Yes, I receive in-kind payment 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option

Paid2	Do you feel that this is fair compensation for the amount of work that you do? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if paid1=1 or paid1=2

<u>Module 2: Health and Nutrition Knowledge</u> [DON'T READ]

Okay, now I have some questions about child health and nutrition.

eat1	How important is it for a child to eat while at school? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	- "Not important" means children do not have to eat while at school - "A little important" means children could eat while at school, but it is not that important - "Rather important" means children should eat at school if they can - "Very important" means children definitely should eat while at school
Eat2	What can happen if a child skips a meal at school and goes hungry? 1. Child can have a short attention span/low concentration 2. Child cannot study well 3. Child does not do as well at school as she could 4. Child gets sleepy or lethargic 5. Child feels sad 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply Do not read.
Eat3a	Are there certain foods boys should get before girls? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Eat3b	Which foods? 1. Starch/carbohydrates (Go foods) 2. Protein (Grow foods) 3. Fiber 4. Fat	I__I I__I I__I I__I I__I	Ask if Eat3a = Yes Select all that apply Do not read.

	5. Vitamins and minerals (Glow foods) 888. Don't know 999. Refuse to answer		
Eat3c	Do you prioritize feeding boys over girls? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Eat4	What are some of the important nutritional practices for school children? 1. Eat different kinds of foods, diverse diet 2. Eat enough food 3. Eat food rich in vitamins 4. Eat balanced meals (vegetables + starch + meat or fish) 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply Do not read.
Diverse1	How important is it to serve different types of foods at meals? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Diverse2	How difficult is it for you to serve different types of foods at meals? 1. Not difficult → **Vita1** 2. A little difficult → à **Vita1** 3. Rather difficult 4. Very difficult 888. Don't know à **Vita1** 999. Refuse to answer à **Vita1**	I__I	Select only one option
Diverse2_why	Why? 1. Difficult to obtain different ingredients	I__I I__I I__I	Only ask if diverse2 = 3 or 4 Select all that apply. Do not read.

	2. Different ingredients are more expensive 3. Children do not like eating different types of foods 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	
Vita1	Give examples of vitamin-A-rich foods you use for school meals. 1. Pumpkin 2. Squash 3. Carrots 4. Orange/yellow Sweet potatoes 5. Dark green vegetables 6. Ripe mangoes (not green) 7. Ripe papayas (fresh or dried) 8. Palm oil 9. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply
Vita2	How important is it to prepare meals with vitamin-A-rich foods? 1. Not important 2. A little important 3. Rather important 4. Very important 0. I do not know what Vitamin A is 888. Don't know 999. Refuse to answer	I__I	Select only one option
Vita3	How common is vitamin A deficiency in school children? 1. Not common 2. Not sure 3. Common 888. Don't know 999. Refuse to answer	I__I	Select only one option
Vita4	What are some signs of vitamin A deficiency in children? 1. Dry skin 2. Eye problems 3. Night blindness	I__I I__I I__I I__I I__I	Select all that apply. Do not read.

	4. Acne 5. Poor wound healing 6. Throat infection 7. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I	
Iron1	How important is it to prepare meals with iron-rich foods? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Iron2	Give examples of iron-rich foods you use for school meals. 1. Organ meat (liver, heart, kidney) 2. Flesh meat 3. Insects 4. Fish/Seafood 5. Soybeans 6. Dark leafy greens 7. Potatoes 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I	Select all that apply
Iron3	How common is vitamin A deficiency in school children? 1. Not common 2. Not sure 3. Common 888. Don't know 999. Refuse to answer	I__I	Select only one option
Iron4	What are some signs of iron deficiency in children? 1. Fatigue 2. Weakness 3. Pale skin 4. Chest pain 5. Headache/dizziness 6. Cold hands or feet	I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read.

	7. Other, specify_____ 888. Don't know 999. Refuse to answer		
Protein1	How important is it to prepare meals with protein-rich foods? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Protein2	Give examples of protein-rich foods you use for school meals. 1. Chicken 2. Meat 3. Eggs 4. Beans 5. Dried fish (Bony) 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Select all that apply
Protein3	What are some signs of protein deficiency in children? 1. Edema (swollen and puffy skin) 2. Loss of muscle mass 3. Stunted growth 4. Increased incidence of infections 5. Increased bone fractures 6. Hair, skin, or nail problems 7. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read.
Protein4	What are some of the plant-based proteins that can substitute animal-based protein for vegetarian students? 1. Beans 2. Tofu (soya meat) 3. Lentils 4. Oats	I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read.

	5. Groundnuts 6. Soybeans 7. Other, specify_____ 888. Don't know 999. Refuse to answer		
Sweets	Why should you avoid serving too much of sticky and sugar-rich foods, such as sweets and candies? 1. Because they can cause tooth decay 2. Because they are not nutritious 3. Because they interfere with appetite 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Select all that apply. Do not read.
Menu1	Do you provide school meals based on the Ministry of Education's (MoE) school feeding food and nutritional guidelines from the national school feeding policy? 1. Yes, always 2. Yes, most of the time 3. Yes, sometimes 0. No, never 888. Don't know 999. Refuse to answer	I__I	Select only one option
Menu2	Do you make adaptations to the Ministry of Education's recommended menu? 1. Yes 0. No →Menu4 888. Don't know→Menu4 999. Refuse to answer→Menu4	I__I	Ask if Menu1 = 1 or 2 or 3 Select only one option
Menu3	Why did you make adaptations to the Ministry of Education's recommended menu? 1. Recommended ingredient unavailable 2. Recommended ingredient too expensive	I__I I__I I__I I__I I__I	Ask if Menu2 = 1 Select all that apply. Do not read.

	3. Recommended ingredient is not good/not nutritious 4. Adaptation for student's diet (e.g., for vegetarian students) 5. Other, specify_____ 888. Don't know 999. Refuse to answer		
Menu4	Which vegetables are you serving <u>this week</u>? 0. None 1. Green leafy vegetables 2. Okra 3. Cauliflower 4. Pumpkin 5. Potato 6. Sweet potato 7. Cassava 8. Bitter balls 9. Cassava leaf 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read.
Menu5	Which fruits are you serving <u>this week</u>? 0. None 1. Bananas 2. Oranges 3. Plantains 4. Mango 5. Papaya 6. Pineapple 7. Pawpaws 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read.
Menu6	How many chicken eggs did you typically provide to <u>each student each day in the last school year</u>? [enter integer]	___	Enter an integer Enter 0 if no eggs are served Enter -888 if they do not know Enter -999 if they refuse to answer
Bev1	Do you serve beverages with school meals? 1. Yes 0. No → healthymeal1	I__I	Select only one option

	888. Don't know→healthymeal1 999. Refuse to answer→healthymeal1		
Bev2	What kind of beverages do you serve? 1. Water 2. Juice 3. Milk 4. Tea 5. Powdered drink 6. Soft drinks 7. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Ask if Bev1 = Yes Select all that apply. Do not read.
Healthymeal2	Which three food groups should a nutritious meal consist of? 1. Starch/carbohydrates (Go foods) 2. Protein (Grow foods) 3. Fiber 4. Fat 5. Vitamins and minerals (Glow foods) 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select three responses that apply. Do not read response options.
Healthymeal1	A health meal includes a balance of foods containing starch/carbohydrates (go foods), protein (grow foods), and vitamins and minerals (glow foods). How confident do you feel preparing healthy and nutritious meals for school children? 1. Not at all confident 2. A little confident 3. Mostly confident 4. Very confident 888. Don't know 999. Refuse to answer	I__I	Select only one option
Train1	Did you ever attend a training on child health and nutrition?	I__I	Select only one option

	1. Yes 0. No →Module2 888. Don't know →Module2 999. Refuse to answer →Module2		
Train2	When was the last time you attended one? 1. In the past week 2. In the past month 3. In the past 6 months 4. In the past year 5. More than one year ago 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if train1 = yes
Train3	Where did you receive information about child health and nutrition? 1. School Meal Provider training 2. Public health inspectors 3. Other School Meal Providers 4. Ministry of Health materials 5. Ministry of Education materials 6. School health and nutrition champions 7. Information, Education, and Communication (IEC) materials supplied by LEARN/Save the Children 8. The National Training Manual for School Health Clubs (supplied by LEARN/Save the Children) 9. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read.
Train4	Did you have any difficulty understanding the training materials? 1. No difficulty 2. Little difficulty 3. Some difficulty 4. A lot of difficulty 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if train1 = Yes

Train5	What is the <u>most important</u> action for preventing Covid-19 infection? 1. Wash your hands frequently with soap and water especially after being in a public place 2. Avoid close contact with people who are sick 3. Maintain a physical distance of 1 meter from anyone not in your household 4. Cover your mouth and nose with a mask when around others 5. Cover your cough and sneezes 6. Clean frequently touched surfaces daily 7. Other, specify _____ 888. Don't know 999. Refuse to answer	I__I	Select only one option

<u>Module 3: Food Safety</u>

Thank you! Now, I would like to ask you some questions about food safety.

Mealprep1	Did you miss any days of meal prep because you were sick in the school year? 1. Yes 0. No →Mealprep2 888. Don't know → Mealprep2 999. Refuse to answer → Mealprep2	I__I	Select only one option
Mealprep1_why	If yes, why did you miss days when you were sick? 1. I felt bad 2. It affects food safety 3. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I	Select all that apply. Ask if mealprep1=Yes Do not read options.
For the following statements, state how much you agree or disagree with the statement:			

Mealprep2	My staff always help me to prepare meals even when they are sick (i.e., with flu, cold, diarrhea, coughing, etc.). 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene1	Sneezing can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene2	Coughing can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene3	Back pain can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene4	An open wound on fingers/hand that comes in contact with food can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know	I__I	Select only one option

	999. Refuse to answer		
Hygiene5	Having a fever can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene6	Having a headache can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene7	Vomiting can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Hygiene8	Diarrhea can affect the safety of the food being prepared. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Handwash1	At what moments do you wash your hands? 1. Before preparing meals 2. Before serving meals 3. After handling raw meat or poultry 4. After touching money	I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read options.

	5. After using the toilet 6. After touching / taking out garbage 7. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	
Handwash2	How long do you wash your hands for? In seconds. [enter a number]	___	Enter a number greater than zero. Enter 888 if they do not know or 999 if they refuse to answer
cleanclothes	How important is it to wear clean clothes (or clean apron) when you cook? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Preparea1	Describe the area where you prepare meals. 1. Separate (dedicated) room in house 2. Shared (not dedicated) room in house 3. Outside 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Select only one option
Preparea2	Describe how you clean the area where you prepare meals. 1. Clean prep surfaces with soap and water 2. Clean prep surfaces with water only (no soap) 3. Sweep/wipe the floor 4. Remove trash 5. Clean utensils 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read options.
Preparea3	When do you clean the area where you prepare meals?	I__I	Select only one option

	1. Before preparing each batch of meals 2. After preparing each batch of meals 3. Both before and after preparing each batch of meals 4. Other, specify_____ 888. Don't know 999. Refuse to answer		
Preparea4	How important is it to maintain a clean cooking environment? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Foodstore1	How do you store **cooked foods**? 1. In the refrigerator (below 5 °C)/cool box 2. Covered (protected from insects, rodents, pests and dust) 3. Uncovered 4. Separated from ready-to-eat foods 5. Combined with all other food items (cooked or uncooked) 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read options.
Foodstore2	How important is it to keep meat, poultry, fish, seafood or cooked food in a cool place, for example in a cool box or in the refrigerator? 1. Not important 2. A little important 3. Rather important 4. Very important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Foodstore3	How difficult is it for you to keep foods in a cool box or in the refrigerator? 1. Not difficult→foodstore9	I__I	Select only one option

	2. A little difficult→foodstore9 3. Rather difficult 4. Very difficult 888. Don't know 999. Refuse to answer		
Foodstore3_why	Why? 1. Do not have a fridge/cool box 2. Fridge/cool box is expensive 4. Do not have electricity 5. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Ask if foodstore3 = 3 or 4 Select all that apply. Do not read options.
Foodstore4	How much time usually passes between preparing hot food (from when it is cooked and ready) and delivering it to students? 1. Less than 30 minutes 2. Less than 1 hour 3. Between 1 and 2 hours 4. Over 2 hours 888. Don't know 999. Refuse to answer	I__I	Select only one option
Foodstore5	Does this time differ depending on the weather (i.e., if it is >30C)? 1. Yes 0. No 888. Don't know 999. Refuse to answer	I__I	Select only one option
Foodstore6	Why is it important to not keep hot food out at room temperature before serving for too long? 1. Bacteria grows well at room temperature 2. The food gets cold 3. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I	Select all that apply. Do not read options.
Foodstore7	Why should you avoid serving leftovers that were not kept in a cool place [if stored for more than 2 hours or 1 hour if it's warmer than 30C]? This does not apply to uncut fruit or breads.	I__I I__I I__I I__I	Select all that apply. Do not read options.

	1. Because food is not safe anymore 2. Food gets spoiled (germs multiply very quickly and can cause illness) 3. Higher temperatures make germs grow faster 4. Other, specify_____ 888. Don't know 999. Refuse to answer		
Foodstore8	How likely are children to get sick from eating food that was not stored properly? 1. Not likely 2. A little likely 3. Somewhat likely 4. Highly likely 888. Don't know 999. Refuse to answer	I__I	Select only one option
Contamination1	Why should you prevent raw meat, offal, poultry and seafood from touching other foods such as those that are cooked or ready to eat? 0. No reason given 1. Raw animal food often contains germs (which may be transferred to cooked and ready-to-eat foods) 2. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I	Select all that apply
For the following statements, state how much you agree or disagree with the statement:			
Contamination2	I use separate (clean) utensils to handle different types of food. 1. Agree 2. Strongly agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Contamination3	I use the same (dirty) utensils to handle raw meat / poultry and other foods (e.g., fruit or vegetables). 1. Agree 2. Strongly agree	I__I	Select only one option

	3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer		
Contamination4	I prepare raw meat / poultry that has pests on it (i.e., flies, roaches, insects). 1. Agree 2. Strongly agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Contamination5	I clean the food prep surface (table, counter, chopping board) after cutting raw meat or poultry and before cutting fruits or vegetables. 1. Agree 2. Strongly agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Contamination6	I make sure that flies can do not touch the prepared food. 1. Agree 2. Strongly agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Ready1	When cooking soups and stews, what sign shows that these are ready and safe to be served? 0. None 1. They are boiling/well cooked 2. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Select only one option Don't read the options

Ready2	When cooking flesh meat, organ meat or seafood, what sign shows that these are ready and safe to be served? 0. None 1. No blood/pink inside 2. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Select only one option Don't read the options
Ready3	How likely are children to get sick from eating undercooked meat or poultry? 1. Not likely 2. A little likely 3. Somewhat likely 4. Highly likely 888. Don't know 999. Refuse to answer	I__I	Select only one option
Ready4	What should you do before serving children raw fruits and vegetables? 1. Wash them with clean water and soap 2. Wash them with clean water only 3. Peel them 4. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I	Select only one option
Transport1	When do you deliver the meals to the school? 1. Before 7:30am 2. Between 7:30 and 8:30am 3. Between 8:30 and 10:00am 4. After 10:00am 888. Don't know 999. Refuse to answer	I__I	Select only one option
Transport2	How long does it take you to deliver the meals to students (in minutes)?		Enter integer. Enter 888 if don't know Enter 999 if refuse to answer
Cleanup1	After you have prepared a school meal, kitchen surfaces, pots, pans, plates and utensils are dirty. Can you describe how you clean them usually? 1. Scrape excess food into rubbish bin	I__I I__I I__I I__I	Select all that apply. Do not read options.

	2. Wash with clean or hot water 3. Wash with detergent 4. Other, specify_____ 888. Don't know 999. Refuse to answer		
Water1	Where do you get water for cooking? 1. Pond, lake 2. Dam 3. Stream/river 4. Unprotected spring 5. Protected spring 6. Well 7. Borehole 8. Water tank 9. Roof catchment 10. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read options.
Water2	Who fetches/provides the water? 1. Women 2. Men 3. Girls 4. Boys 5. Other, specify _____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Select all that apply. Do not read options.
Water3	Where do you get water for children's beverages (e.g., for powdered drinks)? 1. Pond, lake 2. Dam 3. Stream/river 4. Unprotected spring 5. Protected spring 6. Well 7. Borehole 8. Water tank 9. Roof catchment 10. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I I__I I__I I__I I__I I__I	Select all that apply. Do not read options.

Water4	How important is it to boil or filter water that will be used for drinking? 1. Not important 2. A little important 3. Somewhat important 4. Highly important 888. Don't know 999. Refuse to answer	I__I	Select only one option
Water5	Why is it important to boil or filter water that will be used for drinking? 1. Kills germs, microorganisms 2. Makes water safe to drink 3. Reduces chance of illness 4. Gives water better taste 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I	Select all that apply. Do not read options.
Water6	How likely are children to get sick from drinking unboiled or unfiltered water? 1. Not likely 2. A little likely 3. Somewhat likely 4. Highly likely 888. Don't know 999. Refuse to answer	I__I	Select only one option
Water7	How long does water need to be boiled to ensure it is safe? 1. Less than 1 minute 2. Between 2 and 3 minutes 3. 3 minutes 4. More than 3 minutes 888. Don't know 999. Refuse to answer	I__I	Select only one option
Attitude1	Cooks are responsible for preventing food poisoning or foodborne illness. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option

Attitude2	Servers are responsible for preventing food poisoning or foodborne illness. 1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree 888. Don't know 999. Refuse to answer	I__I	Select only one option
Aware1	Has anyone ever come to supervise you as you prepare school meals? 1. Yes 0. No →Aware3 888. Don't know →Aware3 999. Refuse to answer→Aware3	I__I	Select only one option
Aware2	If yes, who has supervised you? 1. Public health inspector 2. Ministry official 3. School principal or head teacher 4. Parent of students 5. LEARN staff 6. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Ask if Aware1 = 1 Select all that apply
Aware3	How often do they come to supervise you? 1. Daily 2. About once a week 3. About once a month 4. Every 3 months 5. Every 6 months 6. Once a year 7. Less than once a year 888. Don't know 999. Refuse to answer	I__I	Ask if Aware1 = 1 Select only one option
Aware4	When somebody comes to supervise you do they arrange it with you or is it a random drop in? 1. Arranged supervision 2. Random drop in 888. Don't know 999. Refuse to answer	I__I	Select only one option Ask if Aware1 = 1

Info1	Have you ever received information about food safety techniques? 1. Yes 0. No →info4 888. Don't know →info4 999. Refuse to answer →info4	I__I	Select only one option
Info2	When was the last time you received food safety information? 1. This week 2. Last week 3. This month 4. Within past 6 months 5. Within the past year 6. Over a year ago 888. Don't know 999. Refuse to answer	I__I	Ask if info1 = 1 Select only one option
Info3	Who did you receive food safety information from? 1. Public health inspector 2. Ministry official 3. School principal or head teacher 4. Parents of students 5. LEARN Staff 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply Ask if info1=1
Info4	Did you ever attend a training on food safety? 1. Yes 0. No →END 888. Don't know →END 999. Refuse to answer → END	I__I	Select only one option
Info5	When was the last time you attended one? 1. In past week 2. In past month 3. In past 6 months 4. In past year 5. Over a year ago 888. Don't know 999. Refuse to answer	I__I	Ask if info4 = Yes Select only one option
Info6	Where did you receive information about food safety?	I__I I__I	Ask if info4 = 1

	1. School Meal Provider training 2. Public health inspectors 3. Other School Meal Providers 4. Ministry of Health (MoH) materials 5. Ministry of Education (MoE) materials 6. LEARN staff 7. Other, specify_____ 888. Don't know 999. Refuse to answer	I__I I__I I__I I__I I__I	Select all that apply. Do not read options.
Info7	Did you have any difficulty understanding the content or training materials? 1. No difficulty 2. A little difficulty 3. Some difficulty 4. A lot of difficulty 888. Don't know 999. Refuse to answer	I__I	Ask if info4 = 1 Select only one option
Thanks	**Thank you very much for answering my questions.**		

School Observation Survey

School Assessment

School Assessment for USDA FOOD FOR EDUCATION (LEARN) IN LIBERIA

Start time	
End time	
Date	

County			
District			
School name			
gps	GPS coordinates		

Variable	Item	Response Options	Instructions
Enrollment Information			
Enrollment	Please see the principal for the enrollment list for 2021-2022		
enrollABCb	What is the number of boys enrolled in ABC?		*Use registration lists to populate
enrollABCg	What is the number of girls enrolled in ABC?		*Use registration lists to populate
enrollKGb	What is the number of boys enrolled in KG?		*Use registration lists to populate
enrollKGg	What is the number of girls enrolled in KG?		*Use registration lists to populate
enroll1b	What is the number of boys enrolled in 1st grade?		*Use registration lists to populate
enroll1g	What is the number of girls enrolled in 1st grade?		*Use registration lists to populate
enroll2b	What is the number of boys enrolled in 2nd grade?		*Use registration lists to populate

Variable	Item	Response Options	Instructions
enroll2g	What is the number of girls enrolled in 2nd grade?		*Use registration lists to populate
enroll3b	What is the number of boys enrolled in 3rd grade?		*Use registration lists to populate
enroll3g	What is the number of girls enrolled in 3rd grade?		*Use registration lists to populate
enroll4b	What is the number of boys enrolled in 4th grade?		*Use registration lists to populate
enroll4g	What is the number of girls enrolled in 4th grade?		*Use registration lists to populate
enroll5b	What is the number of boys enrolled in 5th grade?		*Use registration lists to populate
enroll5g	What is the number of girls enrolled in 5th grade?		*Use registration lists to populate
enroll6b	What is the number of boys enrolled in 6th grade?		*Use attendance lists to populate
enroll6g	What is the number of girls enrolled in 6th grade?		*Use registration lists to populate
Note	Insert your comment if any, especially if the enrollment list is not available		
grade6_comp_b	Number of boys successfully completing Grade 6 last year (2020-2021)		

Variable	Item	Response Options	Instructions
grade6_comp_g	Number of girls successfully completing Grade 6 last year (2020-2021)		
Dropout information for students in 2019-2020			
dropout_abc_b_19	Number of boys who dropped out of ABC during the last academic year (2019-2020)		
dropout_abc_g_19	Number of girls who dropped out of ABC during the last academic year (2019-2020)		
dropout_kg_b_19	Number of boys who dropped out of KG during the last academic year (2019-2020)		
dropout_kg_g_19	Number of girls who dropped out of KG during the last academic year (2019-2020)		
dropout_g1_b_19	Number of boys who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g1_g_19	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g2_b_19	Number of boys who dropped out of Grade 2 during the last academic year (2019-2020)		

Variable	Item	Response Options	Instructions
dropout_g2_g_19	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g3_b_19	Number of boys who dropped out of Grade 3 during the last academic year (2019-2020)		
dropout_g3_g_19	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g4_b_19	Number of boys who dropped out of Grade 4 during the last academic year (2019-2020)		
dropout_g4_g_19	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g5_b_19	Number of boys who dropped out of Grade 5 during the last academic year (2019-2020)		
dropout_g5_g_19	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g6_b_19	Number of boys who dropped out of Grade 6 during the last academic year (2019-2020)		

Variable	Item	Response Options	Instructions
dropout_g6_g_19	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
Note	Insert your comment if any, especially if the dropout list is not available		
Dropout information for Teachers for 2019-2020 school year			
dropout_abc_t	Did the teacher in ABC drop-out?	0. No 1. Yes	*Select only one option
dropout_g1_t	Did the teacher in Grade 1 drop-out?	0. No 1. Yes	*Select only one option
dropout_g2_t	Did the teacher in Grade 2 drop-out?	0. No 1. Yes	*Select only one option
dropout_g3_t	Did the teacher in Grade 3 drop-out?	0. No 1. Yes	*Select only one option
dropout_g4_t	Did the teacher in Grade 4 drop-out?	0. No 1. Yes	*Select only one option
dropout_g5_t	Did the teacher in Grade 5 drop-out?	0. No 1. Yes	*Select only one option
Dropout information for students in 2020-2021			
dropout_abc_b	Number of boys who dropped out of ABC during the last academic year (2020-2021)		
dropout_abc_g	Number of girls who dropped out of ABC during the last academic year (2020-2021)		
dropout_kg_b	Number of boys who dropped out of KG during the last academic year (2020-2021)		

Variable	Item	Response Options	Instructions
dropout_kg_g	Number of girls who dropped out of KG during the last academic year (2020-2021)		
dropout_g1_b	Number of boys who dropped out of Grade 1 during the last academic year (2020-2021)		
dropout_g1_g	Number of girls who dropped out of Grade 1 during the last academic year (2020-2021)		
dropout_g2_b	Number of boys who dropped out of Grade 2 during the last academic year (2020-2021)		
dropout_g2_g	Number of girls who dropped out of Grade 1 during the last academic year (2020-2021)		
dropout_g3_b	Number of boys who dropped out of Grade 3 during the last academic year (2020-2021)		
dropout_g3_g	Number of girls who dropped out of Grade 1 during the last academic year (2020-2021)		
dropout_g4_b	Number of boys who dropped out of Grade 4 during the last academic year (2020-2021)		

Variable	Item	Response Options	Instructions
dropout_g4_g	Number of girls who dropped out of Grade 1 during the last academic year (2020-2021)		
dropout_g5_b	Number of boys who dropped out of Grade 5 during the last academic year (2020-2021)		
dropout_g5_g	Number of girls who dropped out of Grade 1 during the last academic year (2020-2021)		
dropout_g6_b	Number of boys who dropped out of Grade 6 during the last academic year (2020-2021)		
dropout_g6_g	Number of girls who dropped out of Grade 1 during the last academic year (2020-2021)		
Note	Insert your comment if any, especially if the dropout list is not available		
Dropout information for Teachers in 2020-2021 school year			
dropout_abc_t_20	Did the teacher in ABC drop-out?	0. No 1. Yes	*Select only one option
dropout_g1_t_20	Did the teacher in Grade 1 drop-out?	0. No 1. Yes	*Select only one option
dropout_g2_t_20	Did the teacher in Grade 2 drop-out?	0. No 1. Yes	*Select only one option
dropout_g3_t_20	Did the teacher in Grade 3 drop-out?	0. No 1. Yes	*Select only one option

Variable	Item	Response Options	Instructions
dropout_g4_t_20	Did the teacher in Grade 4 drop-out?	0. No 1. Yes	*Select only one option
dropout_g5_t_20	Did the teacher in Grade 5 drop-out?	0. No 1. Yes	*Select only one option
Attendance Information			
Attendance	Please ask the Principal first if they have the attendance if not talk to the teacher in each grade		
attend1b	How many boys in 1st grade attended school last Thursday?		*Use attendance lists to populate
attend1g	How many girls in 1st grade attended school last Thursday?		*Use attendance lists to populate
attend2b	How many boys in 2nd grade attended school last Thursday?		*Use attendance lists to populate
attend2g	How many girls in 2nd grade attended school last Thursday?		*Use attendance lists to populate
attend3b	How many boys in 3rd grade attended school last Thursday?		*Use attendance lists to populate
attend3g	How many girls in 3rd grade attended school last Thursday?		*Use attendance lists to populate
attend4b	How many boys in 4th grade attended school last Thursday?		*Use attendance lists to populate
attend4g	How many girls in 4th grade attended school last Thursday?		*Use attendance lists to populate
attend5b	How many boys in 5th grade attended school last Thursday?		*Use attendance lists to populate
attend5g	How many girls in 5th grade attended school last Thursday?		*Use attendance lists to populate

Variable	Item	Response Options	Instructions
attend6b	How many boys in 6th grade attended school last Thursday?		*Use attendance lists to populate
attend6g	How many girls in 6th grade attended school last Thursday?		*Use attendance lists to populate
Note	Insert your comment if any, especially if the attendance list is not available		
Additional Interventions			
intervention1	Are there other similar (education, health, or nutrition) programs operating in this school?	0. No àEnrollment Yes	*Select only one option
Intervention3	Please list the names of the other interventions and the year the program started in this school	Name1_____ Year1_____ Name2_____ Year2_____ Name3_____ Year3_____ Name4_____ Year4_____ Name5_____ Year5_____ Name6_____ Year6_____ Name7_____ Year7_____	*Add responses based on intervention2

Variable	Item	Response Options	Instructions
Note	Insert your note if there are more programs or there are any other important information regarding these programs		
OBSERVATIONS			
structure	Is this school a permanent or temporary structure?	1. Permanent 2. Temporary	*Select only one option
type	What type of structure is the school?	1. Concrete/block 2. Mud 3. Mat 4. Open air 5. Other (specify)	*Select only one option
clean1	Are the school grounds free from standing water?	0. No 1. Yes	*Select only one option
Clean2	Are the school grounds free from trash and feces?	0. No 1. Yes	*Select only one option
Clean3	Are the school grounds free from sharp objects?	0. No 1. Yes	*Select only one option
Clean4	Is the grass within the school grounds kept short?	0. No 1. Yes	*Select only one option
expansion1	Has there been any expansion of existing buildings in the past year (since February, 2021)?	0. No àexpansion2 1. Yes	*Select only one option * Confirm the expansion with the principal
expansion1b	Is this school a permanent or temporary structure?	1. Permanent 2. Temporary	*Select only one option

Variable	Item	Response Options	Instructions
expansion1c	What type of structure is the school?	1. Concrete/block 2. Mud 3. Mat 4. Open air 5. Other (specify)	*Select only one option
Expansion2	Has there been any addition of new buildings in the past year (since February, 2021)	0. No àtoilet1 1. Yes	*Select only one option *Confirm the addition with the principal
expansion2b	Is this school a permanent or temporary structure?	1. Permanent 2. Temporary	*Select only one option
expansion2c	What type of structure is the school?	1. Concrete/block 2. Mud 3. Mat 4. Open air 5. Other (specify)	*Select only one option
Sanitation Information			
toilet1	How many toilets are there? toilet2-toilet5 is repeated for each toilet in school (up to 6 toilets)	……	* Record the number of toilets between 0 and 10 *If there are more than 10 toilets in the school just make a note at the end in the comment box
toilet2-toilet5 has to be repeated for each toilet in school (up to 6 toilets)			
toilet2	Who is this toilet for?	1. Girls 2. Boys 3. Not designated by gender	*Select only one option

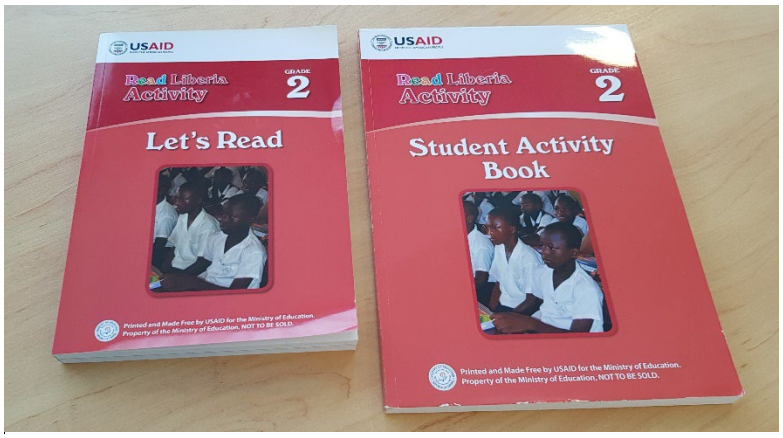
Variable	Item	Response Options	Instructions
toilet3	What type of toilet is this?	1. Flush or pour-flush 2. Pit latrine with slab 3. Composting toilet 4. Pit latrine (without slab) 5. Hanging latrine 6. Bucket latrine 7. Other (Describe…)	*Select only one option
toilet6	How would you rate the cleanliness of the inside of the latrine?	1. Very clean 2. Clean 3. Dirty 4. Very Dirty	*Select only one option *Very clean=Completely free from feces outside the pit, completely free from used paper outside the pit/bin, recently washed Clean= Mostly free from feces outside the pit, mostly free from used paper outside the pit/bin, recently washed Dirty=Some feces outside the pit, some used paper outside the pit/bin, not recently washed Very dirty=Much feces outside the pit, much used paper outside the pit/bin, not recently washed"
toilet4	Is the toilet accessible?	0. No 1. Yes	*Select only one option *Doors are unlocked or key is available

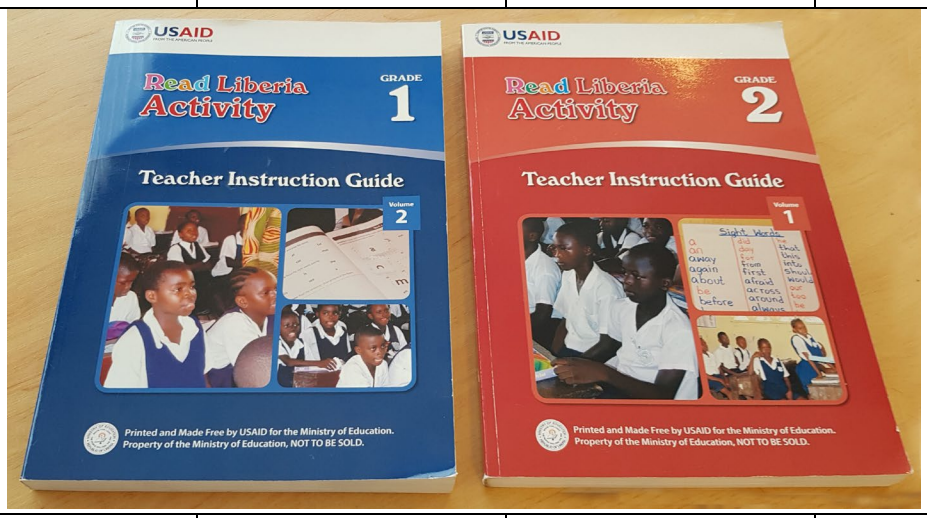
Variable	Item	Response Options	Instructions
toilet5	Is the toilet private?	0. No 1. Yes	*Select only one option *Walls that protect the user from view -- may be a sheet of plastic in the form of an L that allows someone to walk in and not be seen
toilet 7	Are there locks to close the toilets from the inside when in use and outside when not in use?	0. No 1. Yes	*Select only one option *The locks can be a rope or a metal lock that does not allow anyone to walk in.
Note	Insert your comment if any, especially if the number of toilets are more than 10		
Hygiene Information			
			
washstation1	Is there a handwashing station available near the toilets? (see the picture above for an example of what a handwashing station looks like)	0. No --> go to washstation4 1. Yes	*Select only one option

Variable	Item	Response Options	Instructions
washstation1_b	Does this handwashing station have water to wash hands?	0. No 1. Yes	*Select only one option
washstation2	Is this wash station within 10 paces of a toilet?	0. No 1. Yes	*Select only one option
washstation3	Is there soap at this wash station?	0. No 1. Yes	*Select only one option *only soap is yes -- ash or mud is no
Washstation4	Is there a wash station before entering the school?	0. No àwater1 1. Yes	*Select only one option
Washstation5	Does this handwashing station have water to wash hands?	0. No 1. Yes	*Select only one option
Washstation6	Is there soap at this wash station	0. No 1. Yes	*Select only one option *only soap is yes -- ash or mud is no
water1	Is there water available for drinking?	0. No 1. Yes, but not treated (untreated surface water, tanker trucks) 2. Yes, treated water (bottled, chlorine, boiled, Water Guard)	*Select only one option
COVID-19 safety protocols			
Covid1	When you are at the school are the following groups wearing mask?	1. Teachers 2. Other school personnel such as principal 3. Students	*Add yes or no for each

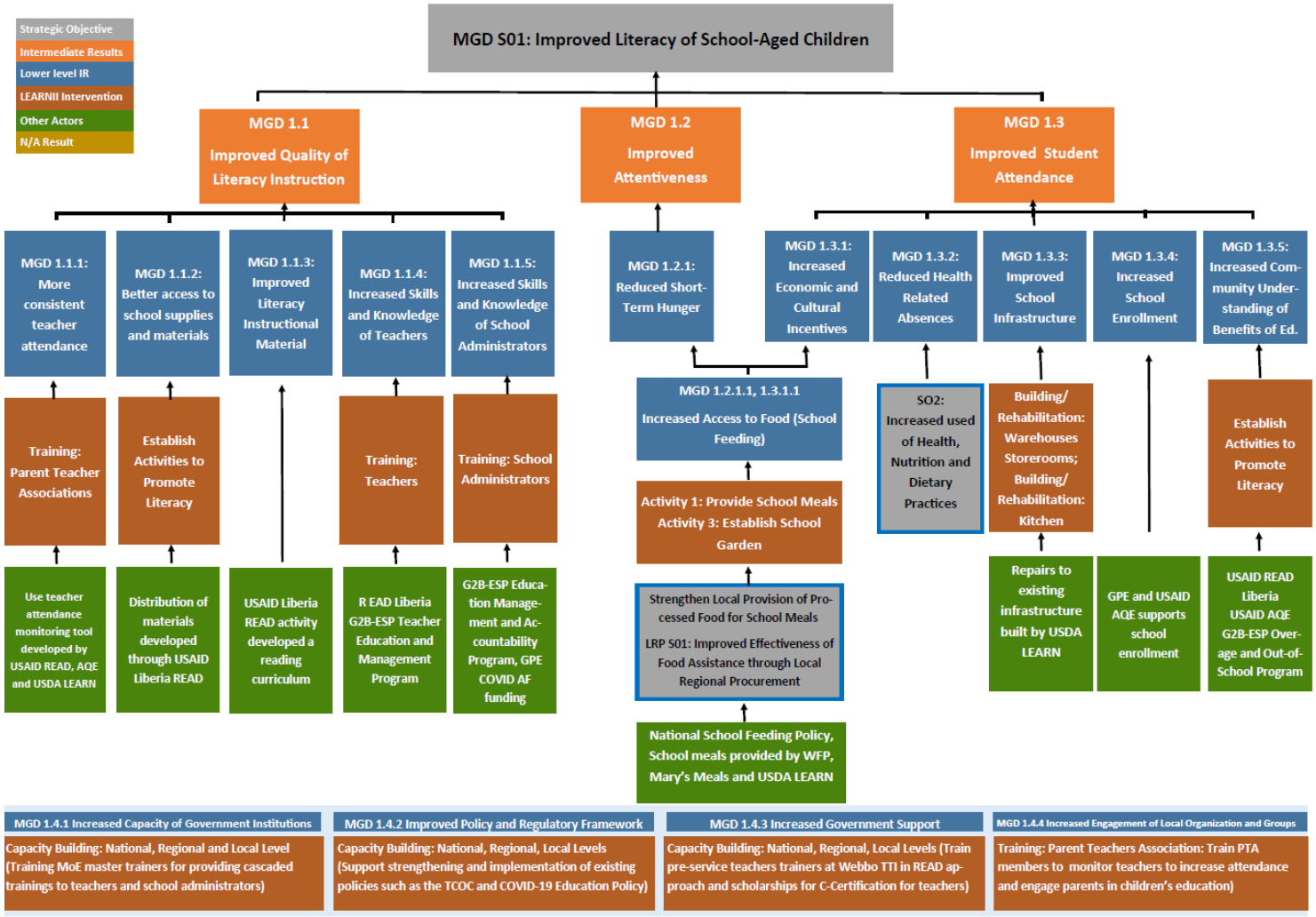
Variable	Item	Response Options	Instructions
Covid2	Are classrooms arranged with one-meter distance in between desks?	0. No 1. Yes	*Select only one option *Just do a spot check in a couple of classrooms and make a note in the comment box if not all of them doing it
Covid3	How many thermometers are available in the school?	……	*enter a number – add 0 if none *check this question with the principal
Covid4	Are any of the following items available at the school?	1. Extra masks for students or staff in case they forget to bring theirs 2. A back sprayer 3. Cleaning supplies such as a bucket, towel, and floor mop 4. Reusable gloves 5. Rubber boots goggles	
Covid5	Does the school have a cleaning staff?	0. No 1. Yes	*Select only one option
Notes	Assessor comments		
Canteen Information			
canteen1	Is there a place for food preparation at this school?	0. No --> go to library 1. Yes	*Select only one option
canteen1_b	Is the canteen functional?	0. No 1. Yes	*Select only one option
Canteen1_c	Is the canteen clean and/or disinfected?	0. No 1. Yes	*Select only one option

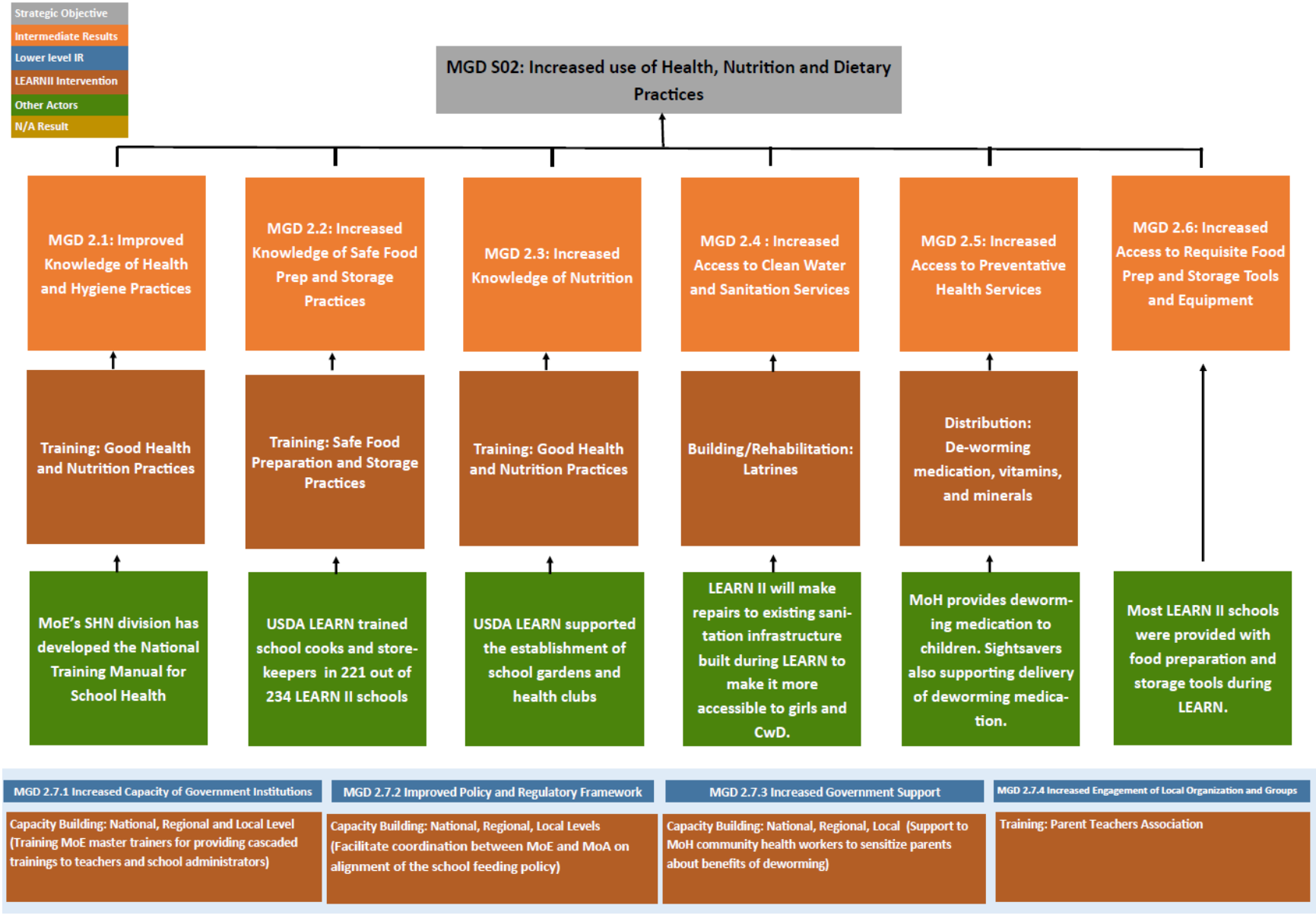
Variable	Item	Response Options	Instructions
canteen2	Do you see the following related to food preparation?	1. Food storeroom with lock 2. Food on pallets 3. Food securely closed in bags 4. Place for cook to wash hands 5. Place for cook to wash vegetables 6. Cooked food protected from flies 7. Leftover food stored at school	*Check all that apply
canteen3	How many cooking stations are open fire?	0. 0 1. 1 2. 2 3. 3 4. more than 3	*Select only one option
canteen4	How many cooking stations are energy saving stoves?	0. 0 1. 1 2. 2 3. 3 4. more than 3	*Select only one option
canteen5	Does the kitchen have a table for the stocking of clean dishes, spoons, and cooking utensils?	0. No 1. Yes	*Select only one option
Canteen6	Do students share the same cups and utensils for eating and drinking without adequate washing?	0. No 1. Yes	*Select only one option *ONLY APPLICABLE IF THE OBSERVATION IS BEING CONDUCTED DURING LUNCH TIME
Notes	Assessor comments		
Learning material in class			

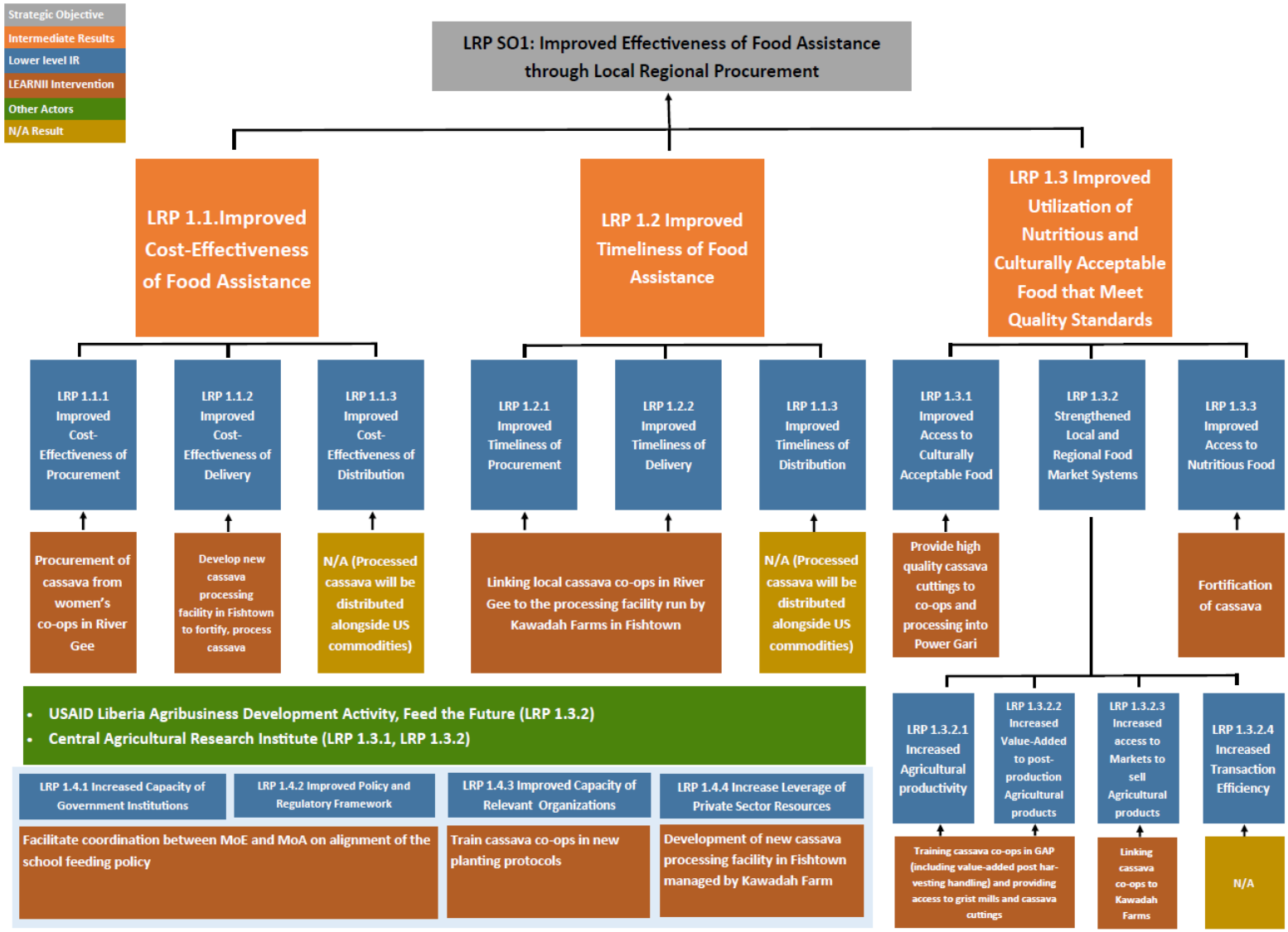
Variable	Item	Response Options	Instructions
For the following observations, ask permission from the principal to visit the classroom in Grade 1 and 2 and politely explain to the teachers that you want to check the availability of the learning materials in their classroom 			
lets_read_g1	Are there **Grade 1** "Let's Read" books available in the classroom?	0. No 1. Yes	*They should be located in plastic trunks/containers *Remember the Let's read book is blue for Grade 1 and red for Grade 2
lets_read_g2	Are there **Grade 2** "Let's Read" books available in the classroom?	0. No 1. Yes	*They should be located in plastic trunks/containers *Remember the Let's read book is blue for Grade 1 and red for Grade 2
activity_book_g1	Is there a **Grade 1** student activity book for each student in the classroom?	0. No 1. Yes	*Select only one option *Remember the student activity book is blue for Grade 1 and red for Grade 2

Variable	Item	Response Options	Instructions
activity_book_g2	Is there a **Grade 2** student activity book for each student in the classroom?	0. No 1. Yes	*Select only one option *Remember the student activity book is blue for Grade 1 and red for Grade 2
			
instruct_guide_g1	Is there a **Grade 1** teacher instructional guide in the classroom?	0. No 1. Yes	*Select only one option *Remember the instructional book is blue for Grade 1 and red for Grade 2
instruct_guide_g2	Is there a **Grade 2** teacher instructional guide in the classroom?	0. No 1. Yes	*Select only one option *Remember the instructional book is blue for Grade 1 and red for Grade 2
library_note	Insert any comments about the library, if any		
Notes	Assessor comments		

Appendix F. Results Framework




Strategic Objective
Intermediate Results
Lower level IR
LEARNII Intervention
Other Actors
N/A Result
MGD S02: Increased use of Health, Nutrition and Dietary Practices
MGD 2.1: Improved Knowledge of Health and Hygiene Practices
MGD 2.2: Increased Knowledge of Safe Food Prep and Storage Practices
MGD 2.3: Increased Knowledge of Nutrition
MGD 2.4 : Increased Access to Clean Water and Sanitation Services
MGD 2.5: Increased Access to Preventative Health Services
MGD 2.6: Increased Access to Requisite Food Prep and Storage Tools and Equipment
Training: Good Health and Nutrition Practices
Training: Safe Food Preparation and Storage Practices
Training: Good Health and Nutrition Practices
Building/Rehabilitation: Latrines
Distribution: De-worming medication, vitamins, and minerals
MoE's SHN division has developed the National Training Manual for School Health
USDA LEARN trained school cooks and store-keepers in 221 out of 234 LEARN II schools
USDA LEARN supported the establishment of school gardens and health clubs
LEARN II will make repairs to existing sanitation infrastructure built during LEARN to make it more accessible to girls and CwD.
MoH provides deworming medication to children. Sightsavers also supporting delivery of deworming medication.
Most LEARN II schools were provided with food preparation and storage tools during LEARN.
MGD 2.7.1 Increased Capacity of Government Institutions
MGD 2.7.2 Improved Policy and Regulatory Framework
MGD 2.7.3 Increased Government Support
MGD 2.7.4 Increased Engagement of Local Organization and Groups
Capacity Building: National, Regional and Local Level (Training MoE master trainers for providing cascaded trainings to teachers and school administrators)
Capacity Building: National, Regional, Local Levels (Facilitate coordination between MoE and MoA on alignment of the school feeding policy)
Capacity Building: National, Regional, Local (Support to MoH community health workers to sensitize parents about benefits of deworming)
Training: Parent Teachers Association


Strategic Objective
Intermediate Results
Lower level IR
LEARNII Intervention
Other Actors
N/A Result
LRP SO1: Improved Effectiveness of Food Assistance through Local Regional Procurement
LRP 1.1.Improved Cost-Effectiveness of Food Assistance
LRP 1.2 Improved Timeliness of Food Assistance
LRP 1.3 Improved Utilization of Nutritious and Culturally Acceptable Food that Meet Quality Standards
LRP 1.1.1 Improved Cost-Effectiveness of Procurement
LRP 1.1.2 Improved Cost-Effectiveness of Delivery
LRP 1.1.3 Improved Cost-Effectiveness of Distribution
LRP 1.2.1 Improved Timeliness of Procurement
LRP 1.2.2 Improved Timeliness of Delivery
LRP 1.1.3 Improved Timeliness of Distribution
LRP 1.3.1 Improved Access to Culturally Acceptable Food
LRP 1.3.2 Strengthened Local and Regional Food Market Systems
LRP 1.3.3 Improved Access to Nutritious Food
Procurement of cassava from women's co-ops in River Gee
Develop new cassava processing facility in Fishtown to fortify, process cassava
N/A (Processed cassava will be distributed alongside US commodities)
Linking local cassava co-ops in River Gee to the processing facility run by Kawadah Farms in Fishtown
N/A (Processed cassava will be distributed alongside US commodities)
Provide high quality cassava cuttings to co-ops and processing into Power Gari
Fortification of cassava
USAID Liberia Agribusiness Development Activity, Feed the Future (LRP 1.3.2)
Central Agricultural Research Institute (LRP 1.3.1, LRP 1.3.2)
LRP 1.3.2.1 Increased Agricultural productivity
LRP 1.3.2.2 Increased Value-Added to post-production Agricultural products
LRP 1.3.2.3 Increased access to Markets to sell Agricultural products
LRP 1.3.2.4 Increased Transaction Efficiency
LRP 1.4.1 Increased Capacity of Government Institutions
LRP 1.4.2 Improved Policy and Regulatory Framework
LRP 1.4.3 Improved Capacity of Relevant Organizations
LRP 1.4.4 Increase Leverage of Private Sector Resources
Facilitate coordination between MoE and MoA on alignment of the school feeding policy
Train cassava co-ops in new planting protocols
Development of new cassava processing facility in Fishtown managed by Kawadah Farm
Training cassava co-ops in GAP (including value-added post harvesting handling) and providing access to grist mills and cassava cuttings
Linking cassava co-ops to Kawadah Farms
N/A

1. Narrative Articulation of the Project Theory of Change

LEARN II is designed around the theory that ***if*** children access the educational and nutritional resources needed for their well-being and learning; ***if*** parents are empowered to support children's learning and hold schools and teachers accountable; ***if*** teachers are motivated, trained, and supported to help all children learn; ***if*** schools create safe, nurturing environments with adequate hygiene and sanitation facilities and practices for both girls and boys; ***if*** governments, communities, and private sector stakeholders are more engaged in feeding, educating, and protecting all boys and girls, including the most vulnerable; and ***if*** food assistance is cost- effective, timely and culturally acceptable and nutritious; ***then*** communities will see improved literacy of school-aged children and increased use of health, nutrition, and dietary practices.

LEARN II's results framework responds to issues raised in the strategic analysis through the following education, nutrition, and health strategies:

SO1: Improved Literacy of School Aged Children

1.1 Improved Quality of Literacy Instruction

- 1.1.1 More Consistent Teacher Attendance: LEARN II will strengthen PTA members' capacity to monitor teacher attendance and recognize high performing teachers. This will promote increased accountability amongst teachers to attend school and classes regularly.
- 1.1.3 Better Access to School Supplies and Materials: To improve literacy instruction, LEARN II will supply schools with USAID Read Liberia materials, place a book bank in 57 schools and provide the most vulnerable children in each school with learner kits[19].
- 1.1.4 Increased Skills and Knowledge of Teachers: In line with the USAID Reading Matters Framework, LEARN II will support MoE master trainers to train teachers on the Read Liberia approach and child-centered positive pedagogy to improve the quality of literacy instruction.
- 1.1.5 Increased Skills and Knowledge of School Administrators: LEARN II will train school principals on school leadership, coaching and child-centered positive pedagogy and to support teachers in delivering effective literacy instruction and establishing safe learning environments.

1.2 Improved Attentiveness

- 1.2.1 Reduced Short Term Hunger/1.3.1 Increased Economic and Cultural Incentives (or Decreased Disincentives): Through a combination of US food commodities, locally procured cassava (LRP SO1), and school garden produce, LEARN II will feed 85,129 children. These meals will meet children's nutrition needs, reduce short-term hunger,

[19] Multiple evaluations of early grade reading programs show that improved instructional materials and teacher training have improved children's literacy outcomes: "Graham, Jimmy; Kelly, Sean. 2018. How Effective Are Early Grade Reading Interventions?: A Review of the Evidence. World Bank Working Paper 8292.

improving attentiveness and thereby, improve children's literacy outcomes[20].

1.3 Improved Attendance

- 1.3.2 Reduced Health-Related Absences: LEARN II will reduce health-related absences by increasing the use of good health, nutrition, and dietary practices (SO2).
- 1.3.3 Improved School Infrastructure: LEARN II will support PTAs in managing minor repairs and rehabilitation of existing school infrastructure and support 13 new schools in procuring building materials to build or rehabilitate school infrastructure.
- 1.3.5 Increased Community Understanding of Benefits of Education: LEARN II will broadcast content through radio to sensitize communities about the importance of education and support PTAs in organizing community reading events and engaging parents in children's learning.

SO2: Increased Use of Health, Nutrition and Dietary Practices

- 2.1 Increased Knowledge of Health and Hygiene Practices: LEARN II will train MoE officials and ESHN mobilizers on MoE's National Training Manual for School Health, who will further train teachers in managing health clubs and develop COVID-19 IEC materials.
- 2.2 Increased Knowledge of Safe Food Preparation and Storage Practices: LEARN II will train kitchen staff in safe food storage and preparation to increase use of nutrition practices.
- 2.3 Increased Knowledge of Nutrition: LEARN II will support health club members in learning about food groups, components of a balanced diet and meeting one's nutritional needs.
- 2.5 Increased Access to Preventative Health Service: LEARN II will increase children's access to deworming medication by providing the food (school meals) necessary for administering medication, supporting MoHSW health workers and organizing the Annual Deworming Partners meeting.[21]

LRP SO1: Improved Effectiveness of Food Assistance through Local and Regional Procurement

1.1 Improved Cost-Effectiveness of Food Assistance

- 1.1.1Improved Cost-Effectiveness of Procurement: LEARN II will procure fortified cassava powder (Power Gari) from a local cassava processor (Kawadah Farms) in River Gee saving shipping and logistics costs required for US commodities.
- 1.1.2 Improved Cost-Effectiveness of Delivery: Kawadah Farms will develop a new cassava processing facility in Fishtown to produce Power Gari. Local procurement and the short distance between producers, processing facility, and schools make the delivery cost-effective.

1.2 Improved Timeliness of Food Assistance

[20] Evidence shows that school feeding is a successful strategy for improving early grade reading as highlighted in 'How effective are food for education programs? A critical assessment of the evidence from developing countries / Sarah W. Adelman, Daniel O. Gilligan, and Kim Lehrer. IFPRI Policy Review 9'

[21] Evidence shows that deworming medication has a positive impact on school attendance. Miguel, Edward, and Michael Kremer. 2004. "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities." *Econometrica* 72(1): 159-217.

- 1.2.1 Improved Timeliness of Procurement & 1.2.2 Improved Timeliness of Delivery: LEARN II will link cassava cooperatives to a local processing facility that will provide fortified cassava powder to schools, ensuring that cassava cooperatives have a predictable and regular demand for their produce. This will reduce the risk of unexpected delays in commodity supply.

1.3 Improved Utilization of Nutritious and Culturally Acceptable Food that Meet Quality Standards

- 1.3.1 Improved Access to Culturally Acceptable Food: The processing facility will fortify cassava procured from cassava cooperatives and process it into Power Gari. As a result, LEARN II will improve school's access to nutritious and culturally acceptable commodities.
- 1.3.2 Strengthened Local and Regional Food Market Systems
  - 1.3.2.1 Increased Agricultural Productivity/ 1.3.2.2 Increased Value Added to Post-Production Agricultural Products: LEARN II will train cassava cooperative members in Good Agricultural Practices (GAP) (including value-added post-harvest handling). In addition, they will also be provided with high quality cassava cuttings and access to gristmills.
  - 1.3.2.3 Increased Access to Markets to Sell Agricultural Products: LEARN II will link cassava cooperatives with Kawadah Farms for processing cassava into Power Gari to be supplied to schools, creating an expanded and stable market for growers to sell their produce.

1.3.3 Improved Access to Nutritious Food: Kawadah Farms will fortify and process cassava into Power Gari to be supplied to 85 schools. The development of the processing facility will improve children's access to a fortified and more nutritious cassava.

Foundational Results

- MGD & LRP 1.4.1/ MGD 2.7.1 Increased Capacity of Government Institutions: LEARN II will build the capacity of MoE trainers, CEOs/DEOs, and MoHSW officers to coach school principals and teachers to support children's learning, health and nutrition through local systems.
- MGD 1.4.2/ 2.7.2/ LRP 1.4.2 Improved Policy and Regulatory Framework: LEARN II will support the strengthening and implementation of GoL policies such as the Teacher's Code of Conduct and the Girls', Inclusive, and COVID Education Policies. Government pre-service teacher trainers at Webbo TTI will be trained in the Read Liberia approach and 50 teachers will get scholarships for C-Certification. LEARN II will also support coordination between the MoE and MoA to include LRP school feeding models in the School Feeding Policy.
- MGD 1.4.3/ 2.7.3 Increased Government Support & LRP 1.4.3 Improved Capacity of Relevant Organization: LEARN II will work with MoA to improve cassava producers' productivity by training them in GAP and providing them with high quality cassava cuttings and gristmills.
- MGD 1.4.4/ 2.7.4 Increased Engagement of Local Organizations and Groups & LRP 1.4.4

Increased- Leverage of Private-Sector Resources: LEARN II will strengthen PTAs to monitor teacher attendance and form VSLAs, and leverage Kawadah Farm's experience in cassava processing.

Critical Assumptions

- School meals are delivered in a timely manner. LRP will ensure a continued supply of meals in the event of a delayed delivery of U.S. commodities.
- Key stakeholders view LEARN II and USDA McGovern-Dole as non-controversial. Political changes in the program areas, or Liberia, will not adversely impact program operations.
- The spread of COVID-19 decreases in the coming months and schools remain open. If schools shut down, all activities will be implemented such that COVID-19 guidelines are followed.
- Commodities can move throughout the country without unexpected delay due to weather-related disruptions. Whenever possible, commodities will be transported during the dry season.
- Project activities to engage PTAs and parents are sufficient to maintain continued interest in LEARN II. LEARN II is working with several stakeholders to foster mutual accountability.

Explanation of non-linked results:

- 1.1.3 Improved Literacy Instruction Materials & 1.3.5 Increased School Enrollment: LEARN II will not directly address these results since other partners such as USAID Read Liberia (1.1.3), GPE[22] (1.3.5), and USAID AQE (1.3.5) have made significant investments in achieving them.
- 2.6 Increased Access to Requisite Food Prep and Storage Tool and Equipment: LEARN II provide utensils in 13 school that were not covered by LEARN but not make additional investment in this area.
- LRP 1.1.3 Improved Cost-Effectiveness of Distribution & LRP 1.2.3 Improved Timeliness of Distribution & LRP 1.3.2.4 Increased Transaction Efficiency: To distribute US and LRP commodities, LEARN II will leverage the same distribution channels as those already established under LEARN for U.S. commodities. Thus, LEARN II will not contribute to them.

[22] GPE through its COVID-19 accelerated funds will invest in student enrollment and retention in Liberia.

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