Liberia USDA McGovern-Dole International Food for Education and Child Nutrition

Liberia Empowerment through Attendance, Reading, and Nutrition (LEARN)

Midterm Evaluation

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List of Exhibits

List of Acronyms

AIR	American Institutes for Research
ANOVA	Analysis of Variance
CART	Center for Action Research and Training
COVID-19	Corona Virus Disease 19
DAC	Development Assistance Committee
DEO	District Education Officer
DID	Difference in Difference
ECD	Early Childhood Development
EGRA	Early Grade Reading Assessment
EMIS	Educational Management Information System
FFP	Food for Peace
FGD	Focus Group Discussion
GPS	Global Positioning System
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
MDE	Minimum Detectable Effect
MGD	McGovern Dole
MOE	Ministry of Education
NGO	Non-governmental Organization
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
PIRE	University of Liberia Pacific Institute for Research and Evaluation
PMP	Performance Monitoring Plan

PTA	Parent Teacher Association
RTI	Research Triangle Institute
SES	Socio-Economic Status
SHC	School Health Club
SHN	School Health and Nutrition
SMS	Short Message Service
SOW	Scope of Work
SRGBV	School-Related Gender-Based Violence
TG1	Treatment Group 1
TG2	Treatment Group 2
THR	Take Home Ration
TOR	Terms of Reference
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WASH	Water and Sanitation
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

Project Background and Purpose

Liberia Empowerment through Attendance, Reading, and Nutrition (LEARN) is a 5-year program (1 October 2017 to 30 September 2022) 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 in partnership with SC Liberia, Mercy Corps, and government partners, including the Ministry of Education (MoE), the Ministry of Agriculture, and the Ministry of Health. LEARN aims to reach 132,780 direct beneficiaries, 60,164 of whom (students) are expected to receive meals through school feeding activities in a total of 220 schools recruited in 2 cohorts of schools across 4 counties, including Grand Bassa, Grand Gedeh, Rivercess, and River Gee. Both cohorts of schools, which started receiving the same program activities in the 2018-2019 school year, aim to achieve the McGovern-Dole objectives in a similar manner.

LEARN program activities are designed to achieve USDA's two strategic objectives: 1) improve the literacy of school-age children by enhancing the quality of instruction and increasing student attentiveness and attendance through provision of school meals and take-home rations; and 2) increase the use of health and dietary practices by enhancing the knowledge of health, nutrition, and hygiene best practices, upgrading sanitation facilities, and improving food safety and storage systems.

Evaluation Questions, Design, Methods and Limitations

SC selected IMPAQ International (IMPAQ) to design and conduct the project and impact evaluations of the LEARN project from 2018 to 2022. The midterm evaluation, which is the focus of this report, examines the relevance and early effectiveness of the interventions, measures the progress of LEARN implementation across all four targeted counties, determines whether the project is on track to meets its desired objectives and provides lessons learned and recommendations to make mid-course corrections.

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

- **Sampling.** A random combination of 85 schools visited at baseline from both cohorts while collecting data from sixth graders and students at the end of Grade 2 level
- **Methodology.** A mixed-methods approach for a performance evaluation to measure LEARN progress over time, as well as a difference-in-differences framework for an impact evaluation to assess the causal effect of LEARN interventions on key outcomes, including literacy and health knowledge and practices.
- **Data sources.** Primary quantitative data from 1,535 students and qualitative data from 258 focus group discussion (FGD) participants and 50 key informant interviews (KII).
- **Analysis.** A comparison of baseline (2018) and midterm (2021) values across all four counties, triangulating the survey data with qualitative interviews for the project evaluation; as well as an assessment of attributing any observed changes in the literacy of school-aged children, and their health and nutrition knowledge, attitudes, and practices (KAP) to the three key packages of LEARN, including school feeding (SF), literacy boost (LB), and/or school health and nutrition (SHN) interventions in Grand Gedeh county

- **Limitations.** Limited changes in means of outcomes for the evaluation to assess from baseline to midterm because of disruptions in implementation due to COVID-19 and other factors such as road conditions during rainy season for in-time delivery of interventions.

Findings and Conclusions

We highlight below the midterm results from both project and impact evaluations 1) most pertinent to the key research question themes with respect to the McGovern-Dole Results framework; and 2) based on the five evaluation criteria (i.e., relevance, effectiveness, efficiency, (perceived impact), and sustainability).

Key Outcomes by Key LEARN Interventions

Literacy. The project evaluation metrics indicated that the key reading outcomes changed little from baseline to midterm and were consistent between counties. Similar to baseline, at midterm, students were mostly successful at identifying letters but struggled to identify full words. While 90 percent of the Grade 2 students could identify letters at midterm, only 37 percent could identify words, and only 17 percent were classified as readers. Among the readers, the percentage of words read accurately improved greatly from 10 percent at baseline to 66 percent at midterm.

Reading with comprehension increased by similar amounts in each county. At midterm, 6 percent of students could read with comprehension, a statistically significant increase over baseline (baseline value: 1 percent) at the 1 percent level.

The impact evaluation showed that provision of school meals was likely the main factor driving these improvements. Students in schools that only received the SF package were 14 percentage points more likely to be able to identify letters compared to students in comparison schools, a difference significant at the 10 percent level. However, students in schools that received LB+SHN interventions in addition to SF performed similarly compared to students in comparison schools in identifying letters. Similarly, the impact evaluation found that students in SF schools significantly outperformed students in comparison schools on reading with comprehension (4 percentage points) but found no discernable impact on SF+LB schools. The qualitative data revealed that the LB component of the intervention may have been limited in impacts on literacy as compared to non-LB schools because of the difficulty in implementing elements of the LB component as planned. Namely, it was a challenge to retain literacy champions after their training, in particular in River Gee, which the project addressed by engaging the local MOE and central office. Also, there were challenges in delivering books due to poor road conditions and as such, establishing book banks in some LB communities. Finally, the support provided by literacy champions on the home learning packet support during COVID-closures was mixed across communities, but limited at best.

Home Environment. Except for seeing someone reading at home, all other home literacy activities decreased from baseline to midterm. There were large variations between counties, with the largest proportion of students in Grand Gedeh reporting literacy activities at home in each category. Additionally, 73 percent of students surveyed after COVID-19 reported using the distributed home learning materials to mitigate the effects of COVID-19 school closures on learning loss. Perceptions of the degree of perceived encouragement for literacy at community and household levels varied by respondent type within single communities, possibly explaining the inconsistencies that we observe in receiving encouragement and support from parents at home for home learning activities.

Nutrition. Knowledge of a balanced diet did not change from baseline to midline. Only one percent of students stated that they knew the definition of a balanced diet at midterm, and of those, one percent could successfully identify all three components of a healthy diet. However, qualitative data indicated that the school feeding project was popular across all school communities. All respondent types in all communities credited the initiative with increasing both attendance and learning (because of increased energy and focus).

Handwashing. Handwashing knowledge and practice increased in all counties except for River Gee between baseline and midterm. However, the drop in River Gee was notable enough to offset the increase in all other counties and leave the overall average the same at midterm compared to baseline. School health clubs (SHCs) are reported to be active and effective across all intervention communities, including in the non-target counties, with multiple qualitative interviews reporting that SHCs were helping with activities including cleaning the campus, encouraging handwashing, providing general awareness on hygiene and health (e.g., once a week), and doing temperature checks at schools.

School-related gender-based violence. Students were largely aware that rules exist for how teachers should treat students at school, even though the level of awareness was less than at baseline. The county-level data showed large differences, with students in Grand Bassa and Rivercess showing greater awareness. Students tended to know that rules prevented teachers from physically harming students. Differences by sex and region were negligible.

We also asked Grade 6 students whether they agreed or disagreed with a series of five statements to understand if they hold less biased and better perceptions of gender norms if they disagreed with at least four of the five gender stereotypes statements. The data show significant variations in perceptions of gender norms by county: a much lower percentage of students in River Gee disagreed with at least four out of five gender norms statements compared to the other counties, especially Rivercess. Qualitative data also show that participants across all schools were well-aware of a general code of conduct for teachers and school staff, indicating progress in the project's objectives.

Key Findings with Respect to Evaluation Criteria

Relevance

- **School feeding:** Local stakeholders and beneficiaries agreed that the school feeding portion of the project aligned with the priorities of their communities. They noted that school meals addressed both food insecurity and student attendance
- **Literacy:** All stakeholders and beneficiaries agreed that efforts toward promoting literacy at home, in particular working with parents/caregivers to encourage (or help, if possible) their children to read, are critical. Books would be utilized if available but remain difficult to obtain. Parents want to support children's literacy but do not always know how, and would benefit from support in learning strategies.
- **WASH:** Given that schools have recently reopened after COVID-19 closures, WASH activities have become particularly relevant for all communities and schools.
- **SRGBV:** SRGBV remains a problem in schools across Liberia, reporting mechanisms are limited, and the degree to which COVID-19 closures has exacerbated the problem is suspected to be high. Revisions to the Codes of Conduct with supplementary training will indeed be relevant for project schools.

Effectiveness and Perceived Impact

Successes/Positive Impact

- **School feeding:** Providing school lunches has positively impacted student attendance and energy to learn; it has also alleviated parents' significant worry about finding money or food for their children's lunch.
- **Literacy:** Teachers generally feel adequately trained, and that they have enough time, to do their duties in alignment with the project. Students in general enjoy and benefit from certain pedagogical approaches, especially group reading. Parents and students in Literacy Boost (LB) communities who were part of summer camps and/or directly worked with literacy champions indicate that it has had a positive impact on student reading.
- **Literacy:** At home, parents are overwhelmingly supportive of their children's literacy and many who are illiterate themselves recognize the important role they play in providing encouragement and checking in with the student on her or his progress.
- **WASH:** Across communities and schools, improvements have been identified in relation to increased attention given to WASH, in particular improved facilities for handwashing, and increased emphasis on a clean school environment. School Health Clubs are found across all schools and are given much credit for these improvements.
- **SRGBV:** Teachers, students, and parents are well-aware of the MoE code of conduct, and explicitly acknowledge it has an important role to play in their school. Most say that existing reporting mechanisms (reporting up to principal) are adequate.

Challenges/Little Impact

- School feeding: PTAs are sometimes unable to provide the necessary support (e.g. providing ingredients) which has, in some communities, led to schools having to request payment for school meals.
- Literacy: Encouragement for literacy does not appear to be stronger in areas with LB, including in areas with a consistent Literacy Champion. At home, parents struggle actively helping their children, indicating that their own illiteracy limits what they can do. Teachers, meanwhile, appear to sometimes misinterpret parent's limited engagement as an indication of the parent not caring about literacy though in general, this was not what parents said themselves.
- WASH: PTAs do not contribute as much as desired to WASH activities in particular around pooling funding to purchase supplies and make improvements to facilities (especially latrines), and remain reliant on other community members helping, or Save resources
- SRGBV: There is evidence that existing codes of conduct (also known as 'rules and regulations') are not always followed or fully understood, for example with a principal explaining that the code of conduct restricts humiliation or physical abuse of students, but then noting that striking with a cane is a disciplinary strategy used at the school. There is also widespread reported use (including in non-intervention schools) of the 'beating spelling' pedagogical approach, in which two students compete to spell a word, and the winner of the competition hits the loser (i.e. with a cane).
- SRGBV: Some students and parents report that existing reporting mechanisms are not effective (i.e. the teacher is not punished) or are feared to lead to retribution (i.e. the teacher will give the student who reported an incident lower marks).

Efficiency

- **General:** Little was possible in terms of project implementation during the COVID-19 closures; households struggled to meet basic needs. The inability to physically move to different towns (e.g., for trade; selling), or to gather together (e.g., at the market) was crippling for the huge number of Liberians who relied on business for their livelihoods. During this time, many of the project goals (e.g. parent support for literacy) became secondary.
- **School feeding:** Prior to COVID-19, LEARN faced challenges in launching the school feeding program as a result of poor road conditions and in gaining the MoE's support. Since resolving the issues, though, school feeding has been largely efficient in delivery. Some areas requiring follow-up include sporadic reports on students and parents being required to pay for meals, and periodic interruptions to supply.
- **Literacy:** Prior to COVID-19, LEARN faced challenges in delivering books on time as a result of poor road conditions in the rainy season, which negatively impacted on the efficiency in which book banks and other LB supplemental activities requiring books could be delivered. Also prior to COVID-19, the reportedly high turnover of literacy champions has limited the degree to which Literacy Boost activities, which were largely dependent upon them, have led to increased literacy. Since re-opening, the LB activities have been slow to start.
- **Literacy:** During COVID-19 closures, the Home Learning program appears to have been unevenly implemented across communities, leaving many students and parents without any literacy-related activities for months.
- **WASH:** SHCs are reported to be active and helpful in all communities, even those where SC did not have a direct role in establishing them. MoH and MoE COVID-19 prevention efforts and distribution of materials may have contributed to this widespread application of improved WASH behavior observed. The training and mobilization of SHN champions is limited, though, with almost half of qualitative sites reporting none mobilized at the time
- **SRGBV:** Work on revising the Code of Conduct has not progressed from baseline.

Sustainability

- School feeding: Schools presently would not be able to continue feeding after the program concludes. School gardens are yet to be established, and some PTAs report in ability to supply cooking materials. When food supply is limited, as occurs in some schools, it is reported that attendance immediately drops.
- Literacy: The literacy component is not sustainable at this point, evidenced by what happened during COVID-19 closures when, in general, no supplementary learning was provided including by literacy champions who were present in the schools. Further work with parents, though, may be sustainable in showing them practical strategies about how to support their child's education. However, without teacher support, this may not be adequate.
- WASH: Stakeholders and beneficiaries agree that having a clean environment is critical, and much collaborative work is done to achieve this, particularly through the School Health Clubs which, in some schools, seem to be in existence without influence from SC but have remained in place as a result of COVID-19 prevention protocols. PTA's however struggle in providing adequate financial support which can limit the degree to which WASH can be maintained, especially when there is a need for larger repairs (e.g. to wells, or rehabilitation of latrines).
- SRGBV: The 2013 MoE school code of conduct is institutionalized knowledge; however, the degree to which the specifics of the rules and regulations are understood and respected is questionable given some open admissions of violations by principals and teachers. To be sustainable, such rules and regulations not only need to be fully understood, but fully agreed upon by stakeholders who will continue to push for adherence to these protocols. There is clearly still work to be done in this regard.

Recommendations

Track fidelity of implementation and contextualize findings and recommendations based on what has happened. Initially, conduct a rapid needs assessment of the communities to identify where there have been gaps in implementation as a result of the COVID-19 crisis, poor road conditions, and high teacher turnover in River Gee, and continue to work to fill those gaps accordingly. From there, a more robust monitoring system, which closely tracks fidelity of implementation, may be beneficial for both the project and a more refined evaluation of the project's impacts at endline.

Set work progress expectations related to caregiver and parent encouragement for literacy through clear communications with project stakeholders. Make clear to stakeholders that the impact of COVID-19 on people's livelihoods was substantial and that their main concern during closures was feeding their children, leaving literacy behind. The LEARN project should therefore set the expectations about the progress of parent engagement; reconsider the targets for any parent engagement related indicators; and/or readjust their corresponding activities to reflect the shift in parents' livelihood priorities during the pandemic.

Consider the varying functionalities of individual parent-teacher associations (PTAs) when providing training/capacity building support. The baseline recommendation is worth repeating: We suggest that, in addition to completing a needs assessment (or revisiting one that was recommended for Year 1, if it was conducted), SC work with PTA members to learn their existing ideas and strategies and to then help them devise formal PTA charters or agreements that dictate roles and responsibilities (including items on gender parity, elections/rotation of members and leadership, reporting mechanisms for complaints, and so on). SC will need to tailor their training and capacity building activities, particularly to provide additional support for new or low-functioning PTAs.

Continue the successful implementation of school meals, a hugely popular and productive activity, but monitor the degree to which there may be limitations that could affect its ongoing success and sustainability. The LEARN project should 1) follow up on the possibility of students being asked to pay for school meals, reported in two schools of twelve across the qualitative sample – though not representative of all LEARN schools and likely a rare problem, still worth monitoring to prevent increased incidence of such practices; 2) monitor the degree to which school meals are reliably offered (whether/where there are interruptions, as was reported in two of twelve schools in the qualitative sample; and 3) continue to work on capacity building with PTAs to develop more effective strategies that enable them to support the school feeding projects—with longer-term sustainability in mind—given that there are multiple reports of PTAs not able to assist as planned.

Further investigate the quality of kitchens in communities. Disruptions in building and/or rehabilitating kitchens and energy saving stoves because of COVID-19 could potentially explain part of this inconsistency. However, further research would help LEARN better understand the status of kitchen equipment and the areas that need more attention to enhance the efficiency canteen operations.

Further investigate the status of school gardens. LEARN needs to further explore the reasons behind the lack of school gardens or explicit ambitions to start a school garden in all but one of the schools in the qualitative sample in Rivercess and Grand Gedeh, where training on establishing those gardens had been delivered both before COVID-19 closures and since school re-openings.

Take advantage of widespread knowledge of the MOE Code of Conduct in upcoming revisions and sensitization around application of protocols. Even if revisions are not made, refresher training may be needed on not just the content but the specific meaning of some of the guidance within of the existing Code of Conduct (e.g., to explain what "humiliation" looks like in the classroom).

Address ineffective and abusive pedagogical practices with project stakeholders. LEARN should explicitly address this practice in upcoming interventions related to pedagogy and/or SRGBV. Beyond addressing this specific method, there is evidently much room for improvement in teachers' knowledge of and application for alternative discipline strategies.

Review strategies for keeping literacy champions engaged in their communities to prevent turnover. Given the strong reliance on literacy champions to conduct a number of tasks in the LB communities and SC's large investment in training and mobilizing the literacy champions, an in-depth review on their perspectives and needs may help SC learn how to keep them engaged and/or identify suitable literacy champions who may be more likely to remain in their position for the remainder of the project. Efforts already made to engage with local MOE should be reflected upon to determine additional strategies.

Further investigate the status of book banks in LB communities and appropriateness of books. The discrepancy in student reports of the availability of learning materials in school and the aims of the LEARN project suggest SC needs to investigate why schools are not implementing book banks and work to improve access to reading materials for children in LB schools.

Consider training teachers on pedagogical approaches that minimize the potential for less advanced students to feel humiliated in front of their peers during classroom activities. Other pedagogical approaches should be considered to limit the degree to which less advanced students are put in this position (for example balancing between individual and group reading activities but limiting the degree to which less advanced students are asked to perform the individual reading tasks.)

Continue emphasizing 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. LEARN should continue to emphasize to parents the critical and constructive role they can play in enhancing their child's education even without being educated themselves and include teachers in these discussions so that teachers are aware of the challenges that parents face and support needed. With teachers, develop realistic strategies that parents, and caregivers can use to encourage their children.

Initiate resilient programming. SC should engage in a series of lessons learned meetings with staff at all levels, from HQ to schools, and any supplemental assessment activities, to document some of the ways in which implementation was able to be adapted effectively, and, if so, how. When implementation was not so effective, equally document why not. This documentation may be useful in future as other shocks and stressors may again threaten in-person schooling.

1. Introduction

The U.S. Department of Agriculture (USDA), through the McGovern-Dole International Food for Education and Child Nutrition Program, has funded Save the Children (SC) to implement the Liberia Empowerment through Attendance and Reading (LEARN) project. This 5-year project (1 October 2017 to 30 September 2022) aims to improve literacy outcomes of school-age children and enhance the use of health and dietary practices. This midterm performance evaluation assesses the progress of LEARN in achieving the desired project outcomes midway through implementation. We also recommend mid-course corrections based on lessons learned.

This section outlines the project's context and describes the interventions and McGovern Dole Theory of Change for the LEARN project. Section 2 outlines the evaluation approach, including the research questions, evaluation design, sampling, data collection methods, data analysis, and limitations of this study. Section 3 presents the midterm project evaluation findings from our mixed-methods approach. Section 4 describes the LEARN impact evaluation results. Section 5 provides more contextual information from the qualitative findings and discusses the effects of coronavirus disease 2019 (COVID-19) and other factors on the midterm evaluation results findings. Section 6 concludes with lessons learned and the implications for the McGovern-Dole results framework. Section 7 provides recommendations for course corrections based on the key findings, limitations, and lessons learned from the midterm evaluation.

1.1. Project Context

By providing school meals to students, teacher training and related support; raising community awareness on school related gender-based Violence (SRGBV); and improving health and nutrition practices, McGovern Dole's projects aim to improve school enrollment, academic performance, and overall student health. The project is expected to improve literacy and primary education achievement by reducing hunger and bringing children into schools.

Recent research has indicated that *learning* (e.g., reading skills) contributes more to a country's economic growth than *school attendance* (e.g., years of education). Hanushek & Woessman (2009) found that a 10 percent increase in the share of students who reach basic literacy skill levels translates into an annual growth rate that is 0.3 percentage points higher than it would be otherwise for that country.[1] As a result of this and other findings, many international development projects have refocused their missions to keep children in school and ensure that children are learning while at school.

Food Security and Malnutrition. Despite significant progress following the end of the prolonged civil war in Liberia in 1996, food insecurity and malnutrition are still widespread. As a majority of Liberians live below the poverty line, 49 percent of Liberians are food insecure, and nearly a third of Liberian children are stunted due to malnutrition.[2] Food insecurity is not distributed evenly in Liberia, as nearly 80 percent of Monrovians are food secure, but only 50 percent are food secure nationally.[3] This widespread food insecurity has a significant impact on student performance, particularly in rural areas that are hardest hit

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[1]Hanushek, Eric A. & Woessmann, Ludger, 2009. "Schooling, cognitive skills, and the Latin American growth buzzle." Natural Bureau of Economic Research, Working Paper 1506.

[2] WFP. 2013. Comprehensive Food Security and Nutrition Survey. Rome: WFP.

[3] https://www.usaid.gov/sites/default/files/documents/1866/FFP-Desk-Review-Liberia-Feb2016v2.pdf

by the effects of COVID19).[4] Given that students in rural areas are already less food secure than their urban counterparts, the prolonged national shutdowns and economic shocks will only add to their food insecurity, which could further decrease student performance.

Liberian Education. The Liberian education system faces many challenges with respect to student attendance, rates of graduation, teacher quality, gender discrimination, gender-based violence, and basic educational attainment. While primary education is free and compulsory, Liberia still has one of the largest out of school populations in the world, with an estimated 15 to 20 percent of 6 to 14 year olds not attending class.[5] Various cultural and economic factors drive late enrollment and diminished attendance in primary and secondary school, including national crises like the civil war and Ebola, as well as other structural issues. The Liberian Ministry of Education (MOE) has identified these issues as the most impactful:

- Low family income relative to school costs and enrollment fees
- The need to participate in household income generating activities instead of schooling
- Negative attitudes toward late and overage enrollment in general
- Parental beliefs about education

Recent data demonstrates overall improvements in the primary school completion rate of Liberian students, but many successful cases do not go on to attend secondary school. Sixty-nine percent of students make it to Grade 6, and only 59 percent of students make it to Grade 9.[6]

Recognizing these limitations in the Liberian system of education, the MOE released its "Getting to Best" Education Sector Plan for 2017 to 2021, which included suites of strategic reforms aimed at increasing enrollment, gender and economic parity among students, improving teacher training programs, and reducing wasted government funds associated with "ghost" teachers.[7] Part of the MOE response to school improvement has included the partnership with NGOs to promote improved school management, in conjunction with other donor organizations funding large-scale school meal programs.[8] These school feeding programs have the potential to defray the costs associated with attending school for poor families and encourage higher enrollment rates in vulnerable populations, while also seeking to improve student performance overall by decreasing the issues associated with malnutrition; however, the World Food Programme (WFP) has noted, in its own assessments of similar projects, that results are frequently mixed.[9]

Sexual and Gender-Based Violence. Gender-based violence is an epidemic in Liberia, and the conditions following the end of the civil war and the outbreak of Ebola have exacerbated this problem. Thirty-five percent of young women will face gender-based violence in their lifetime, and this figure is considered

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[4] According to the World Health Organization, Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. https://www.who.int/health-topics/coronavirus#tab=tab_1
[5] Liberia Basic Education, UNICEF, https://www.unicef.org/liberia/basic-education
[6] Liberian Education Sector Analysis, Liberia Ministry of Education, November 2016
[7] "Getting to Best, Education Sector Plan 2017-2020", Ministry of education, Republic of Liberia, 2016
[8] World Food Programme, Liberia Country Programme (2013-2018) Operation Document
https://www.wfp.org/operations/200395-liberia-country-programme-2013-2018
[9] Country Programme – Liberia (2013-2017), Standard Project Report, World Food Programme in Liberia, 2017

largely underreported, due to the repression of cases by the police and other authority figures.[10] A study conducted by Columbia University and IRC in 2013 found that over 50 percent of women in Montserrado and Nimba counties had experienced non-sexual domestic abuse, and approximately 20 percent of women had been victims of rape outside of marriage. Staggeringly, over 70 percent of women surveyed had experienced marital rape.[11]

The aforementioned limitations of the education system (substantial overage enrollment, lack of qualified teachers, and lack of resources in rural areas) drive up the incidence of gender-based violence in schools. Overage enrollment consistently exposes young girls to older young men who are enrolled in the same grade. Several studies have found that nearly one third of primary school and secondary school Liberian children report having engaged in transactional sex for financial gain, respect, or improved grades. The aforementioned age and power differentials make it incredibly difficult for these youth to refuse sex.[12]

A 2015 survey of secondary school students in Liberia revealed that 30 percent of girls and 22 percent of boys reported that they were forced to have sex. Peer abuse was common but many children in the same study spoke of sexual abuse by teachers and other school staff. [13] Currently, there is not strong evidence showing that government actions and policies have done anything to curb incidences of gender-based violence in schools, or in broader society.

COVID Challenges. The challenges noted above have been exacerbated by the COVID-19 pandemic, especially gender-related challenges. Students who are out of school for extended periods of time are known to experience significant learning loss, which has been explored extensively in the context of long summer holidays out of school.[14] This effect is more pronounced in Liberia, where students already experience low levels of academic support and resources, and, as such, extended school closures due to COVID-19 will decrease the already low level of academic performance. Liberian public schools closed in March 2020 and reopened on the 29th of June, a loss of approximately 80 instructional days. Further, the COVID-19 pandemic, like any other external shock, might have aggravated sexual and gender-based violence, which has been labeled by global leaders as a "pandemic within a pandemic".[15][16]

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[10] Fighting Gender-Based Violence: The Women's Movement and the Enforcement of Rape Law in Liberia, Medie, A. Peace. African Affairs

[11] Measuring the Incidence and Reporting of Violence against Women and Girls in Liberia using the "Neighborhood Method", Stark, Lindsay; Warner, Ann; Lehmann, Heidi; Boothby, Neil; Ager, Alastair. Conflict and Health,

[12] The evolution of policy enactment on gender-based violence in schools, Parkes, Jenny. Prospects, March 2016

[13] Examining gender based violence and abuse among Liberian school students in four counties: An exploratory Study, Pstmus, Judy, et al. Child Abuse & Neglect, June 2015.

[14] Marcotte, Dave E., and Steven W. Hemelt. 2008. Unscheduled school closings and student performance. Education Finance and Policy, 3(3), 316-338.

[15] https://www.savethechildren.org/content/dam/global/reports/emergency-humanitarian-response/ebola-rec-sierraleone.pdf

[16] https://blogs.lse.ac.uk/africaatlse/2020/04/23/gender-based-violence-in-zimbabwe-a-pandemic-covid19-virus/

LEARN Motivation. SC is leading the implementation of USDA-funded LEARN; in partnership with SC Liberia, Mercy Corps, and government partners including the MoE, the Ministry of Agriculture, and the Ministry of Health; to respond to some of the obstacles underlying low enrollment, attendance rate and literacy level; lack of health, nutrition, and hygiene knowledge; as well as food security challenges. LEARN aims to reach 132,780 direct beneficiaries, 60,164 of whom (students) are expected to receive meals through school feeding activities in a total of 220 schools recruited in 2 cohorts[17] across 4 counties, including Grand Bassa, Grand Gedeh, Rivercess, and River Gee. Both cohorts of schools,[18] which started receiving the same program activities in the 2018-2019 school year, aim to achieve the McGovern-Dole objectives in a similar manner. Exhibit 1 shows the map of the program locations in the four counties.

Exhibit 1. LEARN Geographical Coverage

1.2. Project Description

LEARN program activities fall into three intervention packages designed to achieve USDA's two strategic objectives: 1) improved the literacy of school-age children by enhancing the quality of instruction and increasing student attentiveness and attendance; and 2) increase the use of health and dietary practices by enhancing the knowledge of health and hygiene best practices, upgrading sanitation facilities, and improving food safety and storage systems. Annex B provides a snapshot of the results framework with regard to the LEARN Theory of Change. Exhibit 2 shows the full list of activities for each of the three intervention packages across the four counties.

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[17] Due to modifications in SC's implementation plan in 2018, the LEARN program added a second cohort of students with a total of 73 schools in Grand Bassa, Rivercess, and River Gee (excluding Grand Gedeh, the site of the impact evaluation).

[18] The first cohort of the LEARN program covers 147 schools, and the second cohort covers 73, for a total of 220.

Exhibit 2. Program Activity Packages

County	School Feeding Base Package (SF)	Literacy Boost (LB)	School Health & Nutrition (SHN)
	▪ Provide school meals ▪ Provide take-home rations for girls (Grades 4-6) ▪ Distribute deworming medications, vitamins, and minerals ▪ Institute teacher recognition ▪ Build/rehabilitate storerooms, kitchens, stoves, latrines ▪ Establish Parent Teacher Associations (PTAs) ▪ Provide training on PTAs, food preparation and storage, good health and nutrition, commodity	▪ Establish activities to promote literacy ▪ Train teachers to lead Reading Camps ▪ Establish libraries ▪ Produce books & reading materials ▪ Promote increase community awareness on school-related gender-based violence (SRGBV)[19]	▪ Establish school gardens ▪ Improve health and nutrition practices by training teachers to lead SHCs
Grand Gedeh	✓	✓	✓
River Gee	✓	✓	
Grand Bassa	✓		
Rivercess	✓		✓

Source: Terms of Reference (TOR)

As Exhibit 2 shows, while all schools receive the base package of school feeding activities, not all targeted counties receive the same LEARN interventions. In Grand Gedeh, 20 schools receive SF, LB, and school health and nutrition (SHN) activities, while a different set of 22 schools receive only SF. Grand Bassa schools receive only the SF intervention, River Gee schools receive SF and LB, and schools in Rivercess receive SF and SHN activities.

COVID Adjustments to Programming. On March 16, 2020, Liberia reported its first case of COVID-19.[20] As a result, the MOE closed schools for 1 week, which subsequently turned into a 5-month long closure (until July 2020) as more cases emerged. The MOE then developed a two-phase emergency response plan to 1) ensure continuous learning for students during the stay-at-home period, and 2) prepare schools to safely reopen after the pandemic.

During the stay-at-home period, to prevent learning loss, the MOE planned to offer radio-based lessons, which included:

- Targeted age-appropriate COVID-19 awareness messages to students
- Accelerated instruction for grades 1-5, 7, 8, 10, and 11

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[19] All four counties, regardless of their intervention packages, also receive the promoting the code of conduct intervention.

[20] According to the World Health Organization, Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. https://www.who.int/health-topics/coronavirus#tab=tab_1

- Specific instruction for grades 6, 9, and 12 in preparation for national exams
- Early childhood development support for parents of young children through parenting and child development lessons
- Supporting teaching tips and other basic issues for teachers

In conjunction with the government's national response, the SC LEARN team made adaptations to the program to continue providing for the beneficiaries. These included:

- Radio-based language arts lessons aligned with the MoE's radio-based lessons in all four LEARN counties.[21]
- Disseminated LB home learning study tips and local reading materials for children, literacy champions, teachers, and parents through literacy champions in targeted LEARN counties that receive LB, including Grand Gedeh and River Gee.
- Disseminated Short Message Services (SMS) to students, teachers, and parents in all four LEARN counties containing three main topic areas: 1) positive discipline; 2) safe school, teachers' Code of Conduct and Sexual and Gender-Based Violence (SRGBV); and 3) COVID-19 prevention awareness.
- Continued take-home ration (THR) distribution, expanded to all students enrolled in all LEARN schools.
- Raised awareness on the definition, symptoms, and prevention of COVID-19 during distribution of THRs.
- Adapted and aired radio messages on personal and environmental hygiene and COVID-19 prevention messages in all four LEARN counties.

> "We already had the school-level Summer Reading Camps, so we replaced them with the new Covid-19 activities that student had to learn from home (instead of bringing them to club in huge numbers). So we separated them into groups of 5. So basically we could still remotely support the communities by giving the mantle of implementation directly to the community structures of literacy champions and community volunteers in place. We distributed a [home learning] packet to school, then left it for community volunteers to distribute to households. So we'd call Literacy Champions and ask how many packets they had distributed.
>
> Literacy Champions would meet kids at home in small group of 5 to help with assignment. Couldn't rely on parents to be literate. Assignments were not picked up every day, but rather twice a week (depending on school); there were some schools where parents went 2-3 times a week; others did it less. Based on that, the key schedule for the champions and volunteers were responsible for 2x week. Once an assignment would come in, they would go assist student with the packet. One person per 5 students – we had little over 200 in our literacy cluster of schools in Grand Gedeh and River Gee but thousands of students. So a group of 5 would spend a few hours but they'd rotate to go to another household with 5 students. So depending on a day, one champion would go to group three or four groups of five."
> - Project Staff

After an early shutdown of schools, the country widely reopened on July 22 with a number of Covid-19 restrictions in place including mask wearing, social distancing, capacity limits, and handwashing.[22] Then, in the summer of 2020, the MOE began a second period that allowed schools to open on a "catch-up"

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[21] The MOE provided students with teaching lessons over the radio at national level during the stay-home-period, which included all the LEARN targeted counties, as well.

[22] https://moh.gov.lr/press-release/2020/revised-Covid-19-declaration-of-national-health-emergency-by-the-ministry-of-health/

schedule that ran in phases (by grade) from June 29 to the end of the academic year on November 14, 2020.[23] However, primary school students (preschool to Grade 5) remained at home for distance learning, and received lessons by radio from August 17 to October 26. Despite this catch-up period, returning to school may not have been feasible for many students in areas with particularly high economic hardship. The MOE then announced a revised timetable for the 2020/2021 academic year to run from December 2020 to August 2021 for all grades.[24] According to the LEARN fourth quarter Workplan Adjustments Concept Note, under this revised schedule, students will attend school for 181 instructional days, which includes Saturday and Sunday instruction and less instructional days than a regular academic year (with a total of 200 instructional days).[25]

LEARN also altered its modality to deliver school meals and distributed THRs to all students in the 220 schools served under LEARN. This THR distribution occurred following COVID-19 preventative measures, recommendations from the government, and WHO guidance. SC returned to the regular school lunch modality in January 2021, when schools resumed for the 2020-2021 school year.

1.3. Results Framework

According to the LEARN theory of change (see Annex B),

- If teachers are recognized for their good practices, including consistent attendance;
- if teachers and students have better access to appropriately leveled reading materials and those reading materials are accessible in and out of the classroom;
- if teachers clearly understand their roles in quality literacy instruction;
- if children's short-term hunger needs are met during the school day;
- if disincentives to education are decreased by lowering the prevalence and acceptance of SRGBV;
- if health-related absences decrease through improved nutrition and health practices, including appropriate food preparation and storage, regular deworming, and increased use of clean water and improved sanitation;
- if enrollment campaigns are strategically targeted to reach out of school children; and
- if parents and community members have an increased understanding of the benefits of education and the role that they play to support their children's learning;

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[23] Phase I: Grade 12 students resumption of classes from June 29 to September 2, 2020 for completion of academic year 2019/2020; Phase II: Grades 6, 7, 8 and 9 students resumption of classes for completion of the academic year 2019/2020 from August 13 to October 9, 2020; Phase III: Grade 10 and 11 students resumption of classes for completion of the academic year 2019/2020 from October 5 to November 14, 2020; Phase IV: ECE to Grade 5 students complete academic year 2019/2020 from August 17 to October 16, 2020; continue to remain and learn at home.

[24] The academic year in Liberia officially runs from September to June. The MOE revised the timeline for school year 2020-2021 to adjust for COVID-19 school closures.

[25] Delivery of the curriculum is organized around the school day and the school calendar. At the basic and secondary levels, the school day is comprised of six instructional blocks of 45 minutes each for a total of 4.5 hours of instructional time per school day. The school year is comprised of over 200 instructional days (per the Education Act). http://haliaccess.org/wp-content/uploads/2019/11/EDUCATION-FACT-SHEET%E2%80%94LIBERIA.pdf

Then schools in Liberia will demonstrate improved quality of literacy instruction, student attentiveness, and student attendance, because the MOE, schools, parents, community members, and students will have the resources and knowledge required to affect literacy performance and improve their nutrition.

The LEARN project considered the following external factors in 2017 that could have affected the successful implementation of LEARN activities:

- Liberia has limited infrastructure due to sporadic civil wars. Roads are in poor condition because of poor maintenance and heavy rains. The LEARN project plans to ensure that movement of commodities is efficient and secure; however, in the event that extreme weather makes roads impassable, the LEARN project will experience delays. The project assumes that extreme weather events will be minimal throughout the course of the program, and, whenever possible, commodities will be moved during the dry season.

- Liberia is currently Ebola-free. However, Ebola is endemic to the region, and outbreaks could occur on a semi-regular basis. Through the course of the 2014-2015 epidemic, the country made greater strides in managing Ebola. However, if those systems are not maintained, a large-scale epidemic may occur again in the future, which may, again, shutter schools for months at a time. LEARN assumes that future Ebola outbreaks will be contained reasonably quickly and that program schools will remain open throughout the course of the program.

1.4. Purpose of the Evaluation

SC selected IMPAQ International, LLC (IMPAQ) to design the impact and project evaluations of the LEARN project. IMPAQ designed a project and an impact evaluation in parallel to maximize comparability in the outcome indicators and findings by using qualitative and quantitative methods. The project evaluation measures changes of the key performance indicators over the life of the project across all LEARN targeted counties. The impact evaluation, on the other hand, focuses on measuring the causal effects of LEARN activities on literacy, as well as knowledge, attitudes, and practices (KAP) outcomes among Grade 2 students in Grand Gedeh County. The objectives of these evaluations together at midterm are to:

- Assess the progress of LEARN implementation
- Examine the relevance and early effectiveness of the interventions
- Determine whether the project is on track to meet its goals and make early recommendations
- Chronicle sustainability efforts to date
- Summarize lessons learned to date

When schools were shut down on March 17, 2020, due to the first COVID-19 cases, IMPAQ was in the midst of collecting data for the midterm evaluation. At that time, the team had collected quantitative data from students in 45 of 124 schools and qualitative data from 7 of 12 schools. When it became apparent that schools would not open for the academic year 2019-2020, IMPAQ and SC worked closely to develop a contingency plan to continue with the evaluation when the MOE resumed school operations safely (See Annex L for more detail). The contingency plan included recollecting data in March 2021:

- Recollecting data from all sampled schools for the impact evaluation in Grand Gedeh to ensure consistency in the data for an unbiased impact estimate
- Completing the project evaluation data collection in the remaining 58 schools (out of 85) where they left off before the schools shut down due to COVID-19 in March 2020

- Recollecting qualitative data in all 12 originally sampled schools with additional interviews in comparison schools (of the impact sample) to enrich the quantitative outcomes, especially for the project evaluation, as well as to better capture COVID-19 implications on LEARN's implementation.

In March 2021, IMPAQ resumed the midterm evaluation fieldwork with the same data collection team from March 2020. To address the above-mentioned objectives at midterm, IMPAQ incorporated similar survey instruments as at baseline and the originally planned midterm to collect quantitative data for the same performance indicators and elaborated on qualitative protocols from both periods to address midterm research questions, contextualize the quantitative results, and provide valuable lessons learned.

2. Evaluation Approach

This section provides an overview of the quantitative and qualitative designs for the LEARN impact and project evaluations, including research questions, sampling design, data collection methods and analysis, and limitations.

2.1. Evaluation Questions

To address the evaluation objectives, the midterm evaluation sought to answer questions related to literacy, health, nutrition, and SRGBV outcomes. At midterm, IMPAQ addressed these questions focusing on five dimensions of project achievements based on the criteria defined by the Organization for Economic Co-operation and Development's Assistance Committee (OECD-DAC),[26] including: relevance, effectiveness, efficiency, sustainability and impact of key program interventions Annex C lists the original evaluation questions from the TOR in a conceptual framework and includes the additional questions added to capture the effects of COVID-19 on project implementation. For each question, the table in Annex C lists the key evaluation questions, data source, and data collection method used to address these questions.

2.2. Evaluation Design

IMPAQ designed a mixed methods approach consisting of project and impact evaluation components. The quantitative component of the project evaluation measures the progress of the performance indicators in outcomes related to core LEARN activities from baseline[27] (2018) to midterm (2020-2021). To accurately reflect changes in program performance over time, IMPAQ measures the same program indicators at both data collection points, replicating the same quantitative methodology and sampling strategy at baseline. For the impact evaluation, IMPAQ measures the causal effect of the various LEARN activity packages on literacy and health KAP outcomes among Grade 2 students only in Grand Gedeh County.

IMPAQ complemented the quantitative component of the evaluation with qualitative methods to assess the relevance, effectiveness, efficiency, and sustainability of the LEARN project, as well as explore perceived impacts of the intervention. Qualitative analysis enabled IMPAQ to understand stakeholders' perceptions of the design and implementation of the program, their experience implementing or participating in components of the program, expectations for improved outcomes, and other relevant contextual information.

2.3. Sampling methods

This section describes our quantitative and qualitative sampling strategies for the midterm project and impact evaluations.

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[26] The OECD Development Assistance Committee Criteria were revised in December 2019.
https://www.oecd.org/dac/evaluation/revised-evaluation-criteria-dec-2019.pdf
[27] For the project evaluation, IMPAQ completed the baseline of the first cohort in April 2018, and the second cohort in September 2018.

2.3.1 Quantitative Sampling Strategy

2.3.1.1 Project Evaluation Design and sampling

IMPAQ tracked key literacy and health KAP indicators over time with cross-sections of Grades 2 and 6 students across all four LEARN counties. We measured literacy and health indicators for Grade 2 students, as well as indicators of health KAP, SRGBV, and perceived gender norms for Grade 6 students.

At baseline, IMPAQ followed the recommendations from the United States Agency for International Development (USAID) Early Grade Reading Assessment (EGRA) Toolkit[28] to confirm the sample size of 830 Grade 2 students for the literacy outcomes and 498 Grade 6 students for the health KAP outcomes. Based on these power calculations, IMPAQ confirmed that the evaluation required a sample of 83 schools (with an average of 10 students per school).

IMPAQ collected baseline data for the first cohort in 85 schools in April 2018, and the second cohort in September 2018 in a new set of 61 schools after SC added more schools to the program. Overall, IMPAQ collected baseline data in 146 schools in the two cohorts, with an average of 10 Grade 2 and 5 Grade 6 students per school.[29]

To ensure a meaningful comparison between baseline and midterm, we aimed to 1) select a representative sample of all 220 LEARN schools and 2) select a sample of schools that were assessed at baseline (across both cohorts). IMPAQ determined the number of schools to be sampled in each county using a probability proportional to size approach based on the distribution of LEARN schools in each county and cohort, as Exhibit 3 shows.

Exhibit 3. **Sample Sizes from Each County for the Project Evaluation at Midterm**

County	Number of schools in LEARN	Cohort 1 LEARN schools	Cohort 2 LEARN schools	Cohort 1 Evaluation Sample	Cohort 2 Evaluation Sample	Total Grade 2 students (10 per school)	Total Grade 6 students (6 per school)
Grand Bassa	95	40	55	15	21	360	216
Grand Gedeh	42	42	0	16*	0	160*	96
Rivercess	44	30	14	12	5	170	102
Rive Gee	39	35	4	13	3	160	96
Total	**220**	**147**	**73**	**56**	**29**	**850**	**510**

The 16 schools needed for the project evaluation in Grand Gedeh will be a subset of the impact evaluation sample.

Once we determined the number of schools to sample in each county and cohort, IMPAQ randomly selected the schools for the midterm project evaluation.[30] We drew the midterm sample of schools from those that we visited at baseline that also were representative of the broader LEARN program schools.

Exhibit 4 illustrates the sampling strategy described above.

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[28] RTI International. 2015. *Early Grade Reading Assessment (EGRA) Toolkit, Second Edition*. Washington, DC: United States Agency for International Development.
[29] The actual number of students surveyed in each school varied based on the number of students present on the day data were collected.
[30] This school selection strategy will not affect the impact evaluation sample and design. IMPAQ will visit all 55 baseline schools that are part of the impact evaluation.

Exhibit 4. Midterm Sampling Strategy
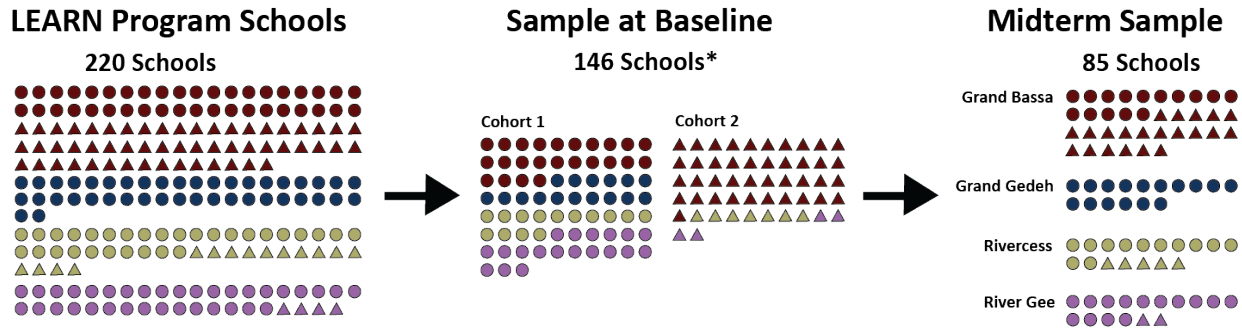
We launched the midterm data collection in March 2020 before the government closed schools due to the COVID-19 pandemic. In the 2 weeks of data collection prior to school closures on March 17, 2020, the fieldwork team was able to collect data from 27 of 85 LEARN sampled schools for the midterm project evaluation (15 schools in River Gee and 12 in Grand Gedeh). Exhibit 5 shows the status of midterm data collection across the four counties for the 2 weeks of data collection in March 2020, prior to school closures.

Exhibit 5. Status of Project Evaluation Sample for Quantitative Component

Region	Cohort 1 Sample (Target)	Cohort 2 Sample (Target)	Total (Target)	Grade 2 Students	Grade 6 Students
Grand Bassa	0 (15)	0 (21)	0 (36)	0	0
Grand Gedeh	12 (16)	0 (0)	12 (16)	163	75
Rivercess	0 (12)	0 (5)	0 (17)	0	0
River Gee	13 (14)	2 (2)	15 (16)	192	100
Total	**25 (57)**	**2 (28)**	**27 (85)**	**355**	**175**

After conversations with SC in April 2020, IMPAQ developed a contingency plan for LEARN's evaluation. IMPAQ and SC agreed to complete the remainder of the project evaluation schools once the MOE resumed school operations. As of January 2021, since schools reopened for the new academic year (January 4 to September 30, 2021), we completed the fieldwork for the 58 remaining project evaluation schools in March 2021.

When selecting students to survey in these 58 schools, IMPAQ implemented the same procedure used at baseline and in March 2020 for the originally planned midterm evaluation. Within each sampled school, IMPAQ selected students by physically lining up the boys and girls separately in their classrooms. Conditional on the total number of students being enrolled in each school, IMPAQ planned to sample a total of 10 students (5 boys and 5 girls) from Grade 3 at the beginning of the school year. Sampling Grade 3 students at the beginning of the new academic year ensured consistency and reliability of the data, assuming Grade 2 cohort students surveyed in March 2020 started Grade 3 in the 2020-2021 school year at the time of the data collection. This approach ensured that students' grade level outcomes--across the 27 schools initially visited in 2020 and 58 remaining schools visited in 2021 to resume the midterm--were equivalent to the end of Grade 2 and were from the same cohort. Since our midterm evaluation assesses students' outcomes at the end of Grade 2, we refer to all students at the end of Grade 2 (i.e., those students who were completing Grade 2 in March 2020 and who just started Grade 3 in March 2021) as Grade 2 students.

We also selected a total of six students (three boys and three girls) from Grade 6. One limitation of our study is that the Grade 6 cohort of students we surveyed in March 2020 were no longer in school in the new academic year (2020-2021). This limitation makes for a challenging comparison between Grade 6 students, who just started the school and were in Grade 5 in the 2019-2020 school year, and 175 Grade 6 students surveyed in March 2020. This analysis should thus be interpreted with caution as the changes in outcomes we observe might be due to time differences in data collection, grade differences, or exposure to the program. Section 2.6 explains in more detail what measures we followed to mitigate this limitation.

To identify the nth student for random selection, we used the following rule:

$$n^{th} girl\ or\ boy\ to\ sample\ = \frac{Total\ number\ of\ girls\ or\ boys\ in\ each\ grade}{Total\ number\ of\ girls\ or\ boys\ to\ be\ selected}$$

For example, if we had 20 female Grade 2 students and we required 10 for the study, we selected every other girl from the line (20 ÷ 10 = 2). The same rule was used to select students systematically from all sampled schools for both boys and girls. Without electronic class lists, this approach ensured sampling consistency across schools and achieved a random sample of students who were present on the day of data collection.

2.3.1.2 Impact Evaluation Sampling and Design

Schools

For the impact evaluation, schools were randomly assigned to two treatment arms (full package of program activities, SF+LB+SHN, or only school feeding base package activities, SF) and a comparison group (not receiving any program activities). Our initial power analysis confirmed that a sample size of 1,320 students, equally divided into 22 schools each for the two treatment arms and the comparison group (66 schools in total), would be sufficient to detect the minimum detectable effect size (MDES) of 0.42 standard deviations with a 95 percent level of confidence.[31]

At the end of baseline data collection, we created 18 clusters of schools not more than 10 kilometers apart based on the geographic location of each school, mapped using global positioning system (GPS) coordinates. Most clusters consisted of an average of three schools, but the two biggest clusters included 10 and eight schools.[32] These two large clusters were assigned to different treatment arms. Keeping the two large clusters apart, we randomly assigned all 18 clusters into three groups: two treatment groups and one comparison group. To ensure that SC reaches its target number of beneficiaries, we designated one group of schools, including the largest cluster, to receive the combined package of all program activities. A second group of schools, including the second largest cluster, was selected to receive the basic school feeding package. The third group, which was the comparison group with the smaller clusters, did not receive any program activities.

During the baseline assessment (April 2018), three factors led to a smaller than expected number of available schools and students surveyed: (a) changes to SC's implementation design, (b) inflated Educational Management Information System (EMIS) enrollment numbers, and (c) data collection during the rainy season. Consequently, IMPAQ surveyed a smaller sample of 55 schools that were active and

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[31] The power calculations used the following additional assumptions: power (β) of 0.80, intra-cluster correlation of 0.25, and a correlation of other covariates with the measured outcomes of 0.50.
[32] In two towns in Grand Gedeh, it was not feasible to create small clusters of three or four schools without running into contamination and spillover concerns.

open at baseline rather than 66 schools. Eleven schools were inaccessible due to rainy season conditions and were not surveyed. Further, due to inflated EMIS enrollment numbers, within each of the 55 schools, IMPAQ was able to survey an average of 12 students per school rather than 20 Grade 2 students.

The smaller than anticipated sample of schools and students resulted in loss of power. With an average of 19 schools per treatment or comparison group and 12 students per school, the MDES increased to 0.45 standard deviations (SD). This loss of power meant that the program activities needed to be more effective than initially anticipated for the analysis to capture their impact. This limitation is important because LEARN may have positive effects that IMPAQ will not be able to identify in the impact measurements. With smaller sample sizes, only larger effects can be estimated to be statistically significant.

The loss of 11 schools (out of the original impact sample of 66) did not introduce any bias. The absence of these schools could have introduced a potential bias if there was a skewed proportion of treatment or comparison groups among these 11 schools. However, as described above, IMPAQ clustered schools and conducted random treatment assignment after baseline data collection on the modified sample (55 schools). Thus, no systematic bias is expected based on IMPAQ's inability to visit these 11 schools during baseline.

At midterm, we planned to visit the same 55 schools as at baseline at the end of the school year 2019-2020. In March 2020, as a result of COVID-19 and extended school closures in Liberia, IMPAQ suspended midterm data collection activities midway. With the MOE opening the primary schools for the next academic year from January 4 to September 30, 2021, IMPAQ collected data from all 55 impact evaluation schools again at the beginning of the academic year (2020-2021) in March 2021. This strategy (recollecting data from all impact sampled schools) allowed for an unbiased measure of treatment effect by ensuring consistency in impact evaluation data, as all responses across treatment and comparison groups would be impacted by the school closures.

Students

Rather than following the same students over time, IMPAQ surveyed a different sample of students in each round of data collection: baseline, midterm, and endline. A cross-sectional sample of students is preferable to a cohort design because of the substantial probability of student attrition from school. Having independent samples every period minimizes the probability that measurement 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).[33]

The evaluation team originally planned to follow the same sampling strategy at midterm as at baseline for selecting students at the end of the school year in March 2020. That is, IMPAQ planned to randomly select up to 10 boys and 10 girls from Grade 2 to assess the effects of the project interventions on their literacy skills at the end of their grade level before the school closures (refer to the approach described for the project evaluation sampling above). With the COVID-19 outbreak and the need to resume the midterm evaluation at the beginning of the 2020-2021 school year, we followed the same random sampling strategy for students as before, but focused on Grade 3 students rather than Grade 2. As Section 2.3.1.1 mentioned, we refer to all Grade 3 surveyed students at the beginning of the school year as Grade 2 students to show the appropriate target grade level. Collecting data from Grade 3 students at the

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[33] 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.

beginning of the school year helped us assess the effects of the project interventions on students' literacy skills at the end of their grade level for Grade 2. Exhibit 6 shows the impact evaluation sample composition by school and student.

Exhibit 6. Numbers of Schools and Students in Impact Sample

	SF	LB+SF+SHN	Comparison	Total
Baseline				
Number of schools sampled	22	20	13	**55**
Number of Grade 2 students surveyed	213	280	188	**681**
Midterm				
Proposed number of schools sampled	22	20	13	**55**
Proposed number of Grade 3 students to survey	440	400	260	**1,100**

Our final sample of Grade 3 students at midterm was 694 students (202 in SF, 297 in LB+SF+SHN, and 195 in Comparison schools), 63 percent of the target 1,100 students. As with the baseline sample, this smaller sample of students resulted in an additional loss of power. With an average of 18 schools per treatment or comparison group and 13 students per school, the MDES increased from 0.45 SD to 0.46 SD. This loss of power is trivial compared to the loss at baseline; however, it still necessitates that the LEARN program activities be more effective than originally anticipated for the evaluation to capture their impact. In other words, insignificant findings might not necessarily mean that the program is not effective, but rather that the evaluation is not sufficiently powered to detect effects. For this reason, we rely on qualitative and monitoring data to support the results of our quantitative analysis and provide a richer contextual background to understand potentially undetectable impacts.

Design. IMPAQ used an intent-to-treat approach to estimate the impacts of the LEARN activities on the outcomes of participating students in a difference-in-differences (DID) framework. Exhibit 7 summarizes the impact evaluation design. The two treatment arms measure the impact of (a) the LEARN base package consisting of school feeding and associated activities; (b) the LEARN combined package, consisting of school feeding implemented together with the package of LB activities, as well as SHN activities; and (c) the incremental effect of LEARN add-on activities (LB and SHN) relative to school feeding only. Measuring the effects at midterm (relative to baseline) shows the impact of LEARN activities in the early years of implementation, and measurements at endline (relative to baseline) will show the impact of LEARN activities once they have matured and stabilized over four years.

Exhibit 7. Impact Evaluation Design for Grand Gedeh County

LEARN TREATMENT SCHOOLS		LEARN COMPARISON SCHOOLS
LEARN Base Package (TG1) Sample: 22 schools	**LEARN Combined Package (TG2)** Sample: 20 schools	**LEARN Comparison Group (CG)** Sample: 13 schools
A	B	C

April 2018

Baseline Survey Cross-sectional survey of 213 Grade 2 students	**Baseline Survey** Cross-sectional survey of 280 Grade 2 students	**Baseline Survey** Cross-sectional survey of 188 Grade 2 students

Total Baseline Sample: 681 Students

D | E | F

February 2021

Midterm Survey Cross-sectional survey of 440 Grade 3 students*	**Midterm Survey** Cross-sectional survey of 400 Grade 3 students*	**Midterm Survey** Cross-sectional survey of 260 Grade 3 students*

Total Midterm Sample: 1,100 Students

G | H | I

February 2022

Endline Survey Cross-sectional survey of 440 Grade 2 students	**Endline Survey** Cross-sectional survey of 400 Grade 2 students	**Endline Survey** Cross-sectional survey of 260 Grade 2 students

Total Endline Sample: 1,100 Students

Newcomers to Grade 3 at the beginning of the school year were used as a proxy for Grade 2 students

Exhibit 8 summarizes the DID estimation framework to analyze the collected data. For example, to measure the impact of the LEARN base package (school feeding) on outcomes of interest at midterm (row 1 of Exhibit 8), the DID framework would measure the change in the average outcome in treatment group 1 (TG1) between midterm and baseline [D-A] and difference out the change in the average outcome in the comparison group (CG) over the same period [F-C]. Because the experimental groups are statistically identical, the change in the CG represents the counterfactual trend, which TG1 would have followed in the absence of LEARN, allowing the evaluation team to disentangle the impact of LEARN. Subsequent rows of Exhibit 8 summarize the different types of treatment effects that the evaluation design would allow us to measure at midterm.

Exhibit 8. Impact Evaluation Measurement Comparisons

Impact Evaluation Measurement		
Period	**Intervention**	**Impact measurement**
Midterm	1.Δ LEARN Base Package; SF only (TG1 vs CG) =	[D-A]-[F-C]
	2.Δ LEARN Combined Package; SF+LB+SHN (TG2 vs CG)=	[E-B]-[F-C]
	3.Δ LEARN Add-On Interventions; LB+SHN (TG2 vs TG1)=	[E-B]-[D-A]

To resume the midterm data collection, we surveyed Grade 3 students at the beginning of the academic year (2020-2021) from all 55 schools in the impact evaluation sample to ensure consistency in impact evaluation data. That is, the DID estimation framework remained the same; however, for the DID to yield unbiased estimates, students across treatment and comparison schools should have been equally impacted by COVID-19. To further investigate, we ran balance tests to ensure that our impact evaluation design is robust. We did not find any evidence of significant differences between treatment and comparison school students after schools reopened, so we are confident that our results remain unbiased.

2.3.2 Qualitative Sampling Methods

Building on the approach at baseline and considering the findings, the midterm qualitative research focused on perceived changes at the school and community levels after 2 years of program implementation. The evaluation team aimed to understand project progress to date, including early successes and challenges and threats to sustainability, to make relevant recommendations to strengthen program impact.

We planned to select three intervention schools in each of the four counties, for a total of 12 schools in the qualitative sample. The selection included variation in schools and communities, based on locale (rural, peri-urban, or urban) and student enrollment in Grade 2. Consultations with SC, as well as relevant monitoring data (for example, cooking rates, PTA take-up, etc.), drove our school selection to help contextualize the findings (e.g., schools that had particularly high or low monitoring results to learn more about factors that facilitate or impede program success).

We visited seven of the sampled schools for qualitative study in March 2020, before COVID-19 related school closures. After schools opened, we visited the remaining five sampled schools to administer the revised questions. We also conducted new key informant interviews (KIIs) and Focus Group Discussions (FGDs) in the seven schools in Grand Bassa, Rivercess, and River Gee that we visited before emergency school closures for COVID-19. These additional interviews enabled us to compare stakeholders' perceptions before and after COVID-19 to enrich the quantitative outcomes.

- We conducted additional qualitative data collection in two comparison schools in Grand Gedeh county to understand
  - Any observed changes in enrollment and learning outcomes in the quantitative data due to COVID-19 (including the relationship between changes and the relative marginalization of some students).
  - How associated interventions unrelated to the program (like radio lessons or public health campaigns) may have impacted the program.
  - How the project may have affected the community response to COVID-19.
- To maintain consistency from baseline to midterm, IMPAQ followed a similar approach to selecting respondents for KIIs and FGDs.

We talked to principals and teachers separately, as our baseline data collection showed more uninhibited responses separately because of the power imbalance between these two positions. FGDs with parents were mixed, as mothers felt comfortable expressing their opinions even in the presence of their spouses and other male community members as many had been doing in PTA meetings and other community meetings not related to LEARN.

IMPAQ expanded the respondents to students, government stakeholders, and community members involved with the project. We spoke to children in higher grades who were better-suited than those in lower grades to answer questions on school feeding, awareness and appraisal of the LEARN project, as well as experience with cross-cutting issues. We also used qualitative interviews with Grade 6 students to learn about whether any observed quantitative changes in outcomes may be attributed to time differences in data collection, grade differences, or exposure to the program.

The qualitative component included 92 interviews in intervention communities and 10 interviews in comparison communities, encompassing a total of 266 respondents from intervention communities and 42 respondents from comparison communities, as Exhibit 9, below summarizes.

Exhibit 9. Qualitative interviews, by County and Respondent Type

Stakeholders	Intervention					Comparison	Total
	Grand Bassa	Grand Gedeh	River Gee	Rivercess	Total		
Principal KII	4	3	3	2	12	2	14
Teachers FGD[a]	7	10	9	9	35	9	44
Parents FGD[b]	15	15	15	15	60	11	71
Student FGD[c]	28	32	32	31	123	20	143
Cook KII	3	3	3	3	12	0	12
Storekeeper KII	3	3	3	3	12	0	12
Government KII	1	1	1	1	4	0	4
Literacy Champion KII	0	1	3	0	4	0	4
Project Staff KII	1	1	1	1	4	0	4
Total	**62**	**69**	**70**	**65**	**266**	**42**	**308**

[a]Mixed sex Grades 2 and 6, to also include literacy champions, one SHN champion [a science teacher])
[b]Mixed-sex including PTA members
[c]Boys and girls groups were conducted separately; all students were in grades 4, 5, or 6 and when possible, included members of reading clubs and food management committees

2.4 Data Collection Methods

This section provides information on data sources, the data collection plan, enumerator training and pilot testing, human subject protection, and quality assurance for the midterm evaluation, accounting for COVID-19 implications.

2.4.1 Data Sources

To answer the research questions for the midterm evaluation and to determine values for performance indicators, IMPAQ collected and analyzed data from three sources: 1) a student survey; 2) the Literacy Boost Reading Assessment (LBRA); and 3) qualitative data collection tools, including KIIs and FGDs. We also conducted a school assessment to support SC in understanding the gaps in school resources to make any mid-course corrections.

The evaluation team developed the instruments and adapted them to the Liberian context using cognitive interviews[34] at baseline in February 2018. When we resumed the midterm evaluation, we added questions to the instruments to capture the implications of COVID-19 and field-tested them during our data collection training, as Section 2.4.4 describes. IMPAQ used the quantitative data to measure the program's progress toward its objectives, and LEARN's causal effect on the key outcomes. We also triangulated the quantitative findings with qualitative data that focused on the relevance, effectiveness, efficiency, sustainability, and perceived impact of project interventions. See Annex J for the evaluation instruments and Annex K for the qualitative protocols.

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[34] A cognitive interview is an individual, face-to-face, in-depth interview that aims to understand how a respondent comprehends and responds to questions.

2.4.1.1 Student Survey

The student survey collected data from Grade 2 and 6 students. IMPAQ adapted survey questions to the Liberian context using cognitive interviews before collecting data at baseline in February 2018. During cognitive testing, interviewers discussed the meaning of each item with students to assess the clarity of the question and appropriateness of the proposed categories. IMPAQ conducted the cognitive interviews in school areas where students spoke both English and non-English languages primarily at home in Grade 2 and 6 to identify, in the local context and in different languages, which questions worked, which did not, and why. Exhibit 10 presents an overview of the seven key topics that the survey covered, including additional questions regarding the effects of COVID-19.

Exhibit 10. 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 implications of COVID-19 trainings on their knowledge- -Handwashing practices (when students wash their hands), including the implications 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)
School Related Gender-Based Violence (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) - Implications of COVID-19 on gender-based violence incidence and reporting at home during the COVID-19 emergency school closures
School environment	- Attitudes toward their school - Teacher attendance
Home environment	- Home literacy activities (e.g., if anyone reads to students or tells them a story) - Parents' engagement in home learning, inclusive of home learning activities during the COVID-19 emergency school closures - Reading culture at home
Disability	- Difficulty in seeing, hearing, talking, walking, and etc.

During the baseline assessment, we faced some limitations in asking SRGBV-related questions from young students due to the sensitivity of the subject. At midterm, we improved our instrument to better capture the school climate related to SRGBV using guidance and specific survey items from the USAID Conceptual Framework for Measuring SRGBV prior to starting the midterm fieldwork in March 2020.[35,36] To support revisions of the teacher code of conduct by LEARN, we included a few more questions on SRGBV to pilot-test them at midterm.

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[35]https://www.globalreadingnetwork.net/sites/default/files/eddata/Conceptual%20Framework%20for%20Measuring%20SRGBV_FINAL.pdf

[36] For the impact evaluation, we will add a couple of questions at midterm to capture when students started school and which grades they repeated.

2.4.1.2 Literacy Boost Reading Assessment

To measure student reading skills at the end of Grade 2, enumerators administered the LBRA as part of the student survey in both the impact and project evaluation samples. IMPAQ developed an adapted version of the LBRA using Liberian Grade 2 textbooks, calibrated to the Liberian context through the Liberia MoE, and field tested them on Grade 2 students in non-project schools during baseline. To generate an appropriate comparison with the midterm, IMPAQ used the same LBRA to measure the changes of literacy outcomes from baseline to midterm. Using the same instrument between impact and project evaluation samples also helped to maximize comparability in literacy outcomes and findings between the two evaluations.

2.4.1.3 Key Informant Interviews and Focus Group Discussions

IMPAQ expanded the baseline qualitative respondents to include students, local government stakeholders, and community members at midterm. The protocols included:

- Questions to understand stakeholders' perceived effects of the program at this stage and their potential recommendations on areas for improvement;
- Additional questions to capture COVID-19's implications on the implementation and outcomes;
- Items related to the implementation of LEARN activities, perceived benefits of program activities, perceived capacity for sustainability, perceived short and long-term impacts of COVID19, lessons learned, and recommendations for program improvement.

We also developed protocols for new stakeholder audiences, including KII procedures for government officials and LEARN staff, as well as new FGD processes for PTA members. Annex K provides an overview of the qualitative protocols.

IMPAQ designed KIIs to be 30 to 45-minute conversations and FGDs to last approximately 90 minutes. IMPAQ held informal meetings with the LEARN project staff prior to developing and finalizing the protocols to craft a sampling strategy and individual items to better respond to program needs.

The discussion guides were written in Standard English. The qualitative team was experienced in interpreting Standard English questions into Liberian English during interviews, or to otherwise rephrase the wording to ensure participants understood.

2.4.1.4 School Assessment

IMPAQ conducted a school assessment at baseline to provide SC with the pre-implementation characteristics, enrollment, and attendance of all LEARN schools. At midterm, IMPAQ used the same assessment to observe changes in the status of students' enrollment, attendance, and school characteristics, but only in those schools sampled for the impact and project evaluations. For the originally planned midterm evaluation in March 2020, IMPAQ added a few more items to the checklist to collect observational data on safe food preparation, storage practices, and latrine cleanliness. Upon resuming the midterm evaluation, we also added items to better capture drop-out rates for students and teachers before and after the COVID-19 pandemic. These data will also be shared with SC for their analysis to identify gaps in resources so that it can use to make any necessary mid-course corrections.

2.4.2 Human Subject Protection

Prior to collecting data for the first round of baseline evaluation in February 2018, IMPAQ sought Institutional Review Board (IRB) approval to ensure that the proposed evaluation complied with local and

international rules and procedures (from baseline to endline). IMPAQ submitted protocol documents to Schulman IRB Advarra on February 16, 2018 (Pro00024481), and to the University of Liberia Pacific Institute for Research and Evaluation IRB (UL-PIRE IRB, Protocol # 18-02-092) on February 15, 2018. IMPAQ also submitted research protocol to the SC Ethics Review Committee (ERC) to confirm that the research is ethically sound and protects the rights, safety, and wellbeing of children. IMPAQ received approval from Advarra (February 16, 2018), UL-PIRE IRB (February 22, 2018) and SC (February 26, 2018). On February 13, 2020, IMPAQ submitted an amendment to UL-PIRE IRB for the revised midterm evaluation approach and received their approval on February 17, 2020.

Prior to resuming the fieldwork in March 2021, on February 12, IMPAQ submitted a request to UL-PIRE to extend their approval to continue the midterm data collection after the COVID-19 outbreak and received their extended approval on February 13, 2021. We also received the SC ERC's approval for our revised midterm evaluation approach on February 23, 2021.

At the time of our fieldwork in February and March 2021, the government of Liberia did not restrict movement within or across counties in Liberia because of COVID-19. However, to ensure the safety of our team, project stakeholders, and beneficiaries, we developed a comprehensive safety protocol, in collaboration with our local partner, and submitted it to the American Institutes for Research (AIR) IRB on February 15, 2021, before launching the data collection. On February 16, 2021, we received AIR IRB's approval to conduct the in-person data collection at the final evaluation, following the COVID-19 safety measures throughout the evaluation.

Before administering the evaluation instruments, IMPAQ trained enumerators on procedures to interview respondents, protect respondents' privacy and confidentiality, follow COVID-19 safety protocols during the survey,[37] and secure the data. IMPAQ also reprised the training from SC on safeguarding children at school. During data collection, the survey team obtained written consent from teachers and/or principals to survey students. The team then asked for students' verbal assent, assured them that their participation was voluntary, and told them that they could terminate the survey at any point. IMPAQ followed a similar procedure of adhering to COVID-19 safety measures, as well as seeking consent from adult participants when conducting the FGDs and KIIs. IMPAQ 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.

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.

2.4.3 Data Collection Preparation

To resume the midterm evaluation fieldwork and enhance the efficiency and quality of data collection, our data collection partner, CART, in collaboration with IMPAQ, rehired 20 enumerators who had collected data during both baseline evaluations and/or participated in the originally planned midterm data collection in March 2020, which was canceled because of COVID-19.

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[37] IMPAQ shared a copy of the COVID -19 safety protocols with each of the enumerators and qualitative researchers. Enumerators and qualitative researchers also provided written agreement to follow the safety protocols and accept the risks of collecting data during a pandemic.

From February 14 to 19, 2021, the IMPAQ team provided a refresher training for 20 enumerators and 2 fieldwork managers. The IMPAQ team led the in-person training of enumerators remotely,[38] in collaboration with the CART team leader and fieldwork managers. Prior to the training, IMPAQ 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 refresher training consisted of three days of theory-based classroom training, one day of pilot testing in two nearby schools in Monrovia, and instrument refinement after pilot testing. During classroom training, enumerators learned: 1) the purpose of each survey question; 2) how to ask questions directed to vulnerable respondents (in this case, children under 18); 3) how to assess students' literacy; 4) how to use tablets to implement the in-person surveys without an internet connection; and 5) how to survey respondents following COVID-19 safety protocols. Pilot testing in the two non-program schools provided an opportunity for enumerators to practice with real respondents. Afterward, enumerators regrouped with the IMPAQ team remotely to debrief and discuss any issues they encountered.

Prior to data collection, the IMPAQ qualitative lead held multiple remote training and discussion sessions with two local qualitative researchers. Local consultants field-tested selected protocols such as KIIs with teachers, based on the availability of respondents in the two pilot schools, and regrouped remotely with the IMPAQ team to debrief afterward. The IMPAQ qualitative lead worked closely with the local consultants to ensure cultural appropriateness. After pilot testing, the team met to discuss challenges such as comprehension (questions that confused respondents) and duration (insufficient time to complete all questions). This meeting allowed the team to adjust the instruments and strengthen their interviewing and summarizing skills.

2.4.4 Data Collection

The quantitative team conducted the fieldwork from March 1 to 23, 2021. CART organized the enumerators into one team of 9 and one team of 12 individuals, including one fieldwork manager for each team. One team was sent to Grand Gedeh, which had the largest sample, while the other team visited schools in the other three counties (Grand Bassa, 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 IMPAQ's project director on challenges and decisions. The IMPAQ data specialist was regularly downloading 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, the two local qualitative consultants (one male and one female) collected data in the targeted schools from March 15 to April 16. During the interviews and FGDs, one person led the discussion, while the other took notes (except in the female student FGDs, in which only the female facilitator was present, taking her own notes). To ensure the comfort of young girls with the facilitators in student FGDs, IMPAQ ensured that the interviewers were of the same sex. 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

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[38] Due to the COVID-19 outbreak and its consequent travel restrictions, IMPAQ could not undertake in-person training for the midterm evaluation.

protocol. The summary synthesized the major points and salient themes and included verbatim quotations that addressed the supplemental evaluation questions.

With the respondents' permission, we recorded all KIIs and FGDs as a backup for the local qualitative consultants to fill in gaps in their notes on the same day that data collection occurred. The finalized detailed notes form the foundation of the subsequent analysis. To ensure data quality, within 48 hours after completion of the first school's KIIs and FGDs, the summary forms were emailed to IMPAQ's qualitative experts for review, along with sample pages of notes from each FGD and KII. Feedback was then provided over WhatsApp (and continued throughout the duration of fieldwork), to ensure complete, high-quality data. The notes from the interviews and focus groups were not shared outside of the evaluation team.

Throughout the fieldwork, we followed all possible COVID-19 protocols 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. IMPAQ also monitored COVID-19 developments and relevant government guidelines and was prepared to work with SC to provide a new contingency plan for the midterm evaluation (which ended up not being necessary).

2.5   Data Analysis Methods

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.

2.5.1 Quantitative Analysis

After completing the field activities, we conducted a final review of the survey data, including:

- Checking for data completeness
- Checking for duplicate entries
- Testing skip pattern logic of tablet survey programming
- Data cleaning

We then compiled the survey responses into a master file for the analysis.

2.5.1.1 Project Evaluation Analysis

Overall Analysis Plan. To assess the progress of LEARN's implementation at midterm, as Section 2.3.1 described, we used a representative sample of 85 LEARN schools from the first and second cohorts. Among these 85 schools, we visited 27 of them in March 2020, and we completed the remaining 58 school visits in March 2021 at the beginning of the 2020-2021 school year.

We compared the literacy scores of the midterm project evaluation sample with the literacy scores of the first baseline cohort to assess students' reading competency at the end of Grade 2 to maximize comparability of outcomes. We used this strategy because the reading outcomes of the first and second baseline cohort samples were statistically significantly different, and this variation likely arose from differences in the timing of data collection at baseline. Therefore, to fully capture changes in reading outcomes between baseline and midterm, we held all else constant by comparing reading outcomes measured at the end of the grade level. To analyze the progress on other outcomes, we used the aggregated values from the representative random sample of 85 schools selected from both baseline

cohorts, as [Section 2.3.1.1](#) described. Exhibit E1 in [Annex E](#) shows the midterm analysis plan in detail for different outcomes.

Project Evaluation Analysis. IMPAQ used a pre-post comparison using constructed means through clustered t-tests to assess and quantify LEARN's progress by tracking changes in outcomes over time, using baseline and midterm data on outcomes measured in the same manner. The pre-post comparison method implicitly assumed that the program rollout for both cohorts was approximately the same and that both cohorts received the same level of exposure to the program interventions. When applicable, IMPAQ disaggregated the findings by students' sex, county, and activity package.

Liberia experienced school closures due to COVID-19, leaving many students out of school, especially primary-aged children. As the World Bank Group reported, "*COVID-19 could result in a loss of between 0.3 and 0.9 years of schooling adjusted for quality, bringing down the effective years of basic schooling that students achieve during their lifetime from 7.9 years to between 7.0 and 7.6 years.*"[39] Although primary school-aged children in Liberia received radio lessons from the MOE during the stay-at-home period, this school disruption could affect students' learning outcomes and underestimate the effect of LB in this context. To mitigate the potential effects of COVID-19 on the evaluation outcomes, we further explored the data using multivariate regression models in our pre-post comparison method and controlled for the COVID-19 effect as an independent variable. To understand the learning loss due to the emergency school closures, we also explored the data before and after the COVID-19 pandemic. This additional examination of the data enhanced the consistency of the measured outcomes between the students surveyed before and after COVID-19 began.

2.5.1.2 Impact Evaluation Analysis

We estimated the program effects at midterm using regression analysis of student outcomes. We used the following difference-in-differences (DID) specification for each treatment arm:[40]

$$Y_{ist} = \alpha + \beta Post_t + \gamma\, Treatment_s + \Delta\, Treatment_s{*}Post_t + \Psi X + \mu_s + \varepsilon_{ist}$$

Where:

- Y_{ist} is the outcome of interest (e.g., reading with comprehension, letter recognition, handwashing knowledge and behavior, and nutrition knowledge) of student i in school s at time t[41]
- *Post* is an indicator variable, equal to 0 if the outcome is from baseline and 1 if at follow up
- Treatment is an indicator variable equal to 0 for the comparison group and equal to 1 for the treatment group in consideration (either SF or SF+LB+SHN)
- The coefficient on the interaction term *Treatment*Post* (Δ) represents the DID estimate, i.e., the change in outcome from baseline to follow-up in the treatment group relative to the change in the same outcome for the comparison group

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[39] Azevedo, João Pedro, Amer Hasan, Diana Goldemberg, Syedah Aroob Iqbal, and Koen Geven. Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates. The World Bank, 2020.

[40] We can consider additional model specifications. Because the two treatment arms are disjoint, we are proposing here to estimate each model separately (for SF and for SF+LB+SHN), but we could also estimate the impact of both treatment arms in the same equation. Including both treatment arms in a single regression offers an alternative way to test whether the two treatment arms significantly differ.

[41] Both dependent variables of interest are binary and we use a linear probability model.

- X_{ist} includes a list of variables that the team used to control for their effect on outcomes to isolate the effect of the intervention based on imbalances in these characteristics between the treatment groups at baseline. These factors include the baseline values of a child-friendly reading materials index, an indicator of English being the main language of the student's home, and the number of days of school the student attended in the last week, which could potentially be related to the literacy outcome of the student.[42]
- μ_c represents school cluster-level fixed effects to control for time-invariant school geographic and other characteristics that vary across schools and can affect outcomes
- ε_{ist} is the error term

Students in the same school might have similar observable and unobservable characteristics. Therefore, the outcomes of students within a particular school may be related to each other (i.e., the correlation between literacy outcomes of children in the same school may be high).[43] To account for this correlation of error terms across students in the same school, we clustered the standard errors at the school level.

Below we visually show the impact of the SF and SF+LB+SHN interventions to facilitate easier comprehension of the intuition of the approach. As shown, β is the time trend as represented by the comparison schools' changes in outcomes. γ is the average difference in outcomes between the treatment and comparison schools at baseline. Our main outcome of interest is Δ, which we measure as the difference in the average outcome in treatment schools before and after treatment **minus** the difference in average outcome in the comparison schools before and after treatment, controlling for time effects.

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[42] We include these specific covariates because, as outlined in Section 4, these characteristics were significantly different between students across the three treatment groups at baseline.

[43] "*The clustering problem is caused by the presence of a common unobserved random shock at the group level that will lead to correlation between all observations within each group*" - Christian B Hansen. Generalized least squares inference in panel and multilevel models with serial correlation and fixed effects. Journal of Econometrics, 140(2):670–694, 2007.

Exhibit 11. DID Effect on Literacy Outcomes
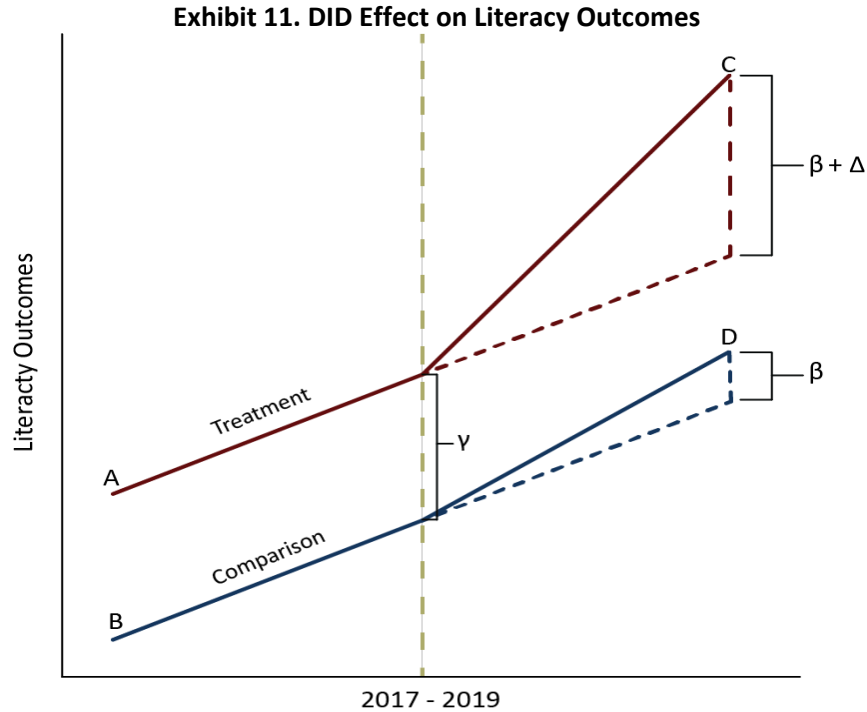
Source: IMPAQ

We also aim to determine the extent to which changes in outcomes are attributable to SF and LB+SHN activities separately. From a programmatic standpoint, understanding which activities are driving the effects on key outcomes is critical to expanding the more effective activities and exploring the less impactful ones. To test whether the two treatment arms differ significantly and thereby uncover the impact of each of these interventions separately, we estimate them in the same equation as outlined below:

$$Y_{ist} = \alpha + \beta \text{Post} + \gamma_1 T_{SF} + \gamma_2 T_{SF+LB+SHN} + \Delta_1 T_{SF} * \text{Post} + \Delta_2 T_{SF+LB+SHN} * \text{Post} + X_{ist} + \mu_c + \varepsilon_{ist} \qquad (2)$$

Where:

- T_{SF} is an indicator variable with TSF = 0 for the comparison group and TSF = 1 if the treatment group is SF
- TSF+LB+SHN is an indicator variable with TSF+LB+SHN = 0 for comparison group and TSF+LB+SHN = 1 if the treatment group is SF+LB+SHN
- $\Delta 2 - \Delta 1$ is the *additional* impact of the LB+SHN intervention
- All other variables are defined as before

We also conducted subgroup analyses by sex; however, the study may not be adequately powered if the subgroups are smaller than 50 percent of the population.

Should the data from the impact evaluation yield any results of particular interest to SC, we will work with SC to sample a selection of these impact schools for qualitative research at the final evaluation. This additional qualitative research can better contextualize information regarding any unique variations in outcomes and explore in detail any spillover effects, hidden treatments, or crossovers. IMPAQ will

determine, in consultation with SC, whether supplementing the impact analysis with a qualitative analysis at endline will be necessary based on a review of the midterm impact evaluation results.

2.5.2 Qualitative Analysis

The qualitative data collection aimed to contextualize the quantitative findings. The nature of the qualitative research does not allow for the results to be empirically generalizable; however, these data offer some perspectives to enrich the quantitative data and identify the relative prevalence of responses within the qualitative participant group.

The evaluation team used detailed notes and summary forms from the interviews and FGDs to analyze the data, synthesize the findings, and identify themes to address evaluation questions. The team entered and coded all quantitative data into an Excel-based database to identify emerging themes related to the main project outcomes. The evaluation team also used qualitative data to (a) support/verify the quantitative data, (b) highlight any outliers, (c) explain unexpected or negative quantitative impacts, and (d) provide nuance not captured by the quantitative tools. All data were coded under the key. Where appropriate, we disaggregated the codes according to sex, region, or participant type.

The evaluation team compared data across the different treatment packages (e.g., LB vs non-LB; SHN vs. non-SHN). We also compared data from the 12 intervention sites against data collected from the 2 comparison sites. We reviewed notes from before the COVID-19 closures and fieldwork cessation to better understand the implications of COVID-19 on LEARN's implementation.

2.6   Evaluation Limitations

This study has a few limitations related to the evaluation design and analysis.

Reliance on self-reported data. The main limitation is that the quantitative approach relies on self-reported data from children for a number of socially and culturally sensitive subjects such as SRGBV. Although IMPAQ adopts best practices in eliciting this information, some degree of measurement error is possible, similar to data collected on sensitive topics in other contexts. To mitigate this limitation, prior to the baseline data collection in 2018, IMPAQ conducted cognitive testing of the survey instrument with students in Grades 2 and 6. In consultation with the local partners, IMPAQ adjusted question phrasing to ensure that children could understand the questions and feel comfortable answering. To further improve data reliability at midterm, IMPAQ relied on lessons learned from the baseline and incorporated some of these topics in qualitative interviews to triangulate with quantitative data.

Absence of electronic class lists. We sampled from students who were present at school rather than drawing a sample from full classroom lists. While our approach ensured sampling consistency across schools and achieved a random sample of students who were present on the day of data collection, the possibility of systemic absences might introduce a risk of sampling bias by selecting only present students. For example, such a bias can arise from excluding information on children who are more likely to be absent from school, including those from vulnerable socio-economic backgrounds who might have been affected by COVID-19 and did not make it back to school when in-person learning resumed, or those who may be absent due to health issues.

Causal Inference for project evaluation: The project evaluation measures the progress of LEARN's outcomes through a performance evaluation. Thus, since the evaluation approach does not include any

experimental or quasi-experimental designs, our analyses do not provide causal inferences. In other words, the results only provide suggestions on correlations between the observed changes in outcomes and LEARN, but not causation. Furthermore, the analysis cannot account for confounding factors outside of LEARN. For example, improvements in health and hygiene knowledge between baseline and the midterm evaluation could be due to general increased awareness of handwashing practices across all counties because of COVID-19. To mitigate this challenge, we triangulated survey data with contextual information from background documents, and qualitative KIIs and FGDs. In addition, we designed our project evaluation in parallel with the impact design to maximize comparability in the outcome indicators and findings.

Less power for the impact evaluation. Due to inflated enrollment data and low attendance, the total number of students available in schools for the impact sample was lower than expected. Although we oversampled in bigger schools and in some cases surveyed all available students to maintain the rigor of our study the smaller sample size resulted in less power to confidently estimate program impacts. The MDE for the impact evaluation in Grand Gedeh increased from 0.42 SD to 0.45 SD at baseline because of the same issues and went slightly higher at midterm to 0.46 SD. This slight increase in the MDE means that the program activities therefore need to be even more effective than initially anticipated for their impact to be captured by the analysis. This limitation is important because LEARN might have positive effects that we might not have been able to identify. With smaller sample sizes, only larger effects of the program could be estimated to be statistically significant.

The smaller number of students for the impact evaluation might also introduce bias. However, the final sample was balanced on observable characteristics at midterm, so our results remained unbiased. Therefore, even if our midterm sample consists of a subset of students who were more motivated than most to attend school or more equipped to absorb the shock of COVID-19 and return to school, our evaluation remained unbiased since the characteristics of the students surveyed was consistent across treatment and comparison groups (i.e., we include the more highly motivated or less affected by COVID-19 for both groups equally). While these limitations are important to keep in mind when interpreting the results, they do not undermine the validity and rigor of the study.

Internal validity of qualitative findings. As is typical of qualitative research, we used a small sample. The results are not generalizable but will highlight a spectrum of perspectives across project beneficiaries and stakeholders. To mitigate this limitation, we selected geographically diverse schools in each county to provide theoretical generalizability; however, the results should still be interpreted with caution.

Another limitation is the respondents' level of comfort with speaking freely in an FGD setting, especially when speaking about potentially controversial issues (e.g., the degree to which they felt comfortable utilizing a reporting mechanism for violations of school codes of conduct); sensitive issues (e.g., the degree to which SRGBV occurred at their school); or topics for which they feel compelled to provide the most desirable/least shameful answer (social desirability bias) (e.g., the degree to which parents encourage their children to read, or handwashing practices). To mitigate this impact, the qualitative research team clarified that the respondents' honest answers would be critical to SC's ability to refine their project implementation. After the FGD was complete, the team invited any participants who seemed uncomfortable speaking during the FGD to speak privately in case there was more they wanted to share. FGDs were still the best approach for this study given that the majority of items were able to be freely discussed and benefitted from having a group conversation to stimulate ideas, and the quantitative protocols were able to capture the perspectives that may have been difficult to share in a group setting.

Another limitation is getting participants to be fully honest when answering delicate questions regarding SRGBV (for example, asking if students had ever heard of any instances of teachers coercing students into having sex for grades). SRGBV is a "known-secret" in Liberia, yet no teachers, principals, or parents would admit any history of sexual abuse of students at their schools.

COVID-19 implications. Although no restrictions were in place for COVID-19 in Liberia when we collected data, respondents might have felt uncomfortable participating in the interviews or surveys due to the risk of COVID-19 exposure. To address this challenge, we undertook measures to reduce the possibility of viral spread, including physical distancing, good hygiene in in-person interactions, and participants' use of personal protective equipment (such as masks and hand sanitizers) to ensure their health and comfort. For FGDs, we collected data from smaller groups (up to six people) outdoors, when the weather or space at the school allowed. IMPAQ monitored the development and spread of COVID-19 in Liberia and any subsequent restrictions or guidelines before, during, and after data collection. Any kind of interaction with our local evaluation team adhered to the most rigorous health and safety standards.

Additionally, COVID-19 imposed some limitations in our technical approach. Exhibit 12 details the implications of COVID-19 for the midterm evaluation and describes IMPAQ's associated mitigation strategies.

Exhibit 12. COVID-19 Implications for the Midterm Evaluation

Anticipated Challenges	Mitigation Strategies
▪ Economic hardship caused by COVID-19 could affect enrollment and attendance as vulnerable students from poor families were more likely not to enroll or attend school regularly in the upcoming academic year due to taking care of domestic chores or working outside to support the family ▪ Learning outcomes of students surveyed in February 2021 could differ from student outcomes in March 2020, due to a lack of learning retention and education loss during school closures ▪ Grade 6 students from the previous year were gone and their outcomes might have not been comparable with the new cohort surveyed in the new academic year; this sample was technically Grade 5 students from the previous year ▪ Overestimation of handwashing outcomes (given the new measures for managing COVID-19) ▪ Caveat in interpreting learning outcomes, as many unobservable factors could influence the children's performance between March 2020 and 2021 ▪ Lack of available data from Grade 6 students; therefore, questions related to SRGBV could not be adequately addressed and should be interpreted with caution	▪ For both project and impact evaluations: IMPAQ ○ Updated the student survey to include information on COVID-19 and how children were impacted ○ Compared learning outcomes for the same set of students surveyed in March 2020 and 2021 in the impact subsample, as well as comparing the literacy outcomes before and after the COVID-19 outbreak, which allowed us to understand the nature of bias in the data for interpreting the project evaluation results ○ Included additional qualitative data collection, such as site visits to comparison schools, to understand changes in enrollment and learning outcomes due to COVID-19 and used these findings to put the impact evaluation findings in perspective ○ Compared qualitative notes from pre-COVID intervention communities to observe any major changes over time ▪ Conducted additional qualitative interviews at each site to determine how the community as a whole was affected by COVID-19, how it might have affected project outcomes, and how the project might have affected the community response to COVID-19

3. Project Evaluation Outcomes

This section presents summary statistics from the student survey, including the LBRA. We performed balance checks for key demographic characteristics to ensure that the midterm sample is observationally equivalent to the baseline sample.

We first describe the project evaluation sample and show a summary of key performance indicators. We then present data from the student survey and the LBRA to examine the differences in outcomes between baseline and midterm including disaggregation by sex, grade, and county, highlighting differences of more than 10 percent.[44] Annex E and Annex F provide additional detail.

In analyzing the quantitative performance data, we compared mean outcomes at baseline and midterm by using t-tests and p-values to highlight statistically significant differences. This analysis can only suggest a correlation—not causal relationship—between the observed changes in outcomes and LEARN interventions such as school feeding or teacher training. For example, improvements in knowledge regarding hygiene could be due to other government programs between baseline and midterm that provide hygiene related health education. Self-reported data on culturally and socially sensitive topics such as handwashing and hygiene, gender norms, and SRGBV may be subject to a social desirability bias.[45]

During data analysis, we identified a number of factors—such as high teacher turnover rates, high literacy champion turnover rates especially in River Gee, road conditions during rainy seasons, and COVID-19— that disrupted the implementation of the interventions, especially after March 2020. These disruptions resulted in some challenges for the literacy interventions because teachers were not consistently in their classrooms to teach or integrate the received training while teaching. For example, schools were closed for almost four months because of the COVID-19 pandemic, an approximate loss of 80 instructional days over the 2019-2020 academic year. Students were promoted to their next grade level without catching up on their previous level after schools resumed. During the school closures, COVID-19 posed some challenges for literacy champions in implementing the home learning package, and for parents to meet their families' basic needs (thus hindering their ability to encourage or support their children's education). These challenges might have limited the degree to which LEARN students engaged in literacy activities during closures. Road conditions during rainy seasons also caused delays in distributing books and learning materials.

All of these factors contributed to the challenge of assessing the project's progress from baseline to midterm, given the evident differences in school environments. For example, comparing students' reading proficiency could be challenging in a "normal" year, with no school disruptions or family hardships and distractions, so these additional burdens may have caused even greater barriers to providing valid comparisons. Therefore, the results in this section should be interpreted with caution, especially for students' literacy outcomes.

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[44] All the percentages in **Section 3 and 4** are rounded to the nearest whole number.
[45] Social desirability bias refers to tendency of research subjects to give what they perceive to be socially desirable responses, rather than responses that reflect their true feelings on sensitive issues. Therefore, these results should be interpreted with caution.

Exhibit 13 presents a summary of key project evaluation outcomes required by the performance monitoring plan and, where applicable, disaggregated by grade, sex, and county. Annex D presents a complete table of midterm levels for key McGovern-Dole performance indicators.

Exhibit 13. Baseline and Midterm Levels for Key Project Indicators
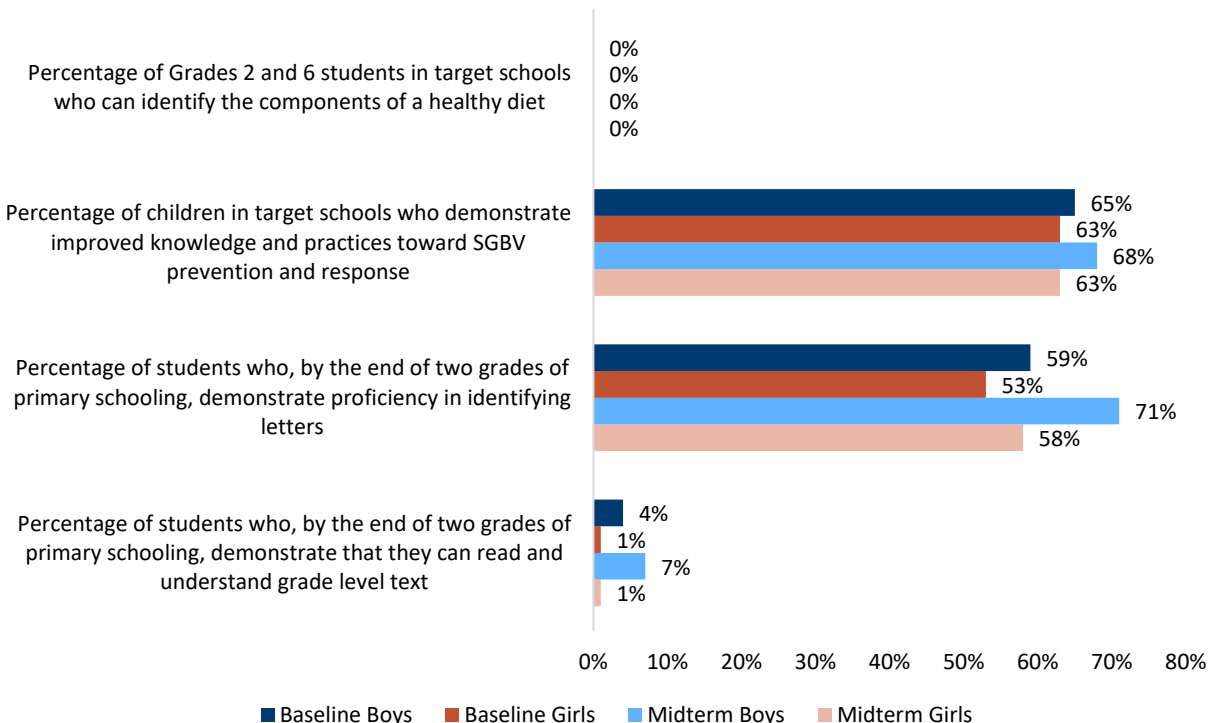
Source: Student survey, LBRA IMPAQ calculation. *p < 0.10; ** p < 0.05; *** p < 0.01. Note: The survey included 1372 Grade 2 students and 649 Grade 6 students at baseline; 999 Grade 2 students and 536 Grade 5 students at midline. Calculations for "Percentage of students who, by the end of two grades of primary schooling, demonstrate proficiency in identifying letters", "Percentage of children in target schools who demonstrate improved knowledge and practices toward SGBV prevention and response", and "Percentage of students who, by the end of two grades of primary schooling, demonstrate that they can read and understand grade level text" include only Grade 2 students per requirements of the PMP.

The section details these results. We first describe the characteristics of schools and students sampled for the project evaluation; then, we discuss student reading outcomes, including factors such as home and school literacy environment, in addition to LBRA results. The section concludes with a review of baseline and midterm values in handwashing and hygiene, nutrition, SRGBV, and disability.

3.1 Evaluation Sample

To measure progress toward outcomes from baseline to midterm, we followed the sampling strategy explained in Section 2.3 to randomly select students present on the day of the school visit. The evaluation team selected 999 Grade 2 students and 536 Grade 6 students across 85 schools in 4 counties of Liberia: Grand Bassa, Grand Gedeh, Rivercess, and River Gee. Although we aimed to survey 10 students in Grade 2 and 6 students in Grade 6 in each selected school in Grand Bassa, Rivercess, and River Gee, low enrollment and attendance rates in the field required the survey team to oversample students in larger schools within the same county. Given COVID-19 related school closures, the evaluation team surveyed

Grade 3 students at the beginning of the school year (equivalent to Grade 2 level at the end of the school year) for the midterm evaluation sample. Thus, to consistently assess the students' outcomes at the end of Grade 2, any reference to Grade 2 students for the project evaluation findings includes a combination of Grade 2 students (at the end of the academic year 2019-2020) and Grade 3 students (at the beginning of academic year 2020-2021). Exhibit 14 shows the total number of students who participated in the student survey, by county, at midterm.

Exhibit 14. Distribution of Midterm Sample

	Number of Schools	Number of Students
	Midterm	Midterm
Grand Bassa	38	649
Grand Gedeh	16	357
Rivercess	17	222
River Gee	16	307
Total	85	1535

Source: Student survey, authors' calculations; Note: Grand Gedeh mid-term 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 the Section 4.

3.1.1 Student Characteristics

Further disaggregating the sample by grade and sex, we see that the project sample has a relatively balanced sex ratio at midterm, as Exhibit 15 shows. Among the Grades 2 and 6 level students at midterm, 51 percent were boys, whereas 54 percent of Grade 2 students and 56 percent of Grade 6 students were boys at baseline.

Exhibit 15. Student Sex Distribution by Grade
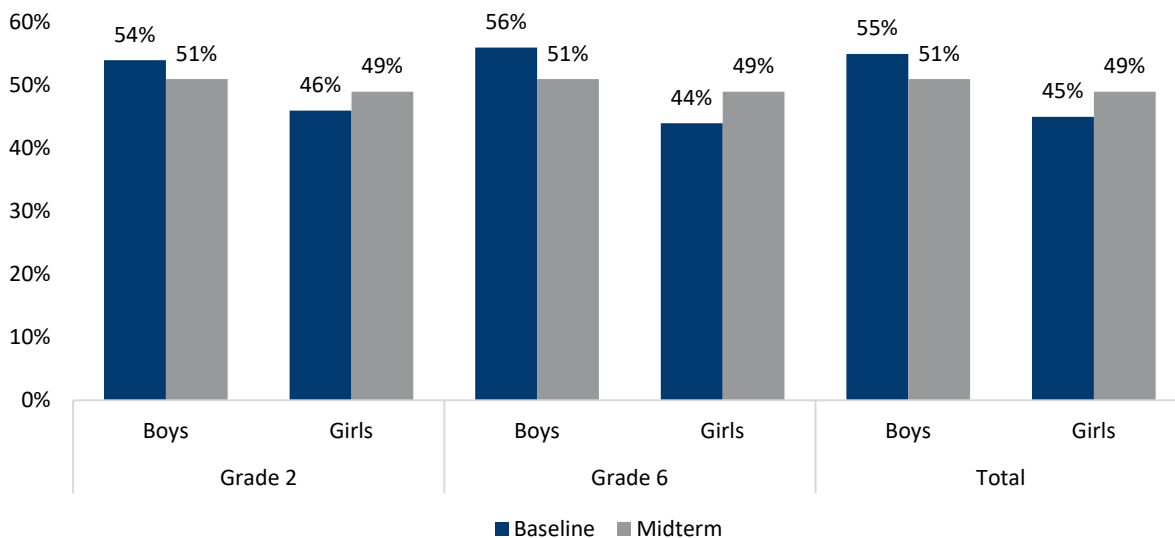
Source: Student survey, authors' calculations.

Exhibit 16 compares the age distribution of surveyed students by grade from baseline to midterm. In contrast to baseline, Grade 2 level students at midterm averaged 13 years of age (both median and mean), with a range of 6 to 25 years of age. The large age gap and high average could be the result of a government policy in 2001 that mandated primary education for children and eliminated fees. Before the enactment of this law, the high price of education and 14 years of civil conflict deterred parents from

sending their children to school. After the new law was passed, many parents enrolled their children in school regardless of age. The age spread for Grade 6 is slightly larger than for Grade 2 with a range of 11 to 25 years of age.

Exhibit 16. Age Distribution, by Grade

Grade	Mean		Median		Range	
	Baseline	Midterm	Baseline	Midterm	Baseline	Midterm
Grade 2	12.3	13.0	12	13	5-19	6-25
Grade 6	16.3	16.4	16	16	8-25	11-25

Source: Student survey, authors' calculations.

3.1.2 Household Characteristics

To understand children's backgrounds, the survey asked students about their household size, primary caregiver's schooling, socioeconomic status, and language spoken at home.

Similar to the baseline sample with an average of 8.2 people per household, the average household size, reported by Grade 2 students across counties at midterm, was 8.0; Grand Gedeh and River Gee had slightly lower averages of about 7 people per household. The spread between minimum and maximum household sizes was large, between 1 and 30 people; however, this range should be interpreted with caution. Large household sizes could be explained by the fact that, in rural areas, different families often live together as one community and students might have different definitions for household.

On average, 64 percent of students said that their mother was their caregiver at midterm compared to 72 percent at baseline. Girls were more likely to report their mother as caregiver (69 percent) than boys (59 percent) at midterm; meanwhile, 29 percent of boys reported their father as caregiver, compared to 18 percent of girls at midterm. Interestingly, among students who reported their mother as the caregiver, 55 percent said their caregiver went to school as a child at midterm; however, this rate rose to 82 percent when students cited their father as the caregiver (up slightly from 78 percent at baseline). Overall, proportions of students who reported that their caregiver went to school at midterm (61 percent) was similar to those at baseline (60 percent), with no significant differences; there were no large differences by grade, sex, or county.

Most students reported English was the main language spoken at home both at baseline (69 percent) and midterm (65 percent). As shown in Exhibit 17, there was a significant decrease of students reporting English as their main language in Rivercess, where the figure dropped from 76 percent at baseline to 43 percent at midterm. There was no difference at midterm in the total number of household assets for student households, compared to baseline.

Exhibit 17. Proportion of Students for Whom English is Their Main Language
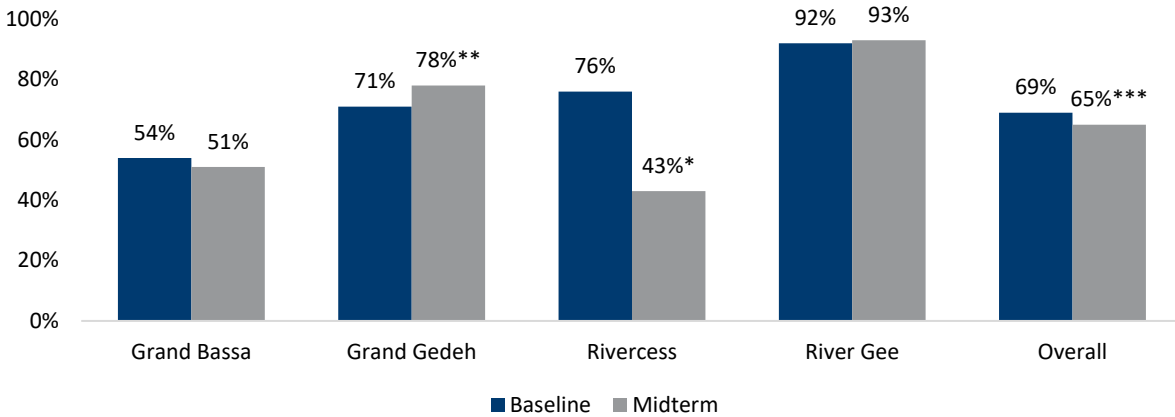
Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee

Further, a majority of students (78 percent at midterm) said they had a holy book at home (see Exhibit 18). Textbooks and schoolbooks represented the next most frequently cited book (48 percent), while storybooks and comics were the next most-cited non-textbook reading material at home (43 percent at midterm). A larger proportion of students in River Gee said that they had no reading materials at home (14 percent at midterm) compared to the other counties (5 to 9 percent at midterm).

Exhibit 18. Availability of Reading Materials in the Home
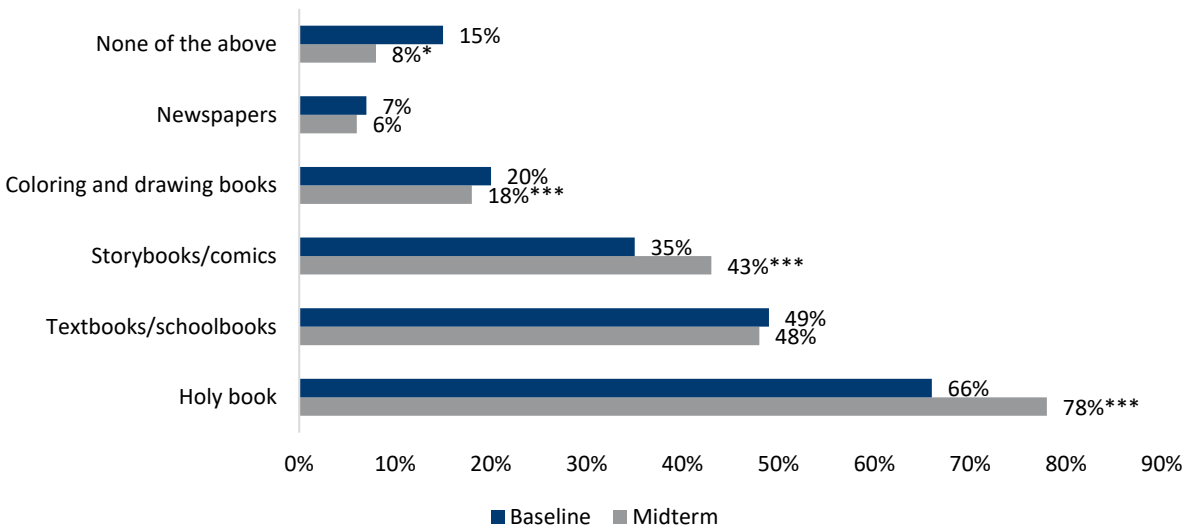
Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Baseline: N = 2021; Midterm: N = 1535

3.2 Project Evaluation Midterm Results

This section presents results on key outcomes related to literacy, health, nutrition, and SRGBV. For reading related outcomes, we analyzed data collected from Grade 2 students who also took the LBRA. For health, nutrition, and SRGBV outcomes, we looked at students' responses from Grades 2 and 6 separately.

3.2.1 Student Reading Outcomes

This section presents changes over time for Grade 2 students' responses to survey questions about the literacy environment at school and at home. The questions focused on four key areas: 1) the availability of reading materials in and out of school, 2) students' home literacy environment, 3) students' attitudes toward schooling, and 4) the presence of teachers in schools. After reporting on the results of these survey questions, we outline findings from the LBRA. While LB activities under LEARN were only targeted to schools in Grand Gedeh and River Gee, we present findings on literacy outcomes for all four counties to provide better comparisons and a more nuanced understanding of how schools receiving LB programming are doing relative to schools that not receiving those same activities. Moreover, it is possible that schools in Grand Bassa and Rivercess are benefitting from other donor-funded education programs,[46] which could be improving literacy outcomes for students in those areas. Therefore, presenting comparisons of changes in literacy outcomes for all four counties provides some insight into how the LEARN activities are performing in relation to other education programs in Liberia.

3.2.1.1 Availability of Reading Materials

Enumerators asked Grade 2 students about the availability of reading materials at school, and outside of these spheres in their community at large. The survey also asked how often students borrowed books from school, if available.

At School. Despite some regional variations (see Exhibit E7 in Annex E), almost half of Grade 2 level students reported that their school had books other than textbooks, though 57 percent at midterm still reporting not having access at school (Exhibit 19). Based on qualitative interviews at the community level, this number could be driven down by books being stolen and lost at the community level. The proportion of students who reported being able to take these books home to read for free at midterm was slightly higher in Grand Bassa (40 percent) than in other counties, especially Rivercess (25 percent), and proportions increased from baseline in Grand Bassa, while they decreased in Grand Gedeh and River Gee and remained the same in Rivercess (Exhibit E7 in Annex E). River Gee had a higher proportion of students at midterm who said that they could not take non-textbook reading materials off campus (18 percent) compared to baseline, while this number decreased at midterm for all other counties. Across all counties, fewer than 5 percent of students reported having to pay to bring reading materials home, consistent with baseline results.

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[46] For instance, the USAID-funded Accelerated Quality Education for Liberian Children program is currently operating in Grand Bassa, and even though the program is targeted at out-of-school children, the program could produce spillover effects in terms of improved educational quality and community support for education which improve outcomes for in-school students in this area.

Exhibit 19. Access to Non-Textbook Reading Materials in School

	Baseline	Midterm
Yes, and can take home for a cost	2%	1%
Yes, and can take home for free	29%	31%
Yes, but can't take off campus	14%	11%
No	55%	57%
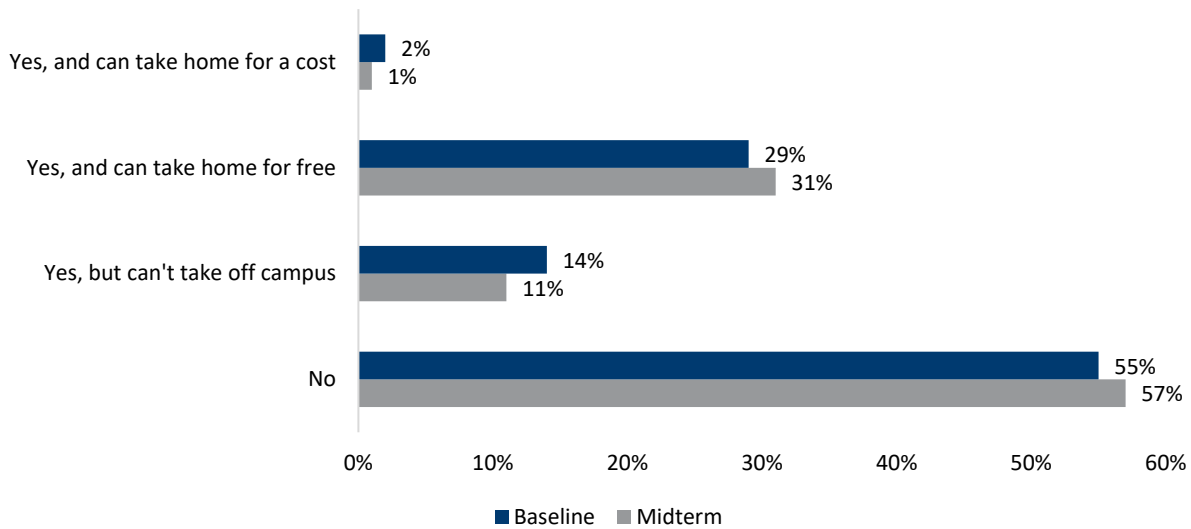
Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N = 658 for Grand Bassa, 134 of Grand Gedeh, 303 for Rivercess and 263 for River Gee.1358. Midterm: N = 1535

Exhibit 20 shows the frequency with which students borrowed books from school. This question was asked of the students who said that their school allowed them to take books home either for free or at a cost. On average, 62 percent of students said that they had borrowed non-textbooks in the past week at midterm (adding up the overall percentages for those students responding "every day" [3 percent], "a few times" [27 percent], and "once during the week" [33 percent]), slightly higher than the 58 percent at baseline. As the Exhibit E8 in <ins>Annex E</ins> highlights, a higher proportion of students in Grand Gedeh at baseline (71 percent) reported that they had never borrowed books from school. At midterm, this proportion decreased to 34 percent in Grand Gedeh, and River Gee had the largest proportion of students reporting never having borrowed a book from school (52 percent). Noticeably, River Gee falls below this average, at 48 percent (down from 68 percent at baseline). Grand Gedeh had the largest increase in the proportion of students saying that they had borrowed a book in the past week, from only 29 percent at baseline to 66 percent at midterm.

Exhibit 20. Frequency with Which Students Borrowed Non-Textbook Reading Materials to Take Home
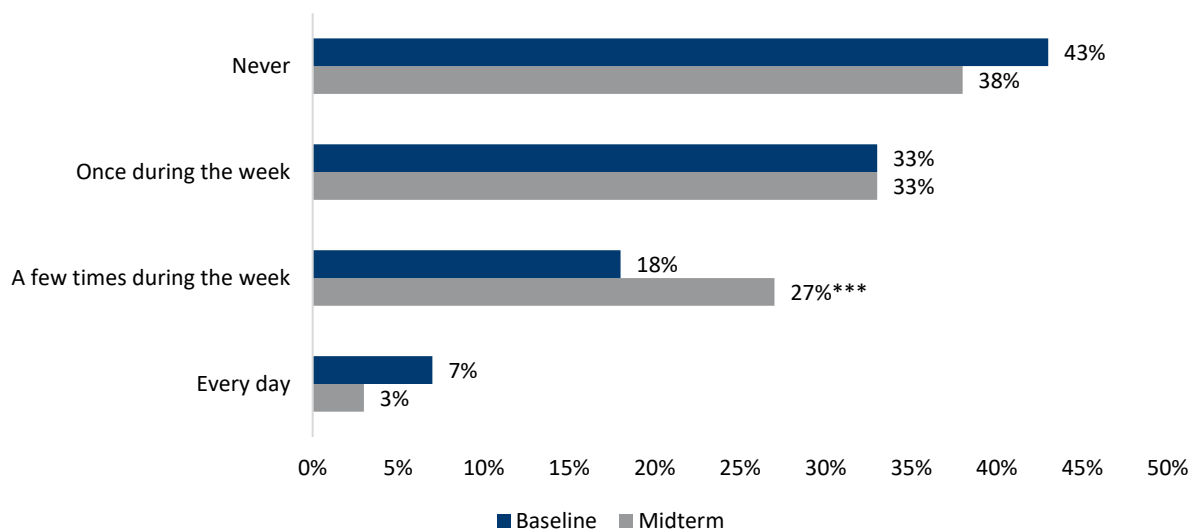
*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N = 1358. Midterm: N = 1535.*

Outside of School or Home. On average, only 25 percent of students reported that they had read storybooks outside of school or their home in the past week, equivalent to the proportion of students in this sample who reported extracurricular reading at baseline (25 percent). There were no notable differences by county or sex. Of the students who reported that they read storybooks outside of school or the home, 56 percent said that they went to a friends' or relatives' for reading materials, followed by 5 percent who reported "other," and 2 percent who responded reading clubs. One percent or fewer reported using religious buildings or community libraries. The proportion of students reporting that they did not know where to borrow a book decreased from baseline to midterm from 53 percent to 36 percent (p-value < 0.01). While these general trends follow those reported at baseline, more students reported visiting friends or relatives for extracurricular reading (p-value < 0.01). The qualitative data agree that student access to books outside of school was extremely challenging across all communities – two communities of twelve (just one of four LB communities) visited had an existing book bank, and there, students were no longer allowed to take books home because of challenges with them being returned. Other communities indicated that some teachers had books that they would sometimes loan out; this was rare.

3.2.1.2 Home Literacy Environment

Examining household literacy practices can illuminate the level of children's exposure to learning outside of school. Students exposed to literacy activities at home have better opportunities for reading acquisition.[47] Numerous studies point to the role of the home literacy environment in influencing early reading skills – in particular, children's exposure to print materials at home and opportunities to engage in reading with other household members.[48]

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[47] 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.

[48] Hess, R. D. & Holloway, S. D. (1984). Family and school as educational institutions. Review of Child Development Research, 7, 179-222. 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).

As such, the assessment included questions to measure the home literacy environment, which we have conceptualized as the reading habits of family members and their engagement with students' readings, as reported by students. Specifically, we asked students if they saw anyone reading at home and whether anyone in their household had encouraged them to study, read to them, or told them a story.

Exhibit 21 shows how students reported their household literacy activities one week before the survey during baseline and midterm. Overall, except for seeing someone reading at home, all other home literacy activities reduced from baseline to midterm. In the overall sample, the majority of students (58 percent at midterm) said someone in their household helped them with their studies; 47 percent reported that someone read to them and 30 percent stated that someone told them a story. All three changes are statistically significant at the 10 percent level. COVID-19 and the shift of household priorities to feeding the family could potentially explain the reduction in literacy activities at home.

These findings are consistent with the qualitative findings, which indicated that the majority of parents want to help their children learn to read but see their main challenge to be their own illiteracy and the shifting of household priorities, especially during COVID-19. Some parents recognize that simply encouraging their child to read, or checking on the status of their schoolwork, can help. But others felt they could not do anything. Teachers recognized the importance of support for literacy at home and noted that some parents help at home. However, teachers also believed that other parents did not help at home because they are not prioritizing education and expect the teacher to do all the work. Parents disagreed, though, and may benefit from more communication from teachers as to how specifically they could be supporting given their own literacy limitations.

There was large variation in the home literacy environment between counties. A larger proportion of students in Grand Gedeh reported literacy activities at home in each category, compared to all other counties (see Exhibit E9 in Annex E). We did not observe similar trends for home literacy activities in River Gee, the other county receiving LB programming. However, because data from River Gee were collected prior to the COVID-19 pandemic and related shutdowns and Grand Gedeh data were collected after COVID-19 closures, the data from Grand Gedeh may reflect the receipt and use of the home learning packet provided by the LEARN program during COVID-19.

Exhibit 21. Household Literacy Activities in the Past Week
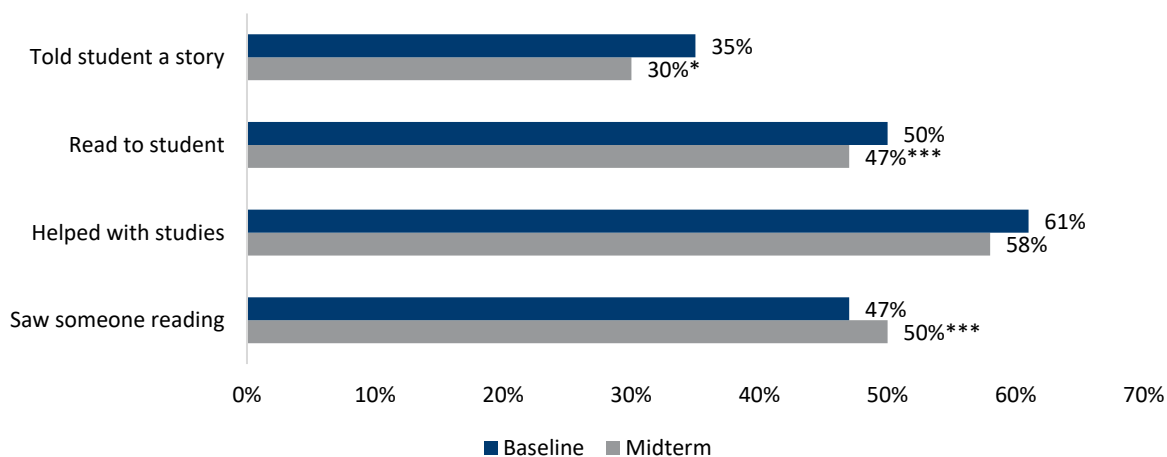
*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Baseline: N = 1358. Midterm: N = 1535.*

The survey asked students to report on the specific family member involved in the four activities listed in Exhibit 21. Most students reported that their older brother was the one they saw reading last week (35 percent), that he helped them study (33 percent), and that he read to them (33 percent), while the majority reported that their mother told them stories (29 percent) followed by their father (17 percent). At baseline, these proportions are fairly similar, with their older brother being the person most reported to be seen reading last week (35 percent), to help them study (38 percent), and to read to them (38 percent), while their mother and father were most likely to tell them a story (21 and 22 percent, respectively). With the exception of the person seen reading last week, the differences in the most reported family member between baseline and midterm were, on average, statistically significant at the 10 percent level. No major differences were found by county or sex.

Household Literacy Activities During COVID-19. Due to the COVID-19 school closures, the LEARN program developed home learning packets for children to continue their learning with a caregiver in Grand Gedeh and River Gee. Since students in River Gee were surveyed for midterm before the COVID-19 pandemic, we do not report on these outcomes for that group of students. The packets included a story booklet, learning tips and worksheet booklet, alphabet puzzle cards, syllable cards, an "I Help My Child to Learn" leaflet[49] for caregivers, and other scholastic materials including pencils, sharpeners, erasers, crayons, and a ruler targeted at 7500 children in 1500 households in 59 LB implemented school–communities in Grand Gedeh and River Gee counties. We asked students surveyed after the COVID-19 pandemic began about the use of these materials in their home as well as their satisfaction with the materials.[50]

Seventy-three percent of students surveyed in Grand Gedeh reported using the home learning materials during school closures. Exhibit 22 shows the proportion of students reporting the use of each material in the packet. One-third of all students who used the materials reported using the story booklet (33 percent) while a little less than that used the alphabet puzzle cards or home learning tips worksheet and booklet (31 percent for both). Only 8 percent reported using the syllable cards.

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[49] I Help my Child to Learn was a check list for parents to fill to motivate and track parental care regarding the home learning activities during COVID 19 school closure.

[50] The sample for the questions related to the home learning packet should only pertain to students in Grand Gedeh, as the questions were only added to the survey after the COVID-19 pandemic began. However, this module was asked of all students in all counties except for River Gee. High proportions of students in both Grand Bassa and Rivercess reported using the home learning packet (82 and 84 percent, respectively) despite not receiving these tools from the program. Therefore, these results should be interpreted with caution (even just for Grand Gedeh), as students may not have known what a home learning packet was.

Exhibit 22. Use of Home Learning Packet Materials
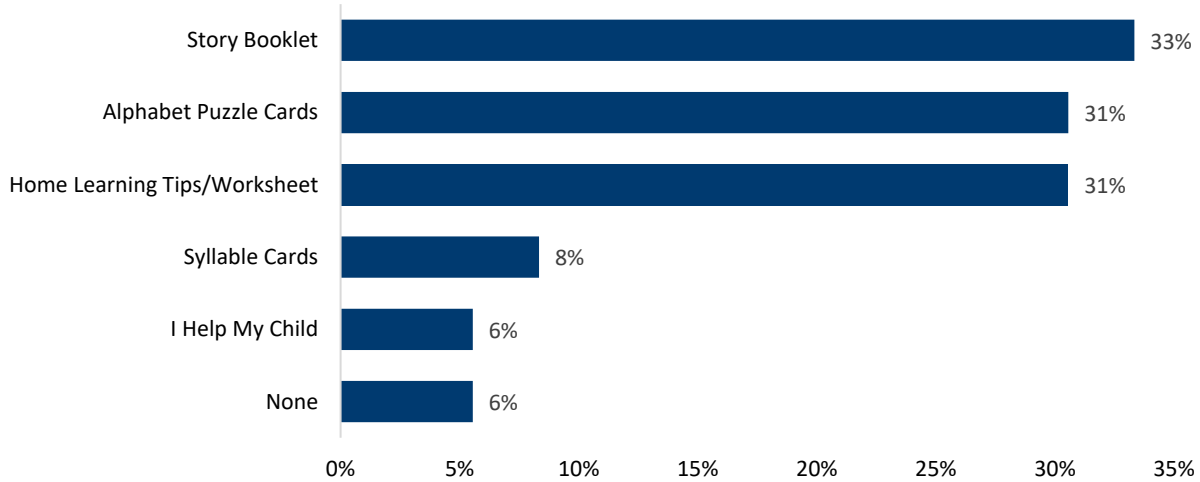
Category	Percentage
Story Booklet	33%
Alphabet Puzzle Cards	31%
Home Learning Tips/Worksheet	31%
Syllable Cards	8%
I Help My Child	6%
None	6%

Source: Student survey. Authors' calculations. Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. N = 49.

Of the students who reported using the home learning packet, 80 percent responded that their parents used the materials with them at least once per week during the pandemic. Almost all of them reported that they enjoyed the materials (98 percent). About one-third responded that the materials were fun (31 percent) and a little under one-quarter noted that they had time to study and read (24 percent). The qualitative data collected in the one sampled LB community in Grand Gedeh showed that some students engaged with the home learning packet and had mixed degrees of parental support. Teachers also reported that the literacy champion (responsible for supplementing the content of the packet) in that school left just before closures, so teachers and the principal provided support as they were able. Exhibit 23 presents the reasons students reported liking the materials. Half of the students reported that they liked the home learning materials because they felt that they learned to read better.

Exhibit 23. Satisfaction with Home Learning Materials
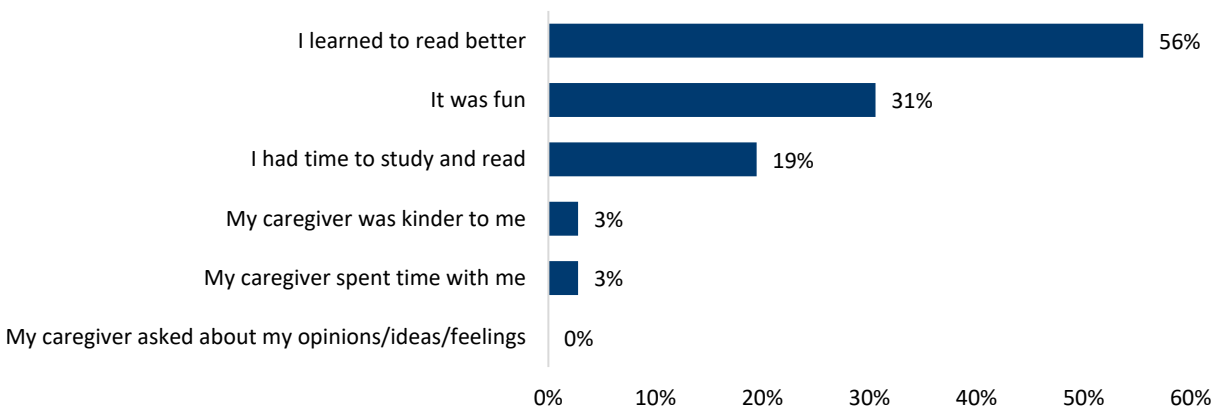
Category	Percentage
I learned to read better	56%
It was fun	31%
I had time to study and read	19%
My caregiver was kinder to me	3%
My caregiver spent time with me	3%
My caregiver asked about my opinions/ideas/feelings	0%

Source: Student survey. Authors' calculations. Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. N = 160.

3.2.1.3 Student Attitudes Toward Schooling

To assess students' perceptions of their education, we asked Grade 2 level students the reasons they liked and disliked school. At baseline, a majority of Grade 2 students (70 percent) said they liked school because they found their lessons and learning enjoyable. Students in Rivercess were particularly enthusiastic about lessons and learning: 75 percent reported them as a reason they like school. Overall enjoyment of lessons and learning increased to 83 percent at midterm (p-value < 0.01) and 86 percent in Rivercess in particular (p-value < 0.01). At baseline, only 1 to 2 percent of students reported liking school because food was provided, but this proportion jumped to 22 percent overall at midterm, with 27 percent of students noting food as a reason for their enjoyment in Grand Bassa and 30 percent in Rivercess (p-value < 0.01 for all).

The main reasons students reported disliking school at midterm were their teacher's punishments or physical violence from teachers (35 percent overall) and other students teasing or fighting with them (22 percent). These findings are consistent with the qualitative findings that students are demotivated by physical violence, not only from the teacher but also from their peers, associated with practices such as "beat spelling" (see more detail on beat spelling Section 5). These proportions increased from 13 percent and 9 percent, respectively, at baseline (p-value < 0.01 for both). The proportion of students reporting disliking receiving punishment from their teacher fell only in River Gee at midterm (from 13 percent to 4 percent; p-value < 0.01). The proportion increased in the other counties: from 15 percent to 50 percent in Grand Bassa (p-value < 0.01), from 5 percent to 26 percent in Grand Gedeh (p-value < 0.01), and from 11 percent to 45 percent in Rivercess (p-value < 0.01). The qualitative data also suggest that there were some activities that, for students who struggled with reading, felt embarrassed.

3.2.1.4 Presence of Teachers in School

A large body of literature suggests a positive association between teachers' attendance and students' achievement.[51] Thus, we asked Grade 2 level students about the consistent presence of teachers in school.

Overall, 88 percent of students at midterm stated that teachers came to class every day, compared to 86 percent at baseline (p-value > 0.10). Exhibit 24 shows the frequency of student-reported daily teacher attendance. The proportion at midterm is lowest in Grand Gedeh, at 81 percent, followed by 87 percent in River Gee, 90 percent in Grand Bassa, and 93 percent in Rivercess. Teacher attendance did not differ noticeably by grade, as reported by students. These results are consistent with student responses about whether they saw a teacher fail to show up in the last week. This question was added at midterm specifically to capture the new additions to the code of conduct.

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[51] Ahn, T., & Vigdor, J. (2010). The impact of incentives on effort: Teacher bonuses in North Carolina. PEPG 10-06. Miller, Raegen. (2012). Teacher Absence as a Leading Indicator of Student Achievement: New National Data Offer Opportunity to Examine Cost of Teacher Absence Relative to Learning Loss. Center for American Progress. Woods, Robert. (1990). The effect of teacher attendance on student achievement in two selected school districts.

Exhibit 24. Teacher Attendance

Bar chart showing Baseline and Midterm values:
- Every day (5 days): Baseline 86%, Midterm 88%
- A few times (2-4 days): Baseline 9%, Midterm 8%
- Once during the week: Baseline 1%, Midterm 2%***
- Never: Baseline 4%, Midterm 3%***
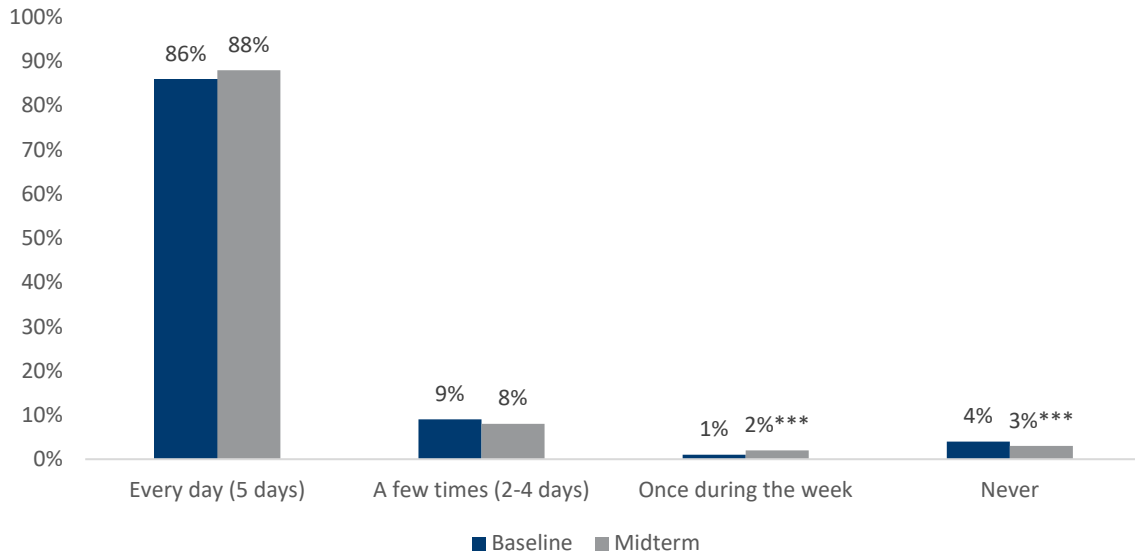
*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N =1358. Midterm = N = 1,535*

Across all three counties, 76 percent of students at baseline and 78 percent of students at midterm said their teacher never arrived late to class (see Exhibit E11 in Annex E). Teacher tardiness was reported slightly more frequently in Grand Gedeh and River Gee than in the other two counties: only 7 percent of students at midterm reported that teachers arrived late at least once per week in Rivercess and Grand Bassa, compared to 13 and 14 percent of students in Grand Gedeh and River Gee, respectively. The proportion of students noting teacher tardiness remained relatively stable over time, suggesting that the LEARN program was not directly affecting teacher attendance or tardiness. Exhibit 25 shows the results.

Exhibit 25. Teacher Tardiness

Bar chart showing Baseline and Midterm values:
- Every day (5 days): Baseline 4%, Midterm 2%
- A few times (2-4 days): Baseline 11%, Midterm 10%
- Once during the week: Baseline 12%, Midterm 10%
- Never: Baseline 76%, Midterm 78%
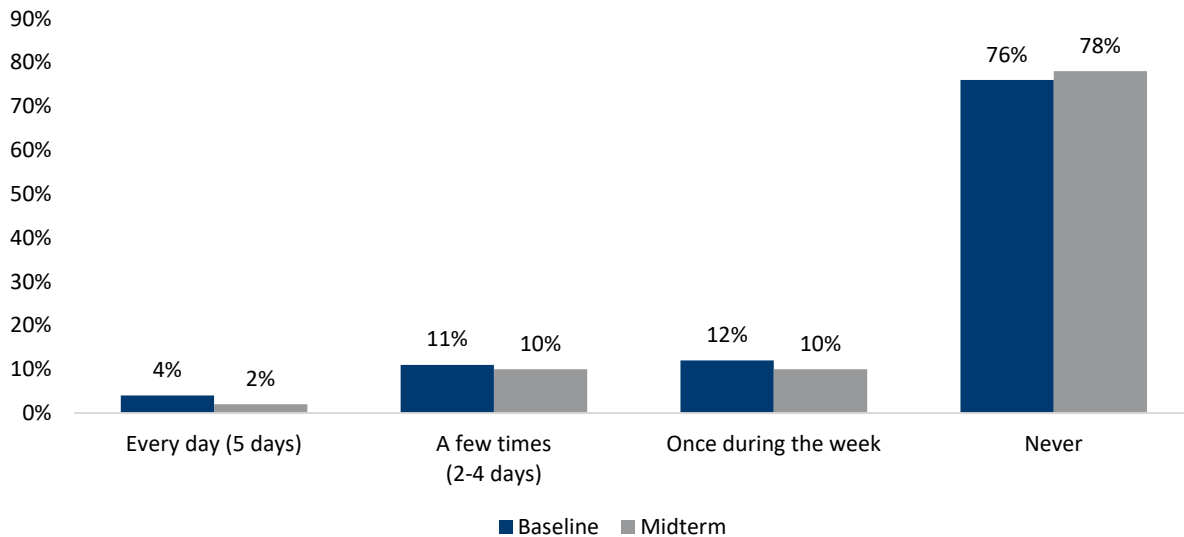
*Student survey, IMPAQ calculation. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N = 1358. Midterm: N = 1,535*

The results for both attendance and tardiness should be interpreted with caution for three main reasons: 1) the team measured these outcomes based on the self-reported responses of young children in Grade

2; 2) the team collected data during the rainy season at baseline when road conditions could have influenced teachers' attendance and tardiness; 3) the team collected data at the beginning of the academic year when some schools had not completed enrollment.

3.2.1.5 Literacy Outcomes

This section provides the findings from the LBRA collected from Grade 2 level students. Consistent with baseline, to measure the literacy skills of Grade 2 students at the end of their grade level, IMPAQ administered an adapted version of the LBRA. Since the official language of instruction in Liberia is English, enumerators administered all subtests in English. The adapted version of the LBRA used for this evaluation consists of four subtests:

1. **Letter knowledge:** The number of letter sounds that the student could identify, out of 26
2. **Word recognition:** The number of words, out of the 20 most-used words from leveled textbooks that the 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 students could decode correctly.
4. **Reading comprehension**
   - **Reading aloud:** Using a short story of 155 words, we assessed:
     - Fluency: The number of words read correctly in a minute
     - Accuracy: The percentage of words read correctly (untimed)
   - **Comprehension:** Ten comprehension questions related to the short story were asked orally in one of three conditions:
     - 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."
     - 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."
     - 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.

Exhibit 26 shows a summary of Grade 2 students' literacy skills by study round. The key reading outcomes were fairly consistent among the counties and from baseline to midterm, apart from reading skills, which have mostly improved across project areas. In particular, Grand Bassa appears to have a relatively larger group of readers, who also outperformed students in other counties in reading comprehension (increased from 33 readers to 103 readers from baseline to midterm). In general, children were successful at recognizing the letters of the alphabet but struggled to recognize full words, especially invented words. On average, students were able to identify only 37 percent of words at midterm (consistent with the 38 percent identified at baseline). The few students who were identified as readers performed better in reading comprehension than non-readers did in listening comprehension. Overall, however, we suggest interpreting these results with caution. While we do not see large gains in students' literacy skills from baseline, this result is likely due to the interruption of schooling by the COVID-19 pandemic and subsequent learning losses.

Exhibit 26. Grade 2 Students' Literacy Skills
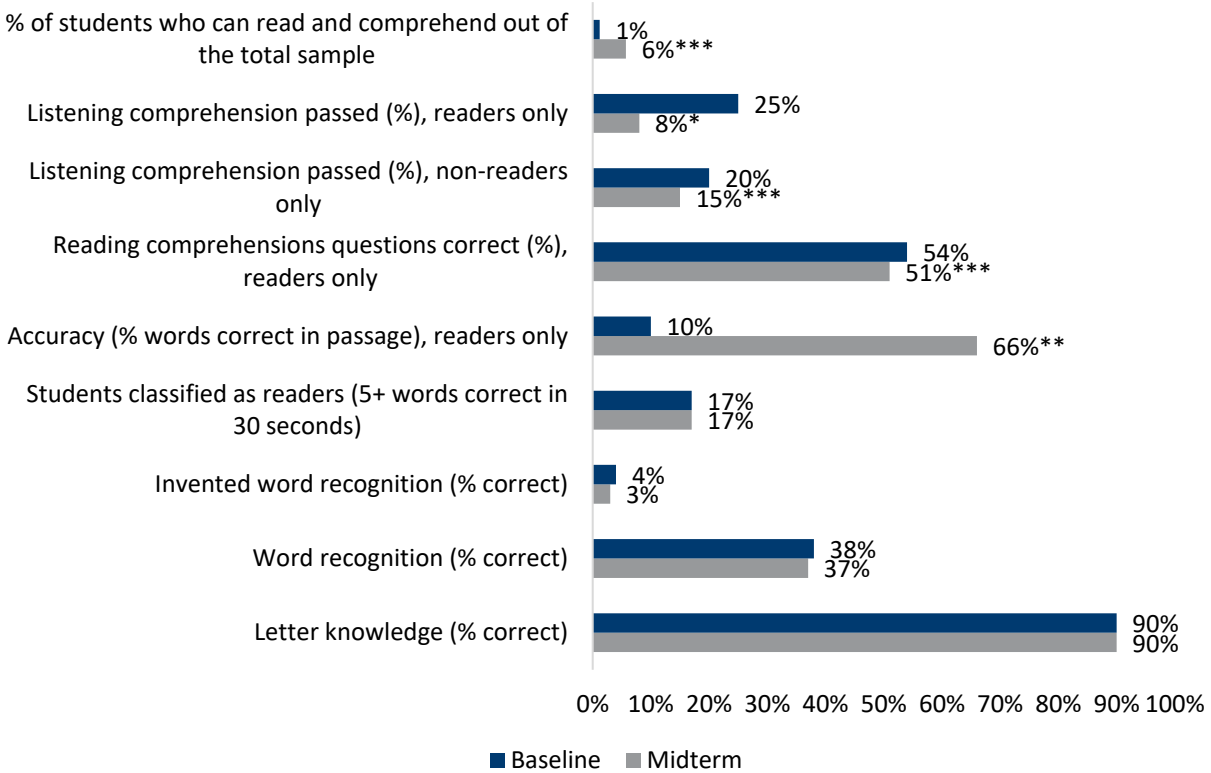
Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline N = 758; Midterm N = 999. There were 171 readers at midline; 127 readers at baseline.

Letter Knowledge

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, most students (90 percent) could identify 21 to 26 letters at midterm, with an average of 23 letters. This result shows no change in letter knowledge from baseline, but this finding could be due to the previously high levels of letter knowledge coupled with learning loss from the COVID-19 pandemic. Less than 1 percent of students in Grand Gedeh were unable to identify any letters; no students in the other counties could not identify a single letter (see Exhibit E12 in Annex E). There were no other major differences in the outcomes by sex, primary language at home, or county

Exhibit 27. Letter Knowledge
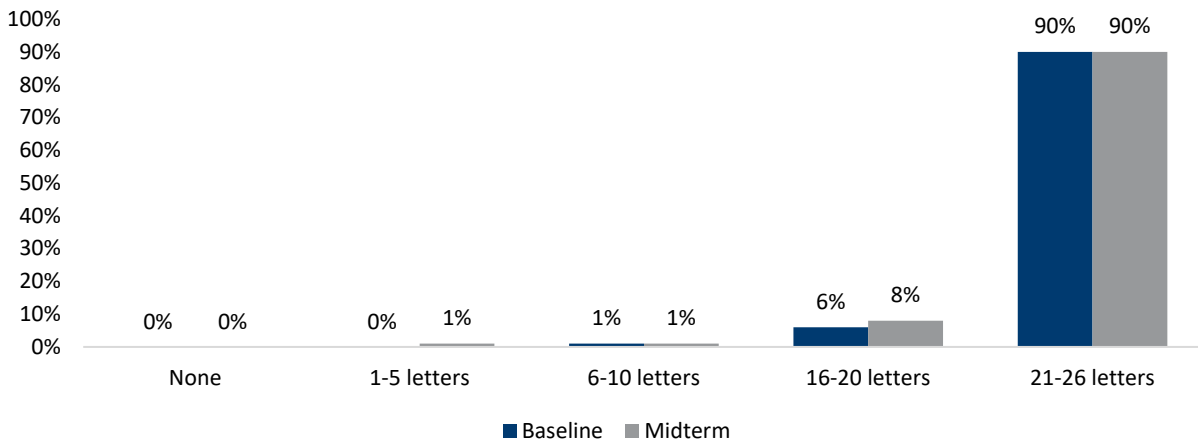
*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. N = 999 at midterm; N = 758 at baseline.*

Reading Skills and Reading Comprehension

IMPAQ classified students as readers if they could read at least 5 words in the LBRA story in 30 seconds.[52] We found no statistically significant difference in the proportion of students who could read at midterm (17 percent) compared to baseline (17 percent). Exhibit 28 shows unlike at baseline, Grand Bassa had the highest percentage of readers with 25 percent at midterm, followed by Rivercess with 20 percent, Grand Gedeh with 13 percent, and River Gee with 4 percent. The proportion of readers decreased the most from baseline in River Gee (from 18 percent to 4 percent) followed by Grand Gedeh (from 22 percent to 13 percent), while the proportions increased in Grand Bassa (from 14 percent to 25 percent) and Rivercess (17 percent to 20 percent).[53] Eighty-six percent of the sample had the passage read to them making them eligible for listening comprehension measurement as opposed to reading comprehension.

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[52] IMPAQ used the same passage from baseline to test students' reading skills.

[53] While schools in Grand Bassa and Rivercess did not receive LB programming through LEARN, it is possible other donor-funded education programming facilitated improved literacy skills for students in these counties. For instance, the USAID-funded Accelerated Quality Education for Liberian Children program is currently operating in Grand Bassa, and even though the program is targeted at out-of-school children, the program could produce spillover effects in terms of improved educational quality and community support for education which improve outcomes for in-school students in this area.

Exhibit 28. Proportion of Readers by County

Bar chart showing proportion of readers by county for Baseline and Midterm:
- Grand Bassa: Baseline 14%, Midterm 25%***
- Grand Gedeh: Baseline 22%, Midterm 13%**
- Rivercess: Baseline 17%, Midterm 20%
- River Gee: Baseline 17%, Midterm 4%***
- Overall: Baseline 17%, Midterm 17%
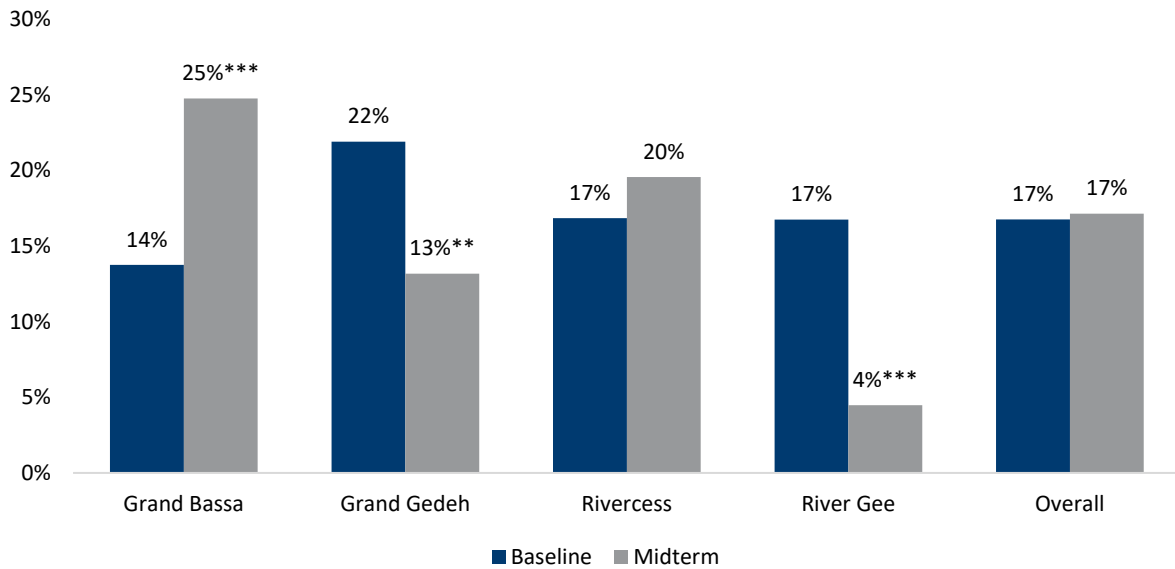
■ Baseline   ■ Midterm

Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. N = 999 at midterm; N = 758. 171 at midterm; 127 readers at baseline.

We used the same LBRA passage to measure students' fluency (words read per minute) and accuracy (percentage of words read correctly). Fluency of readers increased from baseline (11 words/minute) to midterm (29 words/minute), a significant difference at the 1 percent level. Since the proportion of readers remained constant over time, it is likely that baseline readers have increased their fluency and accuracy skill while non-readers have been unable to expand their reading skills enough to become readers likely due to learning losses and lack of parental and educational support during COVID. Students' accuracy also increased from 59 percent of the time reading words correctly at baseline to 76 percent of the time at midterm. Accuracy was highest for students in Grand Bassa (78 percent) and Rivercess (79 percent) even though these counties did not receive the LB package.

After readers read or non-readers listened to the whole passage, enumerators asked 10 comprehension questions:

- **Summary**: One question that tests students' ability to identify the main ideas of a reading passage.
- **Literal**: Five questions in which the answer is clearly and explicitly stated in the passage.
- **Inferential**: Three questions in which the answers are implied, rather than clearly stated in the passage.
- **Evaluative**: One question that requires some level of cognitive and/or emotional judgment. To answer such a question, a child needs to use his/her personal opinion.

The team defined competency on the comprehension assessment as ability to answer at least 80 percent of the questions correctly. In general, readers were more successful than listeners (non-readers and readers who did not finish the passage) on the comprehension questions. Forty-one percent of readers (57 students) and just 13 percent of listeners (130 students) answered at least 80 percent of the comprehension questions correctly at midterm. A smaller, though not statistically significantly different, proportion of readers (35 percent) and a larger and significant proportion of listeners (20 percent; p-value < 0.01) were able to answer at least 80 percent of the comprehension questions correctly at baseline.

Among the listeners, 14 percent of non-readers and 8 percent of readers met the 80 percent competency standard at midterm, down from 20 percent and 25 percent, respectively, at baseline (p-value < 0.01 for both). This outcome is likely driven by the overall reduction in the number of listeners from baseline to midterm.

We also analyzed the comprehension results by question types as shown in Exhibit 29. Exhibit E14 in Annex E shows counties differed substantially on different question types. The proportion of students passing each type of question, except for summary questions, decreased from baseline, though this could be a factor of the larger number of students being eligible for the comprehension questions.

Exhibit 29. Comprehension Subtests
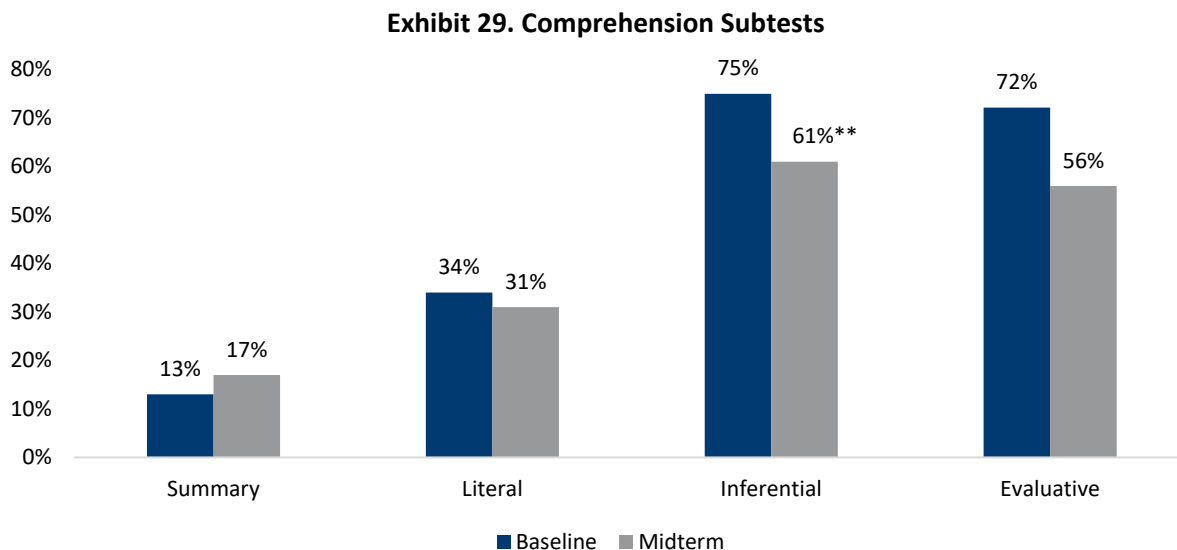
*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. At midterm, N = 999; Baseline. N = 758.*

We also examined changes in reading with comprehension over time. Specifically, we assessed the proportion of students classified as readers who were able to answer 80 percent of the comprehension questions correctly after reading the text. At baseline, only 1 percent of readers had reading with comprehension, compared to 6 percent at midterm (p-value < 0.01). Students in River Gee experienced no change in reading with comprehension from baseline to midterm (1 percent at each round) but a large decrease in the number of identified readers. In Rivercess, we saw a decrease in the total number of students identified as readers (from 17 percent to 16 percent), but an increase in the proportion with reading with comprehension (1 to 4 percent; p-value < 0.10). Both Grand Bassa and Grand Gedeh saw an increase in the number of identified readers and the proportion with comprehension from baseline to midterm; the proportion of students with reading comprehension increased from 3 to 9 percent in Grand Bassa and from 0 to 4 percent in Grand Gedeh (p-value < 0.01 and p-value < 0.05, respectively).

Associations between Student and Household Characteristics and Students' Literacy Skills

The evaluation team used multivariate regression analyses to examine the relationship between students' literacy skills and students and household characteristics. We looked at the following selected variables:

- Student age
- Student sex
- English as the main language spoken at home
- Ever repeating a grade

- Caregiver ever attending school
- Number of reading materials in the home
- Home literacy index
- SES index

Overall, the regression analysis showed a strong relationship between students' sex and Grade 2 students' literacy skills. Specifically, being female was associated with lower literacy skills across all subskills. Speaking English as the main language at home was positively associated with students' word recognition skills and reading with comprehension. The home literacy index (composed of items denoting parental reading engagement with students in the home) was found to be positively associated with the total number of words read accurately only. Although this information could be helpful for implementation purposes, it should be interpreted with caution as these results only provide suggestive evidence of relationships with literacy skills and do not represent causal effects. Annex E presents the regression results.

3.2.2 Other Key Student Outcomes

This section describes the changes in key project evaluation outcome indicators pertaining to hygiene and handwashing, nutrition, SRGBV and gender norms, as well as disability. The enumerators asked questions about these topics of both Grades 2 and 6 students, except for questions about gender norms, from which Grade 2 students were excluded.

3.2.2.1 Hygiene and Handwashing Practices

To capture information on hygiene practices, enumerators first asked students whether they had washed their hands at all in the day prior to the survey, and with what. Most students (88 percent) reported that they had washed their hands, and 87 percent of those students said that they washed with water and soap. There were no sex, grade, or county differences in those outcomes. These results held at midterm as there were no statistically significant differences over time.

For a deeper understanding of students' knowledge and handwashing practices, we also developed questions to compare students' knowledge of appropriate handwashing behavior to their actual conduct. Survey questions focused on handwashing at critical moments, defined as: 1) after using the toilet to defecate, 2) after using the toilet to urinate, and 3) before consuming food.

Overall, handwashing knowledge remained almost the same from baseline (19 percent) to midterm (20 percent) as shown in Exhibit 30. While significant improvements were seen in Grand Bassa and Grand Gedeh, students in Rivercess showed almost the same knowledge from baseline to midterm (see results by county in Exhibit 13 in Annex E). The data also show that self-reported behaviors increased in all counties except for River Gee between baseline and midterm. River Gee was the only county that had a smaller proportion of students at midterm reporting knowledge (14 percent) and practice (8 percent) of handwashing, compared to baseline (27 and 11 percent, respectively). Across all the counties, Grand Bassa had the largest proportion of students self-reporting knowledge (26 percent) and appropriate handwashing practices (17 percent). We also found that a larger proportion of students in Grand Bassa reported being taught proper handwashing when schools were closed due to COVID-19 (85 percent,

compared to 77 percent in Grand Gedeh and 80 percent in Rivercess).[54] The top three reported sources of information on handwashing during COVID-19 came from parents (55 percent), the radio (21 percent), and volunteers (21 percent), followed closely by teachers (17 percent). The qualitative data show that there was community activity around improving handwashing practices during COVID-19 school closures, and that the school health committees, found in all qualitative sites, were continuing to promote such practices once schools reopened. In general, there were adequate materials at school to allow students to wash their hands but there were some reported limitations in keeping this supply going when PTA's struggled to raise money.

Exhibit 30. Student Knowledge vs. Practice of Critical Handwashing Moments
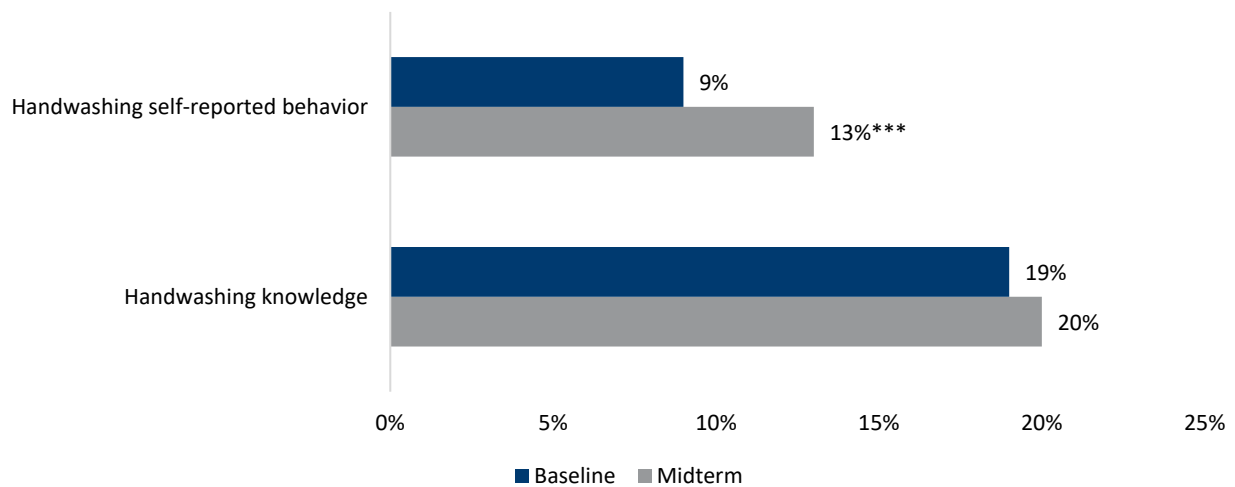
*Student survey, IMPAQ calculation. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N = 2021. Midterm: N = 1535*

3.2.2.2 Nutrition Practices and Knowledge

Practices. We asked Grades 2 and 6 students how frequently they eat each day. As Exhibit 31 shows, students eat 2 to 3 meals per day, on average, though the number of meals decreased significantly from baseline to midterm across all counties. While we cannot say for certain, the negative economic impacts of COVID-19 likely influenced this result. Negligible, though statistically significant, differences emerged when the data are disaggregated by sex or county.

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[54] Students in River Gee were surveyed prior to the COVID-19 pandemic, so we were unable to capture their responses to the COVID-19 related questions added to the survey after the delay.

Exhibit 31. Number of Meals a Student Eats Per Day

Bar chart showing Baseline and Midterm values by county:
- Grand Bassa: Baseline 3.2, Midterm 2.9***
- Grand Gedeh: Baseline 3.1, Midterm 2.7***
- Rivercess: Baseline 2.9, Midterm 2.5***
- River Gee: Baseline 2.8, Midterm 2.6***
- Overall: Baseline 3.0, Midterm 2.7***
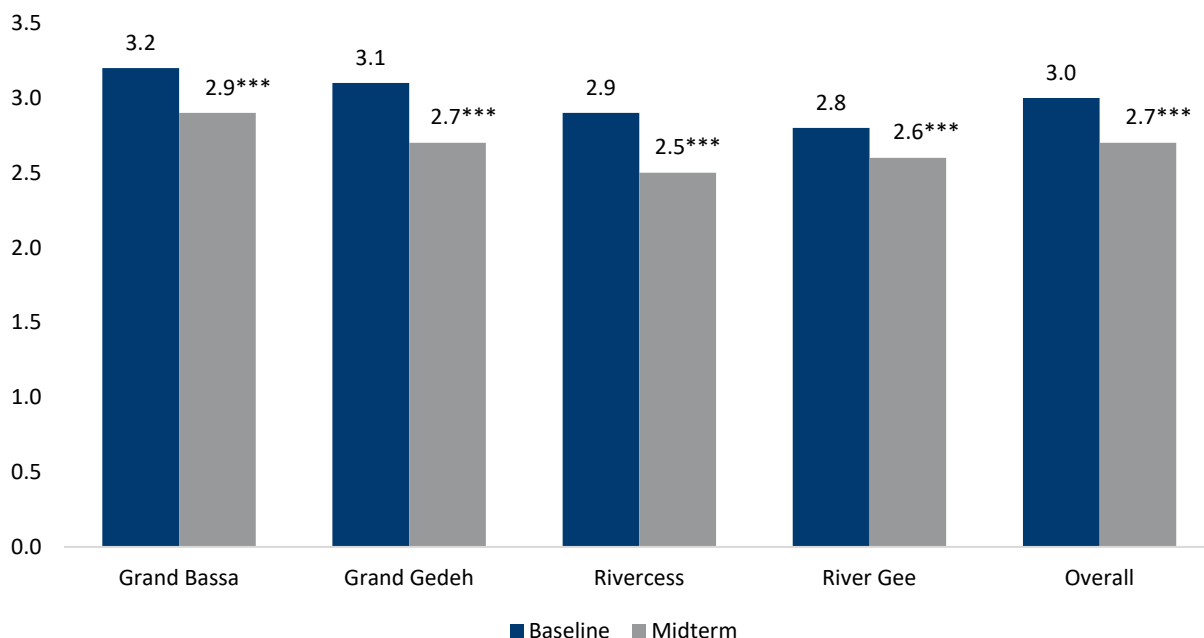
■ Baseline ■ Midterm

*Student survey, IMPAQ calculation. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N = 2011. Midterm: N = 1533*

Knowledge. To determine whether students could identify the components of a healthy diet, the survey asked students to identify the three components of a balanced diet, defined as *go, glow,* and *grow* foods. Based on the terminology SC used to train students, "Go" foods are defined as foods that give one energy to play and learn; "Glow" foods are defined as foods that protect one's body from disease; and "Grow" food are defined as foods that help body grow. The nutrition knowledge remained low similar to baseline. Only 1 percent of students (135 students out of 1535) stated that they knew the definition of a balanced diet at midterm, and, of those, 1 percent (14 students) could successfully identify all three components of a healthy diet.

We also asked students how they thought food should be divided between boys and girls, whether they thought that one sex should get more, or that the food should be divided equally. At baseline, overall, a 46 percent of students felt that food should be divided equally, though 31 percent responded that boys should get more food, and 19 percent said that girls should get more food. At midterm, the proportion of students responding that food should be shared equally increased to 67 percent (p-value < 0.01), while the proportion reporting that one sex or the other should receive more decreased to 21 percent for boys 12 percent for girls (p-value < 0.01 for both). Students in River Gee had the greatest increase in the proportion of students reporting that food should be shared equally, with a 31-percentage point increase from baseline to midterm (42 percent to 73 percent, p-value < 0.01). The proportion of students responding that food should be shared equally in the other counties also increased significantly from baseline to midterm (p-value < 0.01).

3.2.2.3 Sexual and Gender-Based Violence and Gender Norms.

As noted at the beginning of this section, we surveyed both grades regarding SRGBV, but directed gender norm questions only to Grade 6 students. Given the sensitivity of the subject and the age group we surveyed, to assess students' willingness and ability to report incidents of violence indirectly, the survey

inquired whether rules existed to guide teacher behavior in school and, if so, to specify those rules. The survey asked how teachers disciplined students and whether students knew to whom they could go if they were being harassed. Regarding gender norms, we asked Grade 6 students whether they agree or disagree with a series of statements about relationships between boys and girls. Since little work has been done as of midterm on revising school codes of conduct, the analysis of the work in this regard is limited to sensitization around existing codes of conduct from baseline to midterm.

Rules/Code of Conduct for Teachers

Knowledge. Overall, a majority of students (71 percent) said that rules existed for how teachers should treat students at school, down from 79 percent at baseline (p-value < 0.01). Data show large differences by county. While 83 percent of students in Grand Bassa and Rivercess said rules exist at midterm, only 69 percent in River Gee and 42 percent in Grand Gedeh noted the same. While River Gee and Grand Gedeh are receiving interventions aimed at increasing students' knowledge of the code of conduct, these results appear contradictory upon first glance. Exhibit 32 shows the changes in student knowledge of the code of conduct by county and round.

Exhibit 32. Student Knowledge of Code of Conduct by County
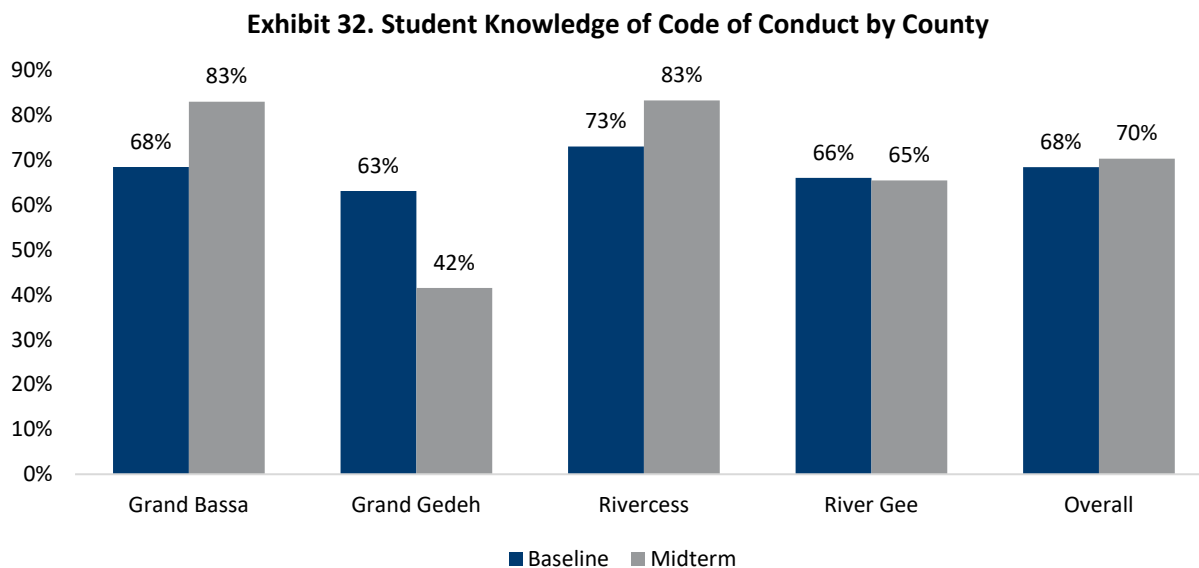
*Student survey, IMPAQ calculation. *p < 0.10; ** p < 0.05; *** p < 0.01. Baseline: N = 544. Midterm: N = 999*

Across all qualitative interviews, students mentioned knowledge of a code of conduct in the school and were able to correctly name its components (namely: teachers and staff must not partake in bribery, abuse, and rape, must not have relationships with students, commit corporal punishment, discriminate by gender, discriminate against children with disabilities, commit fraud, use humiliating language/lack of respect or practice favoritism, use drugs and alcohol, or have persistent absences). Students were also able to describe the process they would use if a teacher or staff member committed an offense and, in most cases, said they trusted this process to be fair and effective. Compared to Grade 2 students, Grade 6 students had a greater level of knowledge showing they have a more complete understanding of school operations and the rules in place that teachers ought to follow, which could be due to the fact that they had attended school for a longer period of time.

Students tended to know that rules prevented teachers from physically harming students. Differences by sex and region were negligible. As Exhibit 33 shows, 49 percent of students at baseline and 79 percent at midterm stated that teachers were not allowed to beat students, while only 14 percent at midterm said that teachers were not allowed to beat students "too much." We distinguished between beating students and doing so "too much" because the cognitive testing showed that, in the Liberian context, beating students remains a common disciplinary strategy in primary schools. Results from our analysis of the identification of rules for teachers supports our hypothesis that students in Grand Gedeh and River Gee are likely more conscious about the rules – even though fewer people reported them, they were more aware of the specifics.

Exhibit 33. Student Identification of Rules to Guide Teacher Behavior
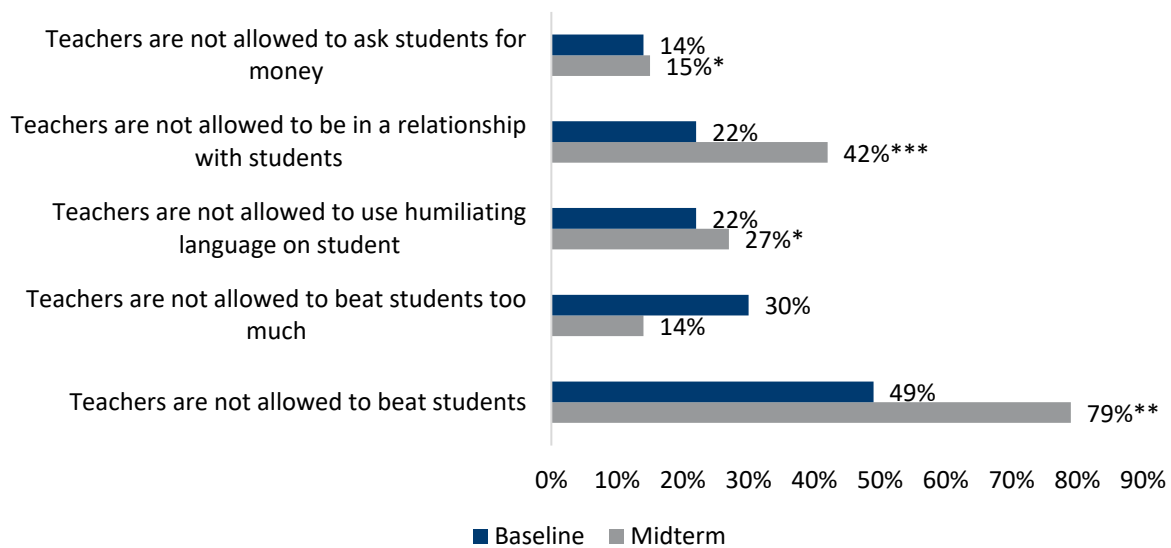
Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. At baseline, N = 1044.

At midterm, students were also asked whether they knew of any other general rules for teachers in school. Approximately 38 percent of students said 'yes' with the lowest proportion in Grand Gedeh (18 percent) and the largest in River Gee (90 percent). For those who mentioned additional rules, the most commonly reported was that teachers are not allowed to come to school drunk or high on drugs (66 percent). Forty-four percent of students said that teachers should not steal from school, while 22 percent noted that teachers were not allowed to arrive to school late or leave early. Only 7 percent of students responded that teachers are not allowed to fail to show up to school.

Students reported that they most commonly heard of these other rules from their head teachers or principals (68 percent) followed by the teachers themselves (26 percent). Fewer than 10 percent of students reported hearing about these rules from their parents or other students (9 percent and 4 percent, respectively).

Rules in Practice. We asked students whether they ever heard of a teacher lying to get what they want or stealing things from school, a teacher offering money to get what they want, a teacher making a comment

about a student's body inappropriately,[55] a teacher touching a child inappropriately, a teacher coming to school drunk or high on drugs, a teacher teasing or calling children names, a teacher treating one student better than the others, or a teacher failing to show up at school. Fewer than 10 percent of students at midterm reported witnessing any of these events.

Reports of Disciplinary Practices. When asked about discipline at school at midterm, 48 percent of students said that teachers forced them to clean or work at school if they behaved poorly, 42 percent reported being given extra work, and 36 percent reported physical violence. These results were significantly different from those reported at baseline, where 55 percent of students said that teachers forced them to clean or work at school, 27 percent reported being given extra work, and 41 percent reported physical violence. While there is some variability in the disciplinary actions taken by county, the results are relatively similar. Only in Grand Gedeh was being given extra work the most commonly reported punishment at midterm versus physical violence at baseline; in all other counties, being forced to clean or work was the most common response at both baseline and midterm.

The team also asked students whether they believed that students were afraid to go to school for fear of being punished by teachers. Most students reported that their peers were never or rarely afraid to go to school for fear of punishment. This response was confirmed in the qualitative interviews where most students and parents said that the process was widely trusted and effective. In two communities, student and/or parent respondents indicated that perhaps there would be retribution for reporting, and three communities suggested that reporting would simply be ineffective (no punishment for the person committing the offense).

Eleven percent of students reported witnessing a teacher using corporal punishment in the last week at midterm. The largest proportion of students reporting witnessing the use of corporal punishment by a teacher was 20 percent in River Gee, and the lowest proportion was 6 percent in Rivercess. Boys were reported as being slightly more likely to receive corporal punishment in the last week than girls (3 times versus 2 times), but there was no difference in the reporting regarding the number of times students heard about a teacher teasing a boy or girl student in the last week (3 times).

Willingness to Report. The enumerators asked students about their knowledge of actions to take if they are teased or touched at school in a way that they dislike (which left open-ended the committer of the act--a teacher, another child, an administrator, etc.). We found that 75 percent of students at midterm stated that they would tell someone if a teacher or school administrator acted violently toward them. Broken down by county, we found that 81 percent in Grand Bassa, 80 percent in Rivercess, 67 percent in River Gee, and 60 percent in Grand Gedeh would tell someone in such an instance. A large majority of students at midterm (81 percent) reported that they would speak to their teacher, followed by 49 percent who said that they would go to the principal or registrar. At baseline, the proportions were 89 percent reporting that they would speak to their teacher, and 31 percent would speak to the principal or registrar (p-value < 0.01 for both).

A Proxy for Willingness to Report SRGBV. Synthesizing all of this information to create an index for SRGBV knowledge and practice, we developed three measurements to indirectly gauge students' willingness and ability to report SRGBV incidents: 1) proportion of students who understand school rules and codes of

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[55] Inappropriately here is defined as discussing or touching a child's front part, behind part, or chest part.

conduct; 2) proportion of students who indicated that they would report cases of bad behavior; and 3) proportion of students who reported any type of corporal or psychological teacher discipline.

We considered students to be knowledgeable about codes of conduct if they reported that rules exist to guide teachers' behavior and could describe at least one of these rules to the enumerator. Across the sample, 70 percent of students (up slightly from 68 percent at baseline) stated that their schools had a code of conduct regulating teachers' behavior. This proportion generally remained above 50 percent when data were disaggregated by county, except for in Grand Gedeh, were the proportion fell to only 42 percent. We do not find evidence of any differences in knowledge of the code of conduct by sex.

We considered students to be willing to report SRGBV incidents (defined in the survey as being teased or touched in an uncomfortable way) if they could identify the person that they would speak to in such cases. Although knowing whom to contact does not guarantee that the student would actually report an incident, the survey could not ask students directly if they would report an incident because of the sensitivity of the topic. We therefore assume that students who could readily name a contact person might be inclined to report SRGBV incidents and used this information as a proxy for willingness to report. In this context, similar to baseline (98 percent), the vast majority of students in our sample (99 percent) were willing to report inappropriate situations at school that they witnessed or in which they were personally involved (p-value < 0.10). No differences were found by county, grade, or sex. These large proportions of students stating their willingness to report is likely a byproduct of social desirability bias rather than true responses. A thorough analysis of students' willingness to report would require a separate, rigorous study.

For the third measurement in our index of willingness to report, we analyzed students' responses to questions regarding teachers' disciplinary practices. We considered teachers as having engaged in corporal or psychological punishment if students reported them as having taken part in any of the disciplinary tactics. By this definition, across the board, regardless of sex, grade, or county, more than 99 percent of students stated that their teachers used some form of corporal or psychological punishment. As the proportion of students stating that their teachers used corporal or psychological punishment was already high a baseline, we see no significant changes in this outcome at midterm.

Our index suggests that students in all grades would willingly report inappropriate teasing or touching in school. Although teachers regularly disciplined students using corporal or psychological disciplinary strategies, students largely understand that their teachers are subject to a code of conduct. The qualitative data are consistent with the quantitative findings, with most students able to provide a list of rules and regulations that teachers were expected to follow, and also explained the process that was to occur in case of a violation (in general, to report to the principal who would then elevate it to the DEO as needed). Students generally felt comfortable with this mechanism and few reported fear of retribution; however, there were instances in which students and parents alike said that they were unsure the degree to which any reports would actually result in a teacher being punished given there was already often an undersupply of teachers, and principals would not want to risk losing them.

Such knowledge of a code of conduct does not guarantee that students would report their teachers should they violate the code, but this level of knowledge regarding guidelines could influence students' perceptions of the school climate and permissible behavior. Studies have shown that students feel more encouraged to share their thoughts if they hold positive perceptions of their relationships with their

teachers in the classroom, and such sentiments may depend on whether their teachers abide by a code of conduct.

Gender Norms. To obtain information on students' perceptions of gender norms, we asked Grade 6 students only whether they agreed or disagreed with a series of five statements. Exhibit 34 shows the result by sex.

Exhibit 34. Student Perceptions of Gender Norms

Statement	Disagreed					
	Boys		Girls		Total	
	Base	Mid	Base	Mid	Base	Mid
If a boy touches a girl at school, it's because the girl did something to attract him.	70%	75%	78%	77%	73%	76%
There are times when a boy needs to beat his girlfriend.	64%	74%***	72%	73%	67%	74%**
Girls like to be teased by boys.	48%	64% **	61%	67%	54%	65%***
When girls wear short skirts, they are telling boys or men to touch them.	50%	64%***	47%	57%**	49%	61%**
For girls to get good grades, they sometimes have to let their teachers touch them or love them.	69%	79%***	79%	85%**	73%	89%**

*Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01.* Midterm N = 273 for boys and 261 for girls. Baseline N = 361 for boys and 284 for *girls.*

Next, we defined a threshold for students holding less biased and better perceptions of gender norms if they disagreed with at least four of the five statements on gender stereotypes listed above. Fifty-eight percent of students reached the threshold at midterm compared to only 48 percent at baseline, showing improvement in students' perceptions of gender norms. As Exhibit 35 illustrates, significant variations were seen by county: a much lower percentage of students in River Gee disagreed with at least four out of five gender norms statements compared to the other counties, especially Rivercess. These results should be interpreted with caution due to the social desirability bias inherent in self-reported responses to such questions (especially in Liberia where this subject is a known challenge).[56] The qualitative data also show that all parents, students, and teachers agree that 'girls and boys should be treated equally', but when probing more deeply into some of the areas in which girls and boys might have different skills or challenges, some bias was revealed (e.g. in terms of the type of work that girls versus boys could do) but also likely because of social desirability bias and compounded by the fact that interviews were done in FGD format with students, parents, and teachers, other gender biases were not admitted.

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[56] Parkes, J. (2016). The Evolution of Policy Enactment on Gender-based Violence in School. *Prospects*, 93-107.

Exhibit 35. Students Who Disagreed with 4 out of 5 Gender Norms, by County
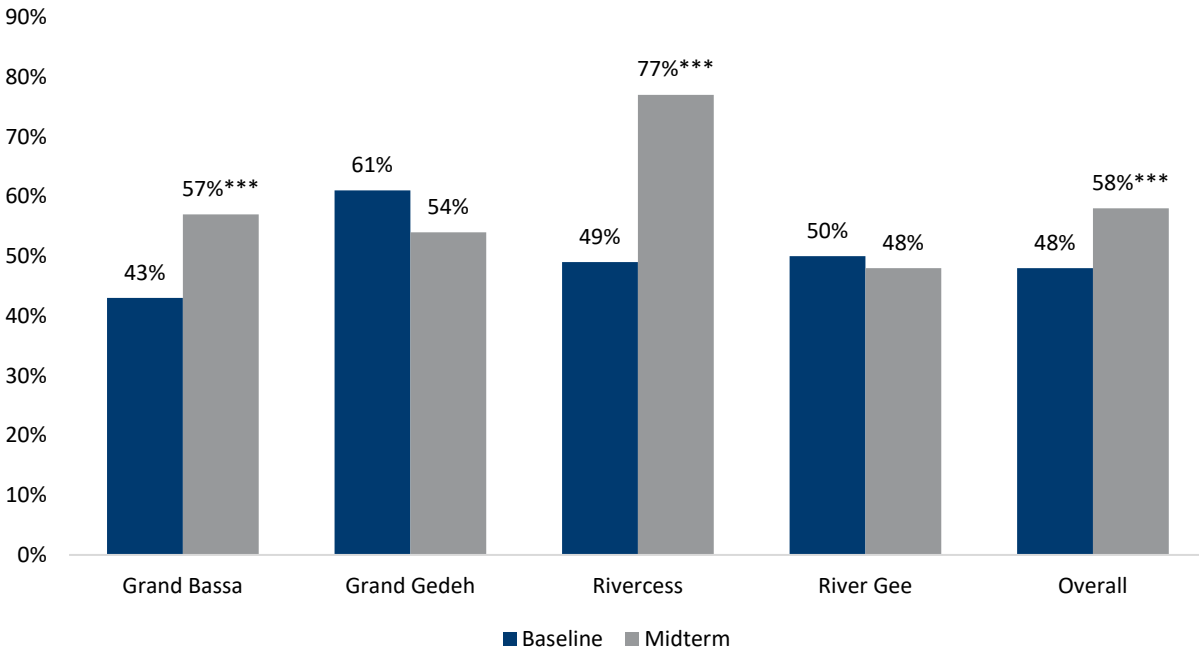
Source: Student survey. Authors' calculations. *p < 0.10; ** p < 0.05; *** p < 0.01. At baseline, N = 649. At midterm, N = 536.

Disability

We assessed visual, auditory, or physical impairments that may impede students' ability to learn in the classroom by asking students the same short set of questions from the Washington Group Questions that we asked at baseline. These questions reflect current thinking and measurement of child functioning.[15] Although this leading conceptual framework assesses a multitude of areas in which children may experience functional difficulties, in our survey, we asked students only questions related to difficulties seeing, hearing, or walking. We directed these questions to students in both Grades 2 and 6. Our results showed that, across grades, sex, and counties, the vast majority of children (more than 95 percent at baseline and midterm) reported that they did not have any kinds of disability in these domains (p-value > 0.10). We did not find any notable differences by sex, grade, or county or by round.

4. Impact Evaluation Findings

This section presents the findings from the quantitative impact analyses enriched by contextual information from the qualitative data. First, we describe the sample of Grade 2 level students[57] in all 55 active schools in Grand Gedeh who completed the student survey and the LBRA at both baseline and midterm. Then, we present the results of the main outcomes of interest for the impact evaluation, i.e., literacy outcomes (Section 4.2.1) and health and nutrition outcomes (Section 4.2.2).

4.1 Impact Evaluation Samples

Section 4.1.1 presents the composition of schools and distribution of students across the three evaluation arms: SF, SF+LB+SHN, and comparison schools. In Section 4.1.2, we provide descriptive statistics of key student and household characteristics (as reported in the student survey). We report information separately by the three groups of schools (treatment and comparison groups) and indicate whether the differences between each of the treatment arms (SF or SF+LB) and comparison schools are statistically significant at midterm. These equivalence checks help verify and comparison for the differences between each of the treatment arms and comparison group in the regression analysis.

4.1.1 School Compositions

The project evaluation sample includes schools in four counties, but the impact evaluation sample includes only schools in Grand Gedeh. As Section 2.3 explained, based on the geographic location of each school in Grand Gedeh, we created 18 clusters with the 55 schools. Then, we randomly assigned all 18 clusters to 3 groups – 2 treatment and 1 comparison group. As Section 1.1 outlined and Exhibit 36 shows, schools in each treatment group receive different LEARN interventions:

Exhibit 36. Treatment Interventions

Treatment 1 SF only	Treatment 2 Combination of SF + LB + SHN	Comparison Group
▪ Provide school meals ▪ Provide THRs for girls (Grades 4-6)[a] ▪ Distribute deworming medications, vitamins, and minerals ▪ Institute teacher recognition ▪ Build/rehabilitate storerooms, kitchens, stoves, latrines ▪ Establish PTAs ▪ Provide training on PTAs, food preparation & storage, good health & nutrition, commodity management	▪ SF package in full ▪ LB package, including: 　o Establish activities to promote literacy 　o Train teachers to lead Reading Camps 　o Establish libraries 　o Produce books & reading materials 　o Promote increase in community awareness on SRGBV ▪ SHN package, including 　o Establish school gardens 　o Improve health and nutrition practices by training teachers to lead SHCs	Schools in this group will not receive either of the packages but will act as a comparison group for the project's impact evaluation.

Source: SC TOR. [a] During the COVID-19 school closures, LEARN distributed the school meals in the form of THRs to all students, unconditional on attendance.

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[57] Due to COVID-19 interruptions, field work was delayed until early 2021, when students were at the beginning of Grade 3 rather than the end of Grade 2. Since our impact evaluation assesses students' outcomes at the end of Grade 2, we refer to surveyed students at the beginning of Grade 3 as Grade 2 students in this report.

As Exhibit 37 shows, 22 schools were randomly assigned to the SF treatment group, 20 schools to the SF+LB+SHN group, and 13 to the comparison group with no intervention. In an attempt to address the smaller-than-anticipated number students to survey (either because of inflated enrollment rates or higher absence rates), the evaluation team oversampled from some of the larger schools. In replacing students, we kept the sex ratio balanced to the extent that the sex-ratio of present students allowed.[58] Exhibit 37 also shows the total number of surveyed students by group. In total, we surveyed 694 students across the three groups in Grand Gedeh. Teachers provided written consent for the children in their school. We also asked students for their oral assent; none of the students refused to participate in the survey.

Exhibit 37. Numbers of Schools and Students in the Impact Sample

District	Students Surveyed at Baseline			Students Surveyed at Midterm		
	SF	SF+LB	Comparison	SF	SF+LB	Comparison
Sampled schools	22	20	13	22	20	13
Surveyed students	213	280	188	202	297	195
Overall	681			694		

Source: Student survey. Authors' calculations.

4.1.2 Student Compositions and Characteristics

Sample Compositions. Due to fieldwork interruptions resulting from COVID-19 lockdowns, we collected data from students at the end of Grade 2 in all accessible schools in Grand Gedeh at the beginning of school year 2020-2021 when they just started Grade 3. Though the average age of the students was 13 in both treatment arms and the comparison group, the range of ages varied slightly.

Despite the sample falling short of its target of 10 boys and 10 girls in each school, gender balance was maintained with an average of 6 girls and 6 boys surveyed in each school. The final midterm sample of 694 students consisted of 46 percent girls and 54 percent boys. Exhibit 38 looks at the composition of students' sexby the treatment and comparison groups.

Exhibit 38. Composition of Students' Sex in the Impact Sample at Midterm

Treatment/Comparison Condition	Boys		Girls		Overall
	Percent	Number	Percent	Number	
SF	54%	109	46%	93	**202**
LB+SF+SHN	55%	163	45%	134	**297**
Comparison	52%	101	48%	94	**195**
Overall	54%	374	46%	320	694

Source: Student survey. Authors' calculations.

Main Language Spoken at Home. When we compared the main language spoken at home across the treatment and comparison groups, the data revealed no significant differences, with the majority of households in each group speaking English at home.

Household Size. Each treatment group was similar in household size with, on average, seven people, which was not significantly different compared to the comparison group.

Socioeconomic Status. To obtain a better understanding of students' socioeconomic status across each group, we examined the differences between each treatment arm and the comparison group on the household's possession of eight durable goods, including cell phone, electricity, icebox, bicycle, TV,

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[58] If a girl was not available at follow-up, we randomly selected another girl from present students. However, if there were not enough girls available on the day of the school visit, we replaced her with a boy in the same class to maintain the power.

motorbike, car, or keh keh. Students reported owning an average of one or two of these goods. The comparison group was the most prosperous based on this measure, owning, on average, half an item more than students in either treatment group.

Enrollment and Grade Repetition. As the key performance indicators focus on students who received the program for at least 2 years, we examine differences in students' reported grade repetition and movement into the treatment schools. Students in SF+LB+SHN were less likely to report ever repeating any grades (20 percent) compared to students in SF (29 percent) and comparison schools (30 percent). Of those who repeated a grade, Exhibit 39 shows the proportion of students repeating Kindergarten and Grade 1 by treatment group. Boys and girls are equally likely to report repeating any grade (25 percent) and those that reported repeating any grade are equally likely to report repeating Kindergarten (30 percent) or Grade 1 (32 percent).

Exhibit 39. Grade Repetition
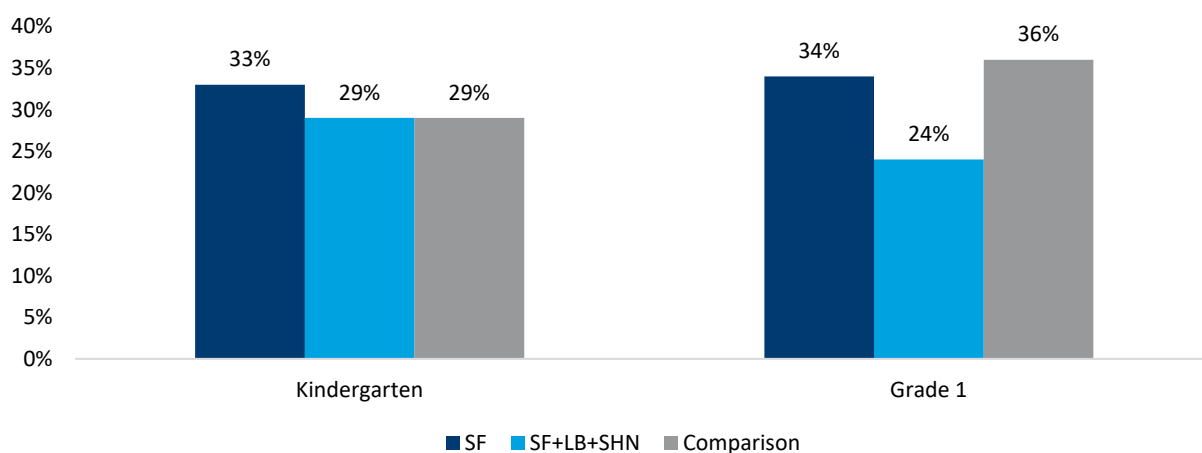
Source: Student survey. Authors' calculations.

We further asked students whether they had moved to their current school (i.e., school the IMPAQ team visited during the evaluation) since 2018. In SF schools and comparison schools, 26 to 28 percent reported moving to their current school since 2018. A statistically significantly larger proportion of students (45 percent) in SF+LB+SHN schools reported that they had moved to their current school since 2018. Based on this measure, almost half of the students in SF+LB+SHN schools likely did not receive the program package for a full 2 years. Annex H presents the results of a robustness test assessing the impact of the LEARN program on key outcomes when restricting the analysis to just those students who remained in program schools since baseline.

4.2 Impact Evaluation Results

The results presented in this section show the main impact evaluation findings from the base package (SF only) and combined package (SF+LB+SHN). Our key outcomes of interest are reading with comprehension, letter recognition, handwashing knowledge and behaviors, and nutrition knowledge. We intended to capture the effects of 2 years of exposure to the intervention (SF or SF+LB+SHN) on Grade 2 students in SF/SF+LB+SHN schools (treatment groups), compared to Grade 2 students in schools with no interventions (comparison group). However, 45 percent of students from SF+LB+SHN and 26 percent of students from

SF only schools changed schools over the course of the evaluation such that they did not receive the intervention for a full 2 years. Further, SC monitoring data suggests that at least 13 comparison schools in Grand Gedeh received some form of literacy or WASH intervention from another donor during the study period. Given these caveats, the results from the impact evaluation should be interpreted with caution as the intended dosage was not met for almost half of the students, and there was potential contamination of the comparison schools. In other words, true program effects may be underestimated.

As the methodology section described, we used a DID method to estimate the 2-year effect of the SF intervention and the combined 2-year effect of SF and LB+SHN on improvements in literacy and health and nutrition outcomes. We present the results from the specified regressions for the base package (SF), the combined package (SF+LB+SHN), and the added benefit of the additional interventions (LB+SHN) below. We also present the results from the subgroup analyses assessing the differential impacts of the packages by sex for each key outcome. Annex H includes additional robustness checks looking at differential impacts by language spoken at home and being in the same school for the past three years. We also conducted qualitative interviews in one combined package site, two SF sites, and two comparison sites, in order to be able to elucidate any further nuances to the impact evaluation findings.

We have structured each exhibit in this section as follows: the highlighted row (*Treatment*Post)* presents the key program effects on main confirmatory outcomes (letter knowledge, reading with comprehension, handwashing behaviors and nutrition knowledge). We also present the coefficients on the differences in outcomes between the treatment and comparison schools at baseline (Treatment) and the time trend (Post). The first column for each sample type presents treatment effects without controlling for any covariates, including indicators for student being female and English being the main language spoken at home, as well as child friendly reading materials index,[59] and number of days of school attended in the last week. The second column for each sample type illustrates the treatment effects after controlling for the following covariates: sex, an indicator for the main language being English, socioeconomic index, an indicator for ever having repeated a grade, and an indicator for having attended an ECD program.[60]

4.2.1 Literacy Outcomes

To assess students' literacy outcomes for the impact evaluation, the evaluation team administered the LBRA on Grade 2 level students at the beginning of Grade 3.

Letter Knowledge. As **Section 4.2.5** explained, we considered students who could name at least 90 percent of the 26 letters of the English alphabet as "letter knowledgeable." Exhibit 40 compares letter knowledge among the treatment and comparison groups. Results show that exposure to the SF package increased Grade 2 level students' ability to identify letters by 13 percentage points which is statistically significant with or without covariates. However, the results did not show any impacts on students' letter recognition from schools receiving the combined package. At baseline, approximately 50 percent of students in each of the treatment and comparison groups were able to identify at least 90 percent of the letters correctly. At midterm, on average, students in SF schools were 14 percentage points more likely to be able to identify 90 percent of the letters compared to students in the comparison group (approximately

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[59] IMPAQ created an index by adding all reading materials (textbooks, newspapers, storybooks/comics, coloring/drawing books) at home. IMPAQ weighted child-friendly materials, such as storybooks/comics and coloring/drawing books double in the regression analysis.
[60] Because having repeated a grade is potentially endogenous, we also estimated the DID model without including this covariate, and the results are similar.

64 percent of students were able to identify 90 percent of letters by midterm) (p-value < 0.10). The proportion of students that were able to correctly identify at least 90 percent of the letters was only 3 percentage points higher for students in SF+LB+SHN schools compared to those in comparison schools, though this result is not statistically significant.

Exhibit 40. Impact of LEARN on Letter Recognition, 90% correct

Variables	SF Only vs Comparison		SF+LB+SHN vs Comparison	
	Coefficient (SE)		Coefficient (SE)	
	Baseline	Midterm	Baseline	Midterm
Treatment*Post (DID)	0.13* (0.076)	0.14* (0.076)	0.01 (0.074)	0.03 (0.075)
Treatment	0.01 (0.088)	-0.002 (0.085)	0.06 (0.091)	0.04 (0.09)
Post	0.01 (0.057)	0.003 (0.056)	0.01 (0.057)	-0.01 (0.056)
Controls	No	Yes	No	Yes
N	397	397	491	491

Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects at the school level.

Subgroup analysis. Next, we examine the differences in impacts by student sex. Exhibit 41 presents the results for the female and male samples separately. We do not find any significant effects of either treatment on letter recognition for boys or girls. In fact, the impact of the SF program on letter recognition completely disappears when conducting this subgroup analysis. This result is likely due to the low power of the study especially when the data are disaggregated, and sample sizes are further reduced. In other words, there may be differential impacts by student sex, but the current study is not powered to detect these differences.

Exhibit 41. Impact of LEARN on Letter Recognition, by Sex, 90% Correct

Variables	Letter Recognition, 90% Correct	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
Girl Sample		
Treatment*Post (DID)	0.10 (0.102)	-0.10 (0.106)
Treatment	0.06 (0.106)	0.09 (0.112)
Post	0.02 (0.066)	-0.01 (0.069)
N	185	227
Boy Sample		
Treatment*Post (DID)	0.17 (0.112)	0.06 (0.094)
Treatment	-0.06 (0.095)	-0.003 (0.085)
Post	-0.01 (0.084)	-0.004 (0.083)

| Variables | Letter Recognition, 90% Correct | |
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
N	212	264

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. Female and male sample regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

Comparison of the Treatment Arms. Lastly, we examine the added value of the additional program components: the LB and SHN interventions on letter knowledge. For this analysis, we run Equation 2 from Section 2 above and explore what, if any, additional impacts are realized for students receiving the combined package, above and beyond those realized for students in SF only schools. We have structured each exhibit in this section as follows: the first row (*SF*Post*) presents the key program effects for the SF schools compared to the comparison schools while the second row [*(SF+LB+SHN)*Post]* presents the effects for SF+LB+SHN schools compared to comparison schools. We also present coefficients on the differences in outcomes between SF and comparison schools at baseline *(SF)* and SF+LB+SHN and comparison schools at baseline (*SF+LB+SHN)* and the time trend *(Post)*. Finally, the shaded row presents the *additional* impact of the LB+SHN interventions compared to the impact of the SF intervention alone. Comparing the outcomes at the student level provides an unbiased estimate of the incremental 2-year effect of the LB+SHN interventions, which would allow us to understand if the effect observed previously for SF+LB arose from SF only, LB+SHN only, or both.

We find no added value of the additional interventions on students' letter recognition. In other words, the overall program impact is being driven by the SF intervention. This finding suggests that simply providing students with access to meals at school improves their literacy skills either through increased nutrition improving their cognitive skills or through higher attendance leading to more learning. However, it also suggests the literacy-focused intervention is likely not being implemented with strong enough fidelity across the treatment schools to produce any additional skill development for students. Further, students potentially suffered learning losses due to COVID-19-related school closures and the subsequent lack of consistent schooling and learning during this extended out-of-school period.[61] These results contribute to the dialogue on the benefit of SF interventions for literacy outcomes. Currently, the evidence is mixed, with some studies finding no impact of SF programs on students' learning outcomes on the one hand (Kazianga, de Walque & Alderman, 2014; Walker, 1998), and another strand of the literature finding positive impacts of SF interventions on learning outcomes (Vermeersch & Kremer, 2011; McEwan, 2013; Chakraborty & Jayaraman, 2019). Specifically, in this present study, we find that students in schools receiving the full package performed qualitatively similar on letter recognition tasks compared to students in schools receiving the SF package only (-12 percentage points, p-value > 0.10), and students in SF only schools performed marginally better than students in comparison schools (15 percentage points, p-value < 0.10).

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[61] While COVID-19 likely affected students to varying degrees and, thus, resulted in different levels of learning loss for students, the initial randomization of schools into treatment groups assumes the variation in COVID-19-related learning loss is balanced across treatment and comparison groups. Therefore, we assume any learning losses due to COVID-19 affected students in SF only, SF+LB+SHN, and comparison schools similarly and it is not the differences in the levels of learning loss driving these null effects.

Exhibit 42. Impact of LEARN Packages on Letter Recognition

Letter Recognition	
Variables	**90% Correct** **Coefficient (SE)**
SF * Post	0.15* (0.076)
(SF + LB +SHN) * Post	0.03 (0.074)
SF	-0.01 (0.083)
SF + LB + SHN	0.04 (0.088)
Post	-0.01 (0.056)
$\Delta_2 - \Delta_1$	-0.12
N	498

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.

Reading Outcomes. This section discusses the effects of the SF and SF+LB+SHN packages, and the added value of the combined package to students' reading with comprehension skills (i.e., students who are able to read 5 more words or more correctly in 30 seconds and respond to 80 percent of the comprehension questions).

Readers with Comprehension. Students in SF only schools are 4 percentage points more likely than students in comparison schools to read with comprehension (p-value < 0.10). However, this marginal impact only exists when we include control variables such that the effect may, instead, be driven by English being the main language at home. We do not find any similar impact on reading comprehension skills for students in SF+LB+SHN schools compared to comparison schools.

Exhibit 43. Impact of LEARN on Reading with Comprehension

Variables	SF Only vs Comparison		SF+LB+SHN vs Comparison	
	Coefficient (SE)		Coefficient (SE)	
	I	II	III	IV
Treatment*Post (DID)	.03 (.019)	.04* (.019)	.02 (.017)	.02 (.018)
Treatment	-.01 (.005)	-.01 (.007)	-.01 (.005)	-.01 (.006)
Post	.01 (.009)	.01 (.009)	.01 (.009)	.01 (.009)
Controls	No	Yes	No	Yes
N	397	397	492	492

Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions with controls include an indicator for the main language being English,

child friendly reading materials index, and number of days of school attended in the last week All regressions include cluster-level fixed effects at the school level.

Subgroup Analysis. For reading with comprehension, we find significant effects only for girls in SF+LB+SHN schools (3 percentage points, p-value < 0.05). We do not find similar effects for male students within the same schools, suggesting that female students are benefitting more than male students from the full package. In SF only schools, we do not find evidence of any significant differential effects by sex; male and female students perform qualitatively similarly in both SF only and comparison schools.

Exhibit 44. Impact of LEARN on Reading with Comprehension, by Sex

Variables	Reading with Comprehension	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
	I	II
Girls Sample		
Treatment*Post (DID)	0.02 (0.014)	0.03** (0.014)
Treatment	0.00 (0.002)	0.002 (0.002)
Post	-0.001 (0.001)	-0.002 (0.003)
N	185	228
Boys Sample		
Treatment*Post (DID)	0.05 (0.032)	0.02 (0.026)
Treatment	-0.03* (0.015)	-0.02 (0.012)
Post	0.01 (0.015)	0.01 (0.015)
N	212	264

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. Female and male sample regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

Comparison of Treatment Arms. The estimated effects remain consistent when examining the value add of the full LEARN package of interventions: the SF only schools are 4 percentage points more likely to answer at least 80 percent of the reading comprehension questions correctly, while SF+LB+SHN schools are 2 percentage points less likely than comparison schools pass the reading comprehension task. This negative result is not statistically significant nor significantly different from the impact for SF only schools.

Exhibit 45. Impact of LEARN Packages on Reading with Comprehension

Reading with Comprehension	
Variables	**Coefficient (SE)**
SF * Post	0.04* (0.019)
(SF + LB +SHN) * Post	0.02 (0.018)
SF	-0.01 (0.006)

SF + LB + SHN	-0.01 (0.006)
Post	0.02 (0.016)
$\Delta_2 - \Delta_1$	-0.02
N	499

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

4.2.2 Health and Nutrition Outcomes

The last set of outcome variables we examined were related to handwashing and nutrition knowledge and behaviors. Students were asked to report on their own handwashing behaviors and knowledge of correct handwashing practices, as well as whether they could identify a balanced diet. The following sections look at the impacts of the LEARN program on each of these key outcomes. The structure of each exhibit in this section follows the same format as those in Section 4.2.1.

Self-Reported Handwashing Behaviors. To assess changes in students' handwashing behaviors, we examine students' self-reports of washing their hands at three critical moments the day before the interview: after defecation, after urination, and before eating food. Students were classified as having proper critical handwashing behaviors if they reported washing their hands in each of these instances. Overall, we do not find any impact of the LEARN program on reporting handwashing behaviors. While we would not necessarily expect to find impacts in the SF only group, we would imagine students receiving the additional SHN interventions to have improved outcomes. This absence of an impact in the SF+LB+SHN schools suggests that the interventions were not implemented with fidelity or that children in comparison schools realized similar improvements in critical handwashing behaviors, perhaps as a result of increased COVID-19 prevention messaging. Exhibit 46 presents the impact estimation results showing no significant impact of any of the LEARN interventions on students' self-reported handwashing behavior. In fact, the exhibit shows significant coefficients only for being in the post-COVID-19 period compared to baseline which supports the theory that Covid-19 health education campaigns likely similarly increased reported behaviors for both treated and comparison schools.

Exhibit 46. Impact of LEARN on Self-Reported Handwashing Behaviors

Variables	SF Only vs Comparison Coefficient (SE)		SF+LB+SHN vs Comparison Coefficient (SE)	
	I	II	III	IV
Treatment*Post (DID)	-0.02 (0.018)	-0.01 (0.018)	0.04 (0.027)	0.04 (0.026)
Treatment	-0.001 (0.007)	-0.01 (0.007)	0.01 (0.008)	0.01 (0.008)
Post	0.04** (0.013)	0.03** (0.013)	0.04** (0.013)	0.03** (0.013)
Controls	No	Yes	No	Yes
N	397	397	492	492

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects at the school level.*

Subgroup Analysis. When examining differential impacts for handwashing behaviors by sex, we similarly find no impacts for either treatment package; however, we see evidence of improvements in self-reported handwashing behaviors for full package schools compared to comparison schools (i.e., positive coefficients), whereas we find decreases in the reported behaviors for those in base package schools compared to comparison schools (i.e., negative coefficients).

Exhibit 47. Impact of LEARN on Self-Reported Handwashing Behaviors

Variables	Handwashing Behaviors	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
	I	II
Girls Sample		
Treatment*Post (DID)	-0.004 (0.035)	0.05 (0.038)
Treatment	-0.01 (0.014)	-0.002 (0.012)
Post	0.04 (0.026)	0.04 (0.026)
N	185	228
Boys Sample		
Treatment*Post (DID)	-0.02 (0.015)	0.03 (0.028)
Treatment	-0.004* (0.002)	0.02* (0.010)
Post	0.03** (0.011)	0.03** (0.013)
N	212	264

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. Female and male sample regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

Comparison of Treatment Arms. When estimating equation 2, we find the value add of the LB+SHN interventions to be 5 percentage points. In other words, children in schools receiving the full package of LEARN interventions were 5 percentage points more likely to report proper critical handwashing behaviors; however, this effect was not statistically significant.

Exhibit 48. Impact of LEARN Packages on Self-Reported Handwashing Behaviors

Handwashing Behaviors	
Variables	**Coefficient (SE)**
SF * Post	-0.01 (0.017)
(SF + LB +SHN) * Post	0.04 (0.026)
SF	-0.004 (0.007)
SF + LB + SHN	0.01 (0.008)
Post	0.03** (0.013)

$\Delta_2 - \Delta_1$	0.05
N	499

Knowledge of Handwashing Behaviors. We also examined students' opinions of critical handwashing behaviors. We constructed an indicator of critical handwashing knowledge based on their responses on whether individuals should wash their hands after the same three critical moments. As with handwashing behaviors, we find no impact of LEARN programming on handwashing knowledge. While our estimates suggest there was no significant difference between students' knowledge of critical handwashing behaviors between students in either treatment group compared to the comparison group, we do find significant impacts of being in the post-COVID-19 period on handwashing knowledge across our sample (an approximately 8 percentage point increase in knowledge). Given the emphasis on handwashing due to the COVID-19 pandemic, the programmatic effects might have been overestimated by the overall increase as a result of country-wide handwashing messaging.

Exhibit 49. Impact of LEARN on Knowledge of Handwashing Behaviors

Variables	SF Only vs Comparison		SF+LB+SHN vs Comparison	
	Coefficient (SE)		Coefficient (SE)	
	I	II	III	IV
Treatment*Post (DID)	-0.01 (0.035)	0.002 (0.038)	-0.003 (0.032)	0.001 (0.033)
Treatment	0.02 (0.017)	0.01 (0.017)	0.02** (0.010)	0.02 (0.012)
Post	0.08*** (0.025)	0.07** (0.027)	0.08*** (0.025)	0.08*** (0.026)
Controls	No	Yes	No	Yes
N	397	397	492	492

Subgroup Analysis. We do not find any evidence of overall or differential impacts of the program packages on knowledge of critical handwashing behaviors. Male and female students appear to have the same level of knowledge of proper behaviors. We again find impacts on handwashing knowledge for boys and girls across all treatment groups (except for male students receiving the base package). This result is likely reflective of increased handwashing messaging throughout the country due to COVID-19.

Exhibit 50. Impact of LEARN on Knowledge of Handwashing Behaviors, by Sex

Variables	Knowledge of Handwashing Behaviors	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
	I	II
Girls Sample		
Treatment*Post (DID)	0.01 (0.068)	-0.02 (0.049)

| Variables | Knowledge of Handwashing Behaviors | |
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
	I	II
Treatment	0.01 (0.029)	0.04* (0.020)
Post	0.09** (0.038)	0.09** (0.039)
N	185	228
Boys Sample		
Treatment*Post (DID)	0.01 (0.045)	0.02 (0.038)
Treatment	0.001 (0.022)	0.001 (0.016)
Post	0.05 (0.032)	0.07** (0.030)
N	212	264

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. Female and male sample regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

Comparison of Treatment Arms. We find no significant additional impact of the LB+SHN interventions compared to the impact of the SF only intervention. Neither treatment package produces a significant effect on students' knowledge of the critical moments for handwashing. We again find that students' knowledge across all treatment groups increased at midterm, perhaps due to increased handwashing knowledge campaigns in light of the current COVID-19 epidemic. Consistently, the qualitative data show that not only there were no discernable differences between the LB and non-LB communities, but also that there were few differences with regards to handwashing and WASH generally as compared to the two comparison communities.

Exhibit 51. Impact of LEARN Packages on Knowledge of Handwashing Behaviors

Knowledge of Handwashing Behaviors	
Variables	**Coefficient (SE)**
SF * Post	-0.003 (0.036)
(SF + LB +SHN) * Post	0.003 (0.033)
SF	0.01 (0.016)
SF + LB + SHN	0.02 (0.012)
Post	0.08*** (0.026)
$\Delta_2 - \Delta_1$	0.00
N	499

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

Nutrition. To determine whether students could identify the components of a healthy diet, the survey asked students to identify the three elements of a balanced diet, defined and taught by SC as *go, glow,* and *grow* foods. We find evidence of a significant impact for students in SF+LB+SHN schools compared to those in comparison schools. There was no similar impact for students in SF only schools, suggesting that the additional SHN interventions may have helped increase students' nutrition knowledge. At baseline, only 2 percent of surveyed students could identify the components of a balanced diet. This proportion doubled (increased by 2 percentage points) for students in schools receiving the full package compared to students in comparison schools (p-value < 0.05). Given the low proportion of students able to identify a balanced diet, these results should be interpreted with caution as they are based on limited variation over time.

Exhibit 52. Impact of LEARN on Knowledge of a Balanced Diet

Variables	SF Only vs Comparison Coefficient (SE)		SF+LB+SHN vs Comparison Coefficient (SE)	
	I	II	III	IV
Treatment*Post (DID)	0.02 (0.015)	0.01 (0.012)	0.03** (0.013)	0.02** (0.011)
Treatment	0.00 (0.000)	0.001 (0.002)	0.00 (0.000)	0.00 (0.001)
Post	0.00 (0.000)	0.002 (0.002)	0.00 (0.000)	0.00 (0.002)
Controls	No	Yes	No	Yes
N	397	397	492	492

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects at the school level.*

Subgroup Analysis. We find marginally significant effects for students in schools receiving the full package: female students are 3 percentage points and male students are 2 percentage points more likely to know what a balanced diet is than their peers in comparison schools. We do not find any comparable effects by sex in schools receiving the base package only.

Exhibit 53. Impact of LEARN on Knowledge of a Balanced Diet, by Sex

Variables	Knowledge of a Balanced Diet	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
	I	II
Girls Sample		
Treatment*Post (DID)	0.03 (0.030)	0.03* (0.018)
Treatment	-0.002 (0.003)	-0.001 (0.002)
Post	0.00 (0.002)	-0.001 (0.002)
N	185	228
Boys Sample		
Treatment*Post (DID)	0.00 (0.000)	0.02* (0.009)
Treatment	0.00 (0.000)	0.001 (0.002)

Variables	Knowledge of a Balanced Diet	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
	I	II
Post	0.00 (0.000)	0.001 (0.003)
N	212	264

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. Female and male sample regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

Comparison of Treatment Arms. Assessing the additional impact of the LB+SHN interventions, we find a marginal impact of 1 percentage point for the full package over the SF only intervention. Again, given the low proportion of students who were able to identify a balanced diet, these results should be interpreted with caution.

Exhibit 54. Impact of LEARN Packages on Knowledge of a Balanced Diet

Knowledge of a Balanced Diet	
Variables	Coefficient (SE)
SF * Post	0.01 (0.013)
(SF + LB +SHN) * Post	0.02* (0.012)
SF	0.00 (0.002)
SF + LB + SHN	0.001 (0.001)
Post	0.001 (0.002)
$\Delta_2 - \Delta_1$	0.01*
N	499

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level.*

5. Qualitative Discussion

Through KIIs and FGDs with beneficiaries at the school and community levels, as well as with project staff and government officials at the national and local levels, the research team assessed the relevance, effectiveness, efficiency, perceived impact, and sustainability of the LEARN interventions with respect to the research questions related to literacy, nutrition, WASH, and SRGBV themes (i.e., relevant to the McGovern-Dole results framework). Findings are based on data analysis from six intervention communities (three each in River Gee and Rivercess) visited pre-COVID, along with 12 intervention communities visited post-COVID (inclusive of the same six communities visited pre-COVID).

The interviews conducted in March 2021 generally reflect the periods from when schools closed in March 2020 given the time passed and the challenges at the forefront of people's minds. We asked respondents in every interview about the period before COVID, but retrospective details were sparse. As such, where possible, we utilized the pre-COVID data to comment on the program activities as they occurred up to March 2020, though these data are limited to only Rivercess and River Gee schools. The intervention sites captured all variations of the intervention packages, as displayed in exhibit 55 below.

Exhibit 55. Qualitative Intervention Sites by LEARN Packages Delivered

County	School Feeding Base Package (SF)	Literacy Boost (LB)	School Health & Nutrition (SHN)
Grand Bassa			
1	x		
2	x		
3	x		
Grand Gedeh			
1	x	x	x
2	x		
3	x		
Rivercess			
1	x		x
2	x		x
3	x		x
River Gee			
1	x	x	
2	x	x	
3	x	x	

Data for 4 of the respondents' sex is missing

As described in Section 2.3, we interviewed 266 stakeholders (119 female, 143 male) from the twelve intervention sites, and 42 individuals (15 female and 27 male) from the two comparison sites in FGDs or KIIs. Within the intervention group, boy and girl students were in Grades 4, 5, and/or 6 and ranged in age from 10 to 21, with a median age of 15. The 60 parents/caregivers ranged in age from 24 to 78, with a median age of 45. Of those, just over half had a junior high to high school education; the remainder had

none to primary education. Among teachers and principals, all had a high school education or more (Exhibit 56).

Exhibit 56. Respondents' Educational Attainment by Interview Type, Intervention Stakeholders

	Students (n=113)	Teachers (n=35)	Parents (n=60)	Principal (n=12)	Literacy Champion (n=4)	Cook (n=12)	Storekeeper (n=11)
College / Teaching Certificate	0%	49%	0%	82%	75%	0%	0%
High School	0%	51%	35%	18%	25%	8%	45%
Jr. High	0%	0%	17%	0%	0%	8%	27%
Primary	100%	0%	22%	0%	0%	17%	0%
None	0%	0%	27%	0%	0%	67%	18%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: 2021 Midterm qualitative interviews in all 12 intervention sites for a total of 247 stakeholders at school and community levels. Authors' calculations.

Contextualizing the Qualitative Findings: Fidelity of Implementation

As mentioned in Section 3, the qualitative findings should be observed in the context in which the program was delivered – COVID-19 closures affected not only school access, but engagement in trades and occupations across Liberia.

SC's need to adapt the project design given the restrictions on moving throughout the country, in-person engagement, and physically gathering in a school, was expectedly difficult and therefore influences interpretation of the evaluation results. Most notably, the home learning program was well-planned and articulated, but challenging to implement at the community level during COVID-19. The degree to which the project was able to deliver during closures was uneven, and, therefore, the impact on the beneficiaries would be understandably uneven as well. Exhibit 57 below summarizes some of the key intervention modalities for LEARN, noting if and how they were implemented in the qualitative communities.

Exhibit 57. Status of LEARN Intervention Modalities, by County.

County	# Sites Verified implementation	Notes related to how it may impact project successes
Literacy Champions Mobilized and Trained		LB communities only would have been expected to have literacy champions
Grand Gedeh	1 of 1	1. Recently mobilized and trained; has not begun work yet; literacy champion position was vacant for "some time"
River Gee	3 of 3	One was mobilized pre-COVID but left for Monrovia during COVID-19 closures One has been around since before COVID-19 closures, unable to work during closures; requests more training One has been around since before COVID-19 closures, unable to work during closures; requests more books
Book banks established and/or books made available for home use		LB communities only would have been expected to have book banks and books made available for home use
Rivercess	See note	Reports a book bank, though not an LB community
Grand Gedeh	1 of 1	Books given to students by teachers; students say they are outdated
River Gee	0 of 3	

Cooks Mobilized and Trained		All cooks mobilized and trained
Kitchens Rehabilitated		
Grand Bassa	0 of 3	
Rivercess	2 of 3	
River Gee	2 of 3	
Grand Gedeh	2 of 3	
SHN Champions Mobilized and Trained		
Grand Bassa	1 of 3	
River Cess	1 of 3	
River Gee	3 of 3	
Grand Gedeh	2 of 3	
SHN Manuals Revised		
Grand Bassa	No	According to District Education Officer (DEO)
Grand Gedeh	No	According to DEO
Rivercess	No	According to DEO
River Gee	No	According to DEO
Code of Conduct Revised		
Grand Bassa	No	According to DEO; verified by principals and teachers in all schools
Grand Gedeh	No	According to DEO; verified by principals and teachers in all schools
Rivercess	No	According to DEO; verified by principals and teachers in all schools
River Gee	No	According to DEO; verified by principals and teachers in all schools

Source: 2021 midterm qualitative interviews in twelve qualitative sites

Below, we present the qualitative findings at midterm by using the five OECD-DAC criteria and by outcome area. Below we describe each criteria in more detail starting with a brief summary of findings.

5.1 Relevance

Through interviews and FGDs with project implementers, national and local government officials, and community level stakeholders, (or whoever) the research team assessed the relevance of LEARN interventions. Interview topics focused on beneficiary satisfaction with project participation. Additionally, IMPAQ asked stakeholders to share their perceptions on whether the project interventions have been culturally appropriate to meet their needs.

Relevance

- **School feeding:** Local stakeholders and beneficiaries agreed that the school feeding portion of the project aligned with the priorities of their communities. They noted that school meals addressed both food insecurity and student attendance
- **Literacy:** All stakeholders and beneficiaries agreed that efforts toward promoting literacy at home, in particular working with parents/caregivers to encourage (or help, if possible) their children to read, are critical. Books would be utilized if available but remain difficult to obtain. Parents want to support children's literacy but do not always know how, and would benefit from support in learning strategies.
- **WASH:** Given that schools have recently reopened after COVID-19 closures, WASH activities have become particularly relevant for all communities and schools.
- **SRGBV:** SRGBV remains a problem in schools across Liberia, reporting mechanisms are limited, and the degree to which COVID-19 closures has exacerbated the problem is suspected to be high. Revisions to the Codes of Conduct with supplementary training will indeed be relevant for project schools.

5.1.1 School feeding

Across all school communities, the school feeding project was extremely popular and welcome as delivered. All stakeholders said lack of food was a major factor in limiting student attendance and

achievement, so they interpreted this initiative as having helped increase attendance and learning (because of increased energy and focus; detailed in effectiveness section). There were rare instances of issues with interrupted supply, inadequate or unequal portions, and requiring students or parents to pay for food, as the efficiency section describes.

5.1.2 WASH

Stakeholders across all communities agreed that having a clean school environment with good access to clean water and regularly practiced hygiene was critical. Interventions related to improvement of WASH were welcome, and there was an explicit desire among students and parents across schools to improve WASH further. The need to remain vigilant with regard to COVID-19 prevention measures further demonstrated the importance of hygiene.

5.1.3 Literacy

Students and parents across all respondent groups and communities saw the value in education (broadly) and literacy (specifically). Respondents welcomed any help for their children to improve their literacy. However, while stakeholders welcomed some of the core literacy components of the project, many components were not being implemented to the extent needed to gauge their relevance. For example, learners, parents, and teachers across all communities agreed that having better access to books would be helpful, and they would use book banks if available; but, at midterm, few students and teachers reported to have access. Some students and teachers also said that books available for borrowing were not of much interest to students. Though not an LB community, there was a book bank identified in a Rivercess qualitative site that had helpful information about appropriateness of books to consider for work on book banks in the LB communities: *"Even though we have a few books that the children can use, they claim that they are outdated and are storybooks."* The principal of that school said, "*Most of the books are American storybooks that do not reflect the current realities of our time; as a result, most of the students are not interested in them*" (Teacher, Rivercess).

5.2 Efficiency

The research team used interviews with USDA, government officials, and project implementers to assess how project resources led to results and efficiency and timeliness for achieving objectives. The research team also looked at internal and external factors affecting implementation of project activities, most specifically examining the role of the COVID-19 pandemic.

- **General:** Little was possible in terms of project implementation during the COVID-19 closures; households struggled to meet basic needs. The inability to physically move to different towns (e.g., for trade; selling), or to gather together (e.g., at the market) was crippling for the huge number of Liberians who relied on business for their livelihoods. During this time, many of the project goals (e.g. parent support for literacy) became secondary.
- **School feeding:** Prior to COVID-19, LEARN faced challenges in launching the school feeding program as a result of poor road conditions and in gaining the MoE's support. Since resolving the issues, though, school feeding has been largely efficient in delivery. Some areas requiring follow-up include sporadic reports on students and parents being required to pay for meals, and periodic interruptions to supply.
- **Literacy:** Prior to COVID-19, LEARN faced challenges in delivering books on time as a result of poor road conditions in the rainy season, which negatively impacted on the efficiency in which book banks and other LB supplemental activities requiring books could be delivered. Also prior to COVID-19, the reportedly high turnover of literacy champions has limited the degree to which Literacy Boost activities, which were largely dependent upon them, have led to increased literacy. Since re-opening, the LB activities have been slow to start.
- **Literacy:** During COVID-19 closures, the Home Learning program appears to have been unevenly implemented across communities, leaving many students and parents without any literacy-related activities for months.
- **WASH:** SHCs are reported to be active and helpful in all communities, even those where SC did not have a direct role in establishing them. MoH and MoE COVID-19 prevention efforts and distribution of materials may have contributed to this widespread application of improved WASH behavior observed. The training and mobilization of SHN champions is limited, though, with almost half of qualitative sites reporting none mobilized at the time
- **SRGBV:** Work on revising the Code of Conduct has not progressed from baseline.

5.2.1 General

In pre-COVID interviews, SC staff identified a challenge related to the program's multiple components and the need to convey technical information on various types of interventions to all staff. To mitigate this challenge, SC provided frequent technical support to Monrovia-based and field-based staff, and also recruited staff from multiple sectors to complement varying technical competencies across the SC in-country team.

Another efficiency challenge was the COVID-19 closures. During this time, little initially planned project implementation was possible; even with modifications, interventions had to contend with the reality that households were struggling to meet basic needs. The inability to physically move to different towns (e.g., for trade; selling), or to gather together (e.g., at the market) was crippling for Liberians who relied on business for their livelihoods. Respondents across all communities and groups reported that parents' main concern during the closure was feeding their children. In many cases, children were given responsibilities to help supplement their families' income. In this context, spending time encouraging or helping children to read, advocating for improved nutrition, reaching out to teachers, or engaging in prior PTA-related activities, was not a priority. However, the increased emphasis on sanitation and hygiene as a result of COVID-19 prevention messaging ensured stakeholders' continued engagement with this component of LEARN.

5.2.2 School feeding

Respondents in interviews pre-COVID (March 2020) indicated challenges in the beginning of the school feeding program related to two issues. First, difficult road conditions in the 2018 rainy season delayed food provision 'well into 2019' (though delays were also said to have enabled time for SC to adequately prepare to conduct the feeding when the food was distributed). Second, there were challenges in rolling out the feeding program because of the MoE's past experience with WFP's feeding program. SC mitigated

this challenge using 'frequent communication' to provide more clarity to WFP on the program design, improvements, and eventually signing a memorandum of understanding.

Respondents in both pre- and post-COVID-19 cohorts were generally positive about the efficiency of the school feeding program: THRs were welcome, sufficient, and reliable. Rarely, respondents identified some challenges that LEARN should continue to monitor. In reading this section, it is important to remember that while certain challenges was reported in some schools across the qualitative sample (a total of 12 schools), these reports are not necessarily representative of the entire population of LEARN schools. The challenges are being detailed in this report not to highlight a failure of this component of the project, but rather to ensure that SC can monitor this going forward to ensure rare problems do not become more common.

One challenge reported in two of the twelve qualitative schools related to consistency was that food was not available at times, which had a negative impact on attendance. For example, parents in Grand Gedeh reported that *"The negative part [of school feeding] is that when the supply is finished and [SC] does not come for two to three weeks, children will start staying home."* A storekeeper in Grand Bassa said, *"On days there is no food on the campus, many of the children will refuse to come, but as soon as they hear that supply is on campus, the entire campus will be overcrowded… From the supply day until maybe the supply is finished, enrollment is maintained."* In two schools in Rivercess, girl students reported "*We noticed that the measurement of the food has reduced since school reopened.*" Girls in Rivercess also said that "*The [amount of] food shared on a daily basis is not enough."*

Another challenge reported by teachers in two schools (one in River Gee, one in Rivercess) was that students and parents had to pay for their meals. Teachers attributed this challenge to the lack of PTA support in providing supplies for the kitchens; one teacher in River Gee said, *"We were asking them [PTA] to pay fees for meal provision but they failed and now, we have decided that children themselves pay their fees on campus. Anyone who will not pay will not eat."* Similarly, a teacher in Rivercess said, "*The PTA is expected to provide soup kind and condiments, but they haven't provided it, so it has been converted into a feeding fee [paid by students or parents] of 50LD per student per month.*"

Part of the PTA role is to support the feeding component of the project by contributing to supplies for school meals ("soup kind") and money to support meals, WASH, and other school projects. The degree to which PTAs are reported to be active and effective (before, during, and after closures) varied across communities with regard to their responsibilities with school feeding and nutrition.

Across the six qualitative sites in counties that received school garden training (both pre-closures in 2020, and post-closures in late 2020 and early 2021), none reported having an active school garden at midterm. One school in Grand Gedeh said that they had received training on establishing a school garden pre-COVID but never received supplies for it. Teacher and principal respondents were aware of the degree to which such a garden could help supplement the school feeding program but, in general, said that they felt unable to initiate the garden themselves and required tools.

Beyond the provision of food, food preparation was a challenge in some schools that were part of the qualitative sample. The quality of the kitchen varied across the four counties with many cooks, storekeepers and other school staff reporting damaged or inadequate cooking materials pre-COVID. *"Yes, there is a kitchen here, we cannot remember [when it was last rehabilitated], but it was in WFP days. No, it does not have adequate materials and not well-maintained."* Also, across the 12 communities,

respondents said only six of the kitchens had been rehabilitated since 2018, and none of those were in Grand Bassa.

Even those with rehabilitated kitchens sometimes reported having difficulty with supplies and maintenance. As a cook in Grand Gedeh said, "*The kitchen is well constructed [rehabilitated by PTA members with support with SC in 2018] but there is no door. At night, motorcyclist use it as their parking lots. Every time, we are working on areas that are damaged by those guys. The kitchen was built by [SC] when they were about to bring the food supply. It's well-maintained but does not have adequate materials*".

5.2.3 Literacy

5.2.3.1 Literacy Champions – Training and Mobilization Generally.

SC staff described a high turnover of literacy champions in the schools (in River Gee particularly), who were responsible for delivering much of the LB component of the project. This turnover brought challenges to efficiently training and mobilizing replacements, which was evident both pre- and post-COVID at midterm, where literacy champions described being new to their posting and lacking adequate training and/or support. As one literacy champion interviewed in the pre-COVID explained, "*I need more training to be able to lead the reading clubs.*"

Since the schools reopened, training and mobilization issues seem to have endured. For example, one literacy champion in Grand Gedeh explained, "*I am very new in this appointment and received my training on how to perform the Literacy champion/Boost work in this school. The content of this training was meant to equip me on how to conduct the Boost for some selected students on how to read. I have received reading materials and books. I am still waiting to start my duty…. I am adequately trained for this work. The support I need now is that the school should give me their schedule to start this boost.*" Another literacy champion in River Gee explained, "*I still need additional training… Our compensation is very small, we do not have adequate instructional materials for the students.*"

Beyond the role of literacy champions, specific activities to promote literacy were not reported in any interviews in LB communities post-COVID closures, suggesting that they have been slow to start with school reopening or are otherwise not notable. Even pre-COVID, such activities were not highlighted in any interviews outside of the specific mention of reading camps (See Effectiveness and Impact Section for more detail).

As such, the degree to which the literacy champions' activities might have had an impact on the LB communities would be expectedly uneven. This inconsistency is particularly evident in interviews reflecting on the home learning program that they were tasked to support during closures.

5.2.3.2 Literacy Champions – Home Learning Support During COVID-19 Closures.

FGDs and KIIs in the four LB communities indicated that application of home learning activities was mixed. In three communities, literacy champions were aware of the home learning activities, but felt unable to implement as specified because of COVID-19 regulations. One literacy champion in River Gee said, "*During closure we could not do much as most of the children were with their parents and were not residing in the town but on their farms. Those who were around were also afraid because the COVID-19 prevention methods were strictly monitored… During closure not much was done because we expected our children to learn by radio, and we needed some pamphlets to be able to read and equip ourselves after closure, but these didn't come.*" A literacy champion in another community in River Gee said, "We were not involved

in doing anything with students during closures because of social distancing and parents' unwillingness to send their children out." In one community, a literacy champion had left for Monrovia for the duration of closures and did not perform any of the home learning support tasks.

Across the LB communities, teachers (not only literacy champions) were active in helping parents and teachers continue literacy activities throughout the closures. One principal from a community in Grand Gedeh said, "*When COVID-19 came, schools were closed and there were no classes, we gave them assignment weekly, we collect them for correction and parents will help them at home to read and look over their work as well. Yes, support from both parents and teachers. No there have been no radio education programs where in students were learning. Yes, parents, may sometimes find extra class teachers for their children. Yes, parents do appreciate much, because most of them are farmers do not have time to monitor their children... Just before closure, our Literacy Champion left. We have just recruited a new Lit. Champion but has not started work yet even though he has completed the training conducted by [SC]*".

5.2.3.3 Books and Learning Materials at School.

While a relatively high proportion of interviews indicated that learners were encouraged to read at home (including at least one mention in all intervention communities), the community interviews rarely reported reading materials being available for students, whether to borrow from school or the community or at home.

A school-based book bank was reported in one of the four LB communities (the one in Grand Gedeh), and also in one non-LB school community in Rivercess. In the LB community, girl students reported that, although there was a book bank, nobody was allowed to take a book home, because there had been issues with lost books: "*In the school we have reading resources that we are allowed to take for reading at the time but now because some children were boring some and refused to return them, teachers are not giving them out again unless you read the book in the bookstore and remain there. We do not read them now because there is no time to stay on campus after school to read.*" As such, they were able to check out the books to read at school but could not leave with them.

5.2.4 WASH

Students and teachers reported to have active SHCs across all intervention communities, including in the non-target counties, with multiple interviews reporting that SHCs were helping with activities including cleaning the campus, encouraging handwashing, providing general awareness on hygiene and health (e.g., once a week), and doing temperature checks in some but not all schools.

Students, teachers, and principals said SHN champions, whose role is to train and support the SHCs, were present and active in only 7 of the 12 sites post-COVID. Where they were present, SHN Champions generally reported having relevant and adequate training to perform their tasks, though some do indicate that they are overworked and would need additional compensation to complete additional work.

The degree to which ministries were involved with SHN champions was mixed, reflecting the challenges during COVID-19 closures. A local government official in Grand Bassa who had been working with SC on the LEARN SHN component prior to COVID-19, for example, said, "*For almost a year, we have not done anything on the SHN education. After the COVID-19 I have engaged school in the county to talk to them on regular hand washing after using the toilet, keep the environment clean and all students must always*

wear their nose mask. No, we have not done anything on the SHN manual which has not yet been adopted in our context."

5.3 Effectiveness and Impact (Perceived)

Interview topics focused on the successes and challenges of program implementation in achieving its desired outputs and outcomes. Additionally, the research team examined perceived impacts of project interventions through interviews and FGDs with community stakeholders including parents, teachers, cooks and storekeepers, as well as local and national government officials and project implementers. The midterm evaluation study examined perceived impacts of activities related to the project's key interventions, including school feeding, literacy, WASH, and SRGBV.

Effectiveness and Perceived Impact

Successes/Positive Impact
- **School feeding:** Providing school lunches has positively impacted student attendance and energy to learn; it has also alleviated parents' significant worry about finding money or food for their children's lunch.
- **Literacy:** Teachers generally feel adequately trained, and that they have enough time, to do their duties in alignment with the project. Students in general enjoy and benefit from certain pedagogical approaches, especially group reading. Parents and students in Literacy Boost (LB) communities who were part of summer camps and/or directly worked with literacy champions indicate that it has had a positive impact on student reading.
- **Literacy:** At home, parents are overwhelmingly supportive of their children's literacy and many who are illiterate themselves recognize the important role they play in providing encouragement and checking in with the student on her or his progress.
- **WASH:** Across communities and schools, improvements have been identified in relation to increased attention given to WASH, in particular improved facilities for handwashing, and increased emphasis on a clean school environment. School Health Clubs are found across all schools and are given much credit for these improvements.
- **SRGBV:** Teachers, students, and parents are well-aware of the MoE code of conduct, and explicitly acknowledge it has an important role to play in their school. Most say that existing reporting mechanisms (reporting up to principal) are adequate.

Challenges/Little Impact
- School feeding: PTAs are sometimes unable to provide the necessary support (e.g. providing ingredients) which has, in some communities, led to schools having to request payment for school meals.
- Literacy: Encouragement for literacy does not appear to be stronger in areas with LB, including in areas with a consistent Literacy Champion. At home, parents struggle actively helping their children, indicating that their own illiteracy limits what they can do. Teachers, meanwhile, appear to sometimes misinterpret parent's limited engagement as an indication of the parent not caring about literacy though in general, this was not what parents said themselves.
- WASH: PTAs do not contribute as much as desired to WASH activities in particular around pooling funding to purchase supplies and make improvements to facilities (especially latrines), and remain reliant on other community members helping, or Save resources
- SRGBV: There is evidence that existing codes of conduct (also known as 'rules and regulations') are not always followed or fully understood, for example with a principal explaining that the code of conduct restricts humiliation or physical abuse of students, but then noting that striking with a cane is a disciplinary strategy used at the school. There is also widespread reported use (including in non-intervention schools) of the 'beating spelling' pedagogical approach, in which two students compete to spell a word, and the winner of the competition hits the loser (i.e. with a cane).
- SRGBV: Some students and parents report that existing reporting mechanisms are not effective (i.e. the teacher is not punished) or are feared to lead to retribution (i.e. the teacher will give the student who reported an incident lower marks).

5.3.1 School Feeding

Respondents of all types across all communities were positive about school feeding's impact on attendance, learner focus and attentiveness, and relief for parents on food security. A girl student in Grand Gedeh said, "*[Without lunch money nor food on campus] we feel discouraged in having regular attendance, but the presences of the meals on campus has motivated us to come to school on a regular basis.*" Learner focus and attentiveness also improved as a result of the school feeding program. A girl student in another Grand Gedeh school said, "*The initiative makes us healthy, it makes us feel comfortable after eating to participate class activities, and it gives us energy as well.*" Finally, parents felt relief from providing their children's lunch every day. A cook in River Gee explained, "*Most parents who were facing difficulty in finding breakfast for children before leaving for farm are no more doing that because of the present of meal on campus. This time around, parent are leaving children in school and going on farms because they have the hope that their children will eat on campus*".

5.3.2 Literacy

5.3.2.1 Pedagogical Approaches in the Classroom.

Much of the literacy-related work picked up only when schools reopened. Respondents across communities had various perspectives on the types of activities they find most useful and enjoy the most, but LB-community activities were not distinguishable from non-LB-community activities. Activities in both groups primarily included group reading, individual reading, quizzing, and competitions. These results are in line with the results from the impact evaluation, showing little to no impacts on students' literacy outcomes in SF+LB+SHN schools compared to schools that did not receive LEARN packages.

Community perception on whether learners enjoy reading groups was mixed. In 10 of the 12 intervention communities, teachers and student FGDs specified that students liked group reading, while in a few other communities (4) they disagreed that group reading was an enjoyable task for students. Less frequently, teachers and students said learners enjoyed individual reading and competitions, while others said students disliked competitive approaches like spelling bees.

Learners had different opinions on pedagogical approaches. The reasons behind their preferences are helpful to consider, though, and criticisms of individual reading in particular often refer to the degree to which a student may feel 'disgraced' by their performance, or embarrass themselves in class, which could have damaging implications on her/his future. As one girl student in Rivercess said, "*Sometimes the shame can lead them to dropping from school*".

For some students, group reading was better because it took the pressure off individuals who might be struggling. As one girl student in Rivercess said, "*it helps others who have not understood the notes to pick it up more quickly.*" A teacher in another school in Rivercess said*: "individual reading [is less popular among the students] because it can expose those who don't know how to read well, and it can make them feel shame."* In general, those who did not prefer group reading said that they thought it was ineffective at building literacy because some students could avoid participating without being noticed.

Students may have felt ashamed about their reading skills if they were behind their classmates, a shame they often attributed to the degree to which their parents were able to support their reading at home. The common refrain from students and parents was that where parents at home are educated and encourage their children, the children perform better. While this may be empirically true and is indeed a hypothesis of LEARN, there is a need to further unpack the reasons behind students' shamefulness

regarding their reading skills, and work to consider on finding pedagogical approaches that do not cause shame.

A finding that emerged across all communities when asking students and teachers about pedagogical approaches to reading was the incidence of "beating spelling," which a teacher in a Grand Gedeh LB community explained as: *"When a spelling is posed to one person and that person misses the spelling and another person gets it right, [the person who gets it right] will give his friend two stroke of a cane… Students don't like beating spelling competition"*. Some teachers acknowledged that this activity was not only unliked by students but was not an effective learning strategy. As one teacher in Rivercess said, "*we are almost on the verge of dropping this activity as the children are losing interest in it"*. The SRGBV section below further discusses this issue.

5.3.2.2 Parent support for literacy.

Students, parents, teachers and principals described three 'levels' of engagement from caregivers in the home before, during, and after COVID-19 closures: 1) actively helping, which was generally limited to educated parents; 2) encouragement, which was possible for all parents regardless of education level; and 3) no engagement or encouragement. The majority of parents cared about their children's education and literacy and expressed that they wanted to help their children as much as possible but were realistic and highlighted two challenges: they were either a) too busy engaging in livelihood strategies or b) were unable to help because of their own limited literacy level. During COVID-19, both of these challenges were also exacerbated.

During the COVID-19 closures, the relative lack of engagement from parents may not be considered necessarily as a reflection on the degree to which the program has been effective, but rather, a reflection of the shock of COVID-19 on households in Liberia. For example, despite strong agreement that their children should be literate, across the interviews in both LB and non-LB sites, just two (of 40) interviews with students, parents, teachers, and principals (both in non-LB sites in Grand Gedeh) indicated that parents actively supported their children's literacy during the closures. Respondents were frank that parents were generally unable to actively support literacy during COVID-19 closures, even if they had been active supporters of literacy pre-COVID, because they were completely preoccupied with more urgent concerns: feeding their family and avoiding COVID-19. One parent in Grand Bassa said, *"[During closures] our basic focus was on how to find daily bread for our children"* and a girl student in another community in Grand Bassa said*, "During the closure, we were not encouraged about reading because of COVID-19… no one was focused in thinking that direction because when we as humans live before we learn"*. A few parents who did try to help stressed how difficult it was without support of teachers during this time. As one parent in River Gee said, *"Some parents heard of [SC] providing reading materials on campus for students and they would visit, get some [materials] for their children, but some could not [help their children with the materials]"*. In just two cases, both in one River Gee (LB community), parents and students remarked on parents providing encouragement for literacy. As one parent said *"During school closures, some parents were reading to their children at home more, especially when [SC] brought books for the school. Some parents could not because they are uneducated and could not help read to their children but rather advised them to study on their own."* As such, the qualitative evidence suggests that, in general, students received extremely limited support for their literacy during the closures.

Pre- and post-COVID, though, many parents, even those who were not literate themselves, did say that they provided encouragement as much as possible, which was easier given that students also had the

support of their teachers at school. For example, parents in River Gee stated that *"What is very typical in this community as it relates to… involvement in our children's reading is advising them, because most of us are uneducated … So most often, we advise them to study their lessons"*.

Teachers and principals, on the other hand, sometimes had a more critical view of parent engagement. While they acknowledged that parents were often quite busy engaging in livelihood strategies, they also opined that parents seemed not to care. As one of the principals from Grand Gedeh said, *"…some parents don't engage me at all. They are careless about their children's education. We sometimes send for some parents to engage them on their children performance and what they are lacking in class, but they will refuse to respond. We have a child like that presently in class. She lacks just copy books and parent refused to take on that responsibility. The child is in class and not participating."*

Issues around parent engagement reflect two key challenges and opportunities for improvement: 1) there is a disconnect between what teachers and principals perceive of parents, and what parents actually do and feel, and 2) parents often feel disempowered from engaging. As such, parents may benefit from learning more about what they could helpfully do given their limitations (time and their own literacy), and, at the same time, teachers and principals could benefit from better understanding parents' strong desire to help and actual limitations.

5.3.2.3 Reading Camps Pre-COVID.

Summer reading clubs were popular among participants in the pre-COVID cohort, and participants found literacy champions to be very helpful. Three main criticisms emerged, however, in River Gee: 1) insufficient availability of books and supporting materials; 2) unsatisfactory inclusivity, reflecting a lack of awareness about the 'first come first served' method of selection to ensure the learning experience was active and positive: "*the way [SC] did their selection was unknown to us… most of us did not participate*" (Girl Student); and 3) inadequate time to support its implementation. As the principal of one River Gee school said, "*There is no compensation [to support the summer club] and I have to go on my farm to put food on my table*".

5.3.3 WASH

Students and teachers reported that SHCs were effective across all intervention communities, including in the non-target counties, in performing work related to improving WASH at schools. The perspectives on the quality of WASH across the schools was mixed, even according to people within the same school community. A substantial proportion of respondents said that WASH had improved over the past year, with credit to supplies delivered to combat COVID-19 (in particular, handwashing resources), but that there were still areas for improvement, in particular having access to adequate supplies for sufficiently cleaning the school now that it was reopened (e.g., buckets, gloves, cleaning products).

Few of the concerns related to WASH were directed toward the SHCs, who were overwhelmingly applauded. On the contrary, PTA members, who are responsible for some of the WASH activities (in particular improving the school environment through fundraising for needed supplies and repairs) were criticized for being inactive. In fact, none of the students, parents, or teachers in the intervention communities provided a positive perspective on PTAs doing a solidly good job or fulfilling their responsibilities with regard to WASH (as mentioned above, complaints about PTAs were not limited to their work in WASH, but also related to their effectiveness in supporting school feeding support).

5.3.4 SRGBV

Little work has been done as of midterm on revising school codes of conduct, so the analysis of the work in this regard is limited to sensitization around existing codes of conduct. Across all schools, participants are well aware of a general code of conduct to which teachers and school staff are expected to adhere; many respondents referred specifically to the 2013 Liberia MOE Code of Conduct. DEOs said they had not been focusing on codes of conduct to date. As one in Grand Bassa said: "*Our school code of conduct has not been revised for over a long period of time. As we speak the school are supposed to revise the MOE teacher's code of conduct that will be used by the student in their handbook. But from 2011 there is no revised handbook for students in government schools.*"

Respondents across all groups reported that they were aware of the content: teachers and staff must not partake in bribery, abuse, and rape, must not have relationships with students, commit corporal punishment, discriminate by sex, discriminate against children with disabilities, commit fraud, have persistent absences, use humiliating language/lack of respect, use drugs and alcohol use, and practice favoritism. Across schools, the process for violations was reported to generally be the same: the report is elevated to the principal who will try to deal with it. As needed, the principal will elevate it to the DEO. In all of the intervention communities, respondents seem to be aware that there is a process in place for reporting such incidences. For example, a girl student in Grand Gedeh said, "*When teacher or administrator violates something against the code of conduct, a report is taken to any of those teachers, administration, or PTA depending on the nature of the case but if it's beyond, DEO is invited for intervention.*"

The majority of parents and students felt that this process was safe and effective. As one girl student in Grand Gedeh said: "*If student reports a teacher, nothing will be done [in retribution]… we would feel comfortable reporting a teacher or school administrator if they did something wrong. We believe such behavior will change because they would like to protect their job.*" Similarly, a parent in Grand Bassa said, "*We have rights as parents looking at the code of conduct. We can report an incident when it occurs. If parents or students report a teacher for being abusive, they understand and handle it in the school, based off the nature of the case, and there is nothing negative they can do to them [the person who reported] on campus.*"

Though uncommon, some respondents indicated a lack of follow-up on reports that may be related to the general problem of inadequate number of teachers in the first place. As one girl student in River Gee said, "*In this school, if teacher is abusive to student, nothing can be done about it… When our parents tried engaging some of the teachers, they insulted our parents only because the school is very understaffed and they feel they can't be removed easily… Anytime we report teacher, nothing is done about it. Even if the principal tried engaging them on that, they will not make a change.*"

Others suggested the possibility of retribution for reporting. As one parent in Rivercess said, "*Yes, we can report incident when it occurs [but] sometime if we report them, they will start to react by dealing with such child in class by [making them leave] class, but that can't stop us from reporting them if they do wrong.*" (Parents, Nyorwein).

As such, in addition to the planned work revising school codes of conduct, reflecting on the reporting processes and some of the reservations expressed by students and parents might be necessary.

Despite this broad awareness of the content in the code of conduct, there is an evident degree of either misunderstanding or blatant disregard for it. For example, there was one instance of a principal in Rivercess reporting his own use of physical punishment as discipline in his school: "*We sometimes beat them when they misbehave and let them stand behind the class for a while or given a parcel of grass to hook, or fetch water in the bathroom, all these punishment depends on the gravity of the offence. Yes, this punishment are very effective.*" In the same response, he also offered, "*Yes I have being trained on alternative discipline strategies)*".

5.4 Sustainability

To assess the sustainability of project interventions mid-way through implementation, the research team asked stakeholders about necessary inputs and system required for sustainability, as well as factors likely to influence sustainability. Interviewers also asked respondents to recommend strategies for continuing activities after the project ends.

Sustainability

- School feeding: Schools presently would not be able to continue feeding after the program concludes. School gardens are yet to be established, and some PTAs report in ability to supply cooking materials. When food supply is limited, as occurs in some schools, it is reported that attendance immediately drops.
- Literacy: The literacy component is not sustainable at this point, evidenced by what happened during COVID-19 closures when, in general, no supplementary learning was provided including by literacy champions who were present in the schools. Further work with parents, though, may be sustainable in showing them practical strategies about how to support their child's education. However, without teacher support, this may not be adequate.
- WASH: Stakeholders and beneficiaries agree that having a clean environment is critical, and much collaborative work is done to achieve this, particularly through the School Health Clubs which, in some schools, seem to be in existence without influence from SC but have remained in place as a result of COVID-19 prevention protocols. PTA's however struggle in providing adequate financial support which can limit the degree to which WASH can be maintained, especially when there is a need for larger repairs (e.g. to wells, or rehabilitation of latrines).
- SRGBV: The 2013 MoE school code of conduct is institutionalized knowledge; however, the degree to which the specifics of the rules and regulations are understood and respected is questionable given some open admissions of violations by principals and teachers. To be sustainable, such rules and regulations not only need to be fully understood, but fully agreed upon by stakeholders who will continue to push for adherence to these protocols. There is clearly still work to be done in this regard.

5.4.1 School Feeding

According to the qualitative data schools presently would not be able to continue feeding after the program concludes. For example, in the few cases in interviews post-COVID at midterm respondents indicated that there had been an interruption in the supply of food from SC, feeding had stopped completely and had an immediate perceived negative impact on attendance. If students knew there was no food, some would not come. This shows of course that school attendance remains dependent on food which suggests the root of the problem – parent and student prioritization of education remains a critical barrier to sustained participation in education. The interviews also reveal the degree to which the schools are reliant upon outside support to provide food. School gardens, though recognized to be a potential support to school feeding, had not been established in any of the schools despite the note that there having been trainings on establishing school gardens both before and after COVID-19 closures; PTAs did not reliably provide "soup kind" (ingredients for lunches) and, in some cases when this happened, schools started charging for meals (therefore denying some students lunches).

5.4.2 Literacy

The COVID-19 closures and associated changes to the LEARN implementation provide a potentially useful way to consider sustainability of literacy activities as of midterm because of the relatively 'hands-off' approach to the project that had to be taken. During this time, teachers across project sites (both LB and non-LB) in general did not actively support education to any degree, according to parents, students, and teachers themselves. In just one community, an LB community in Grand Gedeh, students and teachers said that the literacy champion had been active in supporting the home learning activity; conversely, teachers and students said that they were inactive in the other three (and one had left town for the duration of closures). At the same time, many parents were unable to support their children's learning beyond providing encouragement because of their own illiteracy. Unfortunately, without teachers to provide that necessary ingredient, learning was effectively stagnant without the LEARN project actively working in schools.

5.4.3 WASH

Students, teachers, and principals agree that it is critical to have a clean environment, and the SHCs are active in all schools visited in helping to achieve this. They regularly take part in cleaning the school and are active in teaching others about basic hygiene practices. These types of behaviors will likely endure where SHCs continue to be encouraged. Promisingly, SHCs have endured post-COVID even in school communities without active SHNs.

Schools remain reliant upon SC for delivering materials that the SHCs and PTAs can use for larger scale cleaning and repairs. PTAs are often reported to be unhelpful in raising money for additional WASH-specific needs at the schools. PTAs do not contribute as much as desired to WASH activities in particular around pooling funding to purchase supplies and make improvements to facilities (especially latrines) and remain reliant on other community members helping or SC resources. PTAs in general are not able to support the activities as expected, in particular around pooling money to pay for requisite school repair, cleaning, and feeding activities. For example, a principle in Grand Gedeh said, "*The PTA has numerous challenges: majority of its members do not come for PTA meetings, payment of PTA fees is very slow and sometimes majority does not pay*"; a teacher in River Gee said of the PTA that the "*participation of majority of the members is lacking as most of the members are not educated as such do not attached much value to education*".

5.4.4 SRGBV

The 2013 MOE school code of conduct is institutionalized knowledge; however, the degree to which the specifics of the rules and regulations are understood and respected is questionable given some open admissions of violations by principals and teachers. An essential first step in achieving sustainable adherence to school codes of conduct is to identify whether the present issues are due to a limited understanding of the content or a disregard for the content. The former, of course, could be remedied with increased training around the components of the codes. Sustaining adherence to the codes would require more in-depth work with staff, explaining the rationale for those codes and identifying barriers.

6. Conclusions

This report presented the midterm levels of the impact and project evaluations of the LEARN project in four counties in Liberia: Grand Bassa, Grand Gedeh, Rivercess, and River Gee.

Overall, we found that while many of the program's interventions are popular, student outcomes were not that different between the baseline and midterm evaluations. A number of factors—such as high teacher turnover rates, high literacy champion turnover rates especially in River Gee, road conditions during rainy seasons, and COVID-19—disrupted the implementation of the interventions, especially after March 2020 thereby weakening the fidelity of LEARN implementation. Reading comprehension, home literacy environments, nutritional knowledge, and SRGBV outcomes were all flat or decreased from baseline to midterm. Generally, there was high variation in the outcomes between the four counties.

This section summarizes key findings in response to the main research questions, in three categories: 1) with respect to the key project interventions within the McGovern-Dole results framework and 2) based on the five evaluation criteria (i.e., relevance, effectiveness, efficiency, (perceived impact), and sustainability). Additionally, since the project was unsurprisingly hamstrung by the COVID-19 pandemic, we discuss the implications of COVID for the LEARN outcomes in Section 6.3.

6.1 Key Outcomes by Key LEARN Interventions

We highlight below the midterm results from both project and impact evaluations 1) most pertinent to the key research question themes with respect to the McGovern-Dole Results framework; and 2) based on the five evaluation criteria (i.e., relevance, effectiveness, efficiency, (perceived impact), and sustainability).

Literacy. The project evaluation metrics indicated that the key reading outcomes changed little from baseline to midterm and were consistent between counties. Similar to baseline, at midterm, students were mostly successful at identifying letters but struggled beyond that to identify full words. While 90 percent of the Grade 2 students could identify letters at midterm, only 37 percent could identify words, and only 17 percent were classified as readers. Among the readers, the percentage of words read accurately improved greatly from 10 percent at baseline to 66 percent at midterm.

Reading with comprehension increased by similar amounts in each county. At midterm, 6 percent of students could read with comprehension, a statistically significant increase over baseline (1 percent) at the 1 percent level.

The impact evaluation showed that provision of school meals was likely the main factor to drive these improvements. Students in schools that only received the SF package were 14 percentage points more likely able to identify letters compared to students in comparison schools, a difference significant at the 10 percent level. However, students in schools that received LB+SHN interventions in addition to SF performed similarly compared to students in comparison schools in identifying letters. Similarly, the impact evaluation found that students in SF schools significantly outperformed students in comparison schools (4 percentage points) but found no discernable impact on SF+LB schools. The qualitative data revealed that the LB component of the intervention may have been limited in impacts on literacy as compared to non-LB schools because of the difficulty in implementing elements of the LB component as planned. Namely, it was a challenge to retain literacy champions after their training. Also, there were

challenges in delivering books as a result of poor road conductions and as such, challenges in establishing book banks in LB communities. Finally, the support provided by literacy champions on the home learning packet support during COVID-closures was mixed across communities but limited at best.

Home Environment. Except for seeing someone reading at home, all other home literacy activities decreased from baseline to midterm. There were large variations between counties, with the largest proportion of students in Grand Gedeh reporting literacy activities at home in each category. Additionally, 73 percent of students surveyed after COVID-19 reported using the distributed home learning materials to mitigate the effects of COVID-19 school closures on learning loss. Perceptions of the degree of perceived encouragement for literacy at community and household levels varied by respondent type within single communities, possibly explaining the inconsistencies that we observe in receiving encouragement and support from parents at home for home learning activities.

Nutrition. Knowledge of a balanced diet did not change from baseline to midline. Only one percent of students stated that they knew the definition of a balanced diet at midterm, and of those, one could successfully identify all three components of a healthy diet. However, qualitative data indicated that the school feeding project was popular across all school communities. All respondent types in all communities credited the initiative with increasing both attendance and learning (because of increased energy and focus).

Handwashing. Handwashing knowledge and practice increased in all counties except for River Gee between baseline and midterm. However, the drop in River Gee was notable enough to offset the increase in all other counties and leave the overall average the same at midterm compared to baseline. School health clubs (SHCs) are reported to be active and effective across all intervention communities, including in the non-target counties, with multiple qualitative interviews reporting that SHCs were helping with activities including cleaning the campus, encouraging handwashing, providing general awareness on hygiene and health (e.g., once a week), and doing temperature checks at schools.

School-related gender-based violence. Students were largely aware that rules exist for how teachers should treat students at school, even though the level of awareness was less than at baseline. The county-level data showed large differences, with students in Grand Bassa and Rivercess showing greater awareness. Students tended to know that rules prevented teachers from physically harming students. Differences by sex and region were negligible.

We also asked Grade 6 students whether they agreed or disagreed with a series of five statements to understand if they hold less biased and better perceptions of gender norms if they disagreed with at least four of the five gender stereotypes statements. The data showed significant variations in perceptions of gender norms by county: a much lower percentage of students in River Gee disagreed with at least four out of five gender norms statements compared to the other counties, especially Rivercess. Qualitative data also showed that participants across all schools were well-aware of a general code of conduct for teachers and school staff, indicating progress in the project's objectives.

6.2 Key Findings with Respect to Evaluation Criteria

Below, we present the qualitative findings at midterm by using five OECD-DAC criteria and by outcome area. These criteria include stakeholder satisfaction and project alignment with Liberian context (**relevance**); steps taken to maintain the efficiency of project operations; project management, monitoring, collaboration with stakeholders, project implementation successes, challenges, and

recommendations to better understand the **effectiveness** and **perceived impact** of LEARN at midterm; and understanding inputs and systems required for **sustainability**.

Relevance

- School feeding: Local stakeholders and beneficiaries agreed that the school feeding portion of the project aligned with the priorities of their communities. They noted that school meals addressed both food insecurity and student attendance

- Literacy: All stakeholders and beneficiaries agreed that efforts toward promoting literacy at home, in particular working with parents/caregivers to encourage (or help, if possible) their children to read, are critical. Books would be utilized if available but remain difficult to obtain as a result of sourcing challenges and school closures. Parents want to support children's literacy but do not always know how and would benefit from support in learning strategies.

- WASH: Given that schools have recently reopened after COVID-19 closures, WASH activities have become particularly relevant for all communities and schools.

- SRGBV: SRGBV remains a problem in schools across Liberia, the knowledge about existing reporting mechanisms is limited, and the degree to which COVID-19 closures has exacerbated the problem of SRGBV is suspected to be high. Revisions to the Codes of Conduct with supplementary training will indeed be relevant for project schools.

Efficiency

- General: Little was possible in terms of project implementation during the COVID-19 closures; households struggled to meet basic needs. The inability to physically move to different towns (e.g., for trade; selling), or to gather together (e.g., at the market) was crippling for the huge number of Liberians who relied on business for their livelihoods. During this time, many of the project goals (e.g., parent support for literacy) became secondary.

- School feeding: Prior to COVID-19, LEARN faced challenges in launching the school feeding program as a result of poor road conditions and in gaining the MoE's support. Since resolving the issues, though, school feeding has been largely efficient in delivery. Some areas requiring follow-up include sporadic reports on students and parents being required to pay for meals, and periodic interruptions to supply.

- Literacy: Prior to COVID-19, LEARN faced challenges in delivering books on time as a result of poor road conditions in the rainy season, which negatively impacted on the efficiency in which book banks and other LB supplemental activities requiring books could be delivered. Also prior to COVID-19, the reportedly high turnover of literacy champions has limited the degree to which Literacy Boost activities, which were largely dependent upon them, have led to increased literacy. Since re-opening, the LB activities have been slow to start.

- Literacy: During COVID-19 closures, the Home Learning program appears to have been unevenly implemented across communities, leaving many students and parents without any literacy-related activities for months.

- WASH: SHCs are reported to be active and helpful in all communities, even those where SC did not have a direct role in establishing them. MoH and MOE COVID-19 prevention efforts and distribution of materials may have contributed to this widespread application of improved WASH behavior observed. The training and mobilization of SHN champions is limited, though, with almost half of qualitative sites reporting none mobilized at the time

- SRGBV: Work on revising the Code of Conduct has not progressed from baseline.

Effectiveness and Perceived Impact

Successes / Positive Impact

- School feeding: Providing school lunches has positively impacted student attendance and energy to learn; it has also alleviated parents' significant worry about finding money or food for their children's lunch.
- Literacy: Teachers generally feel adequately trained, and that they have enough time, to do their duties in alignment with the project. Students in general enjoy and benefit from certain pedagogical approaches, especially group reading. Parents and students in Literacy Boost (LB) communities who were part of summer camps and/or directly worked with literacy champions indicate that it has had a positive impact on student reading.
- Literacy: At home, parents are overwhelmingly supportive of their children's literacy and many who are illiterate themselves recognize the important role they play in providing encouragement and checking in with the student on her or his progress.
- WASH: Across communities and schools, improvements have been identified in relation to increased attention given to WASH, in particular improved facilities for handwashing, and increased emphasis on a clean school environment. School Health Clubs are found across all schools and are given much credit for these improvements.
- SRGBV: Teachers, students, and parents are well-aware of the MOE code of conduct, and explicitly acknowledge it has an important role to play in their school. Most say that existing reporting mechanisms (reporting up to principal) are adequate.

Challenges / Little Impact

- School feeding: PTAs are sometimes unable to provide the necessary support (e.g. providing ingredients) which has, in some communities, led to schools having to request payment for school meals.
- Literacy: Encouragement for literacy does not appear to be stronger in areas with LB, including in areas with a consistent Literacy Champion. At home, parents struggle actively helping their children, indicating that their own illiteracy limits what they can do. Teachers, meanwhile, appear to sometimes misinterpret parent's limited engagement as an indication of the parent not caring about literacy though in general, this was not what parents said themselves.
- WASH: PTAs do not contribute as much as desired to WASH activities in particular around pooling funding to purchase supplies and make improvements to facilities (especially latrines), and remain reliant on other community members helping, or Save resources
- SRGBV: There is evidence that existing codes of conduct (also known as 'rules and regulations') are not always followed or fully understood, for example with a principal explaining that the code of conduct restricts humiliation or physical abuse of students, but then noting that striking with a cane is a disciplinary strategy used at the school. There is also widespread reported use (including in non-intervention schools) of the 'beating spelling' pedagogical approach, in which two students compete to spell a word, and the winner of the competition hits the loser (i.e., with a cane).
- SRGBV: Some students and parents report that existing reporting mechanisms are not effective (i.e., the teacher is not punished) or are feared to lead to retribution (i.e., the teacher will give the student who reported an incident lower marks). Further, the main reporting mechanism listed by the respondents was to talk to principal or another teacher, suggesting a lack of awareness of other potentially more effective reporting mechanisms (e.g. Liberia National Police Women and Children Protection Unit or NGOs operating in area providing SRGBV response services).

Sustainability

- School feeding: Schools presently would not be able to continue feeding after the program concludes. School gardens are yet to be established despite training having been delivered in the two counties in which school gardens that SC was planning establish (Rivercess and Grand Gedeh), and some PTAs report in ability to supply cooking materials. When food supply is limited, as occurs in some schools, it is reported that attendance immediately drops.

- Literacy: The literacy component is not sustainable at this point, evidenced by what happened during COVID-19 closures when, in general, no supplementary learning was provided included by literacy champions who were present in the schools. Further work with parents, though, may be sustainable in showing them practical strategies about how to support their child's education. However, without teacher support, this may not be adequate.

- WASH: Stakeholders and beneficiaries agree that having a clean environment is critical, and much collaborative work is done to achieve this, particularly through the School Health Clubs which, in some schools, seem to be in existence without influence from SC but have remained in place as a result of COVID-19 prevention protocols. PTA's however struggle in providing adequate financial support which can limit the degree to which WASH can be maintained, especially when there is a need for larger repairs (e.g., to wells, or rehabilitation of latrines).

- SRGBV: The 2013 MOE school code of conduct is institutionalized knowledge; however, the degree to which the specifics of the rules and regulations are understood and respected is questionable given some open admissions of violations by principals and teachers. To be sustainable, such rules and regulations not only need to be fully understood, but fully agreed upon by stakeholders who will continue to push for adherence to these protocols. There is clearly still work to be done in this regard.

6.3 COVID Implications for the Outcomes

The qualitative discussion showed how COVID-19 led to challenges that required SC to make rapid adaptations to implementation. During this time, little was possible in terms of implementing the project as initially planned. The limitations on movement throughout the country, in-person engagement, and physically gathering in schools were major challenges that should be considered in any interpretation of the results. As shown in the findings, there were evidently some challenges in fidelity of implementation that may be linked to COVID-19 and other factors, and which certainly have implications on the outcomes. COVID-19 also posed serious challenges for the beneficiaries whose livelihoods often rely on freedom of movement and large gatherings. The qualitative findings show what has been seen globally but with respect to this project: the pandemic seemed to force households to prioritize meeting their basic needs over supporting their children's education, including in some cases relying on children to supplement income by working rather than attending school or focusing on their studies.

Additionally, the interruption to our initial data collection by the pandemic allowed us to look at outcomes in River Gee before and after the COVID-19 pandemic began. In terms of literacy skills development, students in the base package schools appear to have done significantly better after the school closures than before, while students receiving the full package had no significant changes.

We also found noticeable differences in outcomes based on this timing, specifically on SRGBV issues. Students were much less likely to show awareness of and a willingness to report on SRGBV issues at midterm, after the COVID-19 school closures, compared to before (Exhibit 58). In fact, the literature suggests that violence against women and children increased throughout the pandemic.[62]

Exhibit 58. Students' Willingness to Report SRGBV Issues

Indicator	Sex	River Gee		
		Baseline	Midterm (Pre-COVID)	Midterm (Post-COVID)
Proportion of students who showed improved knowledge and willingness to report SRGBV - Grade 2	Girls	55%	78%	36%
	Boys	57%	82%	44%
Proportion of students who showed improved knowledge and willingness to report SRGBV - Grade 6	Girls	89%	87%	79%
	Boys	74%	87%	67%

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects at the school level. Baseline N: Grade 2 Girls = 629, Grade 2 Boys=743, Grade 6 Girls = 285, Grade 6 Boys=364; Midterm Pre-COVID N: Grade 2 Girls = 108, Grade 2 Boys=84, Grade 6 Girls = 57, Grade 2 Boys=43; Midterm Post-COVID N: Grade 2 Girls = 381, Grade 2 Boys=426, Grade 6 Girls = 205, Grade 6 Boys=231.*

We find mixed effects of COVID-19 school closures on the impact sample. We have access to data from the treatment arms of the impact sample, which we can use to compare means of outcomes before and after school closures.[63] We find that, in the base package, most indicators show statistically significant positive differences after the school closures, compared to before. For example, the total proportion of students identifying at least 90 percent of letters is 17 percentage points higher in the base package sample after the school closures, compared to before. We find no such differences in the sample receiving the full package.

Exhibit 59. Students' Key Outcomes Before and After COVID-19

Indicator	Base Package			Full Package		
	Pre-COVID-19 Mean	Post-COVID-19 Mean	Difference	Pre-COVID-19Mean	Post-COVID-19 Mean	Difference
% of students that identified at least 90% of the letters	46%	63%	17pp***	50%	56%	6pp
Student self-reported handwashing behavior	5%	2%	-3pp	10%	9%	-1pp
Proportion of students who showed improved knowledge and willingness to report SRGBV	63%	30%	-33pp***	64%	33%	-31pp***

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended*

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[62] Peterman & O'Donnell. COVID-19 and Violence Against Women and Children: A Third Research Round Up for the 16 Days of Activism. UN Women, 2020.

[63] We were only able to collect data from 13 students in comparison schools during our first attempt at midterm data collection, so we refrain from examining pre- and post-COVID-19 differences for students in that group.

in the last week. All regressions include cluster level fixed effects at the school level. Base Package: Midterm Pre-COVID N=105; Midterm Post-COVID N=202. Full Package: Midterm Pre-COVID N=220; Midterm Post-COVID N=296.

While the pandemic primarily had negative effects on LEARN beneficiaries, some noted that the increased emphasis on sanitation and hygiene as a result of COVID-19 prevention messaging and protocols ensured stakeholders' continued engagement with this component of LEARN. In qualitative interviews, there was a broad knowledge of WASH behaviors that were often attributed to COVID-19 messaging and prevention efforts that had been ongoing for the previous 12 months.

7. Recommendations

Intro that details how you organize recommendations and where they come from and how they're prioritized

Track fidelity of implementation and contextualize findings and recommendations. The midterm evaluation found inconsistent implementation of the various project components because of a number of internal (poor road conditions and high teacher turnover) and external (widespread closures in response to the COVID-19 crisis) contextual factors. A key recommendation to the LEARN project is to conduct a rapid needs assessment of the communities to identify gaps in implementation and fill those gaps accordingly. From there, a more robust monitoring system, which closely tracks fidelity of implementation, may benefit the project and a more refined evaluation of the project's impacts at endline.

Set progress expectations related to caregiver/parent encouragement for literacy through clear communications with project stakeholders. Given the challenges in prioritizing literacy while livelihoods were the primary concern during COVID-19, the LEARN project should set expectations about the progress of parent engagement; reconsider the targets for any parent engagement related indicators; and readjust corresponding activities to reflect the shift in parents' livelihood priorities during the pandemic.

Consider the varying functionalities of individual parent-teacher associations (PTAs) when providing training/capacity building support. PTA activity and its perceived effectiveness varied greatly. We recommend that, in addition to completing a needs assessment (or revisiting one that was recommended for Year 1, if it was conducted), SC work with PTA members to learn their existing ideas and strategies and to then help them devise formal PTA charters or agreements that dictate roles and responsibilities (including items on gender parity, elections/rotation of members and leadership, reporting mechanisms for complaints, and so on). SC should tailor their training and capacity building activities, particularly to provide additional support for new or low-functioning PTAs.

Continue the implementation of school meals, a popular and productive activity, but address limitations that can affect its ongoing success and sustainability. Both project and impact evaluations at midterm show that the school meal provision is LEARN's most impactful intervention. However, in two schools, teachers reported that students were required to pay for school meals, which was attributed to the lack of PTA support in providing supplies for kitchens, and therefore further indicates the need to customize and enrich PTA capacity building (as mentioned above). Thus, the LEARN project should 1) follow up on the possibility of students being asked to pay for school meals; 2) monitor the degree to which school meals are reliably offered (whether/where there are interruptions, as was reported in some schools); and 3) continue to work with PTAs to develop more effective strategies that enable them to support the school feeding projects—with longer-term sustainability in mind—given that there are multiple reports of PTAs not able to assist as planned.

Further investigate the quality of kitchens in communities. The qualitative data show that while most kitchens in the sample have been rehabilitated (e.g. improved structure and water sources), others have not and require updating. Common across most qualitative sites, kitchens are said to be poorly equipped with basic cooking equipment such that cooks struggle to perform their duties efficiently. Disruptions in building and/or rehabilitating kitchens and energy saving stoves because of COVID-19 could potentially

explain part of this inconsistency. However, further research would help LEARN better understand the status of kitchen equipment and the areas that need more attention to enhance the efficiency canteen operations.

Further investigate the status of school gardens. According to project staff, LEARN had conducted training on establishing school gardens in Rivercess and Grand Gedeh both before and after COVID. In the pre-COVID qualitative data collection for midterm, one site in Grand Gedeh had also indicated that they had been trained on starting a garden but mentioned that they had never been provided materials. The qualitative interviews with teachers and principals post-COVID, however, showed that none of the sampled schools in these two counties had active school gardens. LEARN needs to further explore the reasons behind lack of school garden activities despite having received training at the county-level, and consider strategies to address the challenges.

Take advantage of widespread knowledge of the MOE Code of Conduct in upcoming revisions and sensitization around application of protocols. The quantitative findings show that most of the students are aware of the existence of a code of conduct in their school (70 percent at midterm). A variety of stakeholders, parents, and students can recite much of the MOE Code of Conduct, almost verbatim, but some evidence shows that its meaning is not fully comprehended. For example, some disciplinary practices reported by teachers are, according to the Code of Conduct, not permitted, which indicates either a lack of understanding of those rules, or an open disregard for them. Further, the widespread use of "beating spelling" (see below) as a practice indicates ignorance to the fact that student-to-student abuse is problematic. These open admissions call into question the degree to which other illicit behaviors may occur under the radar. Even if revisions are not made, refresher training may be needed on not just the content but the specific meaning of some of the guidance within of the existing Code of Conduct (e.g., to explain what "humiliation" looks like in the classroom).

Address ineffective and abusive pedagogical practices with project stakeholders. Given the clear recognition that "beating spelling" (a method reported by teachers and students) in which students compete in a spelling competition and the winner gets to beat the other [e.g., with a cane]) is disliked by students and an ineffective learning strategy, SC should explicitly address this practice in upcoming interventions related to pedagogy and/or SRGBV. Beyond addressing this specific method, there is evidently much room for improvement in teachers' knowledge of and application for alternative discipline strategies.

Review strategies for keeping literacy champions engaged in their communities to prevent turnover. Interviews with SC project staff indicated they were aware of the challenge with literacy champion turnover. Of the four LB qualitative communities visited, one had been recently mobilized and trained after a long vacancy in the position and more broadly. The current literacy champions explain that compensation is low, instructional materials can be lacking, and additional training would be helpful; these factors may begin to explain the high turnover. Given the strong reliance on literacy champions to conduct a number of tasks in the LB communities and SC's large investment in training and mobilizing the literacy champions, an in-depth review on their perspectives and needs may help SC learn how to keep them engaged and/or identify suitable literacy champions who may be more likely to remain in their position for the remainder of the project.

Further investigate the status of book banks in implementation communities and appropriateness of books. Qualitative interviews and community visits only found a school-based book bank in one school

community that was not even part of the LB package (Rivercess). Similarly, quantitative data suggests that only a small proportion of students at both baseline and midterm had access to books to borrow at school (40 percent at baseline and 32 percent at midterm). The discrepancy in student reports of the availability of learning materials in school and the aims of the LEARN project suggest SC needs to investigate why schools are not implementing book banks beyond the known reasons around difficulty delivering books as a result of poor road conditions, and work to improve access to reading materials for children in LB schools.

Consider training teachers on pedagogical approaches that minimized the potential for less advanced students to feel humiliated in front of their peers during classroom activities. While individual reading activities were generally popular among students, some expressed that less-advanced students felt humiliated by them because it broadcasted to the class where they were struggling. Other pedagogical approaches should be considered to limit the degree to which less advanced students are put in this position (for example balancing between individual and group reading activities but limiting the degree to which less advanced students are asked to perform the individual reading tasks.)

Continue emphasizing 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. There is evidence of a disconnect between what some teachers and principals perceive of parents and what parents actually do and feel. For example, when asked about whether parents were engaging with their child(ren)'s schoolwork, some teachers and principals said that they were not because they did not care about their children's education, and/or had other priorities such as working. At the same time, most parents were clear that they wanted to engage with their child's education and would make the time but were not sure how, especially when they were limited in their own education. Thus, LEARN should continue to emphasize to parents the critical and constructive role they can play in enhancing their child's education even without being educated themselves. Second, parents tend to lack the confidence and knowledge on how they may be able to help their children when they have other priorities, limited time and/or literacy challenges. Developing realistic strategies that they can use to encourage their children, given these challenges, would be helpful to enhance the understanding between teachers and parents.

Initiate resilient programming. SC has demonstrated an encouraging degree of absorptive (immediately reacting to a shock or stressor) and adaptive (adjusting what is being done in the days and weeks to respond to the ongoing shock or stressor) resilience capacities for programming in the face of the vast and sudden COVID-19-related closures. For instance, when closures were first announced, SC immediately shifted their staff to virtual work and maintained communication and engagement with the project through existing channels within the communities (albeit not to the degree that would be ideal).

The gap emerges when looking at the degree to which the contingency plan was effectively implemented. SC and other organizations working in Liberia and around the world at the time during the pandemic were treading equally difficult and unknown waters. As such, the evaluation has shown that there has been mixed success in the implementation of SC's adaptations, and therefore, a somewhat difficult to interpret impact as compared to what may have been seen were there not a nearly 1-year gap in project delivery.

A final recommendation is for SC to engage in a series of lessons learned meetings with staff at all levels, from HQ to schools, and any supplemental assessment activities, to document some of the ways in which implementation was able to be adapted effectively, and, if so, how. When implementation was not so

effective, equally document why not. This documentation may be useful in future as other shocks and stressors may again threaten in-person schooling.

Annexes

A. References
B. Results Framework
C. LEARN Evaluation Questions
D. McGovern-Dole Performance Indicators
E. Additional Tables and Complementary Outcomes
F. Other Subtests of Reading Assessment
G. Regression Analysis
H. Additional Impact Evaluation Exhibits
I. Inter-Rater Reliability
J. Survey Instruments
K. Qualitative Protocols
L. Midterm Evaluation SOW and TOR

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Annex B: LEARN Results Framework

Key
- Strategic Objevctive
- Intermediate Results (IR)
- Lower Level IR
- MGD LEARN Activities
- Other Actors and Project

SO1: Improved Literacy of School-Age Children

1.1:Improved Quality of Literacy Instruction

1.2:Improved Attentiveness

1.3:Improved Student Attendance

1.1.1:More Consistent Teacher Attendance

1.1.2:Better Access to School Supplies & Materials

1.1.3:Improved Literacy Instructional Materials

1.1.4:Increased Skills and Knowledge of Teachers

1.1.5:Increased Skills and Knowledge of School Administrators

1.2.1:Reduced Short-Term Hunger

1.3.1:Increased Economic and Cultural Incentives (or Decreased Disincentives)

1.3.2:Reduced Health-Related Absences

1.3.3:Improved School Infrastructure

1.3.4:Increased Student Enrollment

1.3.5:Increased Community Under-standing of Benefits of Education

Teacher recognition

Establish libraries

Production of books and supplementary reading materials

Training: Teachers

1.2.1.1, 1.3.1.1: Increased Access to Food (School Feeding)

Custom: Promotion of Code of Conduct including SGBV awareness

SO2: Increased Use of Health and Dietary Practices *see next page for activities

Provide Energy Saving Stoves Building/Rehab: kitchens Building/Rehab: warehouses and storerooms

Establish activities to promote literacy

Provide school meals Take Home Rations Establish school gardens

Distribute deworming medication, vitamins, and minerals

READ Liberia G2B-ESP Education Management and Accountability Program

Supplementary reading materials created by USAID, LTTPII

G2B-ESP Curriculum & Assessment Program

READ Liberia G2B-ESP Teacher Education and Management Program

G2B-ESP Education Management and Accountability Program

National School Feeding Policy G2B-ESP Student Well-Being Program WFP, Mary's Meals, Winrock Home Grown School Feeding Pilot

G2B-ESP Student Well-Being Program G2B-ESP Teacher Education and Management Program

School Health Division supplies deworming meds and trains teachers (G2B-ESP, Student Well-Being Program)

G2B-ESP School Quality Program

AQE G2B-ESP Over-age and Out-of-School Program

READ Liberia AQE G2B-ESP Over-age and Out-of-School Program

Foundational Results

1.4.1:Increased Capacity of Government Institutions

Training: Commodity Management

G2B-ESP Student Well-Being Program

1.4.2:Improved Policy and Regulatory Framework

Custom: Promotion of Code of Conduct including SGBV awareness

G2B-ESP Student Well-Being Program: Counter school-related gender-based violence

1.4.3:Increased Government Support

Education Sector Planning Working Group

1.4.4:Increased Engagement of Local Organizations and Community Groups

Establish Parent Teacher Associations Training: Parent Teacher Associations

G2B-ESP Student Well-Being Program

Key

Strategic Objevctive	(yellow)
Intermediate Results (IR)	(orange)
Lower Level IR	(green)
MGD LEARN Activities	(blue)
Other Actors and Project	(gray)

SO2: Increased Use of Health and Dietary Practices

2.1: Improved Knowledge of Health and Hygiene Practices

Extracurricular activities

G2B-ESP Student Well-Being Program

2.2: Increased Knowledge of Safe Food Prep and Storage Practices

Training: Food preparation and storage practices

G2B-ESP Student Well-Being Program

2.3: Increased Knowledge of Nutrition

Training: Good health and nutrition practices

G2B-ESP Student Well-Being Program

2.4: Increased Access to Clean Water and Sanitation Services

Building/ Rehab: Latrines

G2B-ESP Student Well-Being Program, School Quality Program DFAP in River Cess (community WASH)

2.5: Increased Access to Preventative Health Interventions

Distribute deworming medication, vitamins, and minerals

G2B-ESP, Student Well-Being Program

2.6: Increased Access to Requisite Food Prep and Storage Tools and Equipment

Training: Food Preparation and Storage Practices

G2B-ESP Student Well-Being Program

Foundational Results

2.7.1: Increased Capacity of Government Institutions

G2B-ESP Student Well-Being Program: Implement National Policy on Girls

2.7.2: Improved Policy and Regulatory Framework

G2B-ESP Student Well-Being Program: Counter school-related gender-based violence

2.7.3: Increased Government Support

G2B-ESP Student Well-Being Program: Implement National Policy on Girls

2.7.4: Increased Engagement of Local Organizations and Community Groups

Establish Parent Teacher Associations Training: Parent Teacher Associations

G2B-ESP Student Well-Being Program

Annex C: LEARN Evaluation Questions

Evaluation Questions	Data Analysis Method and Data Sources
Relevance	
1. Do program stakeholders (students, teachers, PTAs, parents, and local officials) feel the LEARN program is meeting their needs?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
2. Are the school in-meals and take-home rations culturally appropriate?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
3. Are the take home rations adequately meeting household needs?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
4. Are book bank titles perceived as culturally appropriate and age-appropriate for primary school students, including over-age learners?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
5. Did stakeholders feel that their voices were heard, and their needs considered throughout the program?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
6. Have activities to support literacy and improved nutrition been integrated in culturally appropriate ways in the target communities?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
Are there any indications that activities contributed to community-level or individual-level resilience in terms of a) ability to absorb and adapt to stressors in general (e.g., enhanced food security; health); b) lessen the education loss; c) make it easier for students to return to school at the reopening phase and continue to learn?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders; comparisons with comparison groups
Effectiveness	
7. To what extent has the program achieved its output and outcome targets?	**Qualitative & quantitative analysis;** (i) Literacy Boost assessment tool, (ii) Student surveys, (iii) Health KAP assessment tool, (iv) KIIs and FGDs with program beneficiaries and stakeholders
8. What factors have inhibited or facilitated the achievement of program goals, objectives, and expected results?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
Efficiency	
9. Have intervention components been delivered within their planned timeline?	**Qualitative analysis;** KIIs with LEARN Staff
10. Are commodities being delivered within their planned timeline?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
11. How often are schools using produce from their school gardens to supplement USDA donated food?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
12. Which commodity management strategies were most efficient for quick delivery and reduction of waste and theft?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, government officials, principals and teachers
13. Did school gardens produce enough food to supplement school meals adequately?	**Qualitative analysis;** KIIs and FGDs with, parents, students, principals and teachers
Sustainability	
14. What additional inputs are necessary to achieve sustainability?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.

Evaluation Questions	Data Analysis Method and Data Sources
15. What are the current barriers to achieving sustainability?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
16. Do schools have the necessary infrastructure and food management plans in place to continue feeding after the program concludes?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
17. Do schools/communities have the necessary systems in place to recruit and maintain volunteers for reading camps?	**Qualitative analysis**; KIIs and FGDs with LEARN staff, teachers, principals, and government officials
18. What are the necessary components for successful school handover of activities to the government and local community, as modeled by this program?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
19. Is there evidence that LEARN program activities and benefits are likely to continue or to scale up after the project ends?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
Impact	
20. Have the literacy skills of school-age children generally improved in the LEARN program area?	**Quantitative analysis**; Literacy Boost assessment tool in project and impact evaluation counties
21. Has LEARN contributed to increases in enrollment of school-age children?	**Quantitative analysis;** Depending on quality and accuracy of the enrollment records available in schools
22. Have nutrition, dietary, and food safety practices in schools improved in the LEARN program area?	**Qualitative & Quantitative analysis;** (i) KIIs and FGDs with beneficiaries and stakeholders, (ii) Health KAP assessment tool
23. Are PTAs meeting on a regular basis and contributing effectively to the schools?	**Qualitative analysis;** KIIs and FGDs with teachers, PTA members, and principals
24. Have there been any positive or negative impacts in the target areas, besides the realization of the strategic objective-level results?	**Qualitative analysis;** KIIs and FGDs with beneficiaries and stakeholders
25. How do the literacy and health KAP outcomes compare across the three treatment groups in Grand Gedeh county? Is there evidence of a positive impact of LEARN on literacy and health KAP outcomes?	**Quantitative analysis;** (i) Literacy Boost assessment tool; (ii) Health KAP assessment tool
26. How have the SRGBV activities affected knowledge and practices among students and teachers?	**Quantitative & Qualitative analysis;** KIIs and FGDs with teachers and parents
27. Has LEARN improved access to and the quality of early grade reading materials in Liberia?	**Quantitative & Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
28. How has the home literacy environment in target communities changed in the LEARN program area?	**Qualitative & Quantitative analysis;** Student surveys in project and impact evaluation counties
29. How have the variety of distance education options not related to the project, but which were delivered across project areas affected outcomes?	**Qualitative analysis;** KIIs and FGDs with beneficiaries and stakeholders

Annex D: McGovern Dole Performance Indicators

McGovern-Dole Indicators	Data Collection methods	Data Source	Baseline (Percentage or Number)	Midterm (Percentage or Number)	Life of Project Target
MGD 26: 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: 1%	Boys: 4%	
			Girls: 1%	Girls: 7%	
			Overall: 1%	Overall: 6%	
Custom: Percent of students who, by the end of two grades of primary schooling, demonstrate proficiency in identifying letters.	Evaluation	LBRA	Boys: 50%	Boys: 71%	
			Girls: 55%	Girls: 59%	
			Overall: 58%	Overall: 65%	
MGD 27: Number of individuals benefiting directly from USDA-funded interventions	SC/Monitoring	SC	0	**54,932**	
MGD 28: Number of individuals benefiting indirectly from USDA-funded interventions	SC/Monitoring	SC	0	**174,760**	
MGD 1: Number of students regularly (80%) attending USDA supported classrooms/schools	SC/Monitoring	SC	TBD	76%	
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	857	

McGovern-Dole Indicators	Data Collection methods	Data Source	Baseline (Percentage or Number)	Midterm (Percentage or Number)	Life of Project Target
MGD 21: Number of individuals who demonstrate use of new safe food preparation and storage practices as a result of USDA assistance	SC/Monitoring	SC	0	425	
Custom: Percentage of teachers in target schools who attend and teach at least 90% of the scheduled school days	SC/Monitoring	SC	TBD	75%	
MGD 2: Number of textbooks and other teaching and learning materials provided as a result of USDA assistance	SC/Monitoring	SC	0	9959	
MGD 5: 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	N/A	
MGD 6: Number of teachers/educators/teaching assistants trained or certified as a result of USDA assistance	SC/Monitoring	SC	0	N/A	
MGD 15: Number of daily school meals (breakfast, snack, lunch) provided to school-age children as a result of USDA assistance	SC/Monitoring	SC	0	3,458,471	
MGD 16: Number of school-age children receiving daily school meals (breakfast, snack, lunch) as a result of USDA assistance	SC/Monitoring	SC	0	44,122	

McGovern-Dole Indicators	Data Collection methods	Data Source	Baseline (Percentage or Number)	Midterm (Percentage or Number)	Life of Project Target
MGD 13: Number of take-home rations provided as a result of USDA assistance	SC/Monitoring	SC	0		
MGD 14: Number of individuals receiving take-home rations as a result of USDA assistance	SC/Monitoring	SC	0	48,588	
MGD 17: Number of social assistance beneficiaries participating in productive safety nets as a result of USDA assistance	SC/Monitoring	SC	0	46579	
Custom: Number of daily school meals provided that include fruits, vegetables and/or animal-sourced proteins in addition to USDA commodities	SC/Monitoring	SC	0	N/A	
Custom: Number of schools with a strengthened support structure for a code of conduct policy	SC/Monitoring	SC	TBD		Life of Project Target
Custom: Percentage of children in target schools who demonstrate improved knowledge and practices towards SRGBV prevention and response	Evaluation	Student survey	Boys: 67%	Boys: 68%	
			Girls: 68%	Girls: 65%	
			Overall: 67%	Overall: 66%	
MGD 12: Number of educational policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance.	SC/Monitoring	SC	0	N/A	
MGD 24: Number of students receiving deworming medication(s)	SC/Monitoring	SC	TBD		Life of Project Target

McGovern-Dole Indicators	Data Collection methods	Data Source	Baseline (Percentage or Number)	Midterm (Percentage or Number)	Life of Project Target
Custom: Number of energy-saving stoves provided as a result of USDA assistance	SC/Monitoring	SC	0	220	
MGD 7: Number of educational facilities (i.e. school buildings, classrooms, and latrines) rehabilitated/ constructed as a result of USDA assistance	SC/Monitoring	SC	0	220	
Custom: Number of primary school-age children in targeted communities who participated in a reading camp in the past year	SC/Monitoring	SC	0		Life of Project Target
Custom: Number of government officials trained in commodity management practices	SC/Monitoring	SC	0		Life of Project Target
MGD 10: Number of public-private partnerships formed as a result of USDA assistance	SC/Monitoring	SC	0		Life of Project Target
MGD 9: Number of Parent-Teacher Associations (PTAs) or similar school governance structures supported as a result of USDA assistance	SC/Monitoring	SC	0		Life of Project Target
Custom: Percentage of Grades 2 and 6 students in target schools who can identify the components of a healthy diet	Evaluation	Student survey	Boys: 0% Girls: 0% Overall: 0%	Boys: 0% Girls: 0% Overall: 0%	
MGD 20: Number of individuals trained in safe food preparation and storage as a result of USDA assistance	SC/Monitoring	SC	0		Life of Project Target
Custom: Number of schools equipped with food preparation and storage materials	SC/Monitoring	SC	100	220	

McGovern-Dole Indicators	Data Collection methods	Data Source	Baseline (Percentage or Number)	Midterm (Percentage or Number)	Life of Project Target
MGD 11: Value of new public and private sector investments leveraged as a result of USDA assistance	SC/Monitoring	SC	0		Life of Project Target
MGD 18: Number of individuals trained in child health and nutrition as a result of USDA assistance	SC/Monitoring	SC	0		Life of Project Target
MGD 23: Number of schools with improved sanitation facilities	SC/Monitoring	SC	100	220	

Annex E. Additional Tables

Exhibit E1. Midterm Analysis Plan
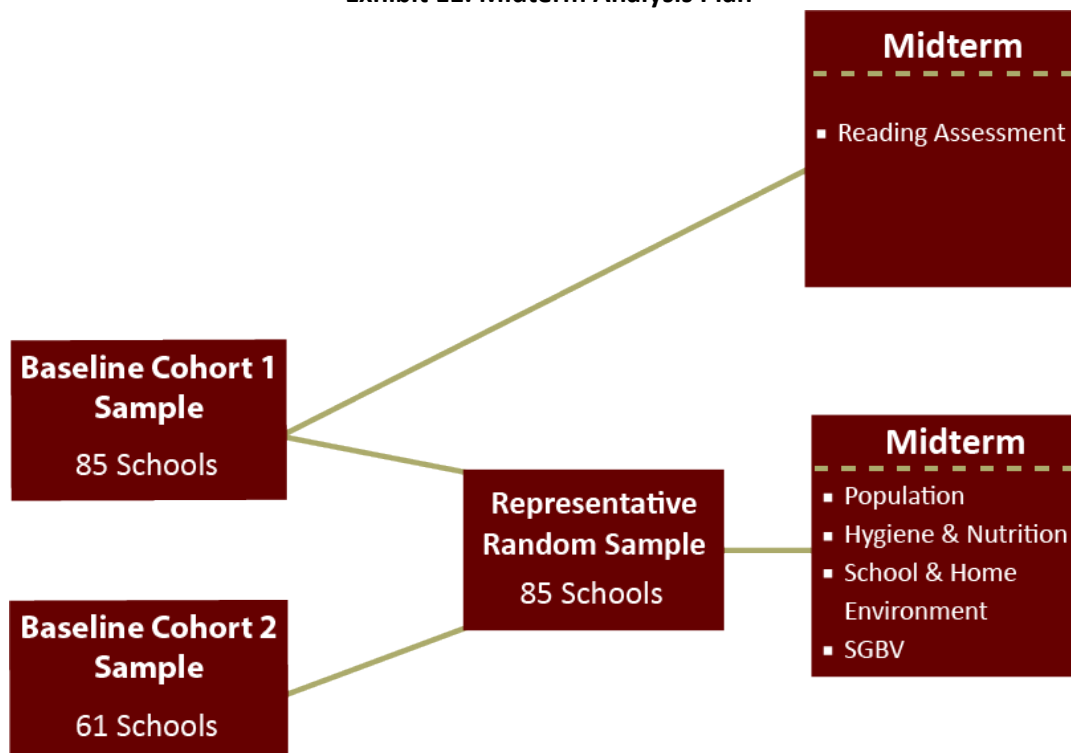
Exhibit E2. Overview of Topics Covered in Qualitative Protocols

Topics	Types of Questions (asked to groups/individuals) as relevant; see protocols in Annex D)
Background information	▪ Questions about background/role in project ▪ Any changes in role/location at onset of COVID-19 closures
Access to and value of education	▪ Access to education in the community; specific barriers to access and full engagement (who is excluded) ▪ Gender-equity of access ▪ Parental involvement, etc. ▪ Did COVID-19 closures change any of these perceptions and, if so, how?
School feeding/nutrition	▪ 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 ▪ Input on progress related to MOE's desire to move to a Home-Grown School Feeding approach to school meals under the National School Feeding Policy ▪ Knowledge of and agreement to ground rules on gardening activities; challenges to date ▪ Effectiveness of THRs for students and volunteers (in summer/during school closures; how the stoppage of THRs upon school re-openings is perceived

Topics	Types of Questions (asked to groups/individuals) as relevant; see protocols in Annex D)
SHCs/water, sanitation, and hygiene (WASH)/nutrition	▪ Perceived effectiveness of SHN champions and SHCs on improving nutrition and WASH practices in schools ▪ WASH status in schools ▪ Perception of WASH grants scheme (PTA) ▪ Effectiveness of annual de-worming campaign ▪ Progress on the development of SHCs and manuals ▪ Progress on SC collaboration with CEOs and DEOs to provide training to the SHN Champions ▪ Effectiveness of community mobilizers ▪ How COVID-19 messaging impacted any of this
School literacy environment	▪ How much students are exposed to literacy activities within the school environment (e.g., presence of library, teacher reading exercises) ▪ 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), highlighting in particular whether they had anything to read during closures. ▪ Feasibility of teachers with added load as literacy champions; related events
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 them ▪ Degree to which students actively pursue/take part in home/community reading activities ▪ Reflections on the efficacy of the school year and summer reading clubs ▪ Difference between in-school/out-of-school uptake in Summer Reading Clubs ▪ Adequacy of training received to be literacy champion ▪ How access to at-home resources, including the home learning packet, changed during COVID-19 closures with distribution of various distance education programs
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) 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 ▪ Existence of/effectiveness of reporting mechanisms for students/teachers to report violations of school code of conduct ▪ What students like and dislike about their school and teachers (probing on issues specifically around school climate and safety) ▪ Development and revision of MOE Code of Conduct; mechanisms for rollout and successes/challenges ▪ Work on supporting reporting mechanisms at school and district levels; procedures for responding to reports against teachers and other staff ▪ Perceived increases in violence at home during COVID-19 closures

Topics	Types of Questions (asked to groups/individuals) as relevant; see protocols in Annex D)
Parent-Teacher Associations	- Existence and activities of PTAs; specific successes and areas for improvement to enhance collaboration and effectiveness. - Perception on WASH grants scheme (PTA) - Degree to which parents in PTAs collaborate with teachers/principals - Effectiveness of parent engagement messages on literacy (engagement not yet started; awareness session held with communities) - PTA activities during school closures

Exhibit E3. Baseline and Midterm Levels for Key Project Indicators

Sex	Overall		Grand Basa		Grand Gedeh		Rivercess		River Gee	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Percentage of students who, by the end of two grades of primary schooling, demonstrate that they can read and understand grade level text[a]										
Girls	1%	4%	1%	6%	0%	3%	1%	3%	1%	3%
Boys	1%	7%	1%	12%	0%	5%	0%	5%	1%	0%
Percentage of students who, by the end of two grades of primary schooling, demonstrate proficiency in identifying letters[a]										
Girls	53%	59%	60%	68%	46%	59%	64%	69%	41%	36%
Boys	58%	71%	61%	76%	54%	65%	67%	85%	50%	53%
Percentage of children in target schools who demonstrate improved knowledge and practices toward SRGBV prevention and response[a]										
Girls	63%	65%	66%	82%	52%	35%	74%	82%	67%	52%
Boys	63%	68%	69%	83%	51%	42%	69%	84%	63%	53%
Percentage of Grades 2 and 6 students in target schools who can identify the components of a healthy diet										
Grade 2										
Girls	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Boys	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Grade 6										
Girls	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%
Boys	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%

Exhibit E1. Student Sex Distribution

Grade	Percent Male		Percent Female	
	Baseline	Midterm	Baseline	Midterm
Grade 2	54%	51%	46%	49%
Grade 6	56%	51%	44%	49%
Total	55%	51%	45%	49%

Source: Student survey. Authors' calculations.

Exhibit E2. Socio-economic status by county

Indicator	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
English is the main language	54%	51%	71%	**78%**	76%	**43%**	92%	93%	69%	**65%**
Total number of household assets	1.75	1.76	1.69	1.63	1.83	1.72	1.77	1.66	1.76	1.7

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for

Exhibit E3. Availability of reading materials in the home by county

Does your home have…?	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Holy book	68%	**82%**	72%	**78%**	64%	**84%**	64%	65%	66%	**78%**
Textbooks/schoolbooks	48%	**43%**	53%	52%	49%	46%	52%	56%	49%	48%
Storybooks/comics	32%	**51%**	42%	37%	38%	**48%**	35%	**28%**	35%	**43%**
Coloring and drawing books	22%	**15%**	32%	**23%**	15%	18%	15%	17%	20%	**18%**
Newspapers	8%	7%	11%	**4%**	5%	**10%**	5%	**3%**	7%	6%
None of the above	17%	**6%**	9%	9%	14%	**5%**	12%	14%	15%	**8%**

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee

Exhibit E4. Access to Non-Textbook Reading Materials in School by County

Response	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
No	61%	48%	56%	65%	50%	62%	54%	52%	55%	57%
Yes, but can't take off campus	16%	11%	7%	6%	20%	12%	12%	18%	14%	11%
Yes, and can take home for free	21%	40%	36%	28%	25%	25%	33%	29%	29%	31%
Yes, and can take home for a cost	1%	1%	1%	1%	5%	1%	2%	1%	2%	1%

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee

Exhibit E5. Frequency with which Students Borrowed Non-Textbook Materials to Take Home

Frequency	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Every day	6%	8%	6%	1%	8%	3%	9%	**0%**	7%	3%
A few times during the week	29%	29%	8%	**30%**	12%	25%	21%	23%	18%	**27%**
Once during the week	42%	35%	15%	**34%**	36%	36%	38%	25%	33%	33%
Never	23%	28%	71%	**34%**	43%	36%	32%	**52%**	43%	38%

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee

Exhibit E6. Household Literacy Activities in the Past Week

Activity	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Saw someone reading	39%	44%	49%	**67%**	55%	51%	55%	**40%**	47%	**50%**
Helped with studies	53%	53%	71%	72%	68%	**55%**	68%	**56%**	61%	58%
Read to student	44%	45%	59%	59%	56%	**44%**	54%	**37%**	50%	**47%**
Told student a story	33%	31%	57%	**36%**	30%	22%	34%	29%	35%	**30%**

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for

Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee

Exhibit E7. Teacher Attendance

Frequency	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Every day (5 days)	84%	90%	73%	81%	93%	93%	87%	**87%**	86%	88%
A few times (2-4 days)	10%	6%	14%	13%	5%	**5%**	7%	**9%**	9%	8%
Once during the week	1%	2%	4%	1%	0%	**2%**	3%	**2%**	1%	**2%**
Never	5%	2%	8%	**6%**	2%	0%	4%	2%	4%	**3%**

Source: Student survey. Authors' calculations. Baseline: N = 362 for Grand Bassa, 116 for Rivercess, and 66 for River Gee. Midterm = N = 905 for Grand Bassa, 321 for Grand Gedeh, 404 for Rivercess, and 432 for River Gee

Exhibit E8. Teacher Tardiness

Frequency	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Every day (5 days)	6%	3%	3%	2%	1%	3%	2%	2%	4%	**2%**
A few times (2-4 days)	11%	10%	17%	14%	5%	5%	10%	10%	11%	10%
Once during the week	9%	7%	14%	13%	10%	7%	14%	14%	12%	**10%**
Never	74%	**81%**	66%	**71%**	84%	85%	75%	75%	76%	**78%**

Source: Student survey. Authors' calculations. Baseline: N = 362 for Grand Bassa, 116 for Rivercess, and 66 for River Gee. Midterm = N = 905 for Grand Bassa, 321 for Grand Gedeh, 404 for Rivercess, and 432 for River Gee

Exhibit E9. Second Grade Students Literacy Skills by County

Outcome	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Foundational Literacy Skills										
Letter knowledge (% correct)	91%	92%	87%	89%	93%	93%	86%	84%	90%	90%
Word recognition (% correct)	46%	46%	31%	28%	45%	46%	28%	**22%**	38%	37%
Invented word recognition (% correct)	6%	5%	4%	**1%**	5%	4%	3%	2%	4%	**3%**
Reading Skills										
Students classified as readers (5+ words correct in 30 seconds)	14%	**25%**	22%	**13%**	17%	20%	17%	**4%**	17%	17%
Accuracy (% words correct in passage), readers only	13%	**72%**	7%	**45%**	8%	**67%**	10%	**57%**	10%	**66%**
Fluency (words correct per minute), readers only	11	**32**	11	**23**	12	**25**	11	**21**	11	**29**
Comprehension Skills										
Reading comprehensions	55%	**51%**	56%	55%	55%	**45%**	49%	51%	54%	**51%**

Outcome	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
questions correct (%), readers only										
Listening comprehension passed (%), non-readers only	18%	**10%**	28%	21%	19%	**10%**	17%	15%	20%	**15%**
Listening comprehension passed (%), readers only	35%	**4%**	36%	25%	19%	**0%**	12%	11%	25%	**8%**

Source: Student survey. Authors' calculations. N = 416 for Grand Bassa, 244 for Grand Gedeh, 138 for Rivercess, and 201 for River Gee at midterm; N = 240 for Grand Bassa, 137 for Grand Gedeh, 184 for Rivercess, and 197 for River Gee. There were 103 readers in Grand Bassa, 32 in Grand Gedeh, 27 in Rivercess, and 9 in River Gee at midline; 33 readers in Grand Bassa, 30 in Grand Gedeh, 31 in Rivercess, and 33 in River Gee at baseline.

Exhibit E10. Student knowledge vs practice of critical handwashing moments by county

Indicator	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Handwashing knowledge	16%	**26%**	3%	**10%**	26%	29%	27%	**14%**	19%	20%
Handwashing self-reported behavior	11%	**17%**	2%	**7%**	8%	**17%**	11%	**8%**	9%	**13%**

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee

Exhibit E11. Comprehension Subtests

Response	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Summary	12%	**18%**	23%	**16%**	15%	19%	7%	**16%**	13%	17%
Literal	35%	30%	44%	40%	34%	**24%**	26%	26%	34%	31%
Inferential	78%	**56%**	78%	**67%**	75%	**48%**	69%	75%	75%	**61%**
Evaluative	73%	**50%**	81%	**63%**	69%	**38%**	68%	74%	72%	**56%**

Source: Student survey. Authors' calculations. Note: Students were told to select all that apply, and therefore the total of the percentages do not add up to 100 percent. Bold denotes significance at the 10% level. Baseline: N = 958 for Grand Bassa, 198 for Grand Gedeh, 438 for Rivercess, 427 for River Gee; Midterm: N = 649 for Grand Bassa, 357 for Grand Gedeh, 222 for Rivercess, 307 for River Gee.

Annex F. Other Subtests of Reading Assessment

As mentioned in **Section 4.2.5 Reading Outcomes**, we also tested students on other literacy skills including word recognition, and invented word recognition. This annex presents the outcomes of these subtests to shed more lights on children's literacy outcomes.

Word Recognition

To assess children's word recognition skill, students were given a chart of 20 words that we developed based on the most frequently used words from their textbooks. Exhibit 55 shows the ability of second graders to read these words. In comparison to their ability to identify letters, students struggled to read full words. Additionally, there were some large disparities between counties as more students struggled to read the words in Grand Gedeh and River Gee compared to Grand Bassa and Rivercess – a trend seen in both baseline and midterm. As seen in Exhibit F1, overall, students were only able to identify 38 percent of the 20 words at baseline and 37% at midterm. We see an increase in % of students identifying zero words, notably in Grand Gedeh where it increased from 11% to 23%.

Exhibit F1. **Most Recognized Word by County**

Indicator	Grand Bassa		Grand Gedeh		Rivercess		River Gee		Overall	
	Base	Mid	Base	Mid	Base	Mid	Base	Mid	Base	Mid
Total number of correctly read words	9.2	9.3	6.2	5.5	8.9	9.2	5.5	4.3	**7.6**	**7.3**
% of words read correctly	46%	46%	31%	28%	45%	46%	28%	22%	**38%**	**37%**
% identified hardest word (uncle)	13%	11%	5%	7%	11%	9%	2%	3%	**8%**	**8%**
% identified easiest word (school)	85%	84%	77%	69%	85%	79%	62%	58%	**78%**	**74%**
% identified zero words	8%	5%	11%	23%	3%	5%	23%	30%	11%	15%

Source: Student survey. Authors' calculations. N = 656 for Grand Bassa, 380 for Grand Gedeh, 372 for Rivercess, and 398 for River Gee

Exhibit F2 also shows that the overall distribution of the number of words identified has a downward trend with the plurality of students naming just 1-5 words correctly.

Exhibit F2. **Distribution of Most Used Words Identified by County**

Grand Bassa
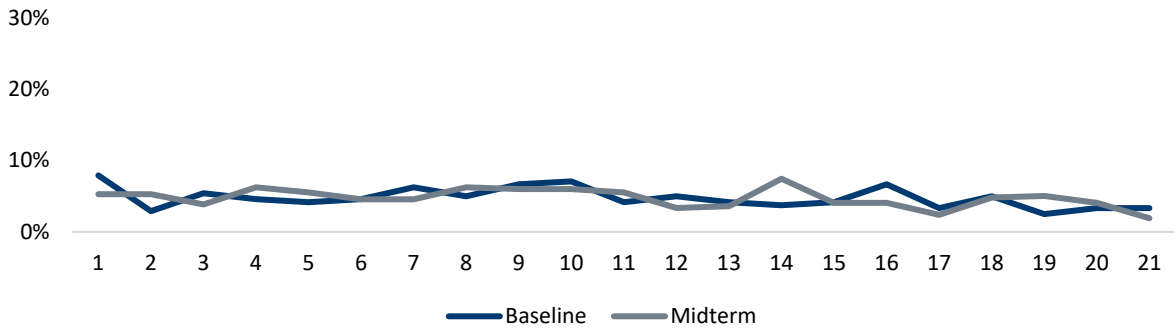
Grand Gedeh
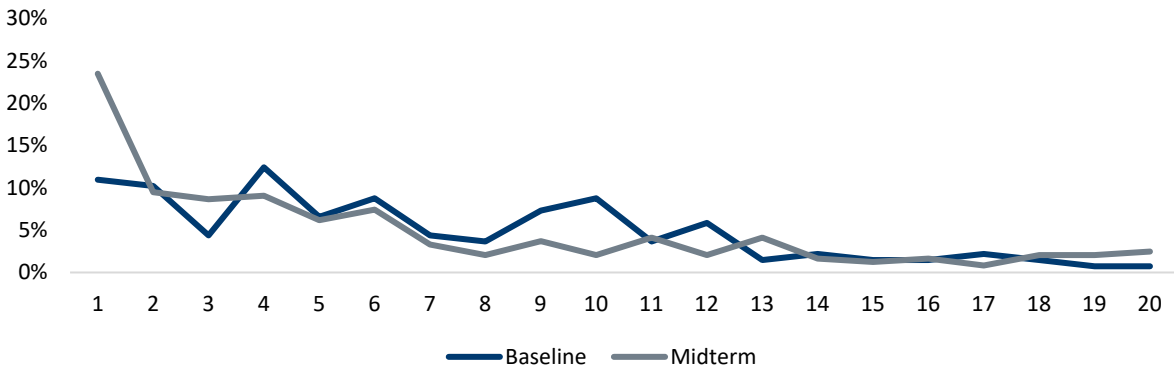
River Gee
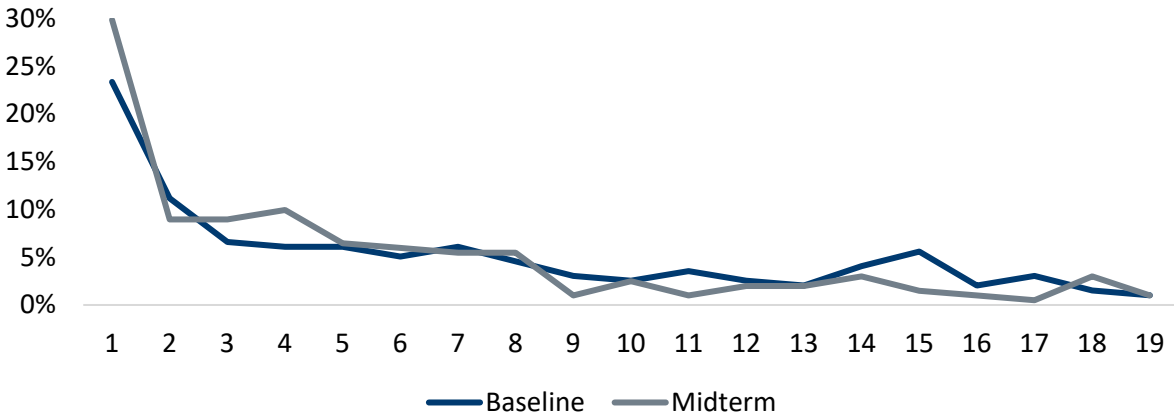
Rivercess
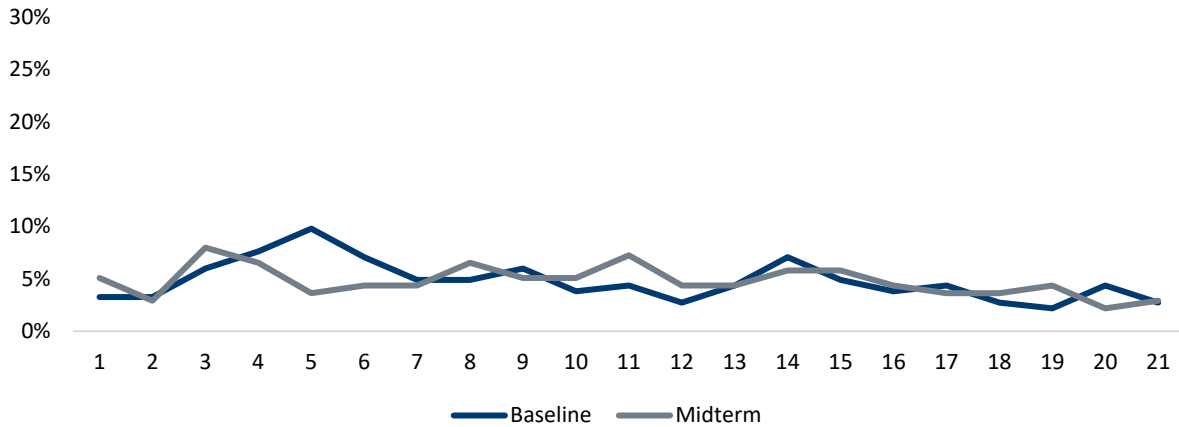
Source: Student survey. Authors' calculations. N=836

Decoding (Invented Word Recognition)

We also included a decodable word test in the LBRA to measure the ability of students in recognizing the 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. Students especially struggled with this task as they only identified one word correctly on average, both at baseline and midterm. Exhibit F3 shows that 77 percent of the sample could not read even one word at baseline. This figure was 82% at midterm. There were no large differences in these numbers between county, sex, or first language.

Exhibit F3. **Invented Word Recognition**

Indicator	Mean		Observations	
	Baseline	Midterm	Baseline	Midterm
Total number of correctly read invented words	1	1	836	998
% of invented words read correctly	4%	3%	836	998
% identified hardest invented word (gelb)	1%	1%	836	998
% identified easiest invented word (ne)	13%	11%	836	998
% identified zero invented words	77%	82%	836	998

Source: Student survey. Authors' calculations.

Annex G. Regression Analysis

Exhibit G1 summarizes the associations between student and household characteristics and students' literacy skills at midterm. The table shows either positive or negative associations that are statistically significant (p-value < 0.10). A "+" indicates the factor is positively associated with the respective literacy outcome while a "-" indicates a negative association. Detailed regression results can be found in the full OLS regression table in Exhibit G2.

Exhibit G1. Predictors of Literacy Skills at Midterm

Independent Variable	Letter Knowledge	Word Recognition	Invented Word Recognition	Reading – Accuracy (total words)	Reading – Accuracy (attempted words)	Reader	Listening Comprehension	Reading with Comprehension
Age								
Girl	-	-	-	-	-	-		
English		+						+
Repeated a grade								
Caregiver attended school								
Reading materials								
Home literacy index				+				
SES index								

Source: Student survey. Authors' calculations. Note: Only statistically significant predictors (p-value < 0.05) are presented in the table.

Exhibit G2. **Predictors of Literacy Skills at Midterm**

Independent Variable	Letter Knowledge	Word Recognition	Invented Word Recognition	Reading – Accuracy (total words)	Reading – Accuracy (attempted words)	Reader	Listening Comprehension	Reading with Comprehension
Age	-0.010 (0.010)	-0.082 (0.115)	0.019 (0.020)	-0.000 (0.003)	-0.001 (0.004)	-0.003 (0.006)	-0.012 (0.008)	-0.004 (0.003)
Girl	-0.130*** (0.039)	-1.995*** (0.399)	-0.215** (0.081)	-0.041*** (0.015)	-0.047*** (0.019)	-0.051** (0.025)	0.039 (0.029)	-0.021* (0.012)
English	-0.041 (0.044)	0.961** (0.471)	0.015 (0.081)	0.017 (0.014)	-0.001 (0.019)	-0.018 (0.031)	0.018 (0.030)	0.034*** (0.009)
Repeated a grade	-0.028 (0.046)	0.293 (0.663)	-0.037 (0.085)	-0.003 (0.015)	-0.011 (0.022)	-0.010 (0.030)	0.049 (0.035)	-0.004 (0.012)
Caregiver attended school	0.024 (0.046)	-0.024 (0.475)	-0.055 (0.102)	-0.027* (0.015)	-0.014 (0.018)	-0.002 (0.024)	0.002 (0.038)	-0.023* (0.012)
Reading materials	-0.003 (0.013)	-0.101 (0.138)	0.005 (0.019)	-0.000 (0.004)	-0.002 (0.005)	-0.001 (0.007)	0.018 (0.012)	-0.002 (0.004)
Home literacy index	0.016 (0.013)	0.224 (0.149)	0.016 (0.025)	0.011** (0.005)	0.012* (0.007)	0.014 (0.009)	-0.002 (0.011)	0.008 (0.005)
SES index	0.025 (0.018)	0.215 (0.170_	-0.013 (0.035)	0.010* (0.006)	0.012* (0.007)	0.014 (0.010)	0.007 (0.013)	0.010* (0.005_
Constant	0.698*** (0.157)	5.583*** (1.580)	0.049 (0.311)	0.033 (0.043)	0.077 (0.062)	0.124 (0.085)	0.276** (0.114)	0.047 (0.043)
R^2	0.02	0.05	0.02	0.03	0.02	0.01	0.01	0.02
N	683	683	683	683	683	683	683	683

Source: Student survey; IMPAQ calculations. *p-value < 0.10, **p-value < 0.05, ***p-value < 0.01. Note: Robust standard errors are clustered at the school level and shown in parentheses below the coefficients.

Annex H. Additional Impact Evaluation Exhibits

Given the limited changes that we observed in the impact evaluation on the key indicators, in this Annex we present results from our analyses of additional literacy outcomes for the impact evaluation, relaxing learning standards, additional subgroup analyses, and robustness checks to supplement the results and findings of the main evaluation.

Additional Literacy Outcomes

To provide more background information and nuances on the effect of LEARN interventions on students' literacy skills, we first examined the impacts of SF and SF+LB+SHN packages on other subtests of literacy outcomes that focused on foundational skills, including most used words and invented words.

Most Used Words

At midterm, we find no impacts of the LEARN base or full package on the number of most used words students were able to read correctly. The coefficients suggest that students in SF only schools performed slightly better than students in comparison schools while students in SF+LB+SHN schools performed slightly worse than students in comparison schools, though none of these results are significant.

Subgroup Analysis. In addition to no overall impacts, we do not find evidence of differential impacts by sex for the number of most used words identified. There is no difference in word reading by sex for the full package, but male students can read 1.5 words more, on average, than female students. These results are not statistically significant.

Comparison of the Treatment Arms. Lastly, we examine the added value of the additional program components: the LB and SHN interventions. Again, we find no effect of LEARN program activities on students' ability to read most used words. While the additional effect of the additional interventions is negative, these results remain statistically insignificant.

Exhibit H1. Impact of LEARN Packages on Number of Most Used Words Read Correctly

Most Used Words	
Variables	**Coefficient (SE)**
SF * Post	1.07 (0.953)
(SF + LB +SHN) * Post	-0.42 (0.876)
SF	-0.93 (1.226)
SF + LB + SHN	0.41 (1.213)
Post	-1.28* (0.742)
$\Delta_2 - \Delta_1$	-1.49
N	498

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects.*

Invented Words

Similar to the most used words, students were assessed on their ability to decode as many invented words as possible out of a list of 20 words. At baseline, students across the three groups were only able to decode one invented word, on average. At midterm, we find this decreased by approximately 0.4 words for students in SF schools compared to comparison schools (p-value < 0.10) and there was no change in SF+LB+SHN schools compared to comparison schools.

Exhibit H2. **Impact of LEARN on Number of Invented Words Read Correctly**

Variables	SF Only vs Comparison		SF+LB+SHN vs Comparison	
	Coefficient (SE)		Coefficient (SE)	
	I	II	III	IV
Treatment*Post (DID)	-0.42* (0.207)	-0.37* (0.210)	-0.24 (0.203)	-0.20 (0.213)
Treatment	0.38* (0.200)	0.33 (0.193)	0.27 (0.165)	0.23 (0.181)
Post	-0.23 (0.153)	-0.27* (0.161)	-0.23 (0.153)	-0.27 (0.160)
Controls	No	Yes	No	Yes
N	397	397	491	491

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects.*

Subgroup Analysis. While we find marginal impacts of the SF only program on the number of invented words read correctly, we do not find any evidence of the marginal impact being driven by improvements in skills for one of the sexes. Impact estimates by sex do not reveal any significant impacts of either treatment arm. All estimates suggest students in treatment schools performed worse than students in comparison schools, though female treated students perform slightly better, on average, than male treated students.

Comparison of the Treatment Arms. Furthermore, there is no observed added value of the additional LEARN interventions (LB+SHN) compared to the SF intervention. The marginal, negative effect of the SF program on the number of invented words read correctly persists when looking at the effects of the two treatment groups together.

Exhibit H3. **Impact of LEARN Packages on Number of Invented Words Read Correctly**

Invented Words	
Variables	Coefficient (SE)
SF * Post	-0.37* (0.209)
(SF + LB +SHN) * Post	-0.19 (0.210)
SF	0.33* (0.195)
SF + LB + SHN	0.22 (0.174)
Post	-0.28* (0.159)

Invented Words	
Variables	Coefficient (SE)
$\Delta_2 - \Delta_1$	-0.56
N	498

Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects.

Relaxing Conditional Learning Standards

Taking learning loss because of COVID-19 into account, we also relaxed the conditional learning standards for letter recognition from being able to identify at least 90% of letters to being able to identify at least 75% of letters correctly. We present these results in Exhibit H4. Our results show that students in SF schools were 7 percentage points more likely to be able to correctly identify at least 75% of the letters indicating students in SF schools have higher letter recognition, on average, than students in comparison schools, though this result is not statistically significant (p-value > 0.10). We do not observe any impacts on letter recognition for students in SF+LB+SHN schools compared to those in comparison schools, even with the use of the loosened definition.

Subgroup Analysis. Similarly, with the relaxed definition of letter recognition, we found no evidence of differential impacts by sex, though the magnitude of the coefficients was larger for female students than for male students, as well as for base package schools compared to full package schools.

Comparison of the Treatment Arms. Lastly, we examine the added value of the additional program components: the LB and SHN interventions. We find students in schools receiving the full package performed qualitatively similar on letter recognition to students in schools receiving the base package only (-7 percentage points, p-value > 0.10), and students in the latter schools only performed marginally better than students in control schools (8 percentage points, p-value < 0.10). However, none of these differences were statistically significant.

Exhibit H4. Impact of LEARN Packages on Letter Recognition

Letter Recognition	
Variables	75% Correct Coefficient (SE)
SF * Post	0.08 (0.059)
(SF + LB +SHN) * Post	0.01 (0.055)
SF	0.03 (0.045)
SF + LB + SHN	0.03 (0.046)
Post	-0.04 (0.053)
$\Delta_2 - \Delta_1$	-0.07
N	498

Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include controls for an indicator for the main language being English, child friendly reading materials index, and number of days of school attended in the last week. All regressions include cluster level fixed effects.

Robustness Checks

In this section we present two robustness checks for our main specifications:

- Exploring another sub-group analysis by main language spoken at home; and
- Restricting the sample to only include students that were consistently exposed to the interventions for three years

Additional Subgroup Analysis

During the impact evaluation analyses, reporting English, the language of instruction in Liberia, as the main language spoken at home seemed to be one of the most influential covariates in the impact regressions. Also, analysis of the association between student characteristics and literacy skills for the project evaluation revealed that speaking English as the main language at home was positively associated with students' word recognition skills and reading with comprehension. Thus, to further shed light on the impact results, we checked the robustness of our findings by additional analyses of the impact of the LEARN interventions on students' literacy and health outcomes by their main language spoken at home. Specifically, we divided the sample into two groups: (1) those whose main language at home was English, and (2) those whose main language at home was not English. Overall, we found no consistent patterns suggesting students in one group are realizing larger benefits of the program based on language spoken at home. We found marginal impacts on reading with comprehension for students in SF only schools whose main home language is not English (5 percentage points) and on knowledge of a balanced diet for students in SF+LB+SHN schools whose main home language is English (1 percentage point).

Exhibit H5. **Impact of LEARN on Reading with Comprehension**

Variables	Reading Comprehension	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
"English is not main language" Sample		
Treatment*Post (DID)	0 (0)	0 (0)
Treatment	0 (0)	0 (0)
Post	0 (0)	0 (0)
N	212	256
"English is main language" Sample		
Treatment*Post (DID)	.046* (.023)	.03 (.021)
Treatment	-.011 (.009)	-.01 (.009)
Post	.01 (.011)	.009 (.011)
N	586	703

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects.*

Exhibit H6. **LEARN on Self-Reported Handwashing Behaviors**

Variables	Handwashing Behaviors	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
"English is not main language" Sample		
Treatment*Post (DID)	-.009 (.033)	.087 (.065)
Treatment	-.004 (.003)	.011 (.011)
Post	.026 (.028)	.022 (.029)

| Variables | Handwashing Behaviors | |
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
N	212	256
"English is main language" Sample		
Treatment*Post (DID)	-.011 (.023)	.03 (.028)
Treatment	-.005 (.009)	.005 (.011)
Post	.033* (.017)	.033* (.017)
N	586	703

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects.*

Exhibit H7. **Impact of LEARN on Knowledge of a Balanced Diet**

| Variables | Balanced Diet | |
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
"English is not main language" Sample		
Treatment*Post (DID)	.055 (.054)	.048 (.045)
Treatment	-.004 (.004)	0 (.001)
Post	-.006 (.006)	-.004 (.004)
N	212	256
"English is main language" Sample		
Treatment*Post (DID)	0 (0)	.018* (.01)
Treatment	0 (0)	0 (.001)
Post	0 (0)	0 (.001)
N	586	703

*Source: Student survey; authors' calculations; p-value < 0.1 ** p-value < 0.05 *** p-value < 0.01; Standard errors shown in parentheses are clustered at the school level. All regressions include cluster-level fixed effects.*

Estimated a Regression Model with a Restricted Sample of Students.

Given the large proportion of students who moved schools prior to midterm, we checked the sensitivity of the regression results for the key outcomes by restricting the sample to those students who had not moved from their enrolled schools in the last 3 years. This indicates that they have been in the treatment or comparison schools throughout the period of the intervention and, thus, received the intervention for a full two years (if in one of the treatment groups). Overall, we found no consistent patterns suggesting students in one group are realizing larger benefits of the program based on length of exposure to the intervention, though we did see positive effects on a couple of literacy indicators. We found impacts on reading with comprehension for students in SF only schools who have not changed schools in the last 3 years (18 percentage points) and on reading with comprehension (4 percentage points).

Exhibit H8. **Impact of LEARN on Letter Recognition, 90% correct**

| Variables | Letter Recognition, 90% Correct | |
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
Sample limited to students who have not moved schools in the last 3 years		
Treatment	.188** (.074)	.046 (.072)
N	798	959

Exhibit H9. Impact of LEARN on Reading with Comprehension

Variables	Reading Comprehension	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
Sample limited to students who have not moved schools in the last 3 years		
Treatment	.035** (.017)	.005 (.011)
N	798	959

Exhibit H10. LEARN on Self-Reported Handwashing Behaviors

Variables	Handwashing Behaviors	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
Sample limited to students who have not moved schools in the last 3 years		
Treatment	-.019 (.015)	.021 (.024)
N	798	959

Exhibit H11. Impact of LEARN on Knowledge of a Balanced Diet

Variables	Balanced Diet	
	SF Only vs Comparison Coefficient (SE)	SF+LB+SHN vs Comparison Coefficient (SE)
Sample limited to students who have not moved schools in the last 3 years		
Treatment	.011 (.011)	.048 (.045)
N	798	959

Annex I. Inter-Rater Reliability

Reading Assessment

To measure the reliability and level of homogeneity of enumerators' scores on children's literacy skills, 9 percent of the overall second grade sample (97 out of 1449) 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 I1 shows the percent of agreement between the raters, as well as inter-rater reliability ratings for the project evaluation sample. Overall, the inter-rater reliability (IRR) across the project evaluation sample was excellent for most of the literacy skills measures and good for two of them, showing high internal validity of the scores. For reading comprehension and listening comprehension, however, there were no variations in the proportion of children who were able to answer at least 80 percent of comprehension questions. Therefore, the ANOVA test could not calculate the IRR.

Exhibit I1. IRR by Literacy Skill Subtests for Performance Sample

Literacy Skill Sub-test	IRR	Rating
Letter Knowledge	77%	Excellent
Word Recognition	97%	Excellent
Reader	86%	Excellent
Fluency	91%	Excellent
Accuracy (out of the whole passage)	72%	Good
Accuracy (out of the words attempted)	82%	Excellent
Reading Comprehension	n/a	n/a
Listening Comprehension	n/a	n/a

Source: Student survey. Authors' calculations. N = 77 Grade 2 students

Exhibit I2 shows the IRR results for the impact sample. The enumerators conducted paired interviews for 5 percent of the SF group, and 6 percent of the LB+SF+SHN group. Similar to the project evaluation sample, the IRR was excellent for most measures. But again, there was no variation in the reading comprehension measure.

Exhibit I2. IRR by Literacy Skill Subtests for Impact Sample

Literacy Skill Sub-test	IRR	Rating
Letter Knowledge	75%	Good
Word Recognition	98%	Excellent
Reader	63%	Good
Fluency	58%	Good
Accuracy (out of the whole passage)	97%	Excellent
Accuracy (out of the words attempted)	76%	Excellent
Reading Comprehension	n/a	n/a
Listening Comprehension	86%	Excellent

Source: Student survey. Authors' calculations. N = 50 Grade 2 student

Overall, the IRR was good or excellent. To maintain the good internal validity of the scores, and improve the administration and scoring of the LBRA, we will provide further training at midterm and endline.

Annex J. Survey Instruments

MIDTERM DATA COLLECTION FOR USDA FOOD FOR EDUCATION (LEARN) 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 ------------------	
enum	Enter your name -------------------------------	
Consent	Has the principal and/or teacher 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 à stcode1	I__I
⚠ **If Principal/teacher says No, thank them, and terminate the survey and proceed to the next child on your list.**		
⚠ **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:

Hi, 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 30 to 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 à thank him/her, terminate the survey, and proceed to the next child on your list.
	    1. Yes à 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	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:	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

	Write "Not listed" if it is not on the list, and add 888 as the school ID and pass to Newsch4.		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 3
	    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	I__I	*Do not read options *Select only one option

	2. Kpelle 3. Grebo 4. Krahn 5. Bassa 6. Kru 7. Lorma 8. Belleh 9. Sapo 10. Other 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 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 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 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	*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

Hand1a	How many times did you wash your hands *yesterday*?	…..	*Enter responses >=0>=0 *Mark 888 if the child does not know the answer/refuse to answer

Hand2	When 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
		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.

	8. After helping someone else use the toilet 9. Right after coming home 10. After coughing or sneezing Other 888. Don't know/ No response	I__I I__I	*Select all that apply.
Hand3	What did you use to wash your hands *yesterday*? 1. Water only 2. Water and soap 3. Water and ash 4. Other 888. Don't know/ No response	I__I	*Do not read the options to the child. *Select only one option
Hand4	When should 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 888. Don't know/ No response	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 → hand6 2. Knew before closures 888. Don't know	I__I	*Select only one option
Hand6	Can you tell me, for how long should you wash your hands? 1. AT LEAST 10 SECONDS 2. AT LEAST 20 SECONDS 3. AT LEAST 30 SECONDS 4. AT LEAST 1 MINUTE 888. Don't know	I__I	*Select only one option *Please make sure the student understands the concept of time. *Read the options to them *Use one of their own examples and ask about for example how

			long they should wash their hands for that
Hand7	When schools were closed because of COVID-19, where did you learn more about handwashing? 1. Through SMSs received from the SC LEARN team 2. 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 888. Don't know/ No response	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/ No response	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 →à à 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/ No response	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) 888. Don't know/ No response	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.
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/No response	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	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

	3. Okra 4. Cauliflower 5. Pumpkin 6. Other (specify) 888. Don't know/ No response		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/ No response	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 888. Don't know/ No response	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 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.**			
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/ No response	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/ No response	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 *Note to enumerators: Mean can be yelling, laughing at students, or humiliating them, etc.
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/No response	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	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
		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
		I__I	*Read the list to the respondent, but don't read 'don't know'
			
			*Select only one

Household Environment [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 that you named, 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
		……
		
		……
			*Enter 0 if they have none in any of the categories
			
			*Enter 888 if do not know
			
			*Record the number >= 0

	3. Older brothers	…….
	4. Younger brothers	……

hh1	In the last week, did you see anyone in your house reading?
	
	    0. No → hh2
	    1. Yes → hh1a
	888. Don't know
		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
		I__I	*Select only one option

hh2a	Who helped you study?
	
	    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
		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

	12. Male none-relative 888. Don't know	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	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	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 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

readout1	During the last week, did you read books other than textbooks/schoolbooks outside of school?
	
	  0. No
	  1. Yes
	888. Don't know
		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/ No response → 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"in the previous question?
	
	  1. The child did not know the answer/refused
	  2. The child mentioned s/he has nowhere to go outside of school for reading
	  3. Other (Specify)
		I__I	*Select only one option
			
			*After this question, skip readout 3 and move to gbv1

readout3	Did you read books (other than textbooks) in any of those places you mentioned before [readout2 option]?
	
	  0. No
	  1. Yes
	888. Don't know
		I__I	*Select only one option

Great job! Now I want you to think about when schools were closed, and you could not go to school because of COVID-19.			

homelearning1	Did you or your family receive any home learning packet from Save the Children?
	
	    0. No → homelearning2
	    1. Yes → homelearning1a
	    888. Don't know
		I__I	*Select only one option
			
			*Probe on home learning packet which was
			
			packaged in a plastic folder holding Story Booklet, Learning Tips and Worksheet Booklet, alphabet puzzle cards, and syllable cards, 'I Help My Child to Learn' Leaflet and other scholastic materials including pencil, sharpener, eraser, crayon, ruler
			
			*We need to show the pictures to ensure the child understand the reference

Homelearning1a	Did your parent/caregiver use this pamphlet with you [show picture of pamphlet] at home?
	
	    0. No → homelearning2
	    1. Yes
	    888. Don't know
		I__I	*Select only one option

Homelearning1b	Which of the following materials your parents used when working with you:
	
	    1. I help my child
	    2. Home learning tips and worksheet booklet
	    3. Story booklet
	    4. Alphabet puzzle cards
	    5. Syllable cards
	    6. None
	    888. Don't remember/Don't know
		I__I
		
		I__I
		
		I__I
		
		I__I
		
		I__I
			*Select all that apply
			
			*Read the options to the child and show a picture of each to confirm understand what material you referring to.
			
			*Don't select none with any other options

Homelearning1c	How often did your parent/caregiver use the pamphlet with you each week?
	
	    0. Once
	    1. A few times
	    2. Nearly every day
	    888. Don't remember/Don't know
		I__I	*Select only one option

Homelearning1d	Did you like the pamphlet?
	
	    0. No → Homelearning2
	    1. Yes
	    888. Don't know
		I__I	*Select only one option

Homelearning1e	What did you like about it?
	
	   0. It was fun
	   1. I learned to read better
	   2. I had time to study and read
	   3. My parent/caregiver spent time with me
	   4. My parent/caregiver was kinder to me
	   5. My parent/caregiver asked about my opinions/ideas/feelings
	   6. Other, please specify_____
	888. Don't know
		I__I	*Do not read the options to them
			
			*Select all that apply

Homelearning2	From August to October 2020 (when schools were closed and you were receiving lessons over radio), did you listen to any school lessons over radio?
	
	   0. No → Homelearning4
	   1. Yes
	   888. Don't know
		I__I	*Select only one option

Homelearning3	From August to October 2020 (when schools were closed and you were receiving lessons over radio), was there any week that you did not listen to those lessons?
	
	   0. No → SGBV1
	   1. Yes
	888. Don't know
		…….	*Ensure the student understand the timeframe, which was during school closures in summer and fall 2020 (from August to October), as well as understand the frequency over a week (Mon-Sun)
			
			*Enter the number, add zero if none and 888 if the child does not know the answer

Homelearning4	Why didn't you listen to the lessons over radio?
	
	   0. Do not have a radio
	   1. Radio was broken
	   2. Had to take care of/help with domestic chores (e.g., taking care of younger siblings, cleaning the house, cooking, etc) when school lessons broadcasted through radio (either on Mondays or when it was rebroadcasted).
	   3. Had to work (outside of home) when school lessons were broadcasted
		I__I	*Do not read the options to them
			
			*Select only one option

	through the radio (either on Mondays or when it was rebroadcasted). 4. Was not aware of any lessons being broadcasted 5. Other (Specify) 888. Don't know or refuse to answer		

Sexual and Gender-based Violence [DON'T READ TO THE CHILD]

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	Q1. Have you ever heard of a teacher lying to get something they want, or to get out of trouble; or have you ever heard of a teacher stealing things from school? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Conduct2	Q2. 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	I__I	*Select only one option
Conduct3	Q3. 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	I__I	*Select only one option
Conduct4	Q4. 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	I__I	*Select only one option

Conduct5	Q5. Did you hear of any teachers coming to school drunk or high on drugs last week? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Conduct6	Q6. Did you hear of any teachers teasing/calling children names in the last week? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Conduct6_a	In the last week, how many times did you hear about this happening to boys?	….	
Conduct6_b	In the last week, how many times did you hear about this happening to girls?	….	
Conduct7	Q7. 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	I__I	*Select only one option
Conduct8	Q8. Last week, did any teacher fail to show up at school? 0. No 1. Yes 888. Don't know	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	Q9. Did you see a teacher use corporal punishment last week? 0. No 1. Yes 888. Don't know	I__I	*Select only one option
Conduct9_a	In the last week, how many times did you see this happening to boys?	….	
Conduct9_b	In the last week, how many times did you see this happening to girls?	….	

Conduct10	Q10. If a teacher or school administrator acted violently towards you, would you tell anyone?
	
	    0. No
	    1. Yes
	888. Don't know
		I__I	*Select only one option

sgbv1	Are there rules for the ways that teachers should treat students in school?
	
	    0. No →sgbv3
	    1. Yes→ sgbv2
	888. Don't know
		I__I	Probe if needed

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
		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?
	
	    2. No →sgbv2_b
	    3. 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 888. Don't know		
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	I__I	*Select only one option
sgbv3	How do teachers discipline students 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 I__I	* Probe if needed *Do not read the options to the child * Select all that apply
Sgbv3_b	In your opinion, are students afraid to go to school for fear of punishment? 0. Never 1. Rarely 2. Some of the time 3. Always 888. Don't know/No response	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)	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

	888. Don't know/No response	I__I	

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/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)

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	

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	

gender3	Girls like to be teased by boys
	
	    1. Disagree
	    2. Agree
	  888. No response/Not sure
		I__I	

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	

gender5	For girls to get good grades, they sometimes have to let their teachers touch them or love them	I__I	

| | 1. Disagree
2. Agree
888. No response/Not sure | | |

Disability [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)**

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

⚠️ **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* <u>not</u> *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** <u>when the pupil begins to say the first word of the title</u> **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 <u>correct</u> 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. Mary looked at the kite that her older brother Moses made for her. It had red and white stripes and a blue lone star at the top. It looked great. Mary was proud of her kite. She ran up the hill. Mary ran so fast that she fell down and broke her kite. Mary began to cry. Moses came down from the hill. "Why are you crying?" he asked. "My kite is broken," said Mary. "I will fix it," said Moses. Mary trusted her brother. Moses fixed the kite with glue. He handed it to Mary. "Try it now!" Mary ran and the wind carried the kite in the air. All the children came running to look at the beautiful Lone Star kite. Mary was right – her big brother 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 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	I__I	Select only one option
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. Mary wants to fly the kite that his brother made 2. Mary falls and breaks his kite 3. Mary's brother fixes the kite 4. Mary is able to fly the kite	I__I	mark every main point mentioned by the child

	5. None		
Comp2	Who made the kite for Mary? (Her older brother, Moses) 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? (Mary tripped and dropped it) 0. False 1. True	I__I	Don't read the answer to them
Comp5	Who fixed Mary's kite? (her brother, Moses) 0. False 1. True	I__I	Don't read the answer to them
Comp6	How did Moses 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 Mary proud of her kite? (her brother made it for her/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 Mary feel after she broke her kite? (Sad or depressed) 0. False 1. True	I__I	Don't read the answer to them
Comp10	Why do you think Moses was a good brother? 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 ……………………

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 2020-2021		
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
enroll2g	What is the number of girls enrolled in 2nd grade?		*Use registration lists to populate

Variable	Item	Response Options	Instructions
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 (2019-2020)		
grade6_comp_g	Number of girls successfully completing Grade 6 last year (2019-2020)		
Dropout information for students in 2018-2019			
dropout_abc_b	Number of boys who dropped out of ABC during the last academic year (2018-2019)		

Variable	Item	Response Options	Instructions
dropout_abc_g	Number of girls who dropped out of ABC during the last academic year (2018-2019)		
dropout_kg_b	Number of boys who dropped out of KG during the last academic year (2018-2019)		
dropout_kg_g	Number of girls who dropped out of KG during the last academic year (2018-2019)		
dropout_g1_b	Number of boys who dropped out of Grade 1 during the last academic year (2018-2019)		
dropout_g1_g	Number of girls who dropped out of Grade 1 during the last academic year (2018-2019)		
dropout_g2_b	Number of boys who dropped out of Grade 2 during the last academic year (2018-2019)		
dropout_g2_g	Number of girls who dropped out of Grade 1 during the last academic year (2018-2019)		
dropout_g3_b	Number of boys who dropped out of Grade 3 during the last academic year (2018-2019)		
dropout_g3_g	Number of girls who dropped out of Grade 1 during the last academic year (2018-2019)		

Variable	Item	Response Options	Instructions
dropout_g4_b	Number of boys who dropped out of Grade 4 during the last academic year (2018-2019)		
dropout_g4_g	Number of girls who dropped out of Grade 1 during the last academic year (2018-2019)		
dropout_g5_b	Number of boys who dropped out of Grade 5 during the last academic year (2018-2019)		
dropout_g5_g	Number of girls who dropped out of Grade 1 during the last academic year (2018-2019)		
dropout_g6_b	Number of boys who dropped out of Grade 6 during the last academic year (2018-2019)		
dropout_g6_g	Number of girls who dropped out of Grade 1 during the last academic year (2018-2019)		
Note	Insert your comment if any, especially if the dropout list is not available		
Dropout information for Teachers for 2018-2019 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

Variable	Item	Response Options	Instructions
dropout_g5_t	Did the teacher in Grade 5 drop-out?	0. No 1. Yes	*Select only one option
Dropout information for students in 2019-2020			
dropout_abc_b	Number of boys who dropped out of ABC during the last academic year (2019-2020)		
dropout_abc_g	Number of girls who dropped out of ABC during the last academic year (2019-2020)		
dropout_kg_b	Number of boys who dropped out of KG during the last academic year (2019-2020)		
dropout_kg_g	Number of girls who dropped out of KG during the last academic year (2019-2020)		
dropout_g1_b	Number of boys who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g1_g	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g2_b	Number of boys who dropped out of Grade 2 during the last academic year (2019-2020)		
dropout_g2_g	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		

Variable	Item	Response Options	Instructions
dropout_g3_b	Number of boys who dropped out of Grade 3 during the last academic year (2019-2020)		
dropout_g3_g	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g4_b	Number of boys who dropped out of Grade 4 during the last academic year (2019-2020)		
dropout_g4_g	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g5_b	Number of boys who dropped out of Grade 5 during the last academic year (2019-2020)		
dropout_g5_g	Number of girls who dropped out of Grade 1 during the last academic year (2019-2020)		
dropout_g6_b	Number of boys who dropped out of Grade 6 during the last academic year (2019-2020)		
dropout_g6_g	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 in 2019-2020 school year			

Variable	Item	Response Options	Instructions
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
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
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

Variable	Item	Response Options	Instructions
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, 2019)?	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
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, 2019)	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			

Variable	Item	Response Options	Instructions
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
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

Variable	Item	Response Options	Instructions
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
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

Variable	Item	Response Options	Instructions
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			

Variable	Item	Response Options	Instructions
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
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

Variable	Item	Response Options	Instructions
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 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
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	

Variable	Item	Response Options	Instructions
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
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

Variable	Item	Response Options	Instructions
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			

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
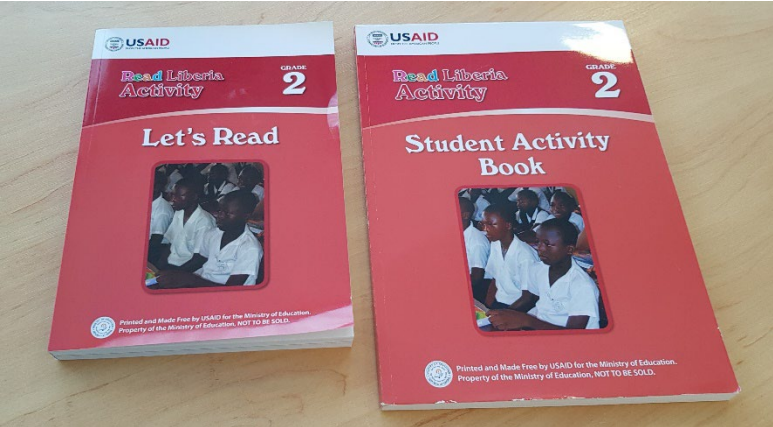
Variable	Item	Response Options	Instructions
lets_read_g1	Are there **Grade 1** "Let's Read" books available in the classroom?	0. No 1. Yes	*They should be located in plastic trunks/containers *Remember the Let's read book is blue for Grade 1 and red for Grade 2
lets_read_g2	Are there **Grade 2** "Let's 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		
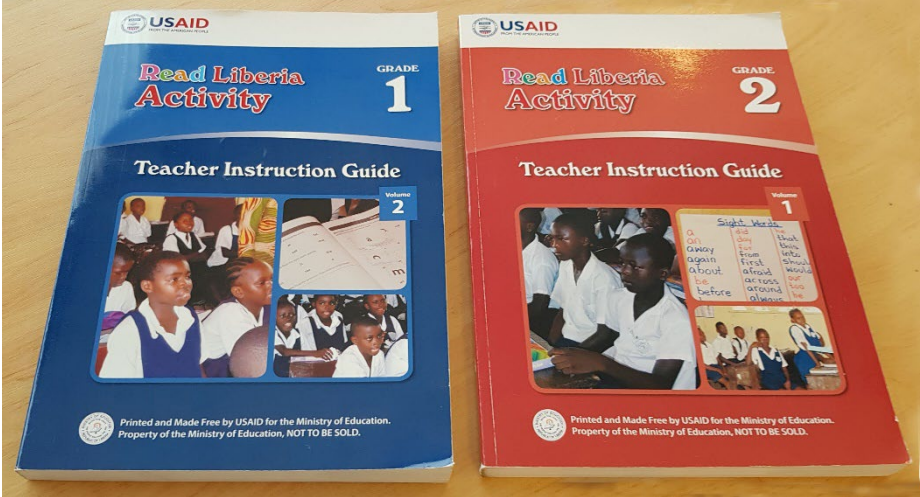
Annex K. Qualitative Protocols

Detailed Overview of Topics Covered in Qualitative Protocols

Students	
Topics	**Types of Questions**
Background information	▪ Questions about student's background
Access to and value of education	▪ Access to education in the community; specific barriers to access and full engagement (who is excluded) ▪ Gender-equity of access ▪ Parental involvement, etc. ▪ How COVID-19-related closures may have affected access for some during re-openings
School feeding / nutrition	▪ Perceived effectiveness of feeding program; successes and areas for improvement
School health clubs / WASH / nutrition	▪ Perceived effectiveness of SHN champions and school health clubs on improving nutrition and WASH practices in schools ▪ WASH status in school
School literacy environment	▪ How much students are exposed to literacy activities within the school environment (e.g., presence of library, teacher reading exercises) ▪ 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)

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) 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
	  ○ Degree to which students actively pursue/take part in home/community reading activities
	▪ Literacy-related resources and support during COVID and how this may have affected present situation

School-related gender-based violence (SRGBV)	▪ While the team will not ask any direct questions related students' exposure to sexual and gender-based violence, related questions are included in order to capture more general information around the extent to which students know about whether they are protected in the school by a) a code of conduct that restricts such behaviors and b) an effective referral and reporting mechanisms to report such behaviors if they do occur. ▪ Students will also be asked more generally about what they dislike and like about their school and teachers, (probing on issues specifically around school climate and safety) ▪ New challenges and concerns since reopening / given situation during closures
Teachers and principals (interviewed separately, but same questions; (include SHN Champions – principal and science teacher))	
Topics	**Types of Questions**
Background information	▪ Teachers' tenure at the school
Access to and value of education	▪ Access to education in the community ▪ Gender-equity of access ▪ Parental involvement, etc.

	▪ How COVID-related closures may have affected access for some during re-openings
School feeding / nutrition	▪ Existence of and quality of kitchen, gardens ▪ Perceived effectiveness of feeding program; successes and areas for improvement
School health clubs / WASH / nutrition	▪ Perceived effectiveness of SHN champions and school health clubs on improving nutrition and WASH practices in schools ▪ Perception on WASH grants scheme ▪ Adequacy of SHN training ▪ Effectiveness of annual de-worming campaign
School literacy environment	▪ How much students are exposed to literacy activities within the school environment (e.g., presence of library, teacher reading exercises) ▪ 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-related resources and support during COVID-19 and how this may have affected present situation
Reading Clubs (Literacy Champions Only)	▪ Reflections on the efficacy of the school year and summer reading clubs ▪ Difference between in school / out of school uptake in Summer Reading Clubs ▪ Feasibility of teachers with added load as literacy champions; related events ▪ Adequacy of training received to be Literacy Champion
School-related gender-based violence (SRGBV)	▪ Perceived prevalence of SRGBV behaviors in the school (itemized by type of behavior e.g., bullying vs. Corporal punishment vs. Sexual abuse vs. Sexual harassment vs. Physical abuse) ▪ Positive discipline strategies (as alternative to corporal punishment) in place, and their effectiveness or limitations ▪ Existence of / effectiveness of school code of conduct to reduce SRGBV ▪ Existence of / effectiveness of reporting mechanisms for students/teachers to use to report violations of school code of conduct ▪ New challenges and concerns since reopening / given situation during closures
Parent-Teacher Associations	▪ Existence and activities of PTAs; specific successes and specific areas for improvement to enhance collaboration and effectiveness. ▪ Degree to which teachers / principals collaborate with PTA member parents ▪ Knowledge about future role of PTAs for engaging with parents ▪ Perception on WASH grants scheme ▪ Role during COVID-related closures and what has changed since reopening

Parents (mixed gender; members of PTA to be included)	
Topics	**Types of Questions**
Background information	▪ Questions about children's background
Access to and value of education	▪ Access to education in the community; specific barriers to access and full engagement (who is excluded) ▪ Gender-equity of access ▪ Parental involvement, etc. ▪ How COVID-related closures may have affected access for some during re-openings
School feeding / nutrition	▪ Perceived effectiveness of feeding program; successes and areas for improvement
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) reading materials) o 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 ▪ Degree to which students actively pursue/take part in home/community reading activities ▪ Literacy-related resources and support during COVID and how this may have affected present situation ▪ ~~Reflections on the efficacy of the school year and summer reading clubs~~ ▪ ~~Difference between in school / out of school uptake in Summer Reading Clubs~~
School-related gender-based violence (SRGBV)	▪ Knowledge of SRGBV behaviors (sexual and physical violence and harassment; bullying; corporal punishment) and agreement that they are negative behaviors ▪ While the team will not ask any direct questions related students' exposure to sexual and gender-based violence, related questions are included in order to capture more general information around the extent to which parents know about whether their children are protected in the school by a) a code of conduct that restricts such behaviors and b) an effective referral and reporting mechanisms to report such behaviors if they do occur. ▪ Parents will also be asked more generally about what their children dislike about their school and teachers, and what parents like and dislike about the school and teachers (probing on issues specifically around school climate and safety) ▪ New challenges and concerns since reopening / given situation during closures
Parent-Teacher Associations	▪ Existence and activities of PTAs; specific successes and specific areas for improvement to enhance collaboration and effectiveness. ▪ Degree to which teachers / principals collaborate with PTA member parents ▪ Knowledge about future role of PTAs for engaging with parents ▪ Perception on WASH grants scheme ▪ Role during COVID-related closures and what has changed since reopening

Government – County/District Education Officers, national-level ministries (Ministry of Education, Ministry of Health, and Ministry of Agriculture)	
Topics	**Types of Questions**
Background information	▪ Role in government; relationship with project
School feeding / nutrition	▪ Status of training of MOE school feeding division officials ▪ Input on progress related to MOE's desire to move to a Home-Grown School Feeding (HGSF) approach to school meals under the National School Feeding Policy (NSFP) ▪ knowledge of and agreement to ground rules on gardening activities; challenges to date
School health clubs / WASH / nutrition	▪ Opinions on the school health and nutrition manual used. ▪ Progress on Save collaboration with CEOs and DEOs to provide training to the SHN Champions ▪ Effectiveness of de-worming campaign
School literacy environment	▪ Feasibility of teachers with added load as literacy champions; related events
School-related gender-based violence (SRGBV)	▪ Development and revision of MOE Code of Conduct; mechanisms for roll-out and successes / challenges ▪ Work on supporting reporting mechanisms at school and district level; procedures for responding to reports against teachers and other staff
Parent-Teacher Associations	▪ Work supporting PTAs, particularly the emphasis on PTAs supporting literacy

Community Members KII - storekeepers	
Topics	**Types of Questions**
Background information	▪ Role in school/community; relationship with project

School feeding / nutrition	▪ Existence of and quality of kitchen ▪ Perceived effectiveness of feeding program; successes and areas for improvement ▪ Specific challenges managing storeroom and food management practices ▪ Adequacy of in-kind payments in form of take-home rations ▪ Effectiveness of take-home rations for students and volunteers (in summer)

Community Members -KII cooks

Topics	Types of Questions
Background information	▪ Role in school/community; relationship with project
School feeding / nutrition	▪ Existence of and quality of kitchen ▪ Perceived effectiveness of feeding program; successes and areas for improvement ▪ Specific challenges providing meals ▪ Adequacy of in-kind payments in form of take-home rations ▪ Effectiveness of take-home rations for students and volunteers (in summer)

Community Members KII - and non-teacher literacy champions (community volunteers)

Topics	Types of Questions
Background information	▪ Role in school/community; relationship with project
School literacy environment	▪ How much students are exposed to literacy activities within the school environment (e.g., presence of library, teacher reading exercises) o 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)
Home / community literacy environment / reading clubs	▪ 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 ▪ Degree to which students actively pursue/take part in home/community reading activities ▪ Reflections on the efficacy of the school year and summer reading clubs ▪ Difference between in school / out of school uptake in Summer Reading Clubs ▪ Adequacy of training received to be Literacy Champion

Project staff including community mobilizers

Topics	Types of Questions
Update since closures	▪ Detailed lines of inquiry to learn more about what specifically happened with regards to the work with / by government, roles of literacy champions, SHN champions, PTA, storekeepers, and cooks
Background information	▪ Role in school/community; relationship with project
General	▪ Perceived challenges and successes with particular role in project (customized to informant)
Community mobilization	▪ Quality of training received from Save ▪ Approximate reach thus far; sensitization activities delivered (e.g., which trainings and to whom) ▪ Challenges in training cooks, storekeepers ▪ Experiences working with parents ▪ Knowledge of / utility of SC community sustainability guide

Discussion Guides

Note that these discussion guides are written in Standard English, and the qualitative team is experienced in interpreting questions written in Standard English into Liberian English during interviews, or to otherwise rephrase the wording of the questions so as to help the participants understand the question being asked. For clarity, the discussion guides below will remain in Standard English and be used as-is for training the qualitative team, so they fully understand the content that we wish to obtain during interviews.

FGDs will begin with an age-appropriate ice-breaker.

Questions in green text are for intervention sites only; questions in black text will be asked of both comparison and intervention sites (with slight modification in how the question is asked to be specific to the group, as necessary).

Table 1: FGD Students (include students who are involved in Reading Clubs and FMCs)

#	Activity Topic	Specific Topic	Discussion Question and Probes
0	Background	Background information	[Age, gender, current year in school, size of household]
1	LB	Access to and Value of education	Do you think children need to go to school? For how long? Are there any differences between boys and girls? [short icebreaker question]
2	LB	Access to and Value of education	We know that during the COVID-19 school closures, a lot had changed in terms of being able to access learning. Now schools are reopened, and we want to talk about any new challenges that you see or have experienced in children being able to attend school on a regular basis. What are some of these challenges you see? Are these different from challenges before COVID-19, or the same? Are there some children who attend school more than others? What prevents some children in this community from going to school? Are there different reasons that prevent boys and girls from going to school? What usually happens when children are unable to attend regularly?
3	SF	School feeding / nutrition	We understand there had been an initiative in your school before the COVID-19 closures that provided students with hot meals. We know this was interrupted during closures but is beginning again. Please describe what you think the effect of having these school meals has been for you personally both before the closures and after the closures. What about for the school as a whole? (for FMCs only: What is your role on the food management committee? What are some challenges you face in your work? What would help?)
4	SHN	School health clubs / WASH / nutrition	Are you aware of the school health clubs and SHN champions in the school? If so, what sorts of activities do you see them engaged in? Is it effective and helpful? If so, in what ways; if not, why not? Have they been involved in any de-worming activities, to your knowledge? If so, please describe what this looks like?

5	SHN	School health clubs / WASH / nutrition	What is the status of Water, Sanitation and Health (WASH) in this school now that you are back in school after the interruption? How does it compare to the status of WASH prior to the interruption? What further improvements are needed now and how is the school dealing with them?
6	LB	School literacy environment	Now that you are back in school, what activities does your teacher in class or the school as a whole do with you to help you learn to read? Which are your favorite activities and are they helping you to learn to read? Which are the activities that you do not enjoy or do not find useful?
7	LB	Home / community literacy environment / reading clubs	I want to talk about whether you are encouraged to read outside of school / at home? First let's talk about before school was closed, did anyone encourage you to read outside of school? Who? Now I want to talk about during the school closures, what sort of encouragement to read did you receive? From who/ where (e.g. radio, pamphlets, adults in the community)? Did you appreciate the encouragement? Do you think it helped you to learn how to read better? Finally, I want to know about today, are you still getting this encouragement? From whom? Is it different now from before the closures? Thinking about today, in your community, do you think that reading with children is encouraged, or simply tolerated but not considered to be important? Is this a change from before COVID-19?
8	LB	Home / community literacy environment / reading clubs	Do you have any reading resources that you can use at home? Like what? Are there any sorts of book banks in the school or in the community that allow you to read anything outside of school hours? [If yes] how often do you read these materials outside of school? What is the process / rules for borrowing a book?; [if no] if these materials were available, do you think you would use them?
9	LB	School-related gender-based violence (SRGBV)	Are you aware of a school code of conduct? What sorts of behaviors, according to this code of conduct, are not allowed? [only probe to clarify what is said, do not introduce behaviors to the group if they are not offered] Show cards with images and words depicting the types of behaviors NOT allowed. Let the participant select the card and ask them why they chose it. If they didn't select a particular card, ask them why. Now, thinking about the lockdown time, how do you think we may need to reconsider the codes of conduct now that we're back in school.
10	LB	School-related gender-based violence (SRGBV)	In case a teacher or school administrator does something against this code of conduct, what should people do? Do people report, to whom? Can you give me an example of what might happen if a student reports that a teacher or school administrator was abusive or violent? What would happen? Would you feel comfortable reporting a teacher or school administrator if they did something wrong? Describe what it would be like if you reported a teacher or school administrator for being abusive or violent. [if a specific incident / behavior is mentioned in previous discussion question, refer to it again here to help students understand the question]
11	LB	School-related gender-based violence (SRGBV)	What is your favorite thing about being at school? How do the teachers and school administrators treat the students here? Are you happy at school? Do you feel safe at school? Tell me about a time when you felt safe at school? What are some of the things that make you not feel safe and happy? Are your feelings about being at school different now since the closures are over, as compared to before the closures? In what way?

Table 2: FGD Parents / Guardians (include PTA members and FMC members)

#	Activity Topic	Specific Topic	Discussion Question and Probes
0	Background	Background information	[Age, gender, # children and years in school, marital status, size of household]
1	LB	Access to and Value of education	Do you think children need to go to school? For how long? Are there any differences between boys and girls? [short icebreaker question]
2	LB	Access to and Value of education	We know that during the COVID-19 school closures, a lot had changed in terms of being able to access learning. Now schools are reopened, and we want to talk about any new challenges that you see or have experienced in children being able to attend school on a regular basis. What are some of these challenges you see? Are these different from challenges before COVID-19, or the same? Are there some children who attend school more than others? Are there different reasons that prevent boys and girls from going to school? What usually happens when children are unable to attend regularly?
3	SF	School feeding / nutrition	We understand there had been an initiative in your child's school before the COVID-19 closures that provided students with hot meals. We know this was interrupted during closures but is beginning again. Please describe what you think the effect of having these school meals has been for you and your child personally both before the closures and after the closures. What about for the school as a whole? (for FMCs only: What is your role on the food management committee? What are some challenges you face in your work? What would help?)
4	SHN	School health clubs / WASH / nutrition	[PTA only] What is your impression of the grants scheme to improve WASH in your school? Has there been any work done yet to apply for such a grant?
5	LB	Home / community literacy environment / reading clubs	I want to talk about whether you encourage your child to read outside of school / at home? First let's talk about before school was closed, did you encourage your child to read outside of school, or did you read to them, even if not specifically for schoolwork? Now I want to talk about during the school closures, what if anything did you do with your child? How did you help or encourage them? Do you think it helped you them to learn how to read better? Were there other resources provided to help your child to read? From who/ where (e.g. radio, pamphlets, adults in the community)? Finally, I want to know about today, will you be providing any encouragement or reading to your children? Is it different now from before the closures? Thinking about today, what do you think is typical in your community as it relates to parent involvement in children's reading. Is reading with children encouraged, or simply tolerated but not considered to be important?

6	LB	Home / community literacy environment / reading clubs	Not including resources in the school, are there any sorts of book banks in the school or in the community that allow your children to read anything outside of school hours? [If yes] how often do your children read these materials outside of school? What is the process / rules for borrowing a book?; [if no] if these materials were available, do you think they would use them outside of school?
7	LB	School-related gender-based violence (SRGBV)	Are you aware of a code of conduct for teachers and school administrators at your child's school? What sorts of behaviors, according to this code of conduct, are not allowed? [only probe to clarify what is said, do not introduce behaviors to the group if they are not offered]. Show cards with images and words depicting the types of behaviors NOT allowed. Let the participant select the card and ask them why they chose it. If they didn't select a particular card ask them why.
8	LB	School-related gender-based violence (SRGBV)	If a teacher or a school administrator is abusive or acts violently towards your child, what would you do? Do you have any rights as a parent? Could you report the incident? Describe what it would be like if you reported a teacher or school administrator for being abusive or violent [if a specific incident / behavior is mentioned in previous discussion question, refer to it again here to help parent understand the question
9	LB	School-related gender-based violence (SRGBV)	Do you think your child feels happy at school? Do you think your child feels safe at their school? In general, do you see your child's school as a positive, safe place for them to be? Thinking about the people there and the resources they have there, what are some of the areas that need to be improved at their school, especially related to your child's safety and well-being?

Are your feelings about your children being at school different now since the closures are over, as compared to before the closures? In what way? |
10	SF	Parent-Teacher Associations	Do you engage with your child(ren)'s teacher about their education? If so, what is the nature of that engagement? Do you find it useful? If not, what might make such engagement easier?
11	SF	Parent-Teacher Associations	Please describe this school's parent-teacher association. When was it established, who is involved (how many members), what sorts of activities do they work on? [probe: codes of conduct, meal provision, WASH infrastructure management; school meals). What are the PTA's main goals and mandate? What has been the role of mobilizers in establishing and strengthening PTAs? What are some of the major challenges the PTA faces in achieving its mandate?
12	SF	Parent-Teacher Associations	What sorts of messages have you heard relating to the PTAs role in engaging with parents on issues related to the children's education? Do you think such engagement strategies will be effective?

Table 3: FGD Teachers/KII Principals (include SHN Champions – principal and science teacher; FMC Member – Vice Principal)

#	Activity Topic	Specific Topic	Discussion Question and Probes
0	Background	Background information	[Age, gender, # years teaching in this school, # years teaching overall, certifications obtained]
1	LB	Access to and Value of education	Do you think children need to go to school? For how long? Are there any differences between boys and girls? [short icebreaker question]
2	LB	Access to and Value of education	We know that during the COVID-19 school closures, a lot had changed in terms of being able to access learning. Now schools are reopened, and we want to talk about any new challenges that you see or have experienced in children being able to attend school on a regular basis. What are some of these challenges you see? Are these different from challenges before COVID-19, or the same? Are there some children who attend school more than others? What prevents some children in this community from going to school? Are there different reasons that prevent boys and girls from going to school? What usually happens when children are unable to attend regularly?
3	LB	School literacy environment	What activities do you do in class or the does the school as a whole do with learners to help them learn to read? Which are their favorite activities and are they helping you to learn to read? Which are the activities that they do not enjoy or do not find useful? Are the activities that you do now, after the closures, going to be any different from those you did before the closures? If so, please explain the differences and why you are approaching activities differently.
4	LB	School literacy environment	Thinking about before closures, during closures, and today now that schools are reopening, how have students been encouraged to read outside of school / at home? First let's talk about before closures – was there encouragement? By whom? What happened during closures? Was there any support? From who/ where (e.g. radio, pamphlets, adults in the community)? Will any encouragement that took place during the closures endure? Why / why not? Do you think that students have appreciated the encouragement?

In your community, do you think that reading with children is encouraged, or simply tolerated but not considered to be important? |
| 5 | | | Do students have any reading resources that they can use at home? Like what? Are there any sorts of book banks in the school or in the community that allow children to read anything outside of school hours? [If yes] Do they access them? What is the process / rules for borrowing a book?; [if no] if these materials were available, do you think they would use them outside of school? |
| 6 | LB | School literacy environment | How do you feel about your present workload as a teacher? Do you have sufficient time to complete all your tasks? What extra tasks have you been given in the last one year or so? Could you take on more? What would you need to be able to take on more responsibilities? How have the school closures affected your workload today? |

7	LB	Home / community literacy environment / reading clubs	(Literacy Champions Only) Do you feel as though you have been adequately trained to be a literacy champion, leading these clubs? Please explain what training you have gotten, and what more you feel you would need to be more effective in your role? Please reflect specifically on the work you did during the school closures
8	SF	Parent-Teacher Associations	Do parents engage with you directly about their child(ren)'s education, s? Do all, most, or few parents engage with you? What is the nature of their engagement and do they/you find it useful? What type of engagement do you feel is most successful in supporting children? Are there certain types of parents who tend/tend not to engage with you? What might make engagement easier and more productive for both you and parents? Did parents attempt to engage during closures? Has this engagement changed as compared to their engagement before the closures?
9	SF	Parent-Teacher Associations	Please describe this school's parent-teacher association [probe: codes of conduct, meal provision, WASH infrastructure management; school meals). What is your involvement with the PTA? What was your role on the PTA during the school closures? What is it now and is this different from before the closures? What has been the role of mobilizers in establishing and strengthening PTAs?
10	SF	Parent-Teacher Associations	What sorts of messages did you hear during closures relating to the PTAs role in engaging with parents on issues related to the children's education? Do you think such engagement strategies were effective? Have you heard of such engagement now that schools are reopened?
11	SF	School feeding / nutrition	We understand there had been an initiative in your school before the COVID-19 closures that provided students with hot meals. We know this was interrupted during closures but is beginning again. Please describe what you think the effect of having these school meals has been for you personally both before the closures and after the closures. What about for the school as a whole? (for FMCs only: What is your role on the food management committee? What are some challenges you face in your work? What would help?)
12	SF	School feeding / nutrition	Is there a kitchen at this school? When was it built/opened? Does it have adequate materials and is well-maintained? Who are the staff working in it? Is there a school garden?
13	SHN	School health clubs / WASH / nutrition	Are you aware of the school health clubs and SHN champions in the school? If so, what sorts of activities do you see them engaged in, both during closures and today? Is it effective and helpful? If so, in what ways; if not, why not? Have they been involved in any de-worming activities, to your knowledge? If so, please describe what this looks like? (SHN Champion only: What is your particular role as an SHN Champion? What are some challenges you face in this role; what would help? What sort of training did you receive as an SHN Champion? Was it adequate? What topics did you learn about? Did your training include guidance on participatory or child-to-child methodologies?)
14	SHN	School health clubs / WASH / nutrition	What is the status of WASH in this school now that you are back in school after the interruption? How does it compare to the status of WASH prior to the interruption? What further improvements are needed now and how is the school dealing with them? [PTA only] What is your impression of the grants scheme to improve WASH in your school? Has there been any work done yet to apply for such a grant?
15	LB	School-related gender-based violence (SRGBV)	What are some of the strategies you use to discipline students in your classroom? Are they effective? Have you been trained on any alternative discipline strategies? What do other teachers use, to your knowledge? Would you benefit from training or resources to help you maintain a controlled classroom?

16	LB	School-related gender-based violence (SRGBV)	Are you aware of a school code of conduct? What sorts of behaviors, according to this code of conduct, are not allowed? Show cards with images and words depicting the types of behaviors NOT allowed. Let the participant select the card and ask them why they chose it. If they didn't select a particular card, ask them why. [Only probe to clarify what is said, do not introduce behaviors to the group if they are not offered]
17	LB	School-related gender-based violence (SRGBV)	If one of your colleagues violates something in this code of conduct, what would you do? Can you think of any examples where you would choose to not do anything? Is there a procedure in place where you could report the incident? To your knowledge, is this an effective mechanism to report incidents? Would you trust it enough to use it in case you needed to? If not, why not?
18	LB	School-related gender-based violence (SRGBV)	What do you do to make students feel safe at school? Do you feel as though there are any new challenges that you'll need to consider given the time students spent away from school?

Table 4: Project Staff KII – General Framing Topics to probe into

#	Activity Topic	Specific Topic	Discussion Question and Probes
0	Background	Background information	[Age, gender, role in school/community/project, education level]
	LB	Home / community literacy environment / reading clubs	What was the role of the Literacy Champions during closures? Please provide me a detailed example of a week for one of these people. What was their responsibility? What were they aiming to accomplish? What training / support did they get? How often did they work on the various activities associated with this position? How were they monitored? - In particular, please elaborate on what specifically was their role with the Home Learning Program and the associated packets, radio, SMS
	LB	Parent-Teacher Associations	As with Literacy Champions in the previous question, I'd like to know more about the PTA members. Please provide me a detailed example of a week for one of these people. What was their responsibility? What were they aiming to accomplish? What training / support did they get? How often did they work on the various activities associated with this position? How were they monitored? In particular, please elaborate on what specifically was their role with the Home Learning Program and the associated packets, radio, SMS
	SHN	School health clubs / WASH / nutrition	Now I'd like to know more about SHN Champions. Please provide me a detailed example of a week for one of these people. What was their responsibility? What were they aiming to accomplish? What training / support did they get? How often did they work on the various activities associated with this position? How were they monitored?
	SHN	School health clubs / WASH / nutrition	Please explain how, during the COVID-19 closures and since, engagement with government may have changed in terms of the following activities which were expected to have been ongoing before those closures: - Progress of MOE moving to the 'Home Grown School Feeding' Approach to school meals - MOE school feeding officials who were meant to be trained on the school feeding project

#	Activity Topic	Specific Topic	Discussion Question and Probes
			- DEOs who were meant to be training kitchen staff - Select training for some MOE staff to know about the ground rules for gardening activities that have been established? - SHN Health Education Manual and its adaptation to the Liberian context - Training of SHN Champions and roll-out of work with school health clubs - Revision and roll-out of school codes of conduct - Work to support advocacy and enforcement of school codes of conduct - Work with PTAs
1	**Gen**	Gen	What are the biggest challenges you have faced in your role as [specify] in this community? *[start with biggest issue the respondent sees, and ask all follow up questions. Then, continue onto the next biggest issue, and ask follow up questions. Try to cover at least the three biggest issues]*. Is this an issue in other communities? What are some of the ways that you've tried to overcome this challenge? What would help?
2	**Gen**	**Gen**	What are some of the biggest successes you have had in your role as [specify] in this community? *[As with previous question, start with biggest success the respondent sees, and ask all follow up questions. Then, continue onto the next biggest success, and ask follow up questions. Try to cover at least the three biggest successes]*. How can you further build on this success and/or maintain it? Do you think other communities have been as successful? Why/why not?
3	**Gen**	**Community mobilization**	Describe the training you have received from Save on performing your role. Have you had training on participatory community mobilization? Was it effective? What about training on codes of conduct? Are you knowledgeable about the SC community sustainability guide? Please explain how it is utilized at the school / community level.
4	**Gen**	**Community mobilization**	What are the specific sensitization activities that you personally have delivered (e.g. which trainings and to whom)? Did you feel adequately prepared to deliver these? Were those who received your trainings receptive? What would help?
5	**Gen**	**Community mobilization**	Have you trained storekeepers and cooks? Do you feel adequately prepared? Do you feel as though the storekeepers and cooks that you trained are ready to perform their tasks? If no, what more do they need?
6	**Gen**	**Community mobilization**	Have you worked directly with parents yet? Doing what? What has been your experience?

USDA McGovern-Dole International Food for Education and Child Nutrition in Liberia

Midterm Impact and Project Evaluation Scope of Work

Save the Children

Liberia Empowerment through Attendance, Reading, and Nutrition (LEARN)

November- December 2019

Table of Contents

Table of Exhibits

List of Acronyms

DID	Difference-in-differences
EGRA	Early Grade Reading Assessment
FGD	Focus group discussion
ICC	Intra-cluster correlation
ILAB	US Bureau of International Labor Affairs
IRB	Institutional Review Board
KAP	Knowledge attitudes and practices
KII	Key informant interview
LB	Literacy Boost
LBRA	Literacy Boost Reading Assessment
LEARN	Liberia Empowerment through Attendance, Reading, and Nutrition
MDE	Minimum detectable effect
McGovern-Dole	McGovern-Dole International Food for Education and Child Nutrition
MoE	Ministry of Education
PMP	Performance Monitoring Plan
PTA	Parent-Teacher Association
RCT	Randomized control trial
RFP	Request for proposals
SC	Save the Children Federation, Inc.
SF	School feeding
SGBV	Sexual and Gender Based Violence
SHN	School Health and Nutrition
SO	Strategic objective
TOR	Terms of Reference
USDA	United States Department of Agriculture
WOPE	Whole of project evaluation

1.   Introduction

The purpose of this document is to describe the objectives and methodological requirements for the midterm project and impact evaluations of the Liberia Empowerment through Attendance, Reading, and Nutrition (LEARN) program. In this document, IMPAQ will also explain the necessary adjustments to the initial evaluation plan from baseline for the addition of the second cohort in August 2018.

1.1 Background

LEARN is a five-year project (1 October 2017 – 30 September 2022), 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 in partnership with SC Liberia, Mercy Corps, and government partners, including the Ministry of Education (MOE), the Ministry of Agriculture, and the Ministry of Health. Overall, LEARN aims to reach 112,498 direct beneficiaries in which 79,290 of them (students) receive meals through school feeding activities in a total of 220 schools across two baseline cohorts. The first cohort of the LEARN program covers 147 schools across four counties, including Grand Bassa, Grand Gedeh, Rivercess, and River Gee; while the second cohort covers 73 schools in all counties, except for Grand Gedeh. Although the second cohort was added to the program in August 2018, both cohorts of schools receive the same activities in order to achieve the McGovern-Dole objectives.

LEARN program activities fall into three intervention packages designed to achieve USDA's two strategic objectives: (1) improved the literacy of school-age children by enhancing the quality of instruction, and increasing student attentiveness and attendance; and (2) increased 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. Appendix B provides a snapshot of the results framework. A full list of activities for each of the three intervention packages across the four counties in both cohorts are shown in Exhibit 1.

Exhibit 1. Program Activity Packages

School Feeding Base Package (SF)	Literacy Boost (LB)	School Health & Nutrition (SHN)
▪ Provide school meals ▪ Provide take-home rations for girls (Grades 4-6) ▪ Distribute deworming medications, vitamins, and minerals ▪ Institute teacher recognition ▪ Build/rehabilitate storerooms, kitchens, stoves, latrines ▪ Establish Parent Teacher Associations (PTAs) ▪ Provide training on PTAs, food preparation & storage, good health & nutrition, commodity management	▪ Establish activities to promote literacy ▪ Train teachers to lead Reading Camps ▪ Establish libraries ▪ Produce books & reading materials ▪ Promote increase community awareness on SGBV[64]	▪ Establish school gardens ▪ Improve health and nutrition practices by training teachers to lead School Health Clubs

Source: Terms of Reference (TOR)

Not all targeted counties receive the same LEARN interventions. In Grand Gedeh, which is the focus of the impact evaluation, 20 schools receive school feeding (SF), Literacy Boost (LB), and school health and nutrition (SHN) activities, while a different set of 22 schools receive only the SF base package. The distribution of the intervention packages in the other three counties are as follows: River Gee schools receive both the base SF package and the LB package; Grand Bassa schools only receive the SF intervention; and schools in Rivercess receive the SF and SHN package of activities.

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[64] All four counties, regardless of their intervention packages, also receive the promoting the code of conduct intervention.

1.2 Midterm Evaluation Objectives

SC has selected IMPAQ International, LLC (IMPAQ) to conduct impact and project evaluations of LEARN program in the four aforementioned counties in Liberia as shown in the map below (see Exhibit 2).

IMPAQ designed the project and impact evaluations in parallel to maximize comparability in the outcome indicators and findings by using qualitative and quantitative methods. The impact evaluation of the project focuses on measuring the causal effect of LEARN activities on literacy, and health and nutrition knowledge, attitudes and practices (KAP) outcomes among school-age children in Grand Gedeh County. Alternatively, the project evaluation measures changes over the life of the project across all LEARN targeted counties in both cohorts. The objectives of these evaluations together at midterm are:

Exhibit *2*. LEARN Targeted Counties in Liberia

- ■ To assess the progress of LEARN implementation;
- ■ To examine the relevance and early effectiveness of the interventions;
- ■ To determine whether the project is on track to meet its goals;
- ■ To chronicle sustainability efforts to date;
- ■ To summarize lessons learned to date; and
- ■ To make early recommendations to ensure that the program is on track to meet its objectives.
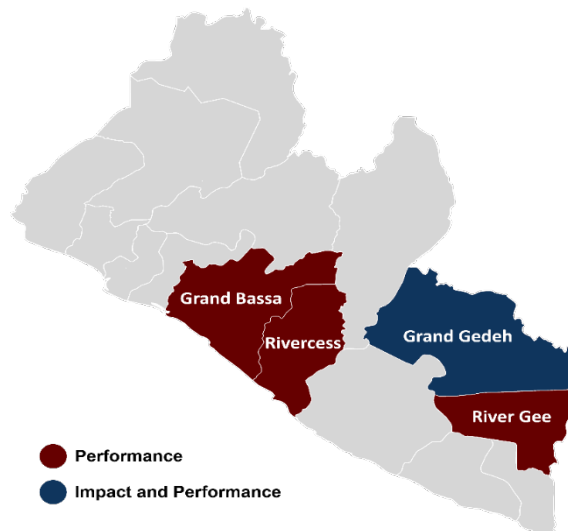
1.3 Research Questions

To achieve the aforementioned objectives, the midterm evaluation will assess the relevance, effectiveness, efficiency, sustainability, and impact of the key project interventions. Key evaluation questions for the midterm are detailed below:

Exhibit 3. Key Evaluation Questions

EVALUATION QUESTION	DATA ANALYSIS METHOD & DATA SOURCE
Relevance	
1. Do program stakeholders (students, teachers, PTAs, parents, and local officials) feel the LEARN program is meeting their needs?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
2. Are the school in-meals and take-home rations culturally appropriate?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
3. Are the take home rations adequately meeting household needs?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders

EVALUATION QUESTION	DATA ANALYSIS METHOD & DATA SOURCE
4. Are book bank titles perceived as culturally appropriate and age-appropriate for primary school students, including over-age learners?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
5. Did stakeholders feel that their voices were heard, and their needs considered throughout the program?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
6. Have activities to support literacy and improved nutrition been integrated in culturally appropriate ways in the target communities?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
Effectiveness	
7. To what extent has the program achieved its output and outcome targets?	**Qualitative & quantitative analysis;** (i) Literacy Boost assessment tool, (ii) Student surveys, (iii) Health KAP assessment tool, (iv) KIIs and FGDs with program beneficiaries and stakeholders
8. What factors have inhibited or facilitated the achievement of program goals, objectives, and expected results?	**Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
Efficiency	
9. Have intervention components been delivered within their planned timeline?	**Qualitative analysis;** KIIs with LEARN Staff
10. Are commodities being delivered within their planned timeline?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
11. How often are schools using produce from their school gardens to supplement USDA donated food?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
12. Which commodity management strategies were most efficient for quick delivery and reduction of waste and theft?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, government officials, principals and teachers
13. Did school gardens produce enough food to supplement school meals adequately?	**Qualitative analysis;** KIIs and FGDs with, parents, students, principals and teachers
Sustainability	
14. What additional inputs are necessary to achieve sustainability?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
15. What are the current barriers to achieving sustainability?	**Qualitative analysis**; KIIs and FGDs with program beneficiaries and stakeholders.
16. Do schools have the necessary infrastructure and food management plans in place to continue feeding after the program concludes?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
17. Do schools/communities have the necessary systems in place to recruit and maintain volunteers for reading camps?	**Qualitative analysis**; KIIs and FGDs with LEARN staff, teachers, principals, and government officials
18. What are the necessary components for successful school handover of activities to the government and local community, as modeled by this program?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
19. Is there evidence that LEARN program activities and benefits are likely to continue or to scale up after the project ends?	**Qualitative analysis;** KIIs and FGDs with LEARN Staff, Principals and Teachers
Impact	

EVALUATION QUESTION	DATA ANALYSIS METHOD & DATA SOURCE
20. Have the literacy skills of school-age children generally improved in the LEARN program area?	**Quantitative analysis**; Literacy Boost assessment tool in project and impact evaluation counties
21. Has LEARN contributed to increases in enrollment of school-age children?	**Quantitative analysis;** Depending on quality and accuracy of the enrollment records available in schools
22. Have nutrition, dietary, and food safety practices in schools improved in the LEARN program area?	**Qualitative & Quantitative analysis;** (i) KIIs and FGDs with beneficiaries and stakeholders, (ii) Health KAP assessment tool
23. Are PTAs meeting on a regular basis and contributing effectively to the schools?	**Qualitative analysis;** KIIs and FGDs with teachers, PTA members, and principals
24. Have there been any positive or negative impacts in the target areas, besides the realization of the strategic objective-level results?	**Qualitative analysis;** KIIs and FGDs with beneficiaries and stakeholders
25. How do the literacy and health KAP outcomes compare across the three treatment groups in Grand Gedeh county? Is there evidence of a positive impact of LEARN on literacy and health KAP outcomes?	**Quantitative analysis;** (i) Literacy Boost assessment tool; (ii) Health KAP assessment tool
26. How have the SGBV activities affected knowledge and practices among students and teachers?	**Quantitative & Qualitative analysis;** KIIs and FGDs with teachers and parents
27. Has LEARN improved access to and the quality of early grade reading materials in Liberia?	**Quantitative & Qualitative analysis;** KIIs and FGDs with program beneficiaries and stakeholders
28. How has the home literacy environment in target communities changed in the LEARN program area?	**Qualitative & Quantitative analysis;** Student surveys in project and impact evaluation counties

2. Evaluation Approach

As explained in Section 1, the evaluation of LEARN entails an impact and a project evaluation using a mixed-methods approach. In 2018, IMPAQ completed the baseline data collection for both evaluations.[65] For the midterm, IMPAQ will follow the same evaluation methodology used in the baseline to generate an appropriate comparison with the midterm using USDA guidelines.

This section describes the research questions, evaluation methodologies (quantitative and qualitative), as well as any modifications that IMPAQ had to make for the impact and project evaluations of the LEARN interventions at midterm.

2.1 Quantitative Design

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[65] Impact baseline evaluation was completed in April 2018. For the project evaluation, IMPAQ completed the baseline of the first cohort in April 2018, and the second cohort in September 2018.

2.1.1 Impact Evaluation

Design and Sampling

In the impact evaluation, IMPAQ measures the effect of the various LEARN activity packages on literacy and health KAP outcomes among Grade 2 students only in Grand Gedeh county. Our initial power analysis confirmed that a sample size of 1,320 students, equally divided into 22 schools each for the two treatment arms and the control group (66 schools in total), would be sufficient to detect the minimum detectable effect size (MDE) of 0.42 standard deviations (SD) with a 95 percent level of confidence.[66]

During the baseline evaluation, as a result of changes to SC's implementation design, as well as more limited than expected number of available schools and students due to inflated EMIS enrollment numbers and rainy season conditions, IMPAQ revised its original sampling frame. Specifically, IMPAQ surveyed a smaller sample of 55 schools that were active and open at baseline rather than 66 schools. Thus, 11 schools were not surveyed. Further, within each of the 55 schools, IMPAQ ended up with an average of 12 students per school rather than 20 second graders. This limitation resulted in loss of power. With averages of 19 schools per treatment or control group and 12 students per school, the minimum the minimum detectable effects (MDEs) increased to 0.45 S.D. That is, the program activities need to be even more effective than initially anticipated in order for their impact to be captured by the analysis. This limitation is important because LEARN may very well have positive effects that IMPAQ will not be able to identify. Only much larger effects can be estimated to be statistically significant with smaller sample sizes.

Reassuringly, there is no bias introduced by not surveying 11 schools (out of the original impact sample of 66) that were not accessible. That is, these schools could introduce a potential bias if there was a skewed proportion of treatment or control schools among these 11 schools. However, IMPAQ clustered schools and conducted random treatment assignment *after* baseline data collection on the modified sample (55 schools). Thus, no systematic bias is expected by the 11 schools that IMPAQ was unable to visit during baseline.[67]

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[66] The power calculations used 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.

[67] Specifically, at the end of baseline data collection, based on the geographic location of each school, mapped using GPS coordinates, IMPAQ created 18 clusters of schools not more than 10 kilometers apart. In two towns in Grand Gedeh, it was not feasible to create small clusters of three or four schools without running into contamination and spillover concerns. Most clusters consisted of an average of three schools, but the two biggest clusters included 10 and eight schools. These two large clusters were assigned to different treatment arms. Keeping the two large clusters apart, IMPAQ randomly assigned all 18 clusters into three groups: two treatment groups and one control group. Furthermore, to ensure that SC reaches its target number of beneficiaries, IMPAQ designated one group of schools, including the largest cluster, to receive the combined package of all program activities. A second group of schools, including the second largest cluster, was selected to receive the basic school feeding package. The third group of clusters, the control group with the smaller clusters, did not receive any program activities.

At midterm, although with a smaller sample of schools (a total of 55), the evaluation team will follow the same sampling strategy as baseline for selecting students within each group: 10 boys and 10 girls from second grade at random (see Exhibit 4).

Exhibit 4. Proposed Numbers of Schools and Students in Impact Sample at Midterm

	SF	LB+SF+SHN	Control	Total
Proposed number of schools sampled	22	20	13	**55**
Proposed number of students surveyed	440	400	260	**1,100**

IMPAQ will select a sample of students at the school level by physically lining up second grade boys and girls separately in their classrooms. To identify the nth student for random selection, IMPAQ will use a simple rule as follows:

$$n^{th} girl\ or\ boy\ to\ sample\ = \frac{Total\ number\ of\ girls\ or\ boys\ in\ each\ grade}{Total\ number\ of\ girls\ or\ boys\ to\ be\ selected}$$

For example, if there are 20 female second graders and IMPAQ requires ten for the study, then IMPAQ will select every other girl from the line (20/10 = 2). IMPAQ will apply the same rule to select students systematically from all sampled schools and by gender. In the absence of pre-established electronic class lists, this approach ensures sampling consistency across schools and will achieve a random sample of students who were present on the day of data collection.

Impact Data Analysis

At midterm, IMPAQ will perform initial descriptive analyses with the data and assess the equivalence of the treatment groups in Grand Gedeh using comparison of means through clustered t-tests and chi-squared analyses. These equivalences will help the evaluation team assess the similarity of average characteristics and outcomes between the treatment and control groups at midterm. IMPAQ will then estimate the program effects using regression analysis of student outcomes by using a difference-in-differences (DID) specification. As needed, IMPAQ will disaggregate impacts by gender, socio-economic status, and home literacy environment.

2.1.2 Project Evaluation

Design and Sampling

The quantitative component of the project evaluation will measure the progress of the performance indicators in outcomes related to core LEARN activities from the baseline to midterm, and endline. To accurately reflect changes in program performance over time, IMPAQ will measure the same program indicators at all three data collection points.

IMPAQ will track key literacy and health KAP indicators over time with cross-sections of Grade 2 and Grade 6 students[68] across all four LEARN counties. At baseline, IMPAQ followed the

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[68] For Grade 6 students, IMPAQ only focuses on health and nutrition KAP, SGBV, and perceived gender norms.

recommendations from the USAID EGRA Toolkit[69] to confirm that a sample size of 830 second graders for the literacy outcomes and 498 sixth graders for the health KAP outcomes were needed. Based on these power calculations, IMPAQ confirmed that a sample of 83 schools (with an average of 10 students per school) was needed for the project evaluation.

However, in response to external challenges during baseline data collection, IMPAQ increased the number of sampled schools and replaced other inaccessible schools in order to maintain the evaluation sample size. Additionally, IMPAQ conducted a second baseline data collection with a separate cohort of schools after SC added a second cohort of schools to the program. Overall, IMPAQ collected data in 85 schools in the first cohort (Summer 2018) and 61 schools in the second cohort (Fall 2018) at baseline, with an average of 10 second grade and 5 sixth grade students per school.[70]

At midterm, IMPAQ plans to select a random sample of 85 schools (based on the sample size at baseline) from the 220 schools in which LEARN is being implemented. The 85 schools will be representative of schools that were assessed across both cohorts at baseline and will be selected in the following manner:

- First, we will determine the number of schools to be sampled in each county and from each baseline cohort using a proportional to size approach based on the distribution of LEARN schools in each county and cohort.

- Once we have determined the number of schools to sample in each county and cohort (shown in Exhibit 5), IMPAQ will then select the actual schools for the midterm and endline project evaluation. To select these schools, IMPAQ will use a probability proportional to size sampling method based on the number of surveys administered in each school at baseline. This strategy allows us to draw a representative sample from the schools in which LEARN is being implemented, while ensuring that IMPAQ uses more baseline data per school to construct our baseline sample performance measures.[71]

Exhibit 5 shows the representative sample of schools selected proportionally from each county, based on the schools in which LEARN is being implemented.

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

County	Number of schools in LEARN	Cohort 1 LEARN schools	Cohort 2 LEARN schools	Cohort 1 Evaluation Sample	Cohort 2 Evaluation Sample	Total Grade 2 students (10 per school)	Total Grade 6 students (6 per school)
Grand	95	40	55	15	21	360	216
Grand	42	42	0	16*	0	160*	96

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

[70] The actual number of students surveyed in each school varied due to variation in the number of students present on the day data were collected.

[71] This school selection strategy will not affect the impact evaluation sample and design. IMPAQ will visit all 55 baseline schools that are part of the impact evaluation.

County	Number of schools in LEARN	Cohort 1 LEARN schools	Cohort 2 LEARN schools	Cohort 1 Evaluation Sample	Cohort 2 Evaluation Sample	Total Grade 2 students (10 per school)	Total Grade 6 students (6 per school)
Rivercess	44	30	14	12	5	170	102
Rive Gee	39	35	4	13	3	160	96
Total	**220**	**147**	**73**	**56**	**29**	**850**	**510**

*The 16 schools needed for the project evaluation in Grand Gedeh will be a subset of the impact evaluation sample.

After selecting the schools in each county, IMPAQ will implement the same procedure used at baseline to select students for the survey. Within each sampled school, IMPAQ will select students by physically lining up the boys and girls separately in their classrooms (refer to the approach described for the impact evaluation sampling above). For the project evaluation, IMPAQ will select a total of 10 students (5 boys and 5 girls) from second grade and a total of 6 students (3 boys and 3 girls) will be selected from sixth grade.

Project Data Analysis

IMPAQ will use a pre-post comparison method to assess the performance on key outcomes. IMPAQ will use this methodology to assess and quantify LEARN's progress by tracking changes in outcomes over time, using baseline and midterm data on outcomes measured in the same manner. The pre-post comparison method implicitly assumes that the program rollout for both cohorts is approximately the same and both cohorts receive the same level of exposure to the program interventions. For assessing performance on literacy skills, IMPAQ will compare the literacy scores of midterm samples with the baseline cohort that best matches the timing of data collection to optimize comparability of outcomes. To analyze progress on other outcomes, IMPAQ will use the aggregated values from the midterm sample of 85 schools as described above. IMPAQ will also implement sub-group analysis, such as disaggregation by county, gender, and activity package. IMPAQ will also implement any sub-group analysis, if the sample size permits, to examine any differences in the timing of implementation of LEARN activities across schools or counties.

2.1.3 Quantitative Data Sources

For the midterm evaluation, IMPAQ will administer the same student survey, including the Literacy Boost Reading Assessment (LBRA), which was developed, cognitively tested, and used for both rounds of baseline data collection.

The student survey will be collected from Grade 2 and Grade 6 students focusing on six key topics: (1) Hygiene and health knowledge and practices; (2) Nutrition knowledge; (3) Sexual and gender-based violence (SGBV); (4) School environment; (5) Home literacy environment; and (6) Disability.

Along with the student survey, IMPAQ will conduct the same LBRA, which IMPAQ developed based on the Liberian second-grade textbooks, and the Ministry of Education validated in a one-day workshop to measure Grade 2 students' literacy skills. The test comprises four subtests, including letter recognition, reading familiar words, reading unfamiliar words, and reading or listening with comprehension.

2.1.4 Limitations

The limitations in the midterm evaluation are similar to those mentioned in the baseline reports. The main limitation is that the quantitative approach relies on self-reported data from children for a number of socially and culturally sensitive subjects such as SGBV. Although IMPAQ adopts best practices in eliciting this information, this information could still have some degree of measurement error, similar to data collected in other contexts on such sensitive topics.

IMPAQ devoted considerable attention to cognitive testing of the survey instrument with students in Grades 1–5 before the baseline project evaluation in 2017. In consultation with the local partners, IMPAQ then adjusted question phrasing to make sure children could understand the questions and feel comfortable answering. However, to minimize this limitation further and improve data reliability at midterm, IMPAQ will also rely on lessons learned from the baseline and incorporate some of these topics in qualitative interviews to triangulate with quantitative data.

Qualitative Design

Building upon the approach at baseline and considering the findings obtained, the midterm qualitative research will focus on perceived changes at the school and community levels after two years of program implementation. IMPAQ will gain a more in-depth understanding of project progress to date, including early successes and challenges, and threats to sustainability so that IMPAQ can make relevant recommendations to strengthen program impact. Below IMPAQ details the sampling design, types of respondents, and analysis to respond to the pertinent research questions at this stage of program activities.

Design and Sampling

Similar to the sampling employed at baseline IMPAQ will select three schools in each of the four counties for a total of 12 schools. IMPAQ will examine a variety of characteristics to ensure that IMPAQ include perspectives from disparate types of schools and communities, including locale (rural, peri-urban, urban), and student enrollment in Grade 2. Consultation with SC, as well as any relevant monitoring data, will also drive our school selection to help contextualize the findings. For example, IMPAQ may choose schools that have both particularly high and low

monitoring results (for example, cooking rates, PTA take-up, etc.) to learn more about the factors that facilitate or impede program success.

Regarding the selection of respondents at each school, to maintain consistency from baseline to midterm, IMPAQ anticipates conducting similar key informant interviews (KIIs) and focus group discussions (FGDs). An illustrative list of respondents at midterm include:

- Parents (mixed-gender, with representation from Parent-Teacher Association (PTA) members)
- Principals
- Teachers (mixed Grade 2 and Grade 6)
- Students (Grades 4 through Grade 6; separate FGDs for boys and girls)
- Government – County/District Education Officers, national-level ministries (Ministry of Education, Ministry of Health, and Ministry of Agriculture)
- Community members – cooks, storekeepers, recordkeepers, and literacy champions

Our previous research shows that talking to principals and teachers separately leads to more uninhibited responses, as there is often a power imbalance between these two positions. As such, IMPAQ will continue this practice from baseline. Additionally, in the Liberia context, IMPAQ found no need to separate parent FGDs by gender as mothers feel comfortable expressing their opinions even in the presence of their spouses and other male community members.

IMPAQ will also expand the respondents to students, government stakeholders, and community members involved with the project. In speaking with children, we will aim for higher grades with older children who may be well suited to answer questions regarding their opinions on school feeding, awareness and appraisal of the LEARN project, as well as experience related to cross-cutting issues. To ensure the comfort of young girls with the facilitators in these student FGDs, IMPAQ will ensure to employ same gender interviewers.

As well, for all FGDs at the community level, if participants cannot converse in Liberian English or any ethnic languages that the local researchers speak, IMPAQ will identify day-hire interpreters to help conduct interviews and record notes. Lastly, IMPAQ intends to hold informal meetings with the LEARN team prior to developing and finalizing the research protocols to better craft a sampling strategy that responds to the needs of the program.

For all interviews, IMPAQ will seek consent from adult participants when conducting the FGDs and KIIs, and assent for students in addition to their principal/teacher's consent. IMPAQ will also assure respondents that their participation will be voluntary with referral mechanisms in place, and that they could terminate the interview at any time they want.

Qualitative Analysis

The qualitative data collection will complement the quantitative data by contextualizing the findings from the literacy assessment and the student health KAP assessment. The data ought not to be interpreted as quantitative data as the nature of the qualitative research does not allow the results to be empirically generalizable. However, it offers some perspectives to enrich the

quantitative data and identify the relative popularity of that type of response within the qualitative participant group.

IMPAQ will rely upon detailed notes and summary forms from the interviews and focus group discussions to analyze the data, synthesize the findings, and identify major themes to address key evaluation questions. IMPAQ will prepare an Excel-based qualitative database to enter all qualitative data in English. During initial review of the data, preliminary codes will be established to help quantify the relative response types provided across all the notes, paying in particular attention to where a) the qualitative data supports the quantitative data; b) outliers; and c) nuance not captured by the quantitative tools. After an initial review of all the qualitative data and assignment of preliminary codes, a final coding protocol will be established, and all rows of data will be coded accordingly. Where appropriate, the codes for the qualitative data will be disaggregated by certain characteristics like gender, region, and participant type.

Appendix A: Work Plan

Exhibit 6 shows the key deliverables/tasks planned for the midterm evaluation.

Exhibit *6.* List of Deliverables/Tasks

Proposed Dates	Tasks/Deliverables
Midterm Evaluation	
December 2019	Submit Draft TOR for midterm evaluation to USDA
2/21/2020- 3/1/2020	Fieldwork preparation (training, piloting, and field planning)
3/2/2020 – 3/31/2020	Data collection
5/29/2020	IMPAQ finalizes data analysis and submits first draft midterm report to SC
6/17/2020	IMPAQ submits final midterm draft report to SC
6/30/2020	SC submits final midterm draft report to USDA
June/July 2020	IMPAQ and SC conduct stakeholder meetings to share initial findings
July 2020	Address USDA comments on the final midterm report
July 2020	Brief summary of report for stakeholders (Standalone summary)

Inputs needed from SC in order to accomplish the midterm evaluation activities listed in Exhibit 6 include:

- Provide approval letter from MOE for fieldwork activities
- Conduct child safeguarding session during enumerator training
- Provide tablets for fieldwork activities, for a total of 25
- Provide IMPAQ with logistical information for field schedule, including CEO/DEO/community mobilizers' contact information for CART
- Provide supplementary documents that would help the sampling and analysis, including:
  - Updated list of schools for both cohorts;
  - Updated project descriptions in each county;
  - Updated sustainability plan; and
  - Other documents that may help with qualitative sampling, which will be finalized with support from SC.

Appendix B: LEARN Results Framework

Key
- Strategic Objevctive
- Intermediate Results (IR)
- Lower Level IR
- MGD LEARN Activities
- Other Actors and Project

SO1: Improved Literacy of School-Age Children

1.1: Improved Quality of Literacy Instruction

1.2: Improved Attentiveness

1.3: Improved Student Attendance

- **1.1.1: More Consistent Teacher Attendance**
- **1.1.2: Better Access to School Supplies & Materials**
- **1.1.3: Improved Literacy Instructional Materials**
- **1.1.4: Increased Skills and Knowledge of Teachers**
- **1.1.5: Increased Skills and Knowledge of School Administrators**
- **1.2.1: Reduced Short-Term Hunger**
- **1.3.1: Increased Economic and Cultural Incentives (or Decreased Disincentives)**
- **1.3.2: Reduced Health-Related Absences**
- **1.3.3: Improved School Infrastructure**
- **1.3.4: Increased Student Enrollment**
- **1.3.5: Increased Community Understanding of Benefits of Education**

Activities row:
- Teacher recognition
- Establish libraries
- Production of books and supplementary reading materials
- Training: Teachers
- 1.2.1.1, 1.3.1.1: Increased Access to Food (School Feeding)
- Custom: Promotion of Code of Conduct including SGBV awareness
- SO2: Increased Use of Health and Dietary Practices *see next page for activities
- Provide Energy Saving Stoves Building/Rehab: kitchens Building/Rehab: warehouses and storerooms
- Establish activities to promote literacy

Sub-activities:
- Provide school meals Take Home Rations Establish school gardens
- Distribute deworming medication, vitamins, and minerals

Other Actors row:
- READ Liberia G2B-ESP Education Management and Accountability Program
- Supplementary reading materials created by USAID, LTTPII
- G2B-ESP Curriculum & Assessment Program
- READ Liberia G2B-ESP Teacher Education and Management Program
- G2B-ESP Education Management and Accountability Program
- National School Feeding Policy G2B-ESP Student Well-Being Program WFP, Mary's Meals, Winrock Home Grown School Feeding Pilot
- G2B-ESP Student Well-Being Program G2B-ESP Teacher Education and Management Program
- School Health Division supplies deworming meds and trains teachers (G2B-ESP, Student Well-Being Program)
- G2B-ESP School Quality Program
- AQE G2B-ESP Over-age and Out-of-School Program
- READ Liberia AQE G2B-ESP Over-age and Out-of-School Program

Foundational Results

- **1.4.1: Increased Capacity of Government Institutions**
  - Training: Commodity Management
  - G2B-ESP Student Well-Being Program
- **1.4.2: Improved Policy and Regulatory Framework**
  - Custom: Promotion of Code of Conduct including SGBV awareness
  - G2B-ESP Student Well-Being Program: Counter school-related gender-based violence
- **1.4.3: Increased Government Support**
  - Education Sector Planning Working Group
- **1.4.4: Increased Engagement of Local Organizations and Community Groups**
  - Establish Parent Teacher Associations Training: Parent Teacher Associations
  - G2B-ESP Student Well-Being Program

Key

Strategic Objevctive	
Intermediate Results (IR)	
Lower Level IR	
MGD LEARN Activities	
Other Actors and Project	

SO2: Increased Use of Health and Dietary Practices

2.1: Improved Knowledge of Health and Hygiene Practices

2.2: Increased Knowledge of Safe Food Prep and Storage Practices

2.3: Increased Knowledge of Nutrition

2.4: Increased Access to Clean Water and Sanitation Services

2.5: Increased Access to Preventative Health Interventions

2.6: Increased Access to Requisite Food Prep and Storage Tools and Equipment

Extracurricular activities

Training: Food preparation and storage practices

Training: Good health and nutrition practices

Building/ Rehab: Latrines

Distribute deworming medication, vitamins, and minerals

Training: Food Preparation and Storage Practices

G2B-ESP Student Well-Being Program

G2B-ESP Student Well-Being Program

G2B-ESP Student Well-Being Program

G2B-ESP Student Well-Being Program, School Quality Program DFAP in River Cess (community WASH)

G2B-ESP, Student Well-Being Program

G2B-ESP Student Well-Being Program

Foundational Results

2.7.1: Increased Capacity of Government Institutions

2.7.2: Improved Policy and Regulatory Framework

2.7.3: Increased Government Support

2.7.4: Increased Engagement of Local Organizations and Community Groups

G2B-ESP Student Well-Being Program: Implement National Policy on Girls

G2B-ESP Student Well-Being Program: Counter school-related gender-based violence

G2B-ESP Student Well-Being Program: Implement National Policy on Girls

Establish Parent Teacher Associations Training: Parent Teacher Associations

G2B-ESP Student Well-Being Program

Appendix C: Contingency Plan Memorandum

MEMORANDUM

Date: April 8, 2020

To: Clay Westrope
Advisor, Research, Evaluation, & Learning, Save the Children

From: Elnaz Safarha
Project Director, IMPAQ International

Re: LEARN McGovern Dole International Food for Education and Child Nutrition Midterm Evaluation Contingency Plan in Response to Coronavirus Disease 2019 (COVID-19) Pandemic

Save the Children (SC) selected IMPAQ International, LLC (IMPAQ) to design and conduct impact and project evaluations of the Liberia Empowerment through Attendance, Reading, and Nutrition (LEARN) program in four Liberian counties (Grand Bassa, Grand Gedeh, Rivercess, and River Gee) at baseline (2018), midterm (2020) and endline (2022). IMPAQ had to suspend data collection for the midterm evaluation almost midway through due to the coronavirus (COVID-19) pandemic, and the associated extended school closures in Liberia. These closures prevented IMPAQ from completing the midterm evaluation. This memorandum describes two proposed alternate options for concluding the LEARN midterm evaluation in response to the current COVID-19 pandemic. Please note that in coordination with SC, IMPAQ selected contingency plan 2 for the midterm evaluation.

Overview of Alternate Options for Implementing the LEARN Midterm Evaluation

The midterm evaluation consists of two components: an impact evaluation in 55 schools in Grand Gedeh and a project evaluation in 85 schools in Grand Bassa, Grand Gedeh, Rivercess, and River Gee.[72] The impact evaluation allows for the estimation of the effects of LEARN activities on literacy outcomes, and on health and nutrition knowledge, attitudes, and practices among school-aged children. The project evaluation measures changes over the life of the project in all LEARN-targeted counties. Moreover, the midterm evaluation design includes a qualitative component to capture perceived changes at the school and community levels in three schools in each of the four counties for a total of 12 schools.

The data collection team launched the fieldwork for both evaluations on March 2, 2020. In the two weeks of data collection prior to school closures on March 17, 2020, the quantitative team was able to collect

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[72] There are 16 schools in Grand Gedeh that overlaps between impact and project evaluation samples.

data from 45 of 124 schools (15 schools in River Gee and 30 in Grand Gedeh). As well, the qualitative team completed all activities in seven of the 12 schools in Grand Bassa, Rivercess, and River Gee. Exhibits 1, 2, and 3 show the status of midterm data collection across the four counties for the two weeks of data collection, prior to school closures.

Exhibit 1. Status of Project Evaluation Sample for Quantitative Component

Region	Cohort 1 Sample (Target)	Cohort 2 Sample (Target)	Total (Target)	Grade 2 Students	Grade 6 Students
Grand Bassa	0 (15)	0 (21)	0 (36)	0	0
Grand Gedeh	12 (16)	0 (0)	12 (16)	163	75
Rivercess	0 (12)	0 (5)	0 (17)	0	0
River Gee	13 (14)	2 (2)	15 (16)	192	100
Total	**25 (57)**	**2 (28)**	**27 (85)**	**355**	**175**

Exhibit 2. Status of Project Evaluation Sample for Qualitative Component

Region	Total (Target)
Grand Bassa	2 (3)
Grand Gedeh	0 (3)
Rivercess	3 (3)
River Gee	2 (3)
Total	**7 (12)**

Exhibit 3. Status of Impact Evaluation Sample

Treatment	Schools (Target)	Students
Control Group	2 (13)	8
School Feeding Group	11 (22)	105
School Feeding+ Literacy Boost+ School Health and Nutrition Group	17 (20)	220
Total	**30 (55)**	**333**

After the confirmation of the first case of COVID-19 in Liberia, the Government of Liberia implemented measures to limit the spread of the virus. Effective March 17, the Government closed all the schools until March 23, 2020,[73] and then later extended the order to March 31, 2020.[74] On March 22, 2020, the Liberian Ministry of Health declared a national health emergency and announced that schools will remain closed for another month. Furthermore, according to the official conversation between SC Liberia and the Ministry of Education, the possibility of schools reopening in the academic year 2019-2020 is very unlikely.

In response to these occurrences, IMPAQ engaged in several conversations with the SC team and immediately initiated contingency planning regarding alternate options for implementing the midterm evaluation in the most rigorous possible manner. Given the likely school closures through the end of the current school year, IMPAQ presents two potential options below for concluding the midterm evaluation in the upcoming academic year (Fall 2020 – Spring 2021).

- ▪ **Option 1.** Finishing data collection in the remaining schools within the impact and project samples

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[73] http://moe-liberia.org/public-service-announcement-4/
[74] http://moe-liberia.org/public-service-announcement-covid-19-2/

- **Option 2.** Recollecting data from schools in the impact sample and completing data collection in the remaining schools within the project sample

Although the school year starts in September in Liberia, for both options, IMPAQ suggests collecting data for the midterm evaluation in October 2020 for two primary reasons. First, we want to collect data after the end of rainy season, as some schools are likely to be inaccessible due to deteriorated road conditions during that time. Second, it allows more time for the COVID-19 situation to improve. Finally, it provides the evaluation team with additional time to assess any potential new developments once schools re-open in September after a long hiatus.

In addition, for both options, IMPAQ does not recommend collecting data from Grade 6 students in the new academic year for the midterm project evaluation due to a lack of reliability and relevance of the data. Grade 6 students in the new academic year are currently Grade 5 students in this academic year.[75] Collecting data from these students would not allow us to analyze whether the changes in outcomes we observe are due to time differences in data collection, grade differences, or exposure to the program.

We present each of these two alternate options in further detail below. For each option, we describe the anticipated challenges for collecting data, the implications for the evaluation, and our mitigation strategies in addressing any likely challenges.

Option 1. Finish data collection in the remainder of impact and project samples in October 2020

In this option, IMPAQ would finish the data collection in the remaining schools for both impact and project evaluations in the next academic year in October 2020. We would visit schools in Grand Bassa and Rivercess for the quantitative component, and schools in River Gee, Grand Gede, and Grand Bassa for the qualitative component, which were left incomplete due to the spread of COVID-19 and school closures. See Exhibits 1, 2, and 3 for the total number of schools left in each county to visit.

To ensure data accuracy and reliability and address the long gap (approximately six months) between phases of the data collection, IMPAQ would conduct another in-person training for enumerators before relaunching data collection. This training would also serve to prepare any new enumerators for the data collection effort. In order to capture the effects of COVID-19 on the evaluation outcomes, we would 1) update the survey instrument and qualitative protocols to the extent possible; and 2) reconduct key informant interviews with project staff and national government stakeholders.

Although this option presents lower budget implications (see Section 3 for more information), it presents significant challenges for the impact evaluation. Exhibit 4 presents the implications for the midterm evaluation of option 1 and describes IMPAQ's associated mitigation strategies.

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[75] Current Grade 6 students would no longer be available in primary schools in the next year.

Exhibit 4. Option One: Implications for the Midterm Evaluation

Anticipated Fieldwork Challenges

▪ Lack of enrollment at the beginning of the school year resulting in smaller sample
▪ Effect on enumerator training:
  o Trained enumerators may no longer be part of the data collection team due to a six-month gap in data collection
  o Enumerators may not remember their previous training and will need to be retrained
▪ Learning outcomes of students surveyed in the fall of 2020 will be different from those for students surveyed in March 2020, due to a lack of learning retention
▪ Sixth graders from the previous academic year will move to seventh grade and therefore no longer be in the same schools

Effect on the evaluation

▪ **Project evaluation**:
  o Overestimation of handwashing outcomes (given the new measures for managing COVID-19)
  o Caveat in interpretation of learning outcomes as many unobservable factors could influence project of children between March and October 2020
  o Lack of available data from Grade 6 students, and therefore, questions related to sexual and gender-based violence (SGBV) cannot be adequately addressed
▪ **Impact evaluation**:
  o Biased sample as those students who already enrolled might be better off (in terms of health and wealth after COVID-19)
  o Biased estimation of literacy outcomes could make it very challenging to assign causal attribution to the LEARN program. This is because more control schools are left to be surveyed compared to treatment schools, and they are likely to be worse off in October as a result of COVID-19 and the associated learning loss

Mitigation Strategies

▪ **For both Project and Impact evaluations:**
  o Conduct another in-person enumerator training to refresh the formerly hired enumerators after six months, and train the newly added ones
  o Update the student survey to include information on COVID-19 and how children were impacted
  o Estimate average performance for March and October samples of students and analyze if changes are time-variant
  o Include additional qualitative data collection such as site visits to control schools to understand changes in enrollment and learning outcomes due to COVID-19 and use these findings to put the impact evaluation findings in perspective
  o Conduct additional qualitative interviews at each site in order to determine how the community as a whole was affected by COVID-19, how it may have affected project outcomes; and how the project may have affected the community response to COVID-19

Option 2: Recollect data in impact sample and complete the remainder of project sample in October 2020

- In order to mitigate the significant challenges that the first option could impose on the impact evaluation, IMPAQ devised a second alternate option for the evaluation as well. In this option, in the next academic year (2020 – 2021) we would collect data in all 55-impact evaluation schools in Grand Gedeh and finish the remainder of schools from the project sample.[76] This strategy would allow for an unbiased evaluation by ensuring consistency in impact evaluation data, as all responses across treatment and control groups would be impacted by the school closures.

In this option, IMPAQ would follow the same measures as proposed in Option 1 to improve the reliability of data, including conducting an in-person training for enumerators; updating the survey and qualitative protocols; and implementing additional interviews with project staff and national stakeholders to capture the effect of COVID-19 to the extent possible. In addition, we would also conduct key informant interviews in the seven schools in Grand Bassa, Rivercess, and River Gee again, which we visited before school closures in March 2020. These additional interviews would provide us with an opportunity to compare stakeholders' perception before and after COVID-19 to enrich the quantitative outcomes, specifically for the project evaluation.

Exhibit 5 presents the implications for the midterm evaluation of option 2 and describes IMPAQ's associated mitigation strategies.

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[76] The remainder of project sample includes 53 schools that were not visited in Grand Bassa, and Rivercess, as well as five schools in Grand Gedeh and River Gee, which were closed for various reasons on the day of school visit in March 2020, and IMPAQ was planning to revisit them.

Exhibit 5. Option Two: Implications for the Midterm Evaluation

Anticipated Fieldwork Challenges

▪ Lack of enrollment at the beginning of the school year could result in a smaller sample
▪ Effect on enumerator training:
  ○ Trained enumerators may no longer be part of the data collection team due to a six-month gap in data collection
  ○ Enumerators may not remember their previous training and will need to be retrained
▪ Learning outcomes of students surveyed in fall 2020 will be different from those for students surveyed in March 2020, due to a lack of learning retention
▪ Sixth graders from previous year will be gone and might not be comparable with the new cohort as half of sample will be surveyed in a different time frame

Effect on the evaluation

▪ **Project evaluation**:
  ○ Overestimation of handwashing outcomes (given the new measures for managing COVID-19)
  ○ Caveat in interpretation of learning outcomes as many unobservable factors could influence performance of children between March and October 2020
  ○ Lack of available data from Grade 6 students, and therefore, questions related to sexual and gender-based violence (SGBV) cannot be adequately addressed
  ○ Information across qualitative sites can be reliably compared given all have been affected by COVID-19; particularly important for measuring performance around WASH
▪ **Impact evaluation**:
  ○ Since data will be collected again from all treatment and control schools, this option would provide a reasonably unbiased estimate of the intervention. However, this assumes that treatment and control schools were equally impacted by COVID-19. We will run balance tests to investigate this further.

Mitigation Strategy

▪ **For both Project and Impact evaluations**:
  ○ Update student survey to include information on COVID-19 and how children were impacted
  ○ Compare learning outcomes for the same set of students surveyed in March and October in the impact sub-sample allows us to understand the nature of bias in the data for interpreting the project evaluation results
  ○ Include additional qualitative data collection such as site visits to control schools to understand changes in enrollment and learning outcomes
  ○ Include additional qualitative data collection such as site visits to control schools to understand changes in enrollment and learning outcomes due to COVID-19 and use these findings to put the impact evaluation findings in perspective
  ○ Conduct additional qualitative interviews at each site in order to determine how community as a whole was affected by COVID-19, and how it may have affected project outcomes; and how project may have affected community response to COVID-19

IMPAQ highly recommends Option 2 for the midterm evaluation of the LEARN program, as it presents fewer challenges and could provide SC with a better understanding of the progress and effects of the program midway through the implementation. Section 2 below provides additional detail around the timeline of each option and Section 3 notes the associated implications for the evaluation budget.

Timeline

Given that school closures in March 2020 interrupted the midterm data collection, the original timeline for implementing the midterm evaluation is no longer be feasible. Exhibit 6 shows the shift in the original timeline for both options.

Exhibit 6. Tentative Timeline

Deliverables	Originally Planned	Option 1	(Revised) Option 2
Evaluation Design Memo with updated evaluation instruments	January 10, 2020	September, 2020	January, 2021
Fieldwork activities, including training and data collection	March 31, 2020	Mid-October, 2020	February, 2021
Final evaluation package to Save	June 17, 2020	Early December, 2020	Mid-May, 2020
Final evaluation report to USDA	June 30, 2020	December, 2020	May-June, 2020