



Burkina Faso McGovern-Dole Food for Education Project

Final Evaluation

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McGovern Dole International Food for Education and Child Nutrition Program Beoog Biiga II Endline Performance and Impact Evaluation Report

With funding support from the United States Department of Agriculture (USDA) McGovern-Dole Food for Education Program, Catholic Relief Services (CRS) implemented the Beoog Biiga II project, from 2014 to 2018 in Burkina Faso. The aim of the program is to improve the literacy, health, and dietary practices of primary-school-aged children.

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ACRONYM LIST

AGIR	Action, Gouvernance, Intégration, Renforcement
ASER	Annual Status of Education Report
BBI	Beoog Biiga I
BBII	Beoog Biiga II
BEPC	Brevet d'Etudes du Premier Cycle (Certificate of Studies of the First Cycle)
CEB	Circonscription d'Education de Base
CCEB	Chef de Circonscription d'Education de Base (School District Administrator)
CRS	Catholic Relief Services
FAO	Food and Agriculture Organization of the United Nations
FAVL	Friends of African Village Libraries
FGD	Focus Group Discussion
IMPAQ	IMPAQ International, LLC
KII	Key Informant Interview
MENA	Ministère de l'Education Nationale et de l'Alphabétisation (Ministry of National Education and Literacy)
OCADES	Organisation Catholique pour le Développement et la Solidarité
PMP	Performance Monitoring Plan
PTA	Parent-Teacher Association
RCT	Randomized Control Trial
SILC	Savings and Internal Lending Community
TOR	Terms of Reference
USDA	United States Department of Agriculture
USDHHS	U.S. Department of Health and Human Services

EXECUTIVE SUMMARY

Overview

Beoog Biiga II (BBII) is a four-year project (2014–2018) implemented by Catholic Relief Services (CRS) and its partners in the Bam and Sanmatenga provinces in Burkina Faso and funded by the United States Department of Agriculture (USDA) McGovern-Dole International Food for Education and Child Nutrition (MGD) program. In BBII, which was an expansion of BBI, CRS aims to improve the literacy,¹ health, and dietary practices² of primary-school-aged children in Burkina Faso. BBII implementation activities include the provision of school meals and take-home rations; distribution of deworming pills, vitamins, and minerals; health and nutrition training; provision of school supplies and materials; school district administrator training; capacity building at the local, regional, and national levels; mentorship of girls; teacher training; creation of community saving and lending groups; establishment of a standardized reading assessment; establishment of libraries; and efforts to raise awareness about the importance of education.

CRS selected IMPAQ International, LLC (IMPAQ) to conduct impact and performance evaluations of the BBII program. The performance and impact evaluations were designed in parallel to maximize comparability in the outcome indicators and findings using qualitative and quantitative methods, but they follow different timelines. The performance evaluation spans three data collection periods: baseline (2015), midline (2017), and endline (2018). The baseline, midline, and endline rounds of the performance evaluation were structured to measure changes in outcomes over time and to inform the overall evaluation results on BBII core objectives. To accurately capture program performance over time, IMPAQ measures the same program indicators at all three data collection points. The impact evaluation, which measures the causal effect of the mentoring intervention on the literacy of school-aged girls in a subset of BBII program schools, spans only two data collection periods: baseline (2015) and follow-up (2018).

Key Evaluation Questions

To evaluate progress on BBII desired outcomes over time and to identify the impact of BBII mentorship on girls' literacy outcomes, the evaluation team focused on seven main areas: nutrition knowledge, hygiene knowledge and practices, food security, attendance, literacy, school engagement; and savings cooperatives. The following key questions guided the study:

- To what extent has students' knowledge of nutrition and dietary practices changed?
- To what extent have students improved their hygiene-related practices?
- To what extent has students' knowledge of health and hygiene practices changed?
- To what extent do the program interventions help address student hunger and attentiveness?
- What percentage of children receiving a minimum acceptable diet has changed, if any, compared to baseline?
- What is the current student attendance rate? Has the percentage of students (girls and boys) that regularly (80%) attend schools changed compared to baseline?
- To what extent has teachers' attendance changed?
- How much time per day do teachers devote to literacy instruction?

¹ Strategic Objective 1: Improved Literacy of School-Age Children

² Strategic Objective 2: Increased Use of Health and Dietary Practices

- To what extent are teachers implementing literacy teaching techniques acquired through the project?
- What percent of students (boys and girls) have increased their reading comprehension compared to baseline?
 - Have literacy levels of boys and girls in schools with mentoring changed more or less than in schools without mentoring?
 - What impact has the mentoring program had on girls participating in the mentoring program?
- Has the parents' level of contribution to the school canteen changed?
- Have parents who are members of savings and internal lending communities used their savings on education costs?

To answer evaluation questions and provide evidence addressing the McGovern-Dole indicators, IMPAQ developed quantitative and qualitative instruments, which were translated and adapted to the Burkina Faso context, including: (1) Student Survey including a reading assessment (the Annual Status of Education Report, ASER³); (2) Parent Survey; (3) Teacher Survey; (4) Parent-Teacher Association (PTA) Survey; (5) School District Administrator Survey; (6) focus group discussions; (7) key informant interviews; and (8) classroom observations.

The purpose of this report is to assess the efficiency and effectiveness of the project over the past four years in achieving its intended results. In this report, we also provide recommendations on sustainable exiting strategies, as well as lessons learned for future implementation of new Beoog Biiga phase(s). Key findings are summarized below.

Key Evaluation Outcomes

Below is a snapshot of the key qualitative and quantitative findings at endline. Additional details are provided in Sections 3 and 4 of the full report.

Key Performance Outcomes

Nutrition knowledge. The data indicate that students' nutrition knowledge improved at endline compared to baseline. More specifically:

- The proportion of students who had heard of vitamin A increased from 32% to 62% between baseline and endline, a statistically significant 30-percentage-point change ($p < .01$).
- The proportion of students who had heard of iron increased from 9% to 29% between baseline and endline, a statistically significant 20-percentage-point change ($p < .01$).
- We also observed large and statistically significant changes in the proportion of students who can cite a benefit of vitamin A and iron.
- Overall students' nutrition knowledge, measured as the proportion of students who can achieve a passing score on a test of food nutrition and dietary practices, also increased between baseline and endline (from 1% to 9%, a statistically significant 8-percentage-points change). However, the

³ The Annual Status of Education Report (ASER) Center pioneered in 2005 a nationwide survey, composed of a reading and a math test, to measure the achievements of children in primary school in rural India in reading and math. Since their inception, adapted versions of the tests have been implemented in Pakistan, Kenya, Mali, Senegal, Tanzania, Uganda, Ghana, and now Burkina Faso (Pratham 2015; USAID 2012).

endline level of overall nutrition knowledge remains low. The statistically significant improvements in teachers' nutrition knowledge may explain the increase in students' knowledge as teachers were in charge of transferring such knowledge to students in the project.

Knowledge of hygiene. We defined a threshold for hygiene knowledge as the ability to identify at least four situations in which people should wash their hands. While the overall proportion of students who achieved a passing score on the test of good health and hygiene practices remains relatively low at endline (20 percent), we observe a large and statistically significant (15 percentage points) increase compared to baseline. This increase is consistent with significant improvements in self-reported handwashing practices (12 percentage points) and handwashing knowledge (36 percentage points) at 'critical moments', defined as washing hands after using the latrine and before eating. The notion that almost all students (97 percent) at endline reported that their teachers had taught them about the importance of washing hands at critical moments can explain these improvements.

Food security. Food security was measured by looking at children's food intake at breakfast and lunch the day before data collection and also by constructing a measure of 'minimum acceptable diet'. The data indicate improvements in some indicators. In particular:

- The proportion of students that reported feeling full after breakfast remained high at baseline, at 96 percent. Consistently, the proportion of students reporting they were hungry during the day from baseline to endline has not changed. This result needs to be interpreted with caution due to social desirability bias of self-reported data on food security.
- Although overall the proportion of students in target schools who indicate they are hungry during the day remains low at about four percent, we also observed a statistically significant decrease (from 74 percent to 30 percent) in the proportion of students who went home to eat lunch (and an increase in the proportion of students who ate at the canteen).
- Regarding the minimum acceptable diet, the data indicate that the proportion of children who received a minimum acceptable diet increased from baseline (60 percent) to endline (83 percent), a statistically significant 23-percentage-point change, based on students' data. This is consistent with the increase in the percentage of students receiving a minimum acceptable diet as reported by parents.

Attendance. The data show that both students' and teachers' attendance at endline remain high, as at baseline:

- Student attendance was measured based on school records and using data from three representative months: November, January, and April. The endline statistics show that all students attend school at least 80% of the time, similar to the baseline figures. However, our experience in the field suggests that these attendance data, as recorded by teachers, are likely to be overestimated. Thus, results need to be interpreted with this caveat in mind.
- In terms of teachers' attendance, we defined a teacher who teaches 'regularly' as one who teaches at least 90 percent of normal school days during the year. The data indicate that there are no statistically significant changes in teachers' attendance between baseline and endline.

Literacy. We examined teachers' and students' datasets for literacy indicators. More specifically:

- There were no statistically significant changes in the proportion of teachers using new techniques and devoting at least 45 minutes a day to literacy instruction at endline compared

to baseline. These outcomes were consistent with findings from interviews. School directors and district administrators reported that not all teachers used the new techniques regularly. The classroom observations also found that, among the lessons observed, teachers did not address (or very rarely addressed) six of the nine core elements of decoding instruction.

- There was an increase in students' attentiveness reported by teachers (11 percentage points), but it was not statistically significant. Teachers identified a slight increase (3 percentage points) in the proportion of students who were attentive during class from baseline to endline. This change was not statistically significant at conventional levels. However, given the difficulty and subjectivity of measuring attentiveness, this outcome should be interpreted with caution.
- Although there were no changes in the proportion of teachers using new techniques, the student data indicate that the proportion of second-grade students with reading proficiency (measured through ASER assessment) at grade level increased by 17 percentage points (from 15 percent at baseline to 33 percent at endline), and the difference is statistically significant at the 1 percent level. The effect is larger for boys (from 12 percent to 33 percent) than for girls (from 17 percent to 33 percent). This counterintuitive result could be explained by different socioeconomic backgrounds of students (e.g., more educated parents) in the endline sample compared to the baseline sample.

School engagement. We also analyzed other outcomes to capture parents' engagement in schools and savings and internal lending community (SILC) groups. Several key findings are summarized below.

- The data indicate that the proportion of parents who were members of the PTA increased significantly by 11 percentage points. Part of these changes need to be interpreted by keeping in mind that the endline sample contains more highly educated households as compared to the baseline.
- Compared to baseline, the proportion of parents who were SILC members increased significantly from 9 percent at baseline to 40 at endline ($p < 0.01$). Among parents who were SILC members, there was a 35-percentage-point increase in the proportion of parents who reported that they used their savings to cover school expenses, significant at the 1 percent level. The data suggest that parents have become more aware of the importance of education, especially for girls, and more involved in school activities. In particular, at endline, all parents (100 percent) showed positive attitudes toward girls' education; this represents a 21-percentage-point increase from baseline, which is also a statistically significant finding ($p < 0.01$). The endline sample contains more highly educated households as compared to the baseline, which may explain these positive differences on attitudes toward girls' schooling and the importance of education in positively affecting later outcomes in a girl's life.

BBII Impact on Literacy Outcomes

The impact evaluation was designed to estimate the effect of the mentorship program on girls' reading proficiency and also to assess potential spillover effects on boys. The data indicate that there is no effect on reading proficiency for girls, while there was a positive and statistically significant effect on boys, i.e., boys in the treatment group are 21 percentage points more likely to read at grade level than boys in the control group.

When interpreting the results of the impact analysis, it is important to keep in mind that mentors' activities are focused on increasing girls' school attendance, support them when they drop-out from school and making sure girls have the necessary support to study, which is in line with the results of the qualitative findings. One focus group with mentors reported that their activities also influence boys, who often receive advice from the mentors and put their recommendations into practice. This indicates that the effect on school performance would be mostly indirect, through attendance. However, the lack of quality attendance data (as described in chapter 4), makes it difficult to assess the impact on attendance. In particular, all students in the impact evaluation sample are reported to have 100 percent attendance, and there is not enough variation in the sample to meaningfully estimate program impacts and assess whether boys and girls have been affected differently.

The lack of statistically significant effects on girls' reading proficiency and positive effects on that of the boys could potentially be an indication of particularly strong spillover effects on boys and a reduced effect on girls, for various other reasons that cannot be identified with the current data. For example, in our experience evaluating education programs in West Africa, we often observed that teachers do not usually treat boys and girls equally when applying their teaching techniques in their classrooms (e.g., they engage girls less in classroom activities). While this would potentially happen in both treatment and control schools, this would still make it more difficult to detect the incremental impact of the mentorship relative to the other program components.

While the confirmatory outcome of interest for the impact evaluation is literacy, the mentor's home visits might also lead parents to be more cognizant of their children's diets (thus affecting children's food security), as well as more cognizant of their children's hygiene practices and the importance of consistent school attendance. The impact evaluation results indicate that there are generally not statistically significant effects for either girls or boys on any of those outcomes. However, the data show that girls in the treatment group are less likely to report the mentor as a reason for their success in school. This counterintuitive result seems to align with the lack of statistically significant changes on girls' reading proficiency.

Key Qualitative Findings

Below is a summary of the main findings of the qualitative research organized by domain.

Summary of Main Qualitative Research Findings	
Relevance	Overall, interview and focus group participants reported satisfaction with the project, saying they believed the project interventions are meeting the needs of beneficiaries and are aligned with Burkina Faso's and the U.S. government's development objectives. Respondents also believed that the project adequately considers economic, cultural, and political contexts. According to implementers and stakeholders, the primary strengths of the project design include the focus on training teachers in evidence-based literacy techniques, the reinforcement and coaching provided by school administrators through the teacher observations, and the inclusion of canteens and distribution of micro-nutrients as key strategies. The primary weaknesses, according to stakeholders, are that teachers do not receive enough learning materials to support all the students in their classrooms, that the reading clubs have encountered challenges recruiting facilitators, that too few libraries have been built to ensure access for all communities, and that participation and engagement in PTAs is lower than the PTAs desire.
Effectiveness	Overall, implementers and stakeholders reported that students' literacy and nutrition and hygiene has improved and that BBII interventions have contributed to these results. Stakeholders report that they have observed

Summary of Main Qualitative Research Findings

improvements in students' literacy skills, motivation to learn, and hand washing behaviors. The new approach to literacy instruction, increased engagement of school directors and administrators in supervising teachers, increased support for school feeding activities, availability of mentors, and provision of micronutrients to students through PTAs in schools with teachers who refuse to distribute them are believed to contribute to the success of the program. Challenges and barriers to success include inconsistent adoption of the new techniques among teachers, reluctance among teachers to distribute micro-nutrients, delays in delivering instructional materials and resources, lack of effective training and recruitment of reading club facilitators, and lack of formal training of enough teachers to deliver information to students about handwashing and nutrition. Though challenges exist, respondents said that CRS has effectively managed partners and that the program has coordinated and collaborated effectively with other stakeholders.

Efficiency

Respondents reported that the project resources have been sufficient to implement scheduled activities and, for the most part, objectives have been achieved on time. Some activities, including the provision of pedagogical materials for teachers and learning materials for students, have been delayed. Further, respondents noted that the project encountered challenges in engaging teachers in distributing micro-nutrients. Despite challenges, respondents reported that CRS has adequately responded to internal and external factors that have hindered the efficient implementation of project activities. For example, the project modified its approach and began distributing micronutrients to students through PTAs in schools where teachers refused to distribute them.

Perceived Impact

Stakeholders believe that teachers who implemented the practices taught in the literacy training delivered higher quality literacy instruction to students and the improved instruction, combined with interactive learning materials and the presence of canteens, helps to improve student motivation and engagement in school. Stakeholders also believe that the mindset of parents and community actors towards education has improved, especially towards girls. Regarding hygiene, stakeholders believe that handwashing behavior has improved among students and observe installation of handwashing devices in homes, markets, mosques, and restaurants, suggested that handwashing has increased among parents and families as well. To increase the impact of BBII literacy interventions, interview and focus group participants recommend more intensive training and monitoring of teachers, provision of additional learning materials, additional training of mentors, increased sensitization of parents, training of SILC members in fund management, and building more libraries closer to schools or increasing access to existing libraries or books. To increase the impact of hygiene and nutrition activities, stakeholders recommend closer monitoring of the installation and operation of handwashing devices, formal training of teachers in teaching nutrition and hygiene, building of latrines, and development of strategies to support handwashing in schools with water scarcity issues.

Sustainability

Implementers and stakeholders expect those who have been directly impacted by the program, including teachers, students, mentors, and parents to continue to benefit from the program. They also report that the program has demonstrated its value to the community and government and there is support for continuing activities. Some transition of activities from CRS to MENA has occurred, and CRS has led sustainability plans related to school feeding, SILC groups, mentors, and libraries. However, there is an inconsistent understanding among partners and stakeholders about which specific activities will be sustained and who will lead those efforts. Of particular concern to teachers, school directors, district administrators and mayors over the continued training of teachers. Although CRS has increased the capacity of school administrators and mayors to oversee training of new teachers, further communication over sustainability plans with stakeholders may be needed.

Classroom Observations of Teachers' Instructional Practice

Summary of Main Qualitative Research Findings

Classroom observation outcomes were more or less in line with the results of student and teacher surveys. In observed lessons, teachers mostly focused on reading skills, especially decoding. According to the classroom observations, a critical improvement since the midline study is that there is additional use of learning materials such as cubes, bananagrams, and word strips during decoding lessons. However, observations also found that during decoding and encoding lessons, teachers and students frequently use the incorrect sounds for letters, which can make combinations of syllables and word-formation activities confusing. The observations also detected other examples of teachers not using the new instructional methods. Teachers often read sentences and words aloud first, then students repeat what the teacher said, making it difficult to determine if students were reading on their own or merely repeating words. Similarly, during the vast majority of lessons observed, teachers asked students to copy letters, words, or sentences, but not to write them on their own. Teachers also did not use certain techniques during the observed sessions, including: word grouping, punctuation, liaisons, and pronunciation.

Recommendations

We present the following recommendations to CRS based on both lessons learned from our experience in the field and our findings after analyzing the collected data. The recommendations are not intended to address all challenges identified through the study; instead they focus on the main drivers of project success, as well as any required changes for future projects and/or evaluations. The recommendations are grouped by category.

Literacy Activities

Consider options for further institutionalizing literacy training for new teachers and refresher trainings for previously trained teachers at the school or district levels. According to stakeholders, BBII met objectives for delivering training to teachers and enhanced the capacity of school directors and administrators to reinforce instructional techniques through increased observation and supervision. However, stakeholders reported in interviews uncertainty as to whether training of new teachers would be available and of the same quality as under BBII. Since teacher mobility is common among BBII schools, stakeholders were concerned that once trained teachers left, schools and districts would have limited capacity to train new teachers to the same extent as was done under BBII. Teachers and stakeholders also suggested resources be identified to provide additional refresher trainings to teachers to reinforce what they learned from BBII. Implementers similarly acknowledged that supporting activities in a large number of schools made it challenging to support continued training of each teacher. For BBII or other initiatives, CRS may want to consider placing greater emphasis on increasing school or district capacity, as appropriate, to deliver trainings to teachers. Refining the train-the-trainer design, or similar options may be fruitful.

Revise the structure and content of teacher training to more effectively address teacher motivation.

Several interview participants reported that the training did not provide teachers with sufficient time to practice and gain confidence in the new techniques and that teachers sometimes struggle to apply the technique fully before a class session ends. According to teachers, this was compounded by the lack of sufficient learning materials provided to them to support the application of these new practices, which was confirmed through classroom observation on availability and usage of learning materials. Teacher survey data also suggests that teacher uptake of the new practices is inconsistent across teachers and

remained unchanged over the life of the project. To address these challenges, after the mid-line evaluation, CRS conducted a study on barriers to using the new techniques and found that teacher motivation to attend the training as well as implement the techniques was an important factor. Recommendations for improvement included improving follow-up conditions and meetings, improving the organizational quality of the training sessions, having more systematic training for new teachers, and increasing the number of days of the training sessions. It appears that at endline, teachers are still not fully adopting the BBII instructional methods. CRS may want to consider implementing these recommendations in future projects, or if they were implemented, but not effective, consulting again with teachers about why these changes did not lead to improvement.

Conduct more periodic assessment of student literacy and observations of teacher practice. CRS and partners cited the value of monitoring but also reported that close monitoring of BBII schools faces constraints due to resources and logistics. CRS regularly collects administrative reports on classroom observations, analyzes the data quarterly, and provides feedback and recommendations to school administrators. However, according to interviews, more periodic and rapid feedback on literacy skills could help improve monitoring and better identify whether implementation of project activities is correlated with improvements in literacy outcomes. Such information may provide CRS, partners and stakeholders with rapid-cycle information that can inform further actions and modifications to program activities. In terms of teacher observations, the teachers, school directors, and district officials interviewed believed the observation process was valuable, and some interview participants expressed interest in more frequent observations and follow-up. Additional observations may help reinforce the application of skills learned during the training and may allow discussion of factors that motivate or de-motivate teachers' use of the new instructional techniques. Though CRS has provided training on these observations and can support increased observations, in order to be sustainable, the government and school administrators would also need to commit to this increased activity. CRS may want to consider engaging government partners and school administrators in conversations about how to address barriers related to taking on these additional responsibilities.

Promote or invest in school infrastructure and school libraries. Interview respondents suggested that electrifying schools would increase the impact of literacy activities by providing students with more time in the day to be able to study or participate in reading activities. Respondents believe that since BBII began, more students have received solar lamps for their homes to encourage studying at night. Stakeholders believe that these were helpful to supporting improved literacy, so CRS may also want to consider directly providing these items or helping develop strategies for families and communities to obtain them. Libraries were also appreciated, but survey data show that a very low proportion of students visited libraries with their parents, which may be explained by the libraries' physical distance from the schools visited. This physical distance was cited as a key reason teachers, students, and parents did not access libraries. Interview participants suggest creating libraries at schools or nearby or potentially creating mobile libraries that can rotate from school to school. To improve library access, CRS could consider including school libraries in future interventions or working with libraries to provide access to their books to schools that are further away.

Re-visit the design of reading clubs to include identification of appropriate facilitators and increased engagement by parents and students. During interviews and focus groups, students, parents and teachers reported that reading clubs are helpful in supporting student literacy. However, implementation challenges—such as an inability to identify facilitators, lack of available training for facilitators, and hesitancy on the part of parents to let their children participate outside of school hours—were common. Also, reading clubs attracted those students who were interested in becoming better readers and were willing to spend time engaged in reading instead of playing. These factors suggest that the design of the reading clubs may not have been well aligned with realities on the ground. CRS could consider re-visiting the design of the intervention and examine options for developing the capacity of facilitators, further sensitizing parents to the value of reading clubs, and developing strategies to recruit less motivated students as well. For example, our experience with children and youth interventions has shown us that integrating games or sports into activities can help increase participation and engagement.

Identify ways to increase parent and community sensitization on the importance of literacy and of supporting schools. Parent survey data suggest that parents have become more aware of the importance of education, especially for girls, and more involved in school activities. Interview and focus group participants also reported that parental and community support for education had improved and that sensitization efforts during BBII have been helpful in improving attitudes. However, many also report that this improvement is not universal, and that parents and communities have a continued need for sensitization. For example, respondents reported that some parents do not allow their children to attend reading clubs on weekends and that some parents do not support the PTA because they say they do not have the time or they feel burdened by the work required to participate in such activities. CRS could consider re-delivering sensitization activities to target communities or modifying sensitization efforts to reach more reluctant parents. For example, an approach to consider could be a door-to-door campaign with the collaboration of communities to increase parents' awareness.

Encourage school administrators to keep consistent records of teacher attendance to help them monitor teacher performance. Although the quantitative data showed high teacher attendance, the quality of the attendance data is uncertain given the sensitive nature of teacher absenteeism at schools. Some school district administrators or school administrators do not keep a record of absentees, and respondents reported varying levels of absenteeism. More accurate tracking of attendance would help district and school administrators monitor teacher performance in the future, once BBII is over. CRS may also want to consider developing administrator capacity to track and monitor attendance in future projects.

Further investigate why mentoring had no effect on girls' literacy but only on that of boys. The lack of statistically significant effects of mentorship on girls' reading proficiency, despite positive effects on boys, could potentially be an indication of particularly strong spillover effects on boys, whereas the effect on girls was potentially diluted. A more in-depth qualitative analysis post-project with mentors, as well as focus groups with students and parents could help to understand the reasons why we observe no effects on girls' literacy, yet see a positive effect on boys' literacy.

Health and Hygiene Activities

Consider investing in equipment and infrastructure to support adoption of WASH practices. Interview participants report that latrines and operational handwashing devices are critical to supporting the translation of hygiene knowledge into practice. Respondents expressed concern that lack of these items can inhibit adoption of appropriate handwashing behaviors and hygiene management. Water scarcity is also a challenge in some BBII schools, which also makes it challenging to encourage handwashing and hygiene. Some interview respondents reported concerns that the WASH component did not adequately consider water-scarcity issues and, therefore, CRS may want to consider exploring or developing strategies to implement WASH at schools with water challenges. In future initiatives, CRS may also want to consider addressing water scarcity as a component of its intervention.

Work with schools to ensure that schools' handwashing stations are in working order. Some respondents noted that handwashing stations are sometimes out of order and that no effort is made by the school or the PTA to repair/replace them. Respondents also suggest that additional monitoring of handwashing devices would be beneficial. CRS could collaborate with local actors to create a specific monitoring plan and identify the institutions responsible for funding and maintaining repairs.

Monitor the effectiveness of distributing micronutrients to PTAs and continue to identify ways to engage parents in health and dietary activities. Earlier in the project, implementers encountered challenges with teachers exhibiting reluctance to distribute the micronutrients and modified the approach to distribute them to parents instead. Thus far, implementers and stakeholders are optimistic that the revised approach is working. Some interview respondents suggested that working with parents is easier and more effective than trying to motivate teachers. CRS may want to consider assessing whether the new approach is more effective than using teachers and consider focusing on parents for future projects.

SILC Group Activities

Provide additional training to SILC groups on management and re-visit strategies to facilitate continued savings during periods of economic or environmental shocks. SILC members and implementers who support SILC activities reported that the savings cooperatives are beneficial but that they sometimes struggle with management of group activities and maintaining membership and engagement. SILC members specifically reported requiring further support in running the groups effectively, particularly in managing savings and group funds. Additionally, based on the survey data, a higher proportion of parent SILC members reported that they are using their savings for school fees. However, fewer respondents reported that the savings helped “a lot” with school expenses, while the proportion of those who said that the savings helped “some” increased. This is consistent with another challenge mentioned by SILC members and implementers, namely the reduction in available income to save and contribute to the SILC during times of economic vulnerability, such as during the dry season or after a bad harvest. Parents report that during these times, affording school fees and food security is a major issue, which means that having income to contribute to a fund is not feasible. Implementers also acknowledge that drop-outs from the SILC groups occur during times of economic stress. CRS may want to consider enhancing their support of SILC groups with additional trainings, while exploring strategies, such as providing partial matching funds for savings or other financial incentives to encourage savings during times of acute economic hardship.

Recommendation for Sustainability

Communicate more widely with stakeholders about sustainability plans and the actors responsible for specific activities. Although CRS has engaged in sustainability planning related to school feeding, SILC groups, mentoring, libraries, and teacher training there remains inconsistent understanding among stakeholder groups over which components of BBII will be sustained and by whom. In addition, some stakeholders do not appear to understand which responsibilities are incumbent upon them to continue or feel unprepared to deliver activities of the same quality as under BBII. Though CRS may have a clear conception of how sustainability will occur, this can be a complex undertaking and more communication and sensitization.

Refine the SILC groups and library activities and re-visit the design of the mentoring component when planning next steps. CRS has prioritized four key components for sustainability: school feeding, SILC groups, libraries, and mentoring. According to implementers, each of these activities has a clear sustainability plan and appropriate supports have been identified to promote their continuation. However, CRS may want to consider working with appropriate actors to refine these activities for future implementation to address some of the challenges identified by stakeholders to improve their impact. For example, training PSPs in new methods for maintaining member engagement during challenging economic times, such as dry seasons or poor harvests, or identifying funds for seed capital may help sustain activities. Also, exploring approaches to facilitating access to libraries for those schools that are far distances or eliciting support to build additional libraries or mobile libraries could be helpful. In addition, CRS may want to conduct further case studies into the mentoring component before solidifying plans to continue or expand the activity.

Continue to engage government stakeholders and local actors to maintain buy-in for school feeding programs and monitor progress at national and local levels. The school feeding component was identified among stakeholders as an impactful intervention and is perceived to be critical in encouraging school attendance and promoting attentiveness in class. Stakeholders believe it is a successful strategy that supports both food security and educational goals and should continue. CRS has been successful at building buy-in and capacity among key actors and given the strategy's importance should continue to promote its sustainability even after the life of the project. CRS may want to consider continuing to track the activities and progress of national government and local communities, particularly as responsibilities shift to local communes in FY2019, and identify future opportunities to expand or support the government's efforts.

Recommendation for Future Evaluations

Consider new assessment for subjective indicators such as attentiveness for a more accurate analysis. One limitation of the analysis is that some indicators, like student attentiveness, are difficult to measure objectively when using teachers' self-reported data. Measuring students' attentiveness of students at individual level is also costly in terms of time and resources. However, future projects could consider allocating more funds to measure this indicator at classroom level, through observations. Although attentiveness measures at the classroom level cannot be linked to each surveyed student, classroom observations are more cost effective and can help measure students' attentiveness with more precision.

Improve monitoring and evaluation of indicators that are tied to social desirability biases. Some of the key indicators for BBII program, including hunger and attendance have been collected without any

challenges. However, the analysis of these outcome indicators need to be interpreted with caution due to their social desirability biases. Principals are less likely to share their teacher absenteeism as it could reflect negatively on their performance. Teachers may do the same for reporting on their students' attendance, especially when they did not keep a consistent attendance log. Moreover, respondents are less likely to share their food insecurity with strangers. Future projects should consider a mechanism to complement the survey results on such outcome indicators with monitoring and evaluation data. For example, allocating more funds to conduct household observations on dietary practices for a sub-sample of respondents, or providing an incentive mechanism for teachers or principals to keep updated attendance logs to allow more frequent and consistent measures of attendance and thus improve the reliability of the data collected.



Source: CRS

SECTION 1. INTRODUCTION

Beoog Biiga II (BBII) is a four-year project (2014–2018) that was implemented by Catholic Relief Services (CRS) and its partners in the Bam and Sanmatenga provinces in Burkina Faso and funded by the United States Department of Agriculture (USDA) McGovern-Dole International Food for Education and Child Nutrition program (MGD). The purpose of this report is to assess the efficiency and effectiveness of the project in the past four years in achieving its intended results. In this report, we also provide recommendations on sustainable exiting strategies, as well as lessons learned for future implementation of new Beoog Biiga phase(s).

In this section, we provide a brief overview of the program, as well as of the endline performance and impact evaluations of the BBII. Section 2 outlines the quantitative and qualitative evaluation methodologies, including research questions, sampling design, data sources, data analysis, and fieldwork. In Section 3, we describe the sample respondents as well as the key indicator outcomes for the performance evaluation. Section 4 shows the impact evaluation results, and Section 5 presents the qualitative findings. Finally, Section 6 concludes with lessons learned, study limitations, and recommendations.

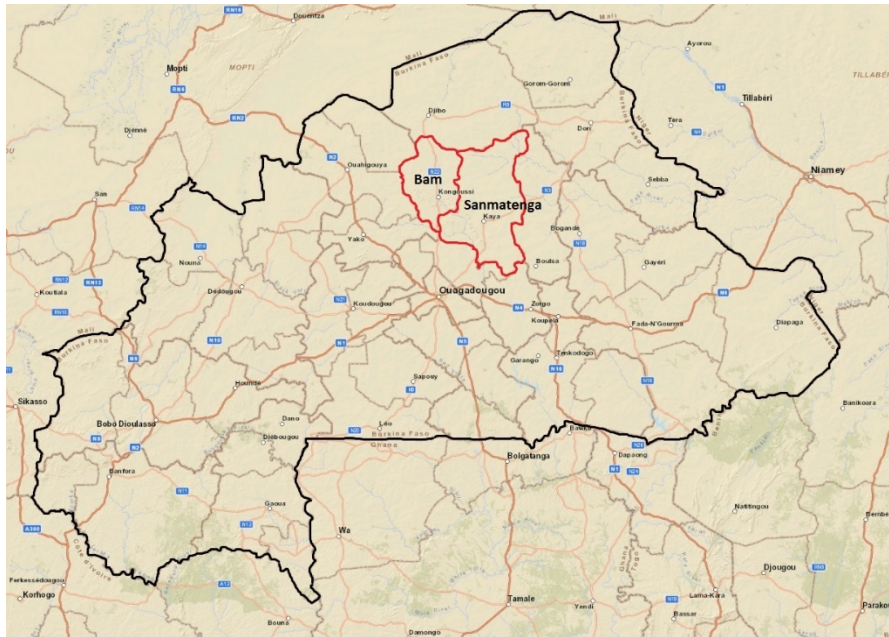
1.1 Program Description

CRS is leading on implementation of Beoog Biiga II, Tomorrow's Child (October 2014–September 2018), in partnership with the Ministry of Basic Education and Literacy (MENA) of Burkina Faso, Organisation Catholique pour le Développement et la Solidarité (OCADES) Ouahigouya, OCADES Kaya, and Friends of African Village Libraries (FAVL). CRS is also working in collaboration with the Ministry of Health and the Ministry of Social Action and Solidarity (MASSN). The program was funded by the McGovern-Dole International Food for Education and Child Nutrition program, which is managed by the Foreign Agricultural Service of the USDA.

Based on the theory of change for this project, BBII aims to improve the literacy and health and dietary practices of school-aged children in the provinces of Bam and Sanmatenga in the Center North Region of Burkina Faso (see Exhibit 1 for the area of the program). To achieve these strategic objectives, the project is implementing various activities, including provision of school meals and take-home rations; distribution of deworming pills, vitamins, and minerals; health and nutrition training; provision of school supplies and materials; school district administrator training; capacity building at the local, regional, and national levels; mentorship of girls; teacher training; creation of community savings and lending groups; establishment of a standardized reading assessment; establishment of libraries; creation of reading clubs; and efforts to raise awareness of the importance of education (see the Conceptual Framework in [Appendix A](#)).

To ensure the program's sustainability, the project is based on a participatory approach that reinforces the linkages between communities and schools by building the capacity of the local stakeholders and raising the community's awareness. This approach also ensures the program is contributing to the achievement of the Burkina Faso education strategic plan and of the United Nations' Millennium Development Goals and United Nations' Sustainable Development Goals objectives.

Exhibit 1. Bam and Sanmatenga Provinces



By implementing these activities over the life of the project, CRS expects to reach approximately 387,000 direct beneficiaries, distributed as follows:

- 270,000 primary and preschool students (between 170,000 and 200,000 per year)
- 3,600 teachers
- 90 preschool caregivers
- 9,900 parent-teacher association (PTA) members, school management committee members, and cooks
- 51,120 savings and internal lending community (SILC) members
- 2,250 community mentors
- 20,000 community members (using libraries)
- 40 local government officials (i.e., county mayors and deputy mayors)
- 30,000 parents
- 80 school administrators: district-level inspectors and pedagogical advisors

1.2 Evaluation Background

The BBII evaluation consists of two main components, as described below.

- 1. Performance evaluation.** This component spans three data collection periods: baseline (2015), midline (2017), and endline (2018). The baseline, midline, and endline rounds of the performance evaluation are structured to measure changes in outcomes over time and inform program performance after four years of implementation. To accurately capture program performance longitudinally, IMPAQ measures the same program indicators at all three data collection points. This report focuses on the final evaluation findings and compares the performance indicator outcomes between baseline and endline with regards to:

- ✓ Knowledge of health and hygiene practices

- ✓ Knowledge of safe food preparation and storage practices⁴
- ✓ Knowledge of nutrition
- ✓ Literacy outcomes and environment

[Section 2](#) provides a full list of key performance indicators. To evaluate these key indicators and measure progress toward achieving them, IMPAQ collected survey data using the same instruments at baseline and midline.

- 2. Impact Evaluation.** This component of the evaluation seeks to identify the causal effect of the mentoring component of the intervention on the literacy of school-aged girls in a subset of BBII program schools. The impact evaluation spans only two data collection periods: baseline (2015) and endline (2018). In this report, we compare students' outcomes at endline between students in the randomly assigned program schools that received the mentorship intervention (treatment group) and students in the randomly assigned program schools that did not receive the mentorship intervention (control group). This report discusses the impact of the mentoring program on literacy levels, food security, hygiene practices, and nutrition knowledge outcomes of students.

The performance and impact evaluations were designed in parallel to maximize comparability in the outcome indicators and findings, although they follow different timelines.

In addition, IMPAQ used qualitative key informant interviews, focus group discussions, and classroom observations to assess the relevance of BBII interventions; the appropriateness of BBII strategies; project management structures; and the effect of activities on project effectiveness, efficiency, impact, and sustainability. Triangulating these data with survey data provides contextual information for the quantitative analysis; helps explore lessons learned and best practices for future programming; and provides effective recommendations for program sustainability at the time of CRS's exit.

⁴ Performance indicators related to knowledge of safe food preparation and storage practices have been collected by CRS and are not analyzed in this report.

SECTION 2. Evaluation Methodology

This section provides a brief overview of our quantitative and qualitative designs for the BBII impact and performance evaluations, including research questions, sampling design, data sources, fieldwork, and data analysis. In [Section 2.1](#) we present our quantitative approach, in [Section 2.2](#) our qualitative approach.

2.1 Quantitative Approach

The design for the quantitative component of the evaluation encompasses data sources that include separate surveys of teachers, district administrators, students, and parents; a PTA member survey; student literacy assessment; student attendance logs; sample of student distribution records (school level); CRS program data/distribution reports; trainings; and reports. In this section, we first present the quantitative research questions that guided the quantitative component of the evaluation and how they map to the project indicators and data sources ([Section 2.1.1](#)). We then present the methodologies used for the performance evaluation and the impact evaluation ([Sections 2.1.2](#) and [2.1.3](#), respectively).

2.1.1 Quantitative Research Questions

BBII quantitative research questions focus on literacy, health, and nutrition outcomes for various beneficiaries, including teachers, students, and PTA members, with an emphasis on improving outcomes for girls. These research questions are derived from the program objectives, as well as guidelines from the McGovern-Dole International Food for Education program.

Exhibit 2 maps the Strategic Objectives (SO) and Results of the CRS performance monitoring plan (PMP) to the key quantitative research questions, their corresponding indicators, and the sources from which IMPAQ will collect data in accordance with the approved Terms of Reference (TOR). [Appendix A](#)⁵ includes a detailed table mapping all the research questions to the SOs.

Exhibit 2. Quantitative Research Questions

Strategic Objectives and Results	Research Questions	Project Indicators	Data Source	Evaluation Methods
SO1. Improved Literacy of School-Age Children	What percent of students (boys and girls) have increased their reading comprehension compared to baseline?	Percentage of students (boys and girls) who, by the end of two grades of primary schooling, demonstrate that they can read and understand the	Student literacy assessment	Performance

⁵ In the approved terms of reference and performance monitoring plan ([Appendix A](#)), the data collection is referred to as “evaluation” when IMPAQ is collecting the data through qualitative and/or quantitative methods and as “CRS/monitoring” when CRS is responsible for collecting monitoring data on performance indicators. For some questions data have been collected by both IMPAQ and CRS.

Strategic Objectives and Results	Research Questions	Project Indicators	Data Source	Evaluation Methods
	Have literacy levels of boys and girls in schools with mentoring changed more or less than in schools without mentoring?	meaning of grade-level text. Percent of students (boys and girls) in mentoring schools who can read and understand grade-level text compared to non-mentoring schools.		Impact
IR1.1. Improved Quality of Literacy Instruction	- To what extent are teachers implementing literacy teaching techniques acquired through the project? - How much time per day do teachers devote to literacy instruction? - To what extent has teachers' attendance changed? - To what extent are school administrators implementing the training of teaching techniques and pedagogical accompaniment and teacher monitoring/feedback techniques acquired through the project?	- Number of teachers, educators, and teaching assistants in target schools who demonstrate use of new and quality teaching techniques or tools as a result of USDA assistance. ^a - Number of teachers who devote an average of at least 45 minutes a day to literacy instruction. ^a - Number of teachers in target schools who attend and teach school at least 90% of scheduled school days per year. ^a - Number of school administrators and officials who demonstrate use of at least one new technique, skill, or tool as a result of USDA assistance.	Teacher survey, Student survey, District administrator survey	- Performance - Performance - Performance - Performance

Strategic Objectives and Results	Research Questions	Project Indicators	Data Source	Evaluation Methods
	their savings on education costs?			
Output 1.3.5. Increased Community Understanding of Benefits of Education	Has the parents' level of contribution to the school canteen changed?	Number of months of community and/or government support for school canteens. ^a	PTA survey	Performance
IR2.1 Improved Knowledge of Health and Hygiene Practices	- To what extent has students' knowledge of health and hygiene practices changed? - To what extent have students improved their hygiene-related practices?	- Number of students in target schools who pass a test of good health and hygiene practices by naming at least 4 situations in which they should wash their hands. ^a - Percentage of schoolchildren who wash their hands at critical moments: before eating and after using the latrine. ^a	Student survey	- Performance and Impact - Performance and Impact
IR2.3 Increased Knowledge of Nutrition	- To what extent has students' knowledge of nutrition and dietary practices changed? - What percent of children receiving a minimum acceptable diet has changed, if any, compared to baseline?	- Number of students in target schools who pass a test on nutrition and dietary practices by naming at least one food with iron and one with vitamin A and by naming one benefit of each. ^a - Percentage of school-aged children (boys and girls) who receive a minimum acceptable diet (boys and girls).	Student survey,	- Performance and Impact - Performance
IR2.5 Increased Access to Preventative Health Interventions	To what degree has students' knowledge about vitamin A, iron and deworming	Percentage of students who have heard of vitamin A and iron, can cite a benefit of each, and know a food that contains each.	Student survey Sample of student distribution records (school level) CRS program	Performance

Strategic Objectives and Results	Research Questions	Project Indicators	Data Source	Evaluation Methods
	medication ⁶ changed since baseline?		data/ distribution reports	
FR4, Outputs 1.4.4 & 2.7.4 Increased Engagement of Local Organizations and Community Groups	To what extent are PTAs holding regular meetings? To what degree is this frequency different from baseline?	Number of general assemblies and PTA council meetings held in the past school year.	PTA survey Trainings Reports	Performance

Source: BBII Terms of Reference (TOR) and Performance Monitoring Plan (PMP);^a Key performance indicators.

To complete the analysis of the key research questions, we also examined some non-key indicators as presented below.

- Number of libraries observed during the data collection in targeted schools
- Percentage of parents reporting that educating girls improves girls' living standards
- Proportion of parents that showed good hygiene and nutrition practices through transfer of knowledge from children

2.1.2 Performance Evaluation Design

In this section we discuss design issues relating to the *performance evaluation*, including: (1) sampling design, (2) data sources, (3) ethical guidance, (4) data collection preparation, (5) data collection, and (6) data analysis.

Sampling Design

At baseline, in light of budget and time constraints and with USDA's approval, IMPAQ and CRS agreed to overlap the sample for the impact and performance evaluations and to limit the performance evaluation sample to the 22 control schools in the impact-evaluation sample. Specifically, the performance-evaluation sample frame is the 22 schools in the control group of the impact evaluation. As described in further detail in [Section 2.1.3](#), the impact evaluation uses a randomized control trial (RCT) design in which 22 treatment schools (out of 44 schools) have been assigned to receive the BBII mentoring program. The performance evaluation sample excludes these treatment schools, so that the changes in outcomes examined in the performance evaluation can be associated only with the other BBII components and not with the mentoring program. These 44 schools are distributed across 19 school districts of 27 in the total project area in the Bam and Sanmatenga provinces.

For the endline performance evaluation, we selected a new sample of students from grades 2, 3, 4, and 6. At endline, the sample for grade 2 students and PTA members increased compared to baseline and midterm evaluations to be able to detect somewhat smaller changes in some key outcomes (the sample was increased from 4 to 8 second grade students, 4 boys and 4 girls, in each of the 22 control schools). For grades 3, 4, and 6, we randomly sampled two students per grade per school. In addition, for grade 5, the minimum target sample size was two students per school in the performance evaluation. However,

⁶ IMPAQ is only responsible for measuring students' knowledge about vitamin A and iron.

for grade 5, we achieved a larger sample size since the endline sample of fifth graders overlaps with the impact-evaluation sample. In other words, the fifth-grade students were tracked from the baseline impact sample wherever feasible, or replaced with a new sample of fifth graders when they were no longer in school at endline (see additional details on the impact-evaluation sample in [Section 2.1.3](#)). This larger sample of fifth grade students allows to achieve a larger overall students' sample size compared to baseline, and thus have more power to detect changes in outcome indicators over time. The final actual sample size achieved for the endline performance evaluation includes 600 students, 327 parents, 108 teachers, and 134 PTA leaders from the 22 control schools. Further detail is provided in Chapter 3.

Data Sources

To measure progress on outcome indicators from baseline to endline, we collected data using the same survey instruments used at baseline and midline, which were translated and adapted to the Burkina Faso context, including: (1) student survey with the Annual Status of Education Report (ASER) reading assessment; (2) parent survey; (3) teacher survey; (4) PTA representative survey; and (5) school district administrator survey. Some of the surveys were updated with minor changes after pilot testing and before the final data collection.⁷

Surveys. Students in grades 2 to 6 completed the same questionnaire. Questions covered reading habits, attendance, health, hygiene, and dietary practices. We also observed hygiene practices of students at the school level to assess to what extent they had washed their hands with soap and water before eating at the canteen and/or after using the latrine to the extent possible. Parents of the students also completed a survey that included the same questions as the student questionnaire regarding their knowledge of nutrition and hygiene. Moreover, the parent survey had some questions regarding parents' involvement with the school and attitudes toward girls' education. All teachers completed the same teacher questionnaire, regardless of the grade level they taught. Teacher questions focused on teaching practices and attendance. In addition, one PTA leader from each school completed a questionnaire with questions related to meetings held by PTA members in the past year, the functioning of the school canteen, and the extent of community support for the school.

Consistent with our baseline and midline data collection, we collected data from district administrators or Chef de Circonscription d'Éducation de Base (CCEB) of the 22 performance schools in Bam and Sanmatenga. In this survey, we collected data on the administrators' knowledge about training teachers in classroom management methods and literacy instruction.

Reading Assessment. At baseline, we developed, fielded, and used an adapted version of the ASER reading test to measure second-grade students' reading levels. In collaboration with CRS staff, IMPAQ conducted an adaptation workshop and a pretest in 2015 to ensure that the test was culturally appropriate and consistent with Burkina Faso's learning standards for each grade level in primary school.

After the baseline data collection, CRS also used the same ASER test to collect monitoring data. Given the possibility of bias in reading outcomes—for example, students could have access to the test from older students or teachers could become aware of the test and start to prepare students for it—we updated the test content for the midline performance evaluation through another calibration workshop with the Ministry of Education (MoE) and local stakeholders and used the same version at endline data collection, as well. The updated test had the same level of complexity and difficulty as the one used at baseline so we would be able to collect consistent data to compare students' reading skills over time.

⁷ We added some questions about the mentors that were not relevant at baseline.

In addition, we pretested the updated ASER in two schools in Ouagadougou with similar characteristics to those of the rural schools in the evaluation sample. The final version of the test included 11 levels (A–K), which roughly correspond to the reading standards for each grade level (see [Appendix C](#)). Exhibit 3 presents the structure of the ASER reading test, including the test’s levels and corresponding grades and reading skills.

Exhibit 3. ASER-Reading Test Structure

Level	Corresponding Grade	Reading Skills
Level 0	None	None
Level A	Grade 1 (CP1) – Lower level	Identify letters
Level B	Grade 1 (CP1) – Upper level	Read simple sounds
Level C	Grade 2 (CP2) – Lower level	Read complex sounds
Level D	Grade 2 (CP2) – Upper level	Decode simple words (1–2 syllables)
Level E	Grade 3 (CE1) – Lower level	Decode complex words (2–3 syllables)
Level F	Grade 3 (CE1) – Upper level	Read simple sentences
Level G	Grade 4 (CE2) – Lower level	Read complex sentences
Level H	Grade 4 (CE2) – Upper level	Read simple stories
Level I	Grade 5 (CM1) – Lower level	Answer reading comprehension questions on simple stories
Level J	Grade 5 (CM1) – Upper level	Read complex stories
Level K	Grade 6 (CM2)	Answer reading comprehension questions on complex stories

Source: IMPAQ

Attendance Data. We collected attendance data for each of the surveyed students and teachers in our sample. At baseline, IMPAQ and CRS agreed to select three representative months across the agricultural crop cycle and the academic school year—November, January, and April—for measuring students’ attendance using teachers’ logs. For teachers, our data collection supervisors met with school administrators in CCEB offices and asked them to collect⁸ teachers’ attendance logs from school directors for the months of February, March, and April (the last three months before the data collection).

Ethical Guidance

According to the U.S. Department of Health and Human Services (USDHHS), this study was exempt from Institutional Review Board (IRB) clearance because:

- There is no biomedical testing involved in this research, and
- This research is being conducted in an established or commonly accepted educational setting, “involving normal education practices.”⁹

In addition, in accordance to the USDHHS guidelines on human subjects research (45 CFR § 46), we asked all respondents for their consent to proceed with the survey. With regards to students, we also interviewed students after receiving their parents or school principals’ consent, as well as their assent.

Data Collection Preparation

⁸ School administrators were responsible for calling the school director to obtain each teacher’s attendance information.

⁹ Exemption 45 CFR 46.101(b)(1).

In collaboration with our data collection partner, Action, Gouvernance, Intégration, Renforcement (AGIR), and our fieldwork managers, we recruited and trained 16 enumerators to collect the final evaluation data in April–May 2018 (before Ramadan). To enhance the efficiency and quality of data collection, AGIR was able to re-hire enumerators who had collected baseline and/or midline data. Enumerator training consisted of three days of theoretical indoor training, one day of pilot testing in two schools in Ouagadougou, and instrument refinement after pilot testing. Enumerators received training/refresher on the rationale behind each survey and practiced how to collect data on paper and tablets. They used tablets to conduct the in-person surveys and electronically submitted the surveys periodically during the fieldwork.

Data Collection

AGIR organized 16 enumerators into four teams of four individuals. Each team had a team leader who was involved in the baseline data collection. The team leaders were already familiar with the project, the schools, and implementation of the ASER reading assessment from baseline and/or midline. In addition to leadership tasks, they also contacted school principals to coordinate their arrival before visiting the school; ensured that randomly selected students were still enrolled and available to be surveyed; and, finally, asked principals to call on selected students' parents (specifically mothers) to be present on a day of data collection to give their consent and be surveyed. Two enumerators were also responsible for collecting attendance data and surveying district administrators. IMPAQ's local consultant took the lead in overseeing the data collection team on a daily basis for quality assurance of the data that enumerators collected and to provide them with technical support.

All enumerators regrouped with/contacted IMPAQ's fieldwork manager several times during the day to debrief, submit daily data collection logs, submit electronic surveys, and review and plan for the next days of data collection. The team completed fieldwork in 14 days. Our local classroom observation specialist also observed one second-grade class in all treatment and control schools, except two that were closed for security reasons.¹⁰

Data Analysis

After the field activities were completed we conducted a final review of the collected data to check:

- Data completeness
- Duplicate entries
- Final dispositioning of records
- Skip-pattern logic
- Data cleaning accuracy

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

In this report, we provide summary statistics (percentages and averages) at endline using data from individual or multiple survey items. We also outline subgroup analyses by grade, student gender, and province, highlighting emerging patterns. To measure the progress of BBII toward its core objectives, we conducted descriptive analyses comparing mean outcomes at baseline with those at endline by running *t*-tests and using *p*-values.

¹⁰ On May 2, 2018, there was a terrorist attack at the school of Bafina in the Barsalogho school district, which caused several schools of the area to close temporarily. Our data collection team went back to the schools once they were safe, but the teachers were no longer available in the schools.

2.1.3 Impact Evaluation Design

The confirmatory outcome for the impact evaluation is to assess the causal effect of the mentoring program on student outcomes, specifically girls' reading proficiency (ability to achieve the grade-appropriate reading level). To this purpose, the impact evaluation used an RCT design in which 22 treatment schools (out of 44 selected schools) were assigned to receive the BBII mentoring program component, while 22 control schools did not receive the mentoring program in the 4-year period of the evaluation. Specifically, the mentoring program was designed to take place in only 200 of the 800 McGovern-Dole BBII primary schools in the Bam and Sanmatenga provinces. Among these 200 schools, 50 BBI pilot schools were already using the mentoring program and were therefore excluded from the sample of schools for the BBII mentoring program. The additional 150 schools were planned to be phased in over the first three years of the project, at a rate of 50 schools each year.

IMPAQ worked in close collaboration with the BBII team and made a selection of schools best suited for the RCT study based on selection criteria to ensure school homogeneity (e.g., schools teaching exclusively in French), schools not already exposed to the mentoring program, and schools at a reasonable distance from each other to prevent contamination, among others. IMPAQ determined which schools matched the selection criteria with information provided by BBII program staff and with geographic information system (GIS) data. These criteria, which are described in greater detail in the baseline report, resulted in a sample of 44 schools for the RCT: 22 in the treatment group and 22 in the control group.

In this section we discuss design issues relating to the *impact evaluation*, including (1) sampling design, (2) data sources, and (3) data analysis.

Sampling Design

As described above, IMPAQ selected 44 schools for inclusion in the RCT sample. At baseline, after selecting the schools, IMPAQ randomly selected a sample of girls and boys from the second-grade class to participate in a baseline survey. IMPAQ sampled a total 381 second-grade students (203 girls and 178 boys) from the 22 control schools, and 382 second-grade students (186 girls and 196 boys) from the 22 treatment schools, for a total sample size of 763 students (i.e., about 17 students per school, on average).¹¹

For the final impact evaluation, IMPAQ tracked the selected girl students, who were in second grade at baseline and in fifth grade at endline (in October 2018). Although mentoring is offered to girls only, the program may have spillover effects on boys in the program schools. For example, boys' reading skills may improve as they emulate the study habits that their female peers learn through the mentoring program; or, alternatively, boys' reading skills may suffer because more attention is given to the girls as a result of the mentoring program. IMPAQ also tracked selected boys in the same grade as the girls to estimate the impact on boys' reading skills.

At endline, IMPAQ was able to track 313 out of the 763 students from the baseline sample, i.e., 41 percent (throughout the report we refer to them as *original* students). The rest of the second-grade students (450

¹¹ The actual sample size obtained at baseline was above the target sample size of 616 students, i.e., 14 students from each of the 44 schools for the RCT sample.

= 763 - 313) from the baseline sample could not be found in grade 5 at endline (i.e., 59 percent attrition). In order to mitigate this attrition and meet the required sample size to estimate program impacts, IMPAQ replaced the baseline students who could not be found at endline with a new sample of 282 fifth-grade students from the same grade/school (i.e., referred to throughout as *replacements*). These replacements were randomly sampled from the updated fifth-grade student lists provided by CRS for the selected schools. By including the replacements, we were able to reach a total endline sample size of 595 fifth-grade students (298 girls and 297 boys). The endline sample includes 303 treatment students (152 girls and 151 boys) and 292 control students (146 girls and 146 boys).

The data indicate that the percentage and gender composition of original students in the endline sample is similar between treatment and control groups: the original students represent 51.8 percent of the endline treatment group (157 out of 303) and 53.4 percent of the endline control group (156 out of 292). By looking at the gender composition, we observe that 51.6 percent of the original students in the treatment group and 55.8 percent of the original students in the control group are females.

Data Sources

To measure progress on outcome indicators for the impact evaluation, we analyzed data collected on the treatment- and control-group students using the same survey instruments used for the performance evaluation, including the ASER reading test.

Data Analysis

Because of attrition and replacement, the endline analytic sample does not completely overlap with the analytic sample used to assess baseline equivalence (i.e., baseline analytic sample). There are several concerns related to this that will inform our impact analysis.

First, while baseline equivalence was established for most outcomes, there is a concern that baseline equivalence might be compromised if the analytic sample at endline is substantially different from the one at baseline. This is a concern given that, as described above, we have 59 percent attrition from baseline to endline. In the context of high attrition, it is particularly important to assess differential attrition between treatment and control groups, which can potentially be a threat to the validity of the randomized design. By looking at the attrition rates by treatment status, we observe a 59.1 percent attrition rate in the control group and 58.9 percent attrition in the treatment group, which indicate very low differential attrition (0.2 percentage points).¹² We also looked at differential attrition rates by gender: the data indicate that the attrition rate among girls is 56.4 percent in the treatment group and 57.1 percent in the control group. For boys, we have an attrition rate of 61.2 percent in the treatment group and 61.2 percent in the control group.¹³ Per What Works Clearinghouse (WWC) guidelines, despite a high level of attrition, it is expected that our data will exhibit a low level of bias due to attrition, given the very

¹² These attrition rates are computed as follows. For the control group, the attrition rate is $(1 - 156/381) \times 100 = 59.1$ percent, where 381 is the number of baseline control-group students, and 156 is the number of control-group students who could be tracked at endline. For the treatment group, the attrition rate is $(1 - 157/382) \times 100 = 58.9$ percent, where 382 is the number of baseline treatment-group students, and 157 is the number of treatment-group students who could be tracked at endline.

¹³ The baseline treatment-group sample includes 186 girls and 196 boys. The baseline control-group sample includes 203 girls and 178 boys. At endline, we were able to track 81 of the 186 baseline girls in the treatment group and 87 of the 203 baseline girls in the control group. We were also able to track 76 of the 196 baseline boys in the treatment group and 69 of the 178 baseline boys in the control group.

low differential attrition. This also indicates that there is no need to report again baseline equivalence on the subsample of students we were able to track at endline.¹⁴

The main impact analysis presents the results using only the subsample of original students. The main regression analysis specified using the subsample of original students for the impact evaluation has been specified as follows:

$$Y_{ij} = \alpha_1 + \alpha_2 M_{ij} + \beta_1 T_{ij} + \beta_2 T_j M_{ij} + \gamma X_{ij} + u_{ij} \quad (1)$$

Where:

- Y_{ij} , is the child's outcome $\{i = 1, \dots, n\}$ in school $\{j = 1, 2, 3, \dots, 22\}$ at endline.
- T_j , is the treatment indicator, which equals 1 if the school j was assigned to the treatment and 0 otherwise.
- M_{ij} , is the gender indicator, which equals 1 if the child is a boy and 0 otherwise.
- X_{ij} , are baseline control variables, including the child's mother's education, the number of young children in the household, and the baseline outcome of interest (if, for example, the outcome analyzed is 'reading proficiency', we include control for baseline value of the reading proficiency). X_{ij} also includes a set of CEB (Circonscription d'Education de Base, School District Office) fixed effects to control for time-invariant school geographic and other characteristics that vary across schools and can affect outcomes.
- u_{ij} , is the error term.

The parameters of interest in this model are:

- β_1 , the regression-adjusted Average Treatment Effect of the intervention for girls.
- $\beta_1 + \beta_2$, the regression-adjusted Average Treatment Effect of the intervention for boys.
- α_1 , the conditional mean outcome for girls in control schools.
- $\alpha_1 + \alpha_2$, the conditional mean outcome for boys in control schools.

For the main outcome of interest (i.e., the ASER reading proficiency), we also tested an alternative model specification that includes the replacement students. In particular, because the randomization was done at the school level, including the fifth-grade students in the analysis is feasible if these students were also enrolled in the same school since the baseline. In this case, we would have some confidence that they were already in the schools at the time schools were assigned to treatment or control conditions and that they were also exposed to the mentoring program for 3 years (similar to the students we tracked from baseline). If, by contrast, all replacements joined the school after randomization, including them in the analysis could introduce some selection bias, since it may be possible for students to knowingly self-select into the schools based on the fact that those schools received the mentoring.

To capture this factor, the endline student questionnaire added a question to assess how long the students have been enrolled in the classroom/school. The data that indicate about 36 percent of replacements students (102 students) were in the school since grade 1 (i.e., at the time of baseline), while

¹⁴ See https://ies.ed.gov/ncee/wwc/Docs/referenceresources/wwc_procedures_v3_0_standards_handbook.pdf, TABLE III.1. The overall attrition rate is 58.8%. Based on WWC guidelines, we can tolerate a differential attrition of up to 1.6 percentage points, under the liberal boundary. In our case the differential attrition meets this threshold.

the rest of the replacements indicated they joined the school in grade 5. As a robustness check, for the main outcome on ASER reading proficiency, we also estimated a regression model including the replacement students who indicated they had been enrolled in the school since baseline.

2.2 Qualitative Approach

Our qualitative study assesses, both retrospectively and prospectively, the following principles¹⁵: (1) the relevance of all interventions, (2) the effectiveness of implementation strategies and activities, (3) the efficiency of the project, (4) the impact of the project, and (5) the likely sustainability of initiated actions. A description of each research domain is presented below in Exhibit 4.

Exhibit 4. Qualitative Research Domain Descriptions

Research Domain	Description
Relevance	The extent to which the project interventions are meeting the needs of the project beneficiaries and are aligned with Burkina Faso's and the U.S. government's development goals, objectives, strategies; the extent to which the project considers economic, cultural, and political context; and the extent to which stakeholders are satisfied with their participation in the project.
Effectiveness	The extent to which the project is achieving its objectives, the interventions contribute to expected results or objectives, and the program coordinates and collaborates with other stakeholders and manages partners.
Efficiency	The extent to which project resources have led to the achieved results, the objectives have been achieved on time, and the project has responded to any internal or external factors that have hindered the efficient implementation of project activities.
Perceived Impact	The extent to which the project will achieve medium- to long-term effects, both intended and unintended, and the extent to which the effects are due to the project intervention or other factors.
Sustainability	The extent to which the project has planned for the continuation of project activities, developed local ownership of the project, and developed sustainability partnerships and the extent to which factors (and which ones) will likely influence achievement or non-achievement of project sustainability.

Source: BBII Terms of Reference (TOR).

In the remainder of this section, we discuss design issues relating to the qualitative component of the evaluation: (1) the qualitative research questions ([Section 2.2.1](#)) and (2) the qualitative data collection and analysis ([Section 2.2.2](#)).

2.2.1 Qualitative Research Questions

The IMPAQ team focused assessment of efficiency, project effectiveness, and perceived impact on the strategic objectives and results shown in Exhibit 5. The domain descriptions in Exhibit 4 and the key

¹⁵ These five principles were developed by the Organisation for Economic Co-operation and Development. Further information may be found at:

<http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>.

questions in Exhibit 5 guided design of the qualitative methodology and development of interview and focus group instruments.

Exhibit 5. Qualitative Research Questions

Strategic Objectives and Results	Key Questions	Data Source
SO1. Improved Literacy of School-Age Children	What factors contributed to an increase in reading comprehension? What factors inhibited improvement?	Implementer, teacher, and school administrator interviews; Student, parent, and mentor focus groups
IR1.1. Improved Quality of Literacy Instruction	- Have teacher literacy instruction trainings been completed as per the project timeline and budget? - To what extent are teachers implementing literacy teaching techniques acquired through the project? - Are changes in classrooms starting to be evident (e.g., teachers see improved reading abilities of students)? If not, why not? What needs to change? - What challenges do teachers face in using the new literacy teaching techniques? - What aspects do they find most useful and why? - In what way has the quality of education improved as a result of the adoption of technical trainings for teachers? - Where libraries are in place, to what degree do community members (including students and teachers) have access? To what extent has the level of access to libraries increased for students, teachers and community members? How well do teachers instruct reading and writing?	Implementer, teacher, and school administrator interviews; Student, parent, and mentor focus groups; Classroom observation
Output 1.1.1. More Consistent Teacher Attendance	- What are the greatest inhibiting factors to teachers' attendance? - What project interventions influenced the improvement of teacher attendance? - Are there any differences in teacher attendance between mentoring and non-mentoring schools?	Implementer, teacher, and school administrator interviews
Output 1.1.2. Better Access to School Supplies and Materials	- To what extent have school supplies and materials been distributed as per the project timeline and budget? - What materials have been supplied? - Which school supplies do teachers find most useful and why? Which supplies and materials provided do students like and why? - What other supplies would teachers and students prefer? - Are material kits being used as intended? - Do teachers and students need additional training to better use these materials? - To what extent have school supplies and materials distributed influenced teachers' literacy teaching approach?	Implementer, teacher, and school administrator interviews; Student focus groups; classroom observation

Strategic Objectives and Results	Key Questions	Data Source
	To what extent have school supplies and materials distributed influenced student literacy performance?	
Output 1.1.3. Improved Literacy Instructional Materials	- To what extent have literacy instructional materials been distributed as per the project timeline and budget? - To what extent have literacy instructional materials distributed influenced teachers' performance? - Do the teachers consider literacy instructional materials to be an improvement over what they previously had? How? - How are teachers using the materials provided? - What, if any, other materials would they prefer? - What do students like and dislike about using the literacy materials that have been provided? - To what extent have reading groups been established? - To what extent have reading groups influenced student performance? - What are the characteristics of a successful reading group? - Who provides oversight of reading groups most often (teachers or older students)? - Why do students join or not join reading groups? - Have students or teachers noticed any change since students have joined reading groups? (e.g., personal confidence, better grades, more social cohesion among students, etc.)	Implementer, teacher, and school administrator interviews; Student focus groups
Output 1.1.4. Increased Skills and Knowledge of Teachers	- To what extent have teachers been trained as per the project timeline and budget? - In what ways has the quality of teaching improved based on the tools and techniques used by teachers? - What aspects of the trainings were not widely adopted and why? - How can the trainings have greater impact? - What additional training topics would help the teachers be even more effective in literacy instruction?	Implementer, teacher, and school administrator interviews
Output 1.1.5. Increased Skills and Knowledge of School Administrators	- To what extent have school administrators been trained as per the project timeline and budget? - To what extent do school administrators find the classroom observation technique useful? - How is the technique received by teachers? - Have the observations led to constructive feedback? If so, has the feedback been received by teachers and affected their teaching techniques? - In what way has the quality of education improved based on techniques used by the administrators? - To what extent have teachers improved their skills and knowledge during the course of the program?	Implementer, teacher, and school administrator interviews
IR1.2. Improved Attentiveness Output 1.2.1. Reduced Short-Term Hunger	- To what extent have school meals been distributed as per the project's budget and timeline? - How do students and students' families appreciate the ration size?	Implementer interviews; Student focus groups

Strategic Objectives and Results	Key Questions	Data Source
Outputs 1.2.1.1/1.3.1.1 Increased Access to Food (School Feeding)	- To what extent have take-home rations been distributed as per the project's timeline and budget? - How do students like the commodities provided for school meals?	Implementer interviews; Student focus groups
IR1.3. Improved Student Attendance	What are the greatest pull factors for students, regarding attendance?	Teacher interviews; Student and mentor focus groups
Output 1.3.1 Increased Economic and Cultural Incentives (Or Decreased Disincentives)	- To what extent has the girls' mentoring activity been implemented as per the project's timeline and budget? - Have the mentors been recruited and trained as per the project's timeline and budget? - Have the mentors conducted regular mentoring activities as planned? - Have the SILC activities been implemented as per the project's timeline and budget? - To what extent have reading-group activities influenced student performance? - How has the mentoring program influenced girls participating in the mentoring program? What have been the factors that have contributed to the results? What factors have limited these results?	Implementer interviews; Mentor and SILC focus groups
Output 1.3.4. Increased Student Enrollment	- Which factors have facilitated or have been obstacles to enrollment? - To what extent have awareness-raising activities influenced students' enrollment? If so, how? - Which factors have facilitated or have been obstacles to enrollment?	Implementer, teacher, and administrator interviews; Mentor and student focus groups
Output 1.3.5. Increased Community Understanding of Benefits of Education	- To what degree have the awareness-raising activities on the importance of education been completed as planned? - How do communities appreciate the messages diffused during awareness raising? - To what extent have awareness-raising activities influenced community behaviors toward education issues? - Has there been a change in the demand for literacy in the communities (value and interest in education and reading)?	Implementer, teacher, and administrator interviews ; Mentor focus groups
SO2. Increased Use of Health and Dietary Practices IR2.1 Improved Knowledge of Health and Hygiene Practices	- To what extent have students improved their hygiene-related practices? - To what extent has the project supplied handwashing stations to schools as planned?	Implementer, teacher, and administrator interviews; Student and parent focus groups

Strategic Objectives and Results	Key Questions	Data Source
<i>IR 2.3 Increased Knowledge of Nutrition</i>	To what extent have PTA members, school management committee members, and food preparers been trained in good nutrition and dietary practices as planned?	Implementer and administrator interviews; PTA focus groups
<i>IR2.5 Increased Access to Preventative Health Interventions</i>	To what extent has the project distributed micronutrients to students as planned?	Implementer interviews

To supplement our analysis, we also examined the following questions:

- What was the Burkina Faso government's support to the project?
- What has the project done/put into place that will lead to sustainability?
- Have there been any unintended negative effects of the project? If so, why?
- What are the project's major limitations and how did the project team address those challenges?
- How do the limitations affect the results, interpretation, and conclusions of the study?

2.2.2 Qualitative Data Collection and Analysis

The primary sources of data for the qualitative component of the evaluation were key informant interviews (KIIs), focus group discussions (FGDs), and classroom observations. We first present our approach to KIIs and FGDs, and then our approach to classroom observations. Finally, we discuss data collection and analysis of the qualitative data.

Key informant Interviews and Focus Group Discussions

To address the research domains, IMPAQ conducted 45- to 60-minute interviews and focus group discussions with individuals from seven stakeholder groups: (1) BBII implementers including CRS, OCADES, FAVL, and MENA; (2) county mayors; (3) teachers; (4) school administrators; (5) mentors; (6) parents; and (7) students. Key informant interviews with these stakeholders probed the relevance of interventions, the effectiveness of implementation strategies and activities, the efficiency of the project, the impact of the project, and the likely sustainability of initiated actions.

Three of the treatment-group schools in the impact-evaluation sample and two of the control-group schools from the performance evaluation (which is the same as the control group for the impact evaluation) were randomly selected for qualitative data collection (see [Appendix E](#) for a full list of selected schools). IMPAQ selected a small sample of teachers and students who completed the survey to participate in key informant interviews and focus groups. In each of the five randomly selected schools, we conducted interviews with two teachers. We had at least one teacher representative from each grade and aimed for an even mix of male and female teachers. We conducted one focus group with five to eight students from one grade at each school, for a total of five focus groups, one per grade.¹⁶ We also

¹⁶ We conducted focus group discussions with students in order to obtain detailed information about personal and group perceptions and opinions. Compared to individual interviews, focus groups allowed us to speak to a greater number of students at each school, given time and resource limitations.

interviewed the school principals at three of the five schools and two district administrators, one from each province.

In addition to school-level interviews, IMPAQ interviewed key program stakeholders and implementers. We conducted eight interviews with representatives of project implementers, including MENA, FAVL, and OCADES; two interviews with county mayors, one from each province; three FGDs with mentors, one in each treatment school visited; and four FGDs with parents, two with PTA and SILC members and two with non-members.

Exhibit 6 presents the number of KIIs and FGDs conducted per respondent type, and [Appendix D](#) contains the qualitative instruments developed and used for each respondent group.

Exhibit 6. KIIs and FGDs by Stakeholder Type

Stakeholder Type	Number of Stakeholders
Project-Level Stakeholder	
CRS	4 KIIs
MENA	2 KIIs
FAVL	2 KIIs
OCADES	2 KIIs
Province-Level Stakeholder	
County Mayors	2 KIIs
School District Administrators	2 KIIs
Treatment Schools	
Teachers	6 KIIs
School Principals	2 KIIs
PTAs/SILCs	1 FGD
Parents	1 FGD
Students	3 FGDs
Mentors	3 FGDs
Control Schools	
Teachers	4 KIIs
School Principals	1 KII
PTAs/SILCs	1 FGD
Parents	1FGD
Students	2 FGD

With oversight from IMPAQ and logistical support from CRS, one of IMPAQ's local consultants, an experienced qualitative researcher, led the qualitative data collection effort in Burkina Faso in May 2018. IMPAQ coordinated with CRS to identify appropriate individuals for interviews and worked closely with CRS to schedule and organize the data collection effort.

In addition to supporting logistics and leading the in-field data collection effort, the local qualitative lead translated the local data collection guides into French and ensured that they were culturally appropriate. The qualitative lead moderated the interviews and focus group discussions, which were audio recorded, with consent, for note-taking and analysis purposes.

Prior to each interview and focus group discussion, the qualitative lead asked each participant to read and sign an informed consent form. IMPAQ worked closely with the qualitative lead to obtain consent forms from guardians for those under 18 years old prior to the focus group discussion. The form informed participants (and their guardians, if applicable) of the following:

- Their participation and the information they disclose will be kept private.
- Their names will not be used in any reports. The interviewers will be taking notes during the discussions about what was said and report aggregate responses and opinions.
- Their participation is voluntary, and they may choose not to answer a question if they feel uncomfortable.
- With their permission, the entire session will be audio recorded for report writing and analysis purposes only. Only the evaluation team will have access to the audio recording.

Contact information for the study's organizers was provided on the consent form, and participants were encouraged to reach out to the organizer if they have any questions after the interview/focus group discussion.

Further, the team adhered to the following data collection protocol throughout the project:

- Interviews incorporated a degree of flexibility, and the evaluation team allowed additional questions in order to capture any information relevant to the research questions and domains.
- The evaluation team followed a consistent data collection approach with each respondent and at each school, while allowing for limited variation according to the cultural practices in each locality.
- The evaluation team kept confidential all information and opinions expressed during individual interviews and focus groups. To the extent possible, only principal parties were present during the interviews.

After the interviews and focus group discussions were complete, the team reviewed and analyzed interview and focus group transcripts to identify recurring patterns pertaining to the five research domains. Our analytical approach captured salient themes for each research domain and any important similarities and key differences that may inform the quantitative results.

Classroom Observations

We used BBII literacy training materials to develop a classroom observation tool at midline. At endline, our local classroom observation specialist, a curriculum expert from MENA's editorial for language and communication curriculum, along with our IMPAQ education expert, pilot tested the tool again in one school in Ouagadougou, Burkina Faso, to make the final adjustments. We worked closely with the CRS education specialist to finalize the instrument, fully adapting it to the local context (see [Appendix D](#)). The tool was designed to observe instruction in any subject, including literacy, math, and human science, in grade 2 across all 44 schools (treatment and control groups). The instrument enabled us to observe whether trained teachers have been implementing the new literacy teaching techniques and using the material kits provided by the program.

For the classroom observation, IMPAQ and CRS with approval from USDA increased the sample of classroom observations from all grades in five schools to second grade in all 44 schools. This was to obtain a better understanding of how the new techniques are being implemented, as well as studying the correlation between teacher characteristics, instructional practices, and students' literacy outcomes. To enhance the quality of the data, we also took videos during our observations, with teachers' consent.

These data enable us to correlate the outcomes of classroom observation with the findings from the teacher survey and teacher key informant interviews.

The classroom observation tool developed for the midline assessment was revised slightly, in order to allow for comparison between practices over time. The tool allows us to record: 1) which BBII techniques are used, 2) which material is used, and 3) what reading skills are developed during the lesson. This data helped us to understand students testing results. The final version of the classroom observation tool can be found in [Appendix D](#).

We implemented a classroom observation instrument in all schools in the performance evaluation sample that could be visited. (See [Appendix E](#) for the full list of schools.) We observed 42 grade-2 classes. The average class size was 73 students per grade with 46% of girls. All teachers taught in French although two of them used the national language to make students understand a text or understand instructions. Over 60 percent of the teachers were women. All the teachers had completed initial training in public teacher training schools.

For classroom observations, we conducted a double coding of lessons based on videos. This double coding allowed us to:

- correct data on the use of materials (classroom observer reported materials available in the classroom when tool asked for materials used during the lesson)
- qualify reporting of written production (classroom observer reported as written production all activities of copy or dictation while written production is related to individual expression, transcription of their own ideas),
- qualify reporting of games (classroom observer reported as game all activities where scores were attributed, even without any notion of entertainment).



Source: CRS

SECTION 3. Performance Evaluation Outcomes

In this section, we provide summary statistics about students, parents, households, teachers, PTA representatives, and school district administrators in the 22 control schools. We performed balance checks on a new endline for key demographic characteristics to ensure the endline sample is observationally equivalent to the baseline sample.

We also analyzed data from the student ([Section 3.1](#)), parent ([Section 3.2](#)), teacher ([Section 3.3](#)), PTA ([Section 3.4](#)), and school district administrator ([Section 3.5](#)) surveys to measure the endline values for performance indicators, shown in Exhibit 2 in [Section 2.1.1](#), and other outcomes. [Appendix B](#) provides additional detail. In analyzing these performance data, we compared mean outcomes at baseline and endline by using t-tests and p-values to highlight statistically significant differences. Such analysis can only suggest a correlation between the observed changes in outcomes and BBII interventions such as school feeding or teacher training. Since we selected a new sample of individuals at each data collection point (baseline and endline), we cannot conclusively determine whether the interventions caused the changes. There may be systematic differences in the two sets of samples that affected the outcomes. For example, improvements in nutrition knowledge at endline relative to baseline could mean that the students selected at endline came from better socioeconomic backgrounds. Also, a simple difference in outcomes between baseline and endline could be caused by other general trends that affected all the schools. In addition, self-reported data, especially those on culturally and socially sensitive topics such as food security, should be interpreted with caution due to social desirability bias.

We followed the sampling strategy explained in [Section 2](#) to randomly select students from the school list shared by CRS. For fifth-grade students, who partially overlap between the impact and performance sample, we tracked the same students who were surveyed at baseline when they were in second grade. When the students from the baseline could not be found (e.g., relocation and/or drop-out), we surveyed a sample of new randomly selected fifth-grade students (e.g., relocation and/or drop-out). On May 2, 2018, a terrorist attack occurred at the Bafina school in the Barsalougho school district where two of our evaluation schools are located. We visited those schools after the attack, but we were not able to reach our target sample sizes due to the absences of teachers, PTA members, and students.

Exhibit 7 summarizes the distribution of surveyed respondents in the performance sample by province. Overall, we ended up with a random sample of 600 students, grades 2 to 6, and 327 parents. In each of the 22 schools, we also surveyed teachers of grades 2 to 6, as well as any of the PTA members for a total of 108 and 134, respectively. All respondents, including students, parents, teachers, and PTA members, gave us their consent to proceed.¹⁷ As describe previously in Section 2.1.2, the larger endline students' sample size compared to baseline is due to: (i) increased sample size of second grade students, from 4 to 8 per school; (ii) inclusion of all fifth-grade students from the 22 control schools, not only those that overlap between the performance and impact evaluation samples. This means that, at endline, we used all the students that were sampled for the impact evaluation in each of the 22 control schools (i.e., about 14 students per school) instead of two fifth grade students per school. This allow us to increase the overall sample size and thus maximize power to detect changes in indicators over time. In order to test the robustness of the performance results, we also computed the key performance indicators using the smaller sub-sample of fifth grade students (i.e., 2 fifth grade students instead of 14) which would give a sample size similar to baseline. The results for key indicators using this restricted fifth grade sample, and

¹⁷ In accordance with the U.S. Department of Health and Human Services guidelines on Human Subjects Research (45 C.F.R. § 46), we asked all respondents for their consent prior to proceeding with the survey.

the statistical significance of the changes between baseline and endline, are very similar to those reported in the main text.

Exhibit 7. Performance Sample Distribution by Province and Type of Respondent

Province	Type of Respondent				
	Schools	Students	Parents	Teachers	PTA Leaders
Bam	11	298	180	55	62
Sanmatenga	11	302	147	53	72
Total	22	600	327	108	134

Source: Surveys of students, parents, teachers, PTA members

Exhibit 8 provides an overview of the baseline, midline and endline levels of the key McGovern-Dole evaluation performance indicators described in detail in [Section 2.1.1](#), as required by the terms of reference. The Data Source column shows which survey data we used to measure each indicator. As we did at baseline and midline, we calculated the total numbers by applying the proportion to the total population of beneficiaries¹⁸ in the Bam and Sanmatenga provinces. This calculation included 212,117 students (112,118 boys and 100,099 girls), 4,658 teachers (2,400 men and 2,258 women), 81 school district administrators, 2,265 mentors, and 67,405 SILC members.¹⁹ Each of these indicators and other findings are discussed in detail later in this section.

In Appendix A, we also compare the total estimated numbers computed at midline and endline in Exhibit 8 with the target values of each indicator as available from CRS's semi-annual report in 2018, and assess whether the target indicator was met or not. In the rest of this chapter we also include the midline levels of the key performance indicators, as already reported in the midline report, for completeness. However, the focus of the discussion will be on the observed changes from baseline to endline, as described in final performance evaluation terms of reference. For more details about the midline results please refer to the midline report.

Exhibit 8. Overview of Baseline, Midline and Endline Levels of Key Performance Indicators

Key Performance Indicators	Data Source	Baseline			Endline		
		Percent ^d	Total Estimated Number	95% Confidence Interval	Percent ^d	Total Estimated Number	95% Confidence Interval
1. Percentage of students (boys and girls) who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade-level text.	ASER reading test	Boys: 13%	12,707	0 – 31%	33%	36,999	22-43%
		Girls: 18%	16,313	1 – 33%	33%	33,033	23-43%

¹⁸ We used the percentages as a basis for extrapolation to estimate the number of beneficiaries in each indicator.

¹⁹ This method is described in the CRS performance monitoring plan and was approved by USDA.

Key Performance Indicators	Data Source	Baseline			Endline		
		Percent ^d	Total Estimated Number	95% Confidence Interval	Percent ^d	Total Estimated Number	95% Confidence Interval
2. Percentage of teachers who devote at least an average of 45 minutes a day to literacy instruction.	Teacher Survey	55%	1,795	45–65%	51%	2,376	40-61%
3. Percentage of teachers who attend and teach school at least 90% of scheduled school days per year.	District Administrators Survey	85%	2,775	NA ^a	89%	4,146	N/A
4. Percentage of school administrators and officials who demonstrate use of at least one new technique, skill, or tool as a result of USDA assistance. ^b	District Administrators Survey	61%	49	NA ^a	100%	81	N/A
5. Number of preschool teachers (bissongo caregivers) in target preschools who demonstrate use of at least one new teaching technique, skill, or tool.		N/A	N/A	N/A	N/A	N/A	N/A
6. Percentage of teachers/educators/teaching assistants in target schools who demonstrate use of new and quality teaching techniques or tools as a result of USDA assistance. ²⁰	Teacher Survey Student Survey	52%	1,677	42–61%	49%	2282	39-60%
7. Percentage of students in target schools who are identified as attentive ²¹ during class/instruction.	Teacher Survey	43%	74,400	35 - 54%	45%	74,483	34-55%

²⁰ Teachers who declared using at least 5 of the 7 activities.

²¹ We asked teachers on a scale of 1 to 10, where 1 is 'not attentive at all', to rate their students' attentiveness. Passing attentiveness score was defined as a score of 7 or more on a scale of 1 to 10.

Key Performance Indicators	Data Source	Baseline			Endline		
		Percent ^d	Total Estimated Number	95% Confidence Interval	Percent ^d	Total Estimated Number	95% Confidence Interval
8. Percentage of students in target schools who indicate that they are hungry or very hungry during the school days.	Student Survey Parent Survey	4%	8,075	2–7%	4%	8,485	3-6%
9. Percentage of students regularly (80%) attending USDA-supported classrooms/schools (boys and girls).	School registries	Boys: 100%	105,894	100–100%	Boys: 100%	112,118	99-100%
		Girls: 100%	95,958	99–100%	Girls: 99%	99,098	99-100%
10. Percentage of group members that spend money from SILC on education costs.	Parent/PTA Survey	48%	14,758	24–71%	83%	25,518	76-89%
11. Percentage of girl students who cite mentors as one of the top 3 reasons for their success or improvement in school. ^c	Student Survey	N/A	N/A	N/A	2%	4,242	0-4%
12. Percentage of school-aged children receiving a minimum acceptable diet (boys and girls).	Student Survey	Boys: 56%	59,301	49–64%	79%	88,573	75-84%
		Girls: 63%	60,454	56–70%	86%	86,085	82-90%
13. Percentage of school children that wash their hands at critical moments: before eating and after using the latrine.	Student Survey	78%	157,445	74–83%	91%	193,026	88-93%
14. Percentage of students in target schools who achieve a passing score on a test of good health and hygiene practices by naming at least 4 situations in which they should wash their hands.	Student Survey	5%	10,093	3–8%	20%	42,423	17-23%

Key Performance Indicators	Data Source	Baseline			Endline		
		Percent ^d	Total Estimated Number	95% Confidence Interval	Percent ^d	Total Estimated Number	95% Confidence Interval
15. Percentage of students in target schools who achieve a passing score on a test on food nutrition and dietary practices by naming at least one food with iron and one with vitamin A and by naming one benefit of each.	Student Survey	1%	2,019	0–1%	9%	19091	6-11%
16. Number of months of community and/or government support for school canteens.	PTA Survey	5 months	N/A	4–7	4 months	N/A	3-4

Source: Surveys of students, parents, teachers, PTA members; IMPAQ calculations.^a The small sample size of district administrators does not permit statistical inferences, and a confidence interval is not meaningful. ^b In the BBII project, this indicator focuses on district-level administrators.

^c This indicator is irrelevant at the endline performance evaluation because the sample includes only the 22 control schools of the impact evaluation, which have not received the mentoring intervention. Percent columns show the percentages with respect to the surveyed respondents for each indicator at baseline and endline. These percentages are used as basis for extrapolation to estimate the total number.

3.1 Students

The survey design ensured that the ratio of boys to girls is balanced equally and also reflects the population of beneficiary students in each school. We randomly selected two boys and two girls in grade 2, seven boys and seven girls in grade 5 (to be consistent with the impact sample), and one boy and one girl in other grades. In total, we surveyed 600 students in grades 2 to 6: 299 boys and 301 girls. Exhibit 51 in [Appendix B](#) also shows that the gender composition from baseline to endline has not changed.

Exhibit 9. Sampled Student Gender Distribution by Grade

Grade	Male		Female		Total
	Percent	Total Number of Observations	Percent	Total Number of Observations	
Grade 2 (CP2)	49%	86	51%	89	175
Grade 3 (CE1)	50%	22	50%	22	44
Grade 4 (CE2)	49%	22	51%	23	45
Grade 5 (CM1)	50%	146	50%	146	292
Grade 6 (CM2)	52%	23	48%	21	44
Total	50%	299	50%	301	600

Source: Student Survey; IMPAQ calculations.

IMPAQ also examined student data to measure progress on the desired student outcomes at endline in comparison with baseline in six areas, as discussed in the subsections below.

- Nutrition knowledge ([Section 3.1.1](#))
- Hygiene knowledge and practices ([Section 3.1.2](#))
- Food security ([Section 3.1.3](#))
- Attendance ([Section 3.1.4](#))
- Literacy activities ([Section 3.1.5](#))
- Reading outcomes ([Section 3.1.6](#))

3.1.1 Student Nutrition Knowledge

We asked students whether they had heard of vitamin A and iron to capture students' nutrition knowledge. If they had heard of those nutrients, we then asked them to name benefits of vitamin A and iron, as well as foods that contain them. Moreover, we defined the passing score on a test of nutrition as the ability to name at least one food with iron, one food with vitamin A, one benefit of iron, and one benefit of vitamin A, in order to assess nutrition knowledge overall.

Exhibit 10 shows the proportion of students with the desired level of nutrition knowledge at baseline, midline and endline, as well as the change from baseline to midline (as presented in the midline report) and the change from baseline to endline. The description of the results in this section and the next is focused on the overall changes between baseline and endline to describe end of the project results. A more complete description of the changes between baseline and midline can be found in the midterm evaluation report.

As shown in Exhibit 10, the proportion of students with the desired level of nutrition knowledge improved at endline, compared to baseline. Following midline trends, the proportion of students who had heard of vitamin A and of iron increased by 30 and 21 percentage points, respectively. The difference is statistically significant at the 1 percent level. There was also a significant increase (23 percentage points, $p < 0.01$) in the proportion of students who could cite one benefit of vitamin A at endline compared to baseline. Similarly, the proportion of students who could cite one benefit of iron increased considerably by 51 percentage points (from 32 percent to 83 percent) compared to baseline. The difference in means is statistically significant ($p < 0.01$). The proportion of students who were able to cite a food containing vitamin A only increased by 7 percentage points, a difference that is not statistically significant, while the proportion of students who can cite a food containing iron increased by 25 percentage points. These results are an improvement from midline when students showed no improvements in their ability to name foods containing vitamin A or iron to a significant degree.

As shown by Exhibit 10, students' nutrition knowledge on vitamin A and iron has improved considerably in comparison to baseline. Students' overall nutrition knowledge continued to increase significantly from baseline and midline to endline (8 percentage points from baseline), but it remains relatively low, with only 9 percent of students achieving a passing score by naming benefits and foods for both nutrients. No gap between genders was identified at either baseline or endline. In interviews and focus group discussions, both teachers and students reported that dietary teachings about vitamins and minerals were useful, although it was unclear whether all teachers provided this information to students. Also in some cases, teachers reported only providing basic information about nutrition, so these lessons may not have provided specific enough information about foods and nutrients.

Exhibit 10. Student Nutrition Knowledge

Indicator	Baseline		Midline		Endline		Difference in Means Baseline to Midline (p-value)	Difference in Means Baseline to Endline (p-value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Students who have heard of vitamin A	32%	324	49%	258	62%	600	17*** (0.000)	30*** (0.0000)
Students who can cite one benefit of vitamin A ^a	41%	103	46%	126	64%	369	5 (0.4273)	23*** (0.0000)
Students who can cite a food containing vitamin A ^a	23%	92	25%	107	30%	261	2 (0.6940)	7 (0.1960)
Students who have heard of iron	9%	324	19%	258	29%	600	10*** (0.0004)	20*** (0.0000)
Students who can cite one benefit of iron ^a	32%	28	58%	48	83%	175	26** (0.0276)	51*** (0.0000)
Students who can cite a food containing iron ^a	29%	28	37%	48	54%	175	8 (0.4354)	25** (0.0114)
Students who achieve a passing score on a test of food nutrition and dietary practices	1%	324	3%	258	9%	600	2** (0.0220)	8*** (0.0000)

Source: Student Survey; IMPAQ calculations.

^a Sample comprises only students who said they had heard of the nutrient.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.1.2 Student Hygiene Knowledge and Practices

To measure students' knowledge and practice of hygiene, we asked students to identify instances in which they should wash their hands (for example, before eating, after touching animals, before preparing food). We also asked them about instances they washed their hands the day before the survey. Furthermore, we observed students' handwashing practices at the school level after using the latrine and/or before eating at the canteen, when possible. We defined a threshold for hygiene knowledge as the ability to identify at least four situations in which people should wash their hands.

As shown in Exhibit 11, the proportion of students who reported washing their hands on the day of the survey remained basically the same at endline (95%) when compared to that at baseline (94%) and midline (95%). The percentage being very high indicates that almost all of the students wash their hands at least once a day. The proportion of students who reported washing their body, on the other hand, increased by 7 percentage points, a difference that is significant at the 5 percent level. This is an encouraging result as there were no significant differences in students who reported washing their bodies at midline. At endline, we also collected data on the means students use to wash their hands; 82 percent of students surveyed at endline reported using soap and water.

While the overall proportion of students who achieved a passing score on the test of good health and hygiene practices remains quite low at endline (20 percent), we observe a large (15 percentage points) increase compared to baseline. In contrast to the midline report, the difference is statistically significant at the 1 percent level. There were no significant differences found between genders at baseline or endline. Yet almost all students reported that their teacher taught them about the importance of handwashing (99 percent) and about the critical moments to wash their hands (97 percent). This is almost five times higher than the proportion of children who actually achieved a passing score on the hygiene test. These contradictory findings should be interpreted with caution due to social desirability bias (i.e., children did not want their teachers to look bad).²²

Interestingly, in focus group discussions, children reported enjoying the handwashing practice. Teachers and school administrators in some schools reported that students' hygiene practices have changed since the start of the project; handwashing has become a habit, they report. The lack of significant changes from baseline to endline could be explained by the facts that some schools lack reliable water sources and that handwashing devices sometimes fall into disrepair, as reported by school-level interviewees and explained in further detail in [Section 5](#).

Exhibit 11. Student Hygiene Practices

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline)	Difference in Means (Baseline-Endline)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.	(p-value)	(p-value)
Students who say that they washed their hands today	94%	324	95%	258	95%	600	1 (0.5575)	1 (0.4151)
Students who say that they washed their body today	66%	324	63%	258	73%	600	-3 (0.4722)	7** (0.0234)
Students who say that they washed their hands with soap and water	n/a	n/a	65%	245	82%	568	n/a	n/a

²² This indicator was added at the midline. Therefore, no comparison in mean of outcomes with baseline is available.

Students who achieve a passing score on a test of good health and hygiene practices	5%	324	4%	258	20%	600	-1 (0.4356)	15*** (0.00000)
Students who say that their teacher taught them the importance of handwashing	n/a	n/a	97%	147	99%	460	n/a	n/a
Students who say that their teacher taught them about critical moments to wash their hands	n/a	n/a	89%	255	97%	588	n/a	n/a

Source: Students Survey; IMPAQ calculations.

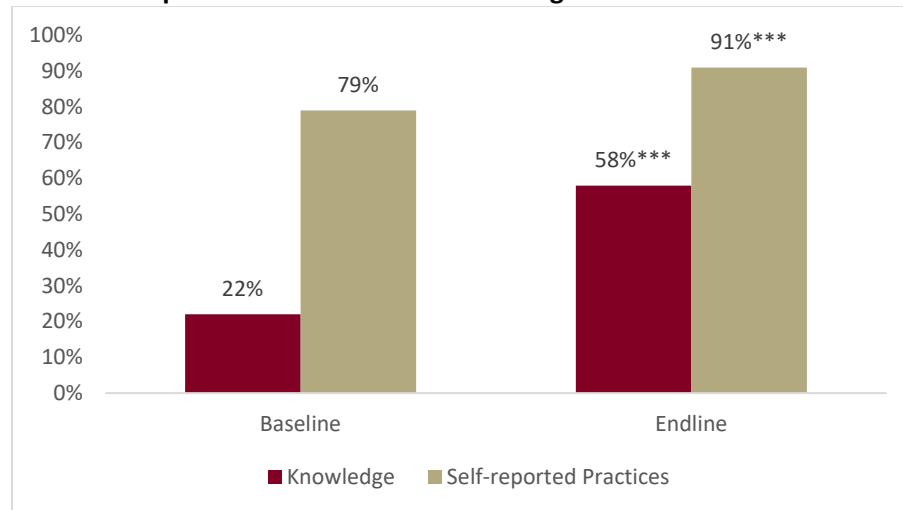
Note: Excluded observations from baseline are students who did not answer these questions.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

We also asked children whether they washed their hands at critical moments; a critical moment being either before eating or after using the latrine. We compared these self-reported handwashing practices with students' knowledge of the two critical moments. The gold bars in Exhibit 12 show that the proportion of students who reported they washed their hands at critical moments increased by 12 percentage points from baseline. Likewise, as shown by the red bars of Exhibit 12, knowledge about handwashing practices increased by 36 percentage points from baseline to endline. While there was no significant gender gap at baseline or endline, male students did experience a larger gain from baseline to endline than female students (16 vs 9 percentage points respectively, both significant at the 1% level).

The inconsistency between children's knowledge and their actual practices suggest a possibility of over-reporting by students on their hygiene practices. Therefore, these results should be interpreted with caution, because they derive from self-reported data from young children. Also, as mentioned earlier in this section, the changes in outcomes can be due to external factors that are not necessarily associated with BBII.

Exhibit 12. Students' Knowledge of Handwashing versus Self-Reported Practices of Handwashing at Critical Moments



Source: Student Survey; IMPAQ calculations. Note: for baseline, N=324 (Knowledge) and N=307 (Self-reported Practices); for endline, N=600 (Knowledge) and N=600 (Self-reported Practices)²³. * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01, *shows the difference in means between self-reported practices and hygiene knowledge.

We also observed students' handwashing practices at critical moments at school. It is important to note that in 16 of the 44 schools observed, soap was not available, and we therefore only observed students who washed their hands with water. 65 percent of the students washed their hands after using the latrines in these schools. In the other 28 schools where soap was available, 62% of the students observed washed their hands with soap and water after using the latrines. Enumerators also observed the handwashing habits of students before they go to the school canteen. In this case, it was not always easy to differentiate among the big group of students all heading in the same direction. Enumerators noted that on average, more than 50 percent of the students washed their hands before going to the canteen. These data are lower than the self-reported handwashing practices of students, which suggests that there might be an overestimate bias in the self-reported data. The data should however be interpreted with caution because sometimes the number of students observed by the enumerators was very low at some schools.

3.1.3 Student Food Security

To measure food security among students, we looked at two factors:

1. **Children's food intake during the day** (breakfast and lunch). We asked students whether they ate breakfast and lunch a day before data collection, where they ate those meals (at home or at the canteen), and whether they felt full after consuming each meal.
2. **Minimum acceptable diet.** We followed the United Nations (UN) Food and Agriculture Organization (2010) diversity index, recommended by the USDA Foreign Agricultural Service, to calculate the minimum acceptable diet in terms of diversity, first using student data and then using parent data for purposes of comparison. Using a list of 15 types of food, we defined a threshold for an acceptable diet as including at least five different foods per day.²⁴

²³ The calculations are based on the total number of responses to different options that were selected for all that applied.

²⁴ IMPAQ removed spices from the list of 16 food groups in the index, because spices are not relevant for child nutrition.

As shown in Exhibit 13., at endline the proportion of students that felt full after eating breakfast is the same as at baseline (96 percent), and a similar proportion reported eating breakfast (90 percent at baseline and 91 percent at endline). In contrast, the proportion of students who reported feeling full after lunch at endline increased by 4 percentage points when compared to baseline, a difference that is statistically significant at the 5 percent level. However, the percentage of students who indicated that they are hungry during the school day remained the same at endline (4 percent).

It was mentioned in CRS semi-annual report in 2018 that the provision of school meals is on track to achieve its goals, except some minor issues with the late commodity arrivals. Similarly, the survey data also show the proportion of students that had their lunch at the canteen increased by about 70 percentage points from baseline to endline (statistically significant at the 1 percent level). The proportion of students who reported going home to eat lunch decreased by 44 percentage points, a difference that is statistically significant at the 1 percent level but considerably lower than the increase in the proportion of students who reported eating at the canteen at endline. Therefore, the outcome about the proportion of students who report eating at the school canteen should be interpreted with caution.

The vast majority of students (90 percent) who ate at the canteen at endline reported that they felt full after eating the school meal with a minimal change compared to baseline. Although 26 percent of students surveyed at baseline reported eating lunch at the canteen, the canteen component of the project had not yet started at that time. One potential explanation could be that students might have been confused about what having a canteen at school implied at baseline.²⁵

During focus group discussions, students expressed much appreciation for the food they received through the canteens. They stated that the cooked food is tasty and that they often take some home to share with their siblings and parents. In addition, the attendance data show all students attended schools regularly although the attendance data should be interpreted with caution. Other stakeholders described that, from their observations, the presence of canteens is directly associated with attendance; when canteens are providing food, students go to school.

Exhibit 13. Students' Food Intake

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Proportion of children that ate breakfast before going to school	90%	325	86%	258	91%	600	-4 (0.1624)	1 (0.8744)
Proportion of children that felt full after	96%	293	93%	207	96%	547	-3 (0.1816)	0 (0.8744)

²⁵ Community (parents, school staff, etc.) provided an “endogenous canteen” for children at school, which involved feeding them during lunch before the school canteens (provided by BBII) began functioning.

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
the meal s/he ate before going to school.								
Proportion of children that went home to eat lunch	74%	69	58%	258	30%	600	-16** (0.0167)	-44*** (0.0000)
Proportion of children that felt full after eating lunch at home	94%	282	94%	150	98%	182	0 (0.9906)	4** (0.0233)
Proportion of children who ate at the canteen	26%	325	80%	258	95%	600	55*** (0.0000)	70*** (0.0000)
Proportion of children that felt full after eating at the canteen	94%	83	88%	207	90%	571	-6 (0.1269)	4 (0.2688)
Proportion of students in target schools who indicate that they are hungry during the school day	4%	293	7%	223	4%	547	3 (0.1816)	0 (0.8744)

Source: Student Survey; IMPAQ calculations

Note: Excluded observations are students who did not answer these questions.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Error! Reference source not found. shows that the proportion of children who received a minimum acceptable diet showed a continuation on the improvement seen at midline (12 percentage points), increasing by 23 percentage points from baseline to endline according to student reports which is consistent with what parents reported for their children receiving minimum acceptable diet (22 percentage points increase, $p < 0.01$). Both findings are statistically significant at the 1 percent level. This increase in the diversity of household diets might be explained by different socioeconomic backgrounds between baseline and midline samples. There are differences between what parents and students reported and between what boys and girls reported. There is still a gender gap in the self-reported minimum acceptable diet. The gap stayed the same at endline as compared to baseline, since the increase from baseline to endline is similar for both boys and girls (23 percentage points, statistically significant at the 1 percent level).

Exhibit 14. Minimum Acceptable Diet

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (<i>p</i> -value)	Difference in Means (Baseline-Endline) (<i>p</i> -value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Students reported receiving a minimum acceptable diet	60%	324	72%	258	83%	327	12*** (0.0029)	23*** (0.00000)
Boys received a minimum acceptable diet	56%	156	69%	125	79%	299	13** (0.0336)	23*** (0.00000)
Girls received a minimum acceptable diet	63%	168	74%	133	87%	301	11** (0.0361)	24*** (0.00000)
Parents reported that students received a minimum acceptable diet	35%	343	56%	262	57%	327	20*** (0.0000)	22*** (0.0000)

Source: Student Survey; Parent Survey; IMPAQ calculations.

Note: Missing observations represent respondents who did not answer these questions.

* *p*-value < 0.1, ** *p*-value < 0.05, *** *p*-value < 0.01



Source: CRS

3.1.4 Student Attendance

To measure students' attendance, IMPAQ and CRS agreed to select three representative months across the agricultural crop cycle and the academic school year: November, January, and April. Then, we collected attendance data for each child in the sample from teachers using school records. Overall, almost all students attended school at least 80 percent of the time (Exhibit 15.).

The endline statistics show that all students attend schools at least 80% of the time, similar to the baseline and midline figures. Both boys and girls have the same overall attendance. However, these data need to be interpreted with caution. Our experience in the field showed that some teachers did not routinely record attendance data and that, when they did, we could not ascertain how rigorously they reported. Even with the best intent, it is possible that teachers neglected to record missing children. Therefore, the average attendance rate is likely overestimated.

Exhibit 15. Student Attendance

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Students attending class at least 80% of the time	100%	510 ^a	99%	261	100%	496	-1* (0.0814)	0 (0.5474)
Boys attending class at least 80% of the time	100%	219	98%	125	99%	246	-2* (0.0628)	-1 (0.1819)
Girls attending class at least 80% of the time	100%	204	99%	134	100%	250	-1 (0.7648)	0 (0.2688)

Source: Student Attendance Data; IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01; ^a See footnote 31

3.1.5 Student Literacy Activities

Student literacy activities can be categorized as 1) activities in class and 2) activities outside of class. Each of these types of literacy-related activities is discussed separately below.

Literacy Activities in Class

We asked students about their reading and writing activities in class. We correlated the outcomes with teachers' responses, discussed in detail in [Section 5.4.2](#), to assess implementation of BBII teaching techniques in classrooms. Specifically, we asked students whether they had read alone or aloud, listened to other students reading, and worked on writing or words during class on the day before the survey.

Exhibit 16 shows that the proportions of students who spent time reading alone, doing word work and listening to reading in class increased by 10, 22, and 11 percentage points, respectively; these changes are all statistically significant at the 1 percent level. The time spent reading to someone also increased by 6

percentage points, and the difference is significant at the 10 percent level. The only activity for which there was no change at all was the time spent writing in class.

Exhibit 16. Student-Reported Literacy-Related Classroom Activities

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Spent time reading alone in class yesterday	63%	325	73%	579	10*** (0.0023)
Spent time reading to someone else in class yesterday	62%	325	68%	579	6* (0.0615)
Spent time writing in class yesterday	71%	325	71%	579	0 (0.9358)
Spent time doing word work in class yesterday	43%	325	65%	579	22*** (0.0000)
Spent time listening to reading in class yesterday	72%	325	83%	579	11*** (0.0000)

Source: Student Survey; IMPAQ calculations.

Note: Excluded observations from baseline are students who did not answer these questions.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Literacy Activities Outside of Class

We looked at children's literacy activities beyond their classroom. Specifically, we asked children whether they belong to a particular reading club, which is defined as a small group of children who read together outside of the school, as part of the BBII program activities. We also asked parents whether they take their children to the closest library.

As shown in Exhibit 17 the proportion of students who participated in a reading club decreased by 41 percentage points, from 60 percent at baseline to 19 percent at endline (statistically significant at the 1 percent level). These findings should be interpreted with caution, however, since the reading-club activity had not started when the baseline data collection was conducted (this activity started in the second year of program). CRS monitoring data from 2018 showed that 1,130 reading clubs were registered across all project schools during the 2017–2018 school year. However, this does not mean that the reading clubs convened, only that they formed. In addition, CRS implemented some activities such as organizing writing competitions to increase children's motivation for participating in the reading clubs. Thus, there is a possibility that children at baseline confused the definition of a reading club, which is a group of children who read together *outside* of school hours, with a reading group, which is a small group of children who read together *in* the classroom. It is also noteworthy that when we asked reading-group members at endline if any adults supported them in their reading club activities, out of 83 percent who said yes, 34 percent mentioned mentors as the supportive adult which as expected the percentage was higher for girls with 41 percent girls compared to 28 percent boys.

The school observation data show that the total number of schools that have a library in their school at endline is 3 out of 22 performance schools. However, as Exhibit 17 shows, the proportion of students who visit libraries with their parents is still very low from baseline to endline, with minimal change (two percentage points) that is not statistically significant. Per CRS's semi-annual report in 2018, CRS and FAVL worked closely with mayors to improve the status of school libraries.

Exhibit 17. Student-Reported Literacy-Related Activities Outside of Class

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(<i>p</i> -value)
Students who are in a reading club	60%	325	19%	579	-41*** (0.00000)
Reading clubs that consist of the entire class	19%	195	21%	112	2 (0.6053)
Students who visit the library with their parents (reported by <i>parents</i>)	2%	343	4%	327	2 (0.1247)

Source: Student and Parent Survey; IMPAQ calculations.

Note: Excluded observations are students that did not remember what they had done the day before.

* *P*-value < 0.1, ** *p*-value < 0.05, *** *p*-value < 0.01

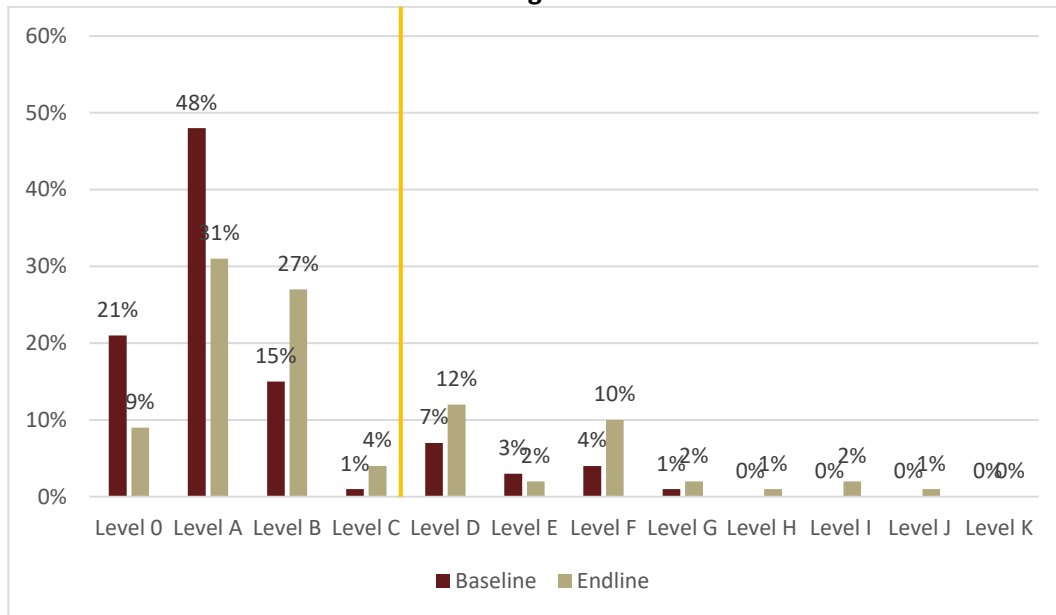
3.1.6 Student Reading Outcomes

As described in [Section 2.1](#), we used the ASER literacy assessment to measure students' grade-level reading competencies. The thresholds for an acceptable reading level at each primary school grade was determined according to the Burkina Faso curriculum guidelines and the calibration workshops that IMPAQ and CRS held in May 2015 and 2017 (Exhibit 3 in [Section 2.1.3](#)). The calibration outcome supposes that Level C in the ASER test corresponds to the ability to read complex sounds and is the minimum acceptable reading level at the end of second grade.

Exhibit 18 shows the distribution of the ASER literacy assessment results for baseline and endline. The vertical orange line represents the minimum acceptable threshold, that is, Level C in the ASER test. The majority of students remain below Level C at endline, although in contrast to midline, there is some improvement compared to baseline.

The proportion of second-grade students with reading proficiency at grade level increased by 18 percentage points, and the difference is statistically significant at the 1 percent level (Exhibit 19). These outcomes are in line with CRS monitoring data in 2016 that showed improvements in children's literacy outcomes. The proportion of boys with grade-level proficiency at endline is similar to that of girls. This is different than at baseline where a relatively larger proportion of girls had reading proficiency, as compared to boys. The improvement in reading ability was therefore higher for boys (20 percentage points) compared to girls (15 percentage points). These results only provide suggestive descriptive evidence for changes in the indicators of interest and must be interpreted with caution because of the small sample sizes.

Exhibit 18. Distribution of Reading Skills for Second-Grade Students



Source: Student Survey; IMPAQ calculations. N (baseline) = 188; N= (endline) = 175.

**Exhibit 19. Reading Proficiency at Second-Grade Level
(Students who scored an ASER Level C [Read Complex Sounds] or higher)**

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline - Midline)	Difference in Means (Baseline - Endline)
	Percent	Total Number of Observations	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)	(p-value)
Second grade students demonstrating reading ability at grade level or above	15%	188	24%	87	33%	175	9 (0.2458)	18*** 0.0001
Male students demonstrating reading ability at grade level or above	13%	88	16%	43	33%	86	4 (0.7253)	20*** 0.0014
Female students demonstrating reading ability at grade level or above	18%	100	32%	44	33%	89	15 (0.1811)	15*** 0.0205

Source: Student Survey; IMPAQ calculations. * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.2 Parents

In order to gain an understanding of children's household environments, we surveyed their parents, specifically their mothers. Using the data collected, we compared parent outcomes at baseline and endline in three areas, as discussed in the subsections below.

- Household composition and characteristics ([Section 3.2.1](#))
- Nutrition knowledge ([Section 3.2.2](#))
- Attitude towards girls' education ([Section 3.2.3](#))
- School involvement ([Section 3.2.4](#))

3.2.1 Household Composition and Characteristics

We collected data from parents on household characteristics in the areas of:

- Parents' educational attainment
- Household composition: household size, percentage of children under 16, and percentage of household members above 16
- Household access to basic services

Each of these areas is discussed separately below.

Parents' Educational Attainment

Exhibit 20 shows the differences between educational attainments of parents obtained from the Parent Survey at baseline and endline. Parents at endline are more educated than at baseline. The proportion of parents with no education at all decreased by 11 percentage points, statistically significant at the 1 percent level. There is also a higher proportion of parents with primary education (8 percentage points, statistically significant at the 1 percent level) and secondary education (3 percentage points, statistically significant at the 5 percent level). We should therefore compare with caution the literacy outcomes of children as presented in [Section 5](#) since the children measured at endline are from families with a slightly higher level of education than those children measured at baseline.

Exhibit 20. Parents' Educational Attainment

Level of Education	Baseline		Endline		Difference in Means (<i>p</i> -value test)
	Percent	Observations	Percent	Observations	
None	95%	343	84%	327	-11*** (0.00000)
Primary education (Grades 1 to 6)	3%	343	10%	327	8*** (0.00009)
Secondary education (Grade 7 and above)	2%	343	5%	327	3** (0.02792)

Source: Parent Survey; N=343 (baseline) and N=327 (endline); IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Household Composition

As shown in Exhibit 21, the average household size at endline is similar to that at baseline. The average size at baseline was 13 members compared to 14 at endline. At both baseline and endline, there are 6 members over 16 years old, with 8 members reported to be under 16 at endline compared to 7 at baseline.

Exhibit 21. Household Size

Household Size	Baseline		Endline		Difference in Means
	Mean	Observations	Mean	Observations	(<i>p</i> -value test)
Household size	13	343	14	327	1 (0.48361)
Household members under 16 years old, including the respondent in the household	7	343	8	327	1*** (0.00227)
Household members over 16 years old, including the respondent in the household	6	343	6	327	0 (0.30508)

Source: Parent Survey; N=343 (baseline) and N=327 (endline); IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Household Access to Basic Services

In order to have an overview of parents' and students' living situations, we asked parents whether they had access to any source of electricity as well as any type of latrines at home. Compared to the baseline results (59 percent), the proportion of parents who reported having access to electricity increased by 38 percentage points at endline (96 percent), a difference that is statistically significant at the 1 percent level. Similarly, the proportion of parents who mentioned access to any type of latrines at home increased by 21 percentage points, from 49% at baseline to 70% at endline, a difference that is also significant at the 1 percent level. These results show that the sample of parents at endline had better access to basic services, perhaps because they are better off overall or because the delivery of basic services improved as a whole in the region over time.

3.2.2 Parents' Nutrition Knowledge

Parents are usually instrumental in children's education and development. In order to have a deeper understanding of children's nutritional knowledge, we asked parents the same questions that we asked students: whether parents had heard of vitamin A and iron and, if so, whether they were able to name any benefits of vitamin A and iron or any foods that contain each nutrient.

Parents' nutrition knowledge has changed over time, as can be seen in Exhibit 22. The proportion of parents who had heard of vitamin A and iron increased significantly from baseline to endline, by 27 and 7 percentage points, respectively. However, the proportion of parents who were able to name foods that contain vitamin A decreased significantly by 24 percentage points ($p < 0.01$). Similarly, a smaller proportion of parents were able to name any potential benefit of iron, with a significant 33-percentage-point decrease ($p < 0.01$), compared to baseline. The lower nutrition knowledge of parents may be explained by different household characteristics (e.g., bigger household size at endline compared to baseline). By looking at students' higher nutrition knowledge at endline ([Section 3.1.1](#)), these findings suggest that parents may have heard more about these nutrients from their children. But the knowledge (i.e., citing benefits of these nutrients or foods that contain them) may not fully transferred to them from their children.

Exhibit 22. Parent Nutrition Knowledge

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(<i>p</i> -value)
Parents who have heard of vitamin A	35%	343	62%	327	27*** (0.0000)
Parents who can cite one benefit of vitamin A ^a	60%	120	59%	204	-1 (0.8538)
Parents who can cite a food containing vitamin A ^a	59%	120	35%	204	-24*** (0.0000)
Parents who have heard of iron	8%	343	15%	326	7*** (0.0022)
Parents who can cite one benefit of iron ^a	78%	23	45%	49	-33*** (0.0074)
Parents who can cite a food containing iron ^a	28%	29	39%	49	11 (0.3217)

Source: Parent Survey; IMPAQ calculations

^a Sample comprises only parents who had heard of the nutrient.

* *P*-value < 0.1, ** *p*-value < 0.05, *** *p*-value < 0.01

3.2.3 Parents' Attitudes toward Girls' Education

In order to evaluate parents' attitude towards the schooling of girls, we asked parents whether they think schooling is good for girls. We then followed up with those having a positive opinion on the matter by asking them to select reasons from a list with potential benefits that accompany girls' education.

Exhibit 23 shows the changes in parents' opinions about girls' schooling, and Exhibit 24 shows the reasons supporting their opinions. Consistent with midline findings, at endline, all parents (100 percent) showed positive attitudes toward girls' education; this represents a 21-percentage-point increase from baseline, which is also a statistically significant finding ($p < 0.01$). This significant increase could be explained by the project activities focused on raising the community awareness on the importance of education. For example, as mentioned in CRS's semi-annual report in 2018, the project managed to send out radio messages in the local language (Moore), as well as conduct theater performances on the importance of education, especially girls' schooling.

As shown in Exhibit 24, some of the reasons behind parents' favorable opinions changed at endline compared to baseline. A large proportion of parents at endline (61 percent) reported that girls' education allows them to find better work (statistically significant at any level). In contrast, similar to baseline, most of the parents (75 percent at endline) mentioned that educating girls is good because it improves living standards, with no significant changes compared to the baseline. As mentioned earlier, the endline sample contains more educated households as compared to the baseline sample, which may explain these positive differences on attitudes towards girls' schooling and the importance of education on later outcomes in girls' life.

Exhibit 23. Parents' Opinions of Girls' Schooling

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Parents who indicated that girls' schooling is good	79%	343	100%	327	21*** (0.0000)
Parents who indicated that girls' schooling is bad	2%	343	0%	327	-2** (0.0163)
Parents who did not know the answer	20%	343	0%	327	-20*** (0.0000)

Source: Parent Survey; IMPAQ calculations

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Exhibit 24. Parents' Reasons for Supporting Girls' Schooling

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Parents who say educating girls improves living standards	71%	270	75%	327	4 (0.3374)
Parents who say educating girls improves their health	18%	270	9%	327	-9*** (0.0065)
Parents who say educating girls improves the health of their future children	19%	270	11%	327	-8*** (0.0065)
Parents who say girls should be able to fulfill themselves	38%	270	34%	327	-4 (0.2873)
Parents who say educating girls allows them to find better work	36%	270	61%	327	25*** (0.0000)

Source: Parent Survey; IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.2.4 Parents' Engagement in School

We asked parents about their participation in school as *PTA members* and in the village *savings and internal lending community* (savings cooperatives). We also asked those who do belong to SILC groups whether they used their savings to cover school expenses. Exhibit 25 shows that more parents said they were involved in their children's school at endline than at baseline. The proportion of parents who were members of the PTA increased significantly, by 11 percentage points ($p < 0.01$). Exhibit 25 also shows a considerable increase in the percentage of parents who were SILC members; the 32-percentage-point difference is significant at the 1 percent level.

Of parents who were SILC members, there was a 35-percentage-point increase in the proportion of parents who reported that they used their savings to cover school expenses, significant at the 1 percent level. Of the parents who said that they used their savings for school expenses, the proportion of those who reported that the savings helped "a lot" with school fees decreased by 24 percentage points from

baseline to endline, significant at the 10 percent level. The proportion of those who said that the savings helped “some” increased by 23 percentage points, but this was not statistically significant. This shift in parents’ responses might reflect an increase in education expenses or a decrease in parents’ purchasing power with respect to school expenses.

Exhibit 25. Parents’ Involvement in School and in Savings Cooperatives

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Parents who are members of the PTA	13%	343	24%	327	11*** (0.0001)
Parents who are members of a savings group	9%	220	40%	327	32*** (0.0000)
Parents who have used their savings for school expenses ^a	48%	21	83%	132	35*** (0.0003)
Parents indicating the savings helped “a lot” with school fees and tuition ^a	44%	9	20%	109	-24* (0.0930)
Parents indicating the savings helped “some” with school fees and tuition ^a	11%	9	34%	109	23 (0.1615)
Parents indicating the savings helped “a little” with school fees and tuition ^a	44%	9	46%	109	1 (0.9349)

Source: Parent Survey; IMPAQ calculations.

^a Sample comprises only parents who are members of a savings group.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

We asked parents whether they meet individually with teachers of their children to assess their involvement in school. We asked the same questions from teachers to triangulate their responses with those of the parents. Exhibit 26 shows the level of one-on-one meetings held between parents and teachers reported by both types of respondents. At endline, consistently more parents (25 percentage points) and teachers (15 percentage points) reported they met individually in the past 12 months, statistically significant at the 1 percent level. The primary reason reported by both parents and teachers to meet with each other was “child’s performance” at baseline and midline, with no statistically significant changes.

Exhibit 26. Parent-Teacher Individual Meetings

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Teacher met individually with parents of students in the past 12 months	80%	101	95%	108	15*** (0.0007)
Teacher met with parents of students about student performance at least 3 times in the past 12 months	57%	81	60%	103	3 (0.6437)

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Parent or another adult in household met individually with teachers over the past 12 months	45%	343	70%	327	25*** (0.0000)
Parents or another adult in household met individually with teacher at least 3 times over the past 12 months	59%	154	77%	228	18*** (0.0002)

Source: ^a Teacher & ^b Parent Surveys; IMPAQ calculations;

^c Excluded observations from baseline are students who did not answer these questions

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.3 Teachers

From the teacher survey, we compared baseline and endline data on teacher outcomes in four areas, as discussed in the subsections below.

- Teacher characteristics ([Section 3.3.1](#))
- Nutrition Knowledge ([Section 3.3.2](#))
- Attendance ([Section 3.3.3](#))
- Classroom practices and teaching techniques ([Section 3.3.4](#))

In addition, this section also provides information on Students' attentiveness as reported by teachers ([Section 3.3.5](#)).

3.3.1 Teacher Characteristics

We surveyed a total of 108 teachers across 22 schools, from grades 2 to 6. The gender composition was equally balanced between males and females for endline, as well as for baseline. In each of the 22 schools, we surveyed teachers in grades 2 to 6, for a total of 108 teachers which 52 percent of teachers were female. In some schools, teachers were absent due to sickness or security issues and we were not able to survey them. Significantly more teachers (22 percentage points) at endline had 3-5 years of experience ($p < 0.01$), compared to baseline, but there was significantly fewer teachers with 6-10 years of experience at endline compared to baseline.

The average class size was 57 students at endline, compared to 50 at baseline (Exhibit 27). This difference is statistically significant at the 5 percent level. More crowded classes at endline may suggest a potential increase in students' enrollment and/or attendance which is consistent with high students' attendance. In addition, it expected to see lower attendance in higher grades for school drop-outs, for example early marriage for girls or migration for boys.

Exhibit 27. Classroom Size

Indicator	Baseline	Endline	Difference in Means
	Mean	Mean	(p-value test)
Average number of students per classroom, all grades	50	57	7** (0.01205)

Indicator	Baseline	Endline	Difference in Means
	Mean	Mean	(<i>p</i> -value test)
Average number of students in grade 2 classrooms	55	66	11 (0.13035)
Average number of students in grade 3 classrooms	51	60	9* (0.07842)
Average number of students in grade 4 classrooms	46	57	11* (0.09322)
Average number of students in grade 5 classrooms	47	55	8* (0.08393)
Average number of students in grade 6 classrooms	46	44	-1 (0.79368)

Source: Teacher survey; N=101 (baseline) and N = 190 (endline); IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

As Exhibit 28 shows, teachers at endline were also less educated compared to teachers at baseline. Most teachers (64 percent) had only a Brevet d'Etudes du Premier Cycle (BEPC), which corresponds to a tenth-grade level of education. There was a big shift (12 percentage points) to "other" educational levels from baseline to endline (statistically significant at the five percent level). The other options included high school diploma, secondary and primary school level.

Exhibit 28. Teachers' Educational Attainment

Level of Education	Baseline	Endline	Difference in Means
	Percent	Percent	(<i>p</i> -value test)
BEPC	68%	65%	-3 (0.6576)
Baccalaureate	19%	16%	-3 (0.5782)
Bachelor's degree	5%	1%	-4 (0.1337)
Master 1	0%	0%	n/a
Other	8%	18%	10** (0.0372)

Source: Teacher Survey; N=101 (baseline) and N = 190 (endline); IMPAQ calculations; None of the teachers had Master 2 degrees at either baseline or endline. * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

As shown in Exhibit 29, the proportion of teachers who received teacher training remained as high as baseline. There was a significant increase (31 percentage points, $p < 0.01$) in the proportion of teachers who received training on writing and reading. Only 47 percent of teachers received literacy training. This training could be referred to any literacy training, including the project's. Teachers were not asked specifically about the BBII literacy training.

Exhibit 29. Teacher Training

Level of Education	Baseline	Endline	Difference in Means
	Percent	Percent	(<i>p</i> -value test)
Teachers that have received teacher training	96%	99%	3 (0.1529)

Level of Education	Baseline	Endline	Difference in Means
	Percent	Percent	(p-value test)
Teachers that have received literacy training	16%	47%	31*** (0.00000)

Source: Teacher survey; N=101 (baseline) and N = 190 (endline); IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.3.2 Teachers' Nutrition Knowledge

To gain an overall view of teachers' nutrition knowledge, we asked them the same questions about vitamin A and iron that we asked students and parents. As shown in Exhibit 30, the proportion of teachers able to cite one benefit of iron increased by 18 percentage points, and the difference is statistically significant at the 1 percent level. Similarly, the proportion of teachers able to cite one food containing iron increased by 15 percentage points, a difference that is also statistically significant at the 1 percent level. However, the proportion of teachers who had heard of iron decreased by 5 percentage points, although that difference was not statistically significant, while the proportion who could cite a food containing vitamin A increased by 8 percentage points, a difference that was also not statistically significant.

The data suggest that most teachers seem to have adequate nutrition knowledge to impart to students and the community in general. But they may need better instructions in how to teach students more effectively on the subject. As shown in Exhibit 10, students' nutrition knowledge remains significantly low, despite a small increase at endline when compared to baseline.

Exhibit 30. Teachers' Nutrition Knowledge

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Teachers who have heard of vitamin A	95%	101	92%	108	-2 (0.4972)
Teachers who can cite one benefit of vitamin A ^a	78%	96	81%	99	3 (0.64478)
Teachers who can cite a food containing vitamin A ^a	71%	77	80%	99	8 (0.19842)
Teachers who have heard of iron	98%	101	94%	108	-5 (0.11021)
Teachers who can cite one benefit of iron ^a	69%	87	87%	101	18*** (0.00227)
Teachers who can cite a food containing iron ^a	75%	69	90%	101	15*** (0.00965)

Source: Teacher Survey; IMPAQ calculations.

Note: Excluded observations from baseline are teachers who did not answer these questions.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

^a Sample comprises only of teachers who had heard of the nutrient.

3.3.3 Teachers' Attendance

Consistent with baseline and midline, we defined a teacher who teachers “regularly” as one who teaches at least 90 percent of normal school days during the year. We collected attendance data for a sample of 110 teachers of grades 2 to 6 in the 22 targeted schools. The data were collected from school district administrators during the months of February, March, and April 2018. As shown in Exhibit 31, on average a slightly larger proportion of teachers attended and taught regularly at endline (89 percent) compared to baseline (85 percent), although the difference is not statistically significant. This finding reflects the similar insignificant finding at midline. The data on teacher attendance should be interpreted with caution. Indeed, as our field experience indicates, attendance is a direct indicator of teacher performance that both teachers and school principals can be reluctant to share.

Exhibit 31. Teachers' Attendance over the Past Three Months

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (<i>p</i> -value)	Difference in Means (Baseline-Endline) (<i>p</i> -value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Teachers who taught at least 90% of school days in February, March, and April	85%	95	88%	110	89%	110	3 (0.3000)	4 (0.21320)

Source: Teacher attendance data; IMPAQ calculations.

* *P*-value < 0.1, ** *p*-value < 0.05, *** *p*-value < 0.01

3.3.4 Classroom Practices and Teaching Techniques

Children tend to have diverse learning styles; applying a set of different activities in class, including teacher-centered, student-centered, and group-centered ones, can be an effective way to accommodate the learning outcomes of students who learn in different ways²⁶. To measure the extent to which teachers applied or planned to apply new teaching techniques and activities, we asked them about classroom practices they used or planned to use in a day or a week, for example, asking children to work in groups, to write, and to check each other's work.

Exhibit 32 presents teachers' responses about whether they had applied or planned to apply the seven techniques taught in the BBII training on the day of the data collection. It also shows changes from baseline to endline. The proportion of teachers who had already done each type of activity decreased significantly ($p < 0.01$) from baseline to endline. In contrast, there were significant increases in the proportions of teachers who were planning to use several teaching techniques, except for the activity of pairing students with the same skill, which saw a non-significant change of just 1 percentage point.

Findings on proportions of teachers who *did not use* or *did not plan on using* a particular activity are relatively more heterogeneous among the different techniques. The activities with the largest increases in proportions of teachers who did not plan to use them were pairing children with the same skill level and asking students to write on a slate for the class. Both saw an increase of 20 percentage points, significant at the 1 percent level.

²⁶ Montgomery S. M. et al., 1998

Assuming that teachers' schedules might be different from one day to another, we also asked teachers about the activities they used, planned to use, or did not plan to use during the week. The results, reported in Exhibit 54 in [Appendix B](#), were more or less the same as the one-day findings shown in Exhibit 32. Most teachers reported that they were planning to use most of the teaching techniques. Additionally, there were significant decreases from baseline to endline in the percentage of teachers who mentioned they did not use or not planning to use certain activities, including having students check his/her own homework (a 37-percentage-point decrease, $p < 0.01$); or asking students to work together on a project so that the teacher could provide his/her feedback later (29 percentage points decrease, $p < 0.01$).

Exhibit 32. Utilization of Classroom Activities for the Day of Data Collection

Utilization	Baseline		Endline		Difference in Means
	Percent	Total number of Observations	Percent	Total number of Observations	p-value of the test
Individual students check their own work and give themselves a mark or comments.					
Already use	23%	101	13%	108	-10* (0.0639)
Planning to use	13%	101	39%	108	26*** (0.0000)
Not used and not planning to use	64%	101	48%	108	16** (0.0182)
Students check each other's work.					
Already use	46%	101	19%	108	-27*** (0.0000)
Planning to use	22%	101	47%	108	25*** (0.0001)
Not used and not planning to use	33%	101	34%	108	2 (0.8093)
Whole class checks the work of one student.					
Already use	43%	101	18%	108	-25*** (0.0001)
Planning to use	25%	101	47%	108	22*** (0.0007)
Not used and not planning to use	33%	101	35%	108	3** (0.7033)
Students write solutions on a slate and show to the teacher and class.					
Already use	64%	101	17%	108	-48*** (0.0000)
Planning to use	19%	101	46%	108	27*** (0.0000)
Not used and not planning to use	17%	101	37%	108	20*** (0.0010)
Students of different skill levels are paired together.					
Already use	50%	101	19%	108	-30*** (0.0000)
Planning to use	29%	101	50%	108	21*** (0.0016)

Utilization	Baseline		Endline		Difference in Means
	Percent	Total number of Observations	Percent	Total number of Observations	p-value of the test
Not used and not planning to use	22%	101	31%	108	9 (0.1515)
Students of the same skill level are paired together.					
Already use	27%	101	6%	108	-21*** (0.0000)
Planning to use	22%	101	23%	108	1 (0.8142)
Not used and not planning to use	51%	101	71%	108	20*** (0.0031)
Teacher asks group of 3 or more students to work together on a project and later provides feedback on group performance.					
Already use	39%	101	19%	108	-20*** (0.0012)
Planning to use	21%	101	48%	108	27*** (0.0000)
Not used and not planning to use	41%	101	33%	108	-7 (0.2791)

Source: Teacher survey; IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

In addition to examining individual classroom activities in the survey data (Exhibit 32), we also established a threshold to indicate significant adoption of new teaching techniques: applying or planning to apply at least five of the seven different activities on the day of data collection. Exhibit 33 shows that the proportion of teachers who demonstrate use of new techniques or tools at endline (49 percent) has returned to a similar level as baseline (52 percent) after dipping at midline (44 percent). Additionally, at baseline there is a statistically significant increase in the percentage of teachers using or planning to use new techniques as the grade they teach increases however, this gap disappears at endline.

Exhibit 33. Teachers Using New Techniques or Tools

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Teachers who demonstrate use of new techniques or tools	52%	101	44%	105	49%	89	-9 (0.2153)	-3 (0.6780)

Source: Teacher Survey; IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

We assessed whether teachers were applying the BBII literacy instructional techniques to teach reading skills by asking teachers to provide examples, without enumerator prompting, of an activity or an instruction they used for teaching reading, such as phonological awareness, phonetics, and/or vocabulary. Then, we calculated the average time that teachers reported spending on all the literacy instruction per

day. This indicator reflects both teachers' understanding of and their practice of literacy instruction. Exhibit 34 shows that there has been no statistically significant change in the proportion of teachers who devote at least 45 minutes a day to literacy instruction at endline (53 percent) compared to baseline (55 percent)—a continuation of the findings at midline.

Exhibit 34. Time Spent by Teachers on BBII Literacy Instruction

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Percent	Total Number of Observations	Percent	Total Number of Observations	Percent	Total Number of Observations		
Proportion of teachers who devote at least 45 minutes a day to literacy instruction	55%	91	66%	103	51%	89	11 (0.1160)	-4 (0.5585)

Source: Teacher Survey; IMPAQ calculations.

Note: Excluded observations from baseline are teachers who did not answer this question.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Moreover, to understand the extent to which teachers applied literacy practices without focusing on specific techniques, we asked teachers the following questions: how frequently do they have students read by themselves, read to others, listen to others' reading, write, and play word games in class. Teachers were also asked how much time they spent on each activity per week. The results are shown in Exhibit 35. The proportion of teachers who had students read by themselves more than once a week increased by 7 percentage points at endline compared to baseline, a difference that is statistically significant at the 1 percent level. There were also significant increases in the proportions of teachers who had students listen and read to others at least once a week (7 and 13 percentage points, respectively, both significant at the 1 percent level), as well as in those that have students play word games more than once a week (17 percentage point, significant at the 1 percent level). Although the proportion of teachers who have students write more than once a week increased by 8 percentage points, the difference was not statistically significant. Finally, the average number of minutes spent per week on all literacy activities increased from 60 to 96 minutes, a difference that is statistically significant at the 10 percent level. The data suggest greater emphasis on literacy activities by teachers overall, which is consistent with classroom observations results.

In observed lessons, teachers mostly focused on reading skills, especially decoding, with less emphasis on writing techniques. Teachers' responses were more or less the same as those from students, especially in terms of practicing listening to others read aloud, and less emphasis in writing. These improvements may explain students' better performance in ASER, as ASER is heavily focused on reading skills.

Exhibit 35. Implementation of Literacy Activities

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Students read by themselves more than once a week	94%	92	100%	108	7*** (0.00688)
Students read to others more than once a week	87%	83	100%	108	13*** (0.00008)
Students listen to others read aloud more than once a week	87%	77	100%	108	13*** (0.00009)
Students write more than once a week	92%	99	100%	108	8 (0.11340)
Students play word games more than once a week	83%	81	100%	108	17*** (0.0000)
Average number of minutes spent per week on all literacy-related activities	60	91	96	108	36* (0.06654)

Source: Teacher Survey; IMPAQ calculations.

Note: Excluded observations from baseline are teachers who did not answer these questions.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.3.5 Attentiveness

Together with CRS, IMPAQ decided how best and most efficiently to measure student attentiveness. IMPAQ and CRS noted that it is very hard to judge objectively the degree to which a given child is attentive. Some children are very restless when they are attentive, while others are very still. Conversely, a very still student might be sleepy and an active one might only be distracted. Also, classroom observations for each student are costly and must be completed in exactly the same circumstances in each classroom in order to get quality, comparable data. IMPAQ and CRS, therefore, decided that the best measure of a child's attentiveness was the teacher's own assessment of his or her students' attentiveness. To measure this indicator, we collected data from teachers who are best able to judge the relative degree of the students' attentiveness. We asked teachers to rate their students' attentiveness on a scale of 1 to 10, where 1 is not attentive at all. Exhibit 36 shows that according to teachers, students' attentiveness have improved by just 2 percentage points at endline when compared to baseline, a difference that is equal to that found at midline and not statistically significant in either case. However, given the difficulty and subjectivity of measuring attentiveness, this outcome should be interpreted with caution.

Exhibit 36. Students' Attentiveness Reported by Teachers

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Percent	Total Number of Obs.	Percent	Total Number of Obs.	Percent	Total Number of Obs.		
Proportion of attentive students identified by teachers	43%	95	47%	105	45%	89	2 (0.8433)	2 (0.7411)

Source: Teacher survey; IMPAQ calculations.

3.4 Parent-Teacher Associations

To measure the level of community involvement with children's schooling, we surveyed the PTA members in each school, including the leader. We asked PTA members questions related to PTA meetings held in the past year, the functioning of the school canteen, and the extent of community support for the school. We also asked them about the number of months in which the school canteen was covered by MENA, CRS, parents, and other responsible parties. It is important to note that the comparison results presented in this section rely on a small sample of PTA leaders at baseline; estimates for the indicators and their change over time have to be read with caution.

The IMPAQ team surveyed 134 PTA members (62 in Bam and 72 in Sanmatenga). The majority of the PTA members were male (76 percent) and 24 percent were women. This gender composition is consistent with the baseline data, in which PTA members²⁷ were predominantly men.

As shown by Exhibit 37, the data suggest that PTAs have become less active at endline when compared to baseline. For instance, the number of general assembly meetings held in the past 6 months decreased from 3 to 2, a difference that is statistically significant at the 1 percent level. The proportion of schools that held at least 3 general assembly meetings in the past 6 months also decreased by 28 percentage points at endline, a difference that is statistically significant at the 5 percent level. In interviews, PTA members reported maintaining engagement as a challenge. They seemed to be overwhelmed with PTA's responsibilities when they have other responsibilities such as working on their farms.

Exhibit 37. Parent-Teacher Association Meetings

Indicator	Baseline		Endline		Difference in Means (p-value)
	Mean/ Percent	Total Number of Observations	Mean/ Percent	Total Number of Observations	
Number of general assembly meetings held in past 6 months	3	21	2	134	-1*** (0.0036)
Schools that held at least 3 general assembly meetings in past 6 months	71%	21	43%	134	-28** (0.0161)
PTA representatives who attended a general assembly	100%	25	99%	134	-1 (0.6672)
Number of PTA council meetings held during past school year	4	21	5	120	0 (0.4633)

Source: PTA Survey; IMPAQ calculations

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Exhibit 38 gives an overview on the involvement of PTA representatives in school-related activities. The proportion of PTA representatives who have a meal with students at the school canteen and who participated in school-community projects increased by 4 and 3 percentage points respectively at endline when compared to baseline, but these changes are not statistically significant. However, the proportion of PTA representatives who have visited a classroom significantly decreased by 26 percentage points, a difference that is statistically significant at the 5 percent level. These results should be interpreted with caution given the small sample of PTA members at baseline.

²⁷ At baseline, we only surveyed PTA leaders.

Exhibit 38. PTA Representative Involvement in the Past 12 Months

Indicator	Baseline		Endline		Difference in Means (p-value)
	Percent	Total Number of Observations	Percent	Total Number of Observations	
PTA representatives who have had a meal with students at school	4%	25	8%	134	4 (0.4677)
PTA representatives who have participated in school-community projects such as cleaning	92%	25	95%	134	3 (0.5841)
PTA representatives who have helped the school as cook or storekeeper	52%	25	52%	134	0 (0.9826)
PTA representatives who have helped watch over a reading group	0%	25	6%	134	6 (0.2125)
PTA representatives who have visited a classroom	76%	25	50%	134	-26** (0.0165)
PTA representatives who have attended a performance put on by students	44%	25	41%	134	-3 (0.7847)
PTA representatives who have helped in other ways	8%	25	5%	134	-3 (0.5841)

Source: PTA Survey; IMPAQ calculations.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Exhibit 39 shows PTA representatives' reports on the total number of months in which the canteen was supported by MENA, CRS, parents, and other responsible parties. The average number of months that canteens were supported decreased by 1 at endline (compared to 2 at midline), which is statistically significant at the 1 percent level. This outcome should be interpreted with caution, because of low sample sizes and there is a possibility that canteen operations were misrepresented at baseline. PTA members over-reported the total number of months during which the government supported the canteen at baseline.

Exhibit 39. Support for Canteens

Indicator	Baseline		Midline		Endline		Difference in Means (Baseline-Midline) (p-value)	Difference in Means (Baseline-Endline) (p-value)
	Mean	Total Number of Obs.	Mean	Total Number of Obs.	Mean	Total Number of Obs.		
Number of months of community and/or government support for canteens	5	14	3	15	4	111	-2* (0.0600)	-1*** (0.0007)

Source: PTA Survey; IMPAQ calculations.

Excluded observations are the PTA members who did not know the answer.

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

3.5 School District Administrators

In the BBII program, school district administrators have been responsible for training teachers on pedagogical practices. To gauge their level of confidence in and knowledge of teacher training programs, we asked district administrators about the importance of each literacy instruction subject they taught, the number of training sessions they held, and any supervision or observational activities they conducted. Due to the small sample at the baseline, the results presented below are merely descriptive; no statistical analysis (*t*-test of difference in means) can be conducted.

We surveyed 38 school-district-level (CEB) staff, including 19 pedagogical advisors and 19 school district administrators. CEB staff were predominantly men (with only two female staff members), representing an average of 5.5 years of experience. Exhibit 52 in [Appendix B](#) shows approximately 56 percent of the CEB staff had some level of college education.

Exhibit 40 shows which reading instructions district administrators said were most important. Compared to the baseline results, fewer district administrators reported that several techniques including phonetic awareness, phonics, fluency, vocabulary, and comprehension were important reading instructions. However, a high proportion (76 percent) of district administrators reported that other techniques are important, including writing and working in groups.

Exhibit 40. Important Reading Instructions Reported by District Administrators

Technique	Baseline		Endline	
	Percent	Total Number of Observations	Percent	Total Number of Observations
Phonemic awareness	62%	13	50%	38
Phonics	100%	13	45%	38
Fluency	100%	13	89%	38
Vocabulary	62%	13	53%	38
Comprehension	85%	13	68%	38
Other techniques	N/A*	N/A *	76%	38
None of the Proposed Techniques	N/A *	N/A *	0%	38

**Option not available in baseline.*

Source: School District Administrator Survey; authors' calculations.

At endline, all the 38 surveyed district administrators reported that they held at least one teacher training on reading skills, in the previous school year. IMPAQ defined this indicator, demonstrating use of new techniques or tools, as school district managers transferring skills to others through trainings. Compared to baseline which was only 8 out of 13 administrators, this number improved over time. At endline, they also reported 2.3 training sessions with 74 teacher trainees in total or 32 teachers per session on average.

All of the administrators also said they had observed, supervised, and/or monitored teachers in their classes during the previous academic year, conducting an average of 27 visits lasting an average of 100 minutes each. At baseline, only 9 out of 13 administrators reported that they had observed classrooms. At endline, administrators reported that they had observed 99 percent of teachers used the “read aloud” technique every day to teach reading. The other techniques were also used by most teachers every day (for example, 84 percent used “writing” and 98 percent used “listening to others read”). This proportion

of teachers using at least one of the five BBII literacy techniques is higher than that at baseline where 81 percent of teachers used at least one of the techniques.

In interviews, teachers, school principals and administrators said that the observations were a supportive process that facilitated better instruction.



Source: CRS

SECTION 4. Impact Evaluation Findings

This section presents the findings from the quantitative impact analyses. We present first the results of the main confirmatory outcome of interest for the impact evaluation, i.e., reading proficiency ([Section 4.1](#)). We then present the results of the other impact evaluation indicators listed in Exhibit 2 including food security ([Section 4.2](#)), success in school due to mentors ([Section 4.3](#)), hygiene knowledge ([Section 4.4](#)), and nutritional knowledge ([Section 4.5](#)).²⁸ In this section, we present the results from the main regression model specification that includes only the original students tracked from the baseline, as described in [Section 2.1.3](#).²⁹ For reading proficiency, the alternative model specification, including the replacement students who were enrolled in school since baseline, is presented in [Appendix F](#).

Each table of results is structured as follows. We report the treatment effect for girls (i.e., the coefficient β_1 from Equation 1 in [Section 2.1.3](#)), which measures the difference in the average outcome variable between treatment and control group for girls, conditional on other characteristics controlled for in the regression, and the associated P-value. A p-value above 0.10 indicates that there is no statistically significant difference between control and treatment. As described in Chapter 2, although the primary effects of interest are those for the girls, we also report effects on boys to assess the potential for positive or negative spillover effects. The treatment effect for boys ($\beta_1 + \beta_2$) measures the difference in the average outcome variable between treatment and control groups for boys.

Most of the outcome variables analyzed in this chapter are measured as indicators (e.g., whether the child meets reading proficiency standards for his/her grade or not), and the estimated effects represent a percentage point difference between treatment and control group outcome prevalence. The last two rows in each exhibit report mean of the outcome variable at endline for girls and boys, to provide a sense of the magnitude of the estimated impacts relative to the control-group mean.



Source: CRS

²⁸ We used the same measurement as performance for students' regular attendance (i.e., attending school at least 80 percent of the time during three months). However, since there was no variation in the regular attendance of tracked students in the impact evaluation sample, thus regressions could not be performed.

²⁹ The main regression includes only the original students and controls for the student gender and baseline values of the following variables: mother's education, number of younger children, and baseline value of the outcome variable. The regression also includes CEB (Circonscription d'Education de Base, School District) fixed effects. Standard errors have been clustered at the school level. The number of observations in each regression is smaller than the sample of 313 original students because of missing values on the outcome variables and/or baseline covariates.

4.1 Literacy

This section reports the results for the ASER reading proficiency test (i.e., whether students can read and understand grade-level text). We used the same ASER reading test described in the previous chapter for the performance evaluation. For fifth-grade students, we used Level H in the ASER test, the ability to read simple stories, to define the minimum acceptable level at the end of fifth grade.

The data indicate that girls in the treatment group are about 3 percentage points less likely to read and understand at grade level than girls in the control group. However, the effect is not statistically significant. For boys, we observe a positive 21-percentage-point difference in reading proficiency between treatment and control group, and the result is statistically significant (P-value <0.01). These results are robust also to the alternative model specification, which includes the replacements, presented in Exhibit 55, and shows a negative and insignificant effect for girls and a positive and significant effect for boys.

When interpreting the results of the impact analysis, it is important to keep in mind that mentors' activities are focused on increasing girls' school attendance, support them when they drop-out from school, making sure girls have the necessary support to study and also work with parents and schools to raise awareness of the importance of education. For example, the mentors gather the group of girls they are in charge to do homework together, so that the girls can help each other, but the vast majority of the mentors are illiterate, so they cannot directly help the girls in doing the homework. During those group sessions, mentors talk with the girls about how they are doing in school, whether they are supported by their parents, the importance of completing their studies, the dangers of working on goldmining sites, etc. Mentors also have one-on-one discussions/work sessions with the girls. The mentors pay regular house visits to discuss with parents to make sure they support their daughters' education and have the space, time and means to study (e.g., making sure they are not overwhelmed with household chores or care of younger siblings). Female mentors have also taken initiatives such as the organization of mentoring days at the school level, with the participation of community leaders, to raise awareness on the importance of education at the household and community level.

This is in line with the results of the qualitative findings. According to the results of the focus groups, the mentorship program was generally well received by the various stakeholders and was perceived to positively influence girls' attendance and enrollment through multiple mechanisms, for example mentors sensitize the girls on menstrual hygiene management, health, hygiene and nutrition. Mentors also intervene with girls, their parents, and their teachers to encourage attendance. Mentors report that they monitor girls to make sure they do not go to work at mining sites, talk to parents about not working and having more time to study at home, and visit with teachers and parents about absences or attentiveness in class. One focus group with mentors reported that their activities also influence boys, who often receive advice from the mentors and put their recommendations into practice.

This indicates that the effect of mentorship on school performance will be mostly indirect, mainly through attendance. Higher attendance level, though, might not necessarily lead to improved reading outcomes for all students, if they are accompanied by more crowded classrooms and not enough teachers' resources to deal with the additional influx of students. In addition, the lack of quality attendance data (as described in chapter 3), makes it difficult to assess the impact on attendance. In particular, all students in the impact evaluation sample are reported to have 100 percent attendance, and there is not enough variation in the

sample to meaningfully estimate program impacts and assess whether boys and girls have been affected differently.

The lack of statistically significant effects on girls' reading proficiency and positive effects on boys could potentially be an indication of particularly strong spillover effects on boys and a reduced effect on girls, for various other reasons that cannot be identified with the current data. For example, in our experience evaluating education programs in West Africa, we often observed that teachers do not usually treat boys and girls equally when applying their teaching techniques in their classrooms (e.g., they engage girls less in classroom activities). While this would potentially happen in both treatment and control schools, this would still make it more difficult to detect the incremental impact of the mentorship relative to the other program components.

Exhibit 41. Impact on ASER Reading Proficiency

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	-0.03 (0.702)
Treatment effect for boys ($\beta_1 + \beta_2$)	0.21*** (.001)
N	253
Control-group mean for girls	27%
Control-group mean for boys	27%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

We also analyzed children's literacy activities outside of their classrooms. We asked children whether they are part of a reading club, defined as a small group of children who read together outside of the school, as part of BBII program activities. The data indicate that treatment group girls are about 8 percentage points more likely to participate in a reading group than girls in the comparison group, however the effect is not statistically significant. The treatment effect for boys is also not statistically significant. During interviews and focus groups, students, parents and teachers reported that reading clubs are helpful in supporting student literacy. However, implementation challenges such as an inability to identify facilitators, lack of available training for facilitators, and hesitancy from parents to let their children participate outside of school hours were common. These challenges may explain the lack of statistical effects on participation in reading clubs.

Exhibit 42. Impact on Participating in Reading Group

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	.08 (0.266)
Treatment effect for boys ($\beta_1 + \beta_2$)	-.010 (.914)
N	249
Control-group mean for girls	24%
Control-group mean for boys	24%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

While the primary confirmatory outcome of interest for the impact evaluation is literacy, a mentor's home visits might also lead parents to become more cognizant of their children's diets (thus affecting their children's food security), as well as their children's hygiene practices and the importance of consistent school attendance. These other exploratory outcomes are analyzed in additional detail below, following the order of the impact evaluation indicators as presented in Exhibit 2.

4.2 Food Security

For the impact evaluation we focused on whether the program had an effect on students reporting being hungry or very hungry during school days, defined as whether they felt full after their breakfast using the previous day as reference. The data indicate there is no statistically significant effect for girls, and a marginally statistically significant increase for boys (10 percentage points). This result, however, needs to be interpreted with caution because this outcome has a relatively large number of missing values and because sample sizes to estimate these program impacts are relatively low.

Exhibit 43. Impact on Being Hungry or Very Hungry During School Days

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	.04 (.592)
Treatment effect for boys ($\beta_1 + \beta_2$)	.10* (.093)
N	193
Control-group mean for girls	5%
Control-group mean for boys	2%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

4.3 Success in School due to Mentors

The endline student questionnaire also included a question to assess whether the students feel they are doing well in school and whether they can cite mentors as one of the top three reasons for their success or improvement in school. The estimates indicate that girls in the treatment group are 2.5 percentage points less likely to report the mentor as one of the three main reasons for their success in school compared to girls in the control group. The effect for boys is not significant. The top three reasons that students mentioned for their success in school was 1) more studying; 2) higher attendance; and 3) better teachers, in that order. Mentors were mentioned by few students, but it was not their first top three choices. Qualitative findings show that availability of mentors was one of the factors that parents mentioned as a success of the program.

Exhibit 44. Impact on Mentor Cited as Reason for Success in School

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	-.025** (.043)
Treatment effect for boys ($\beta_1 + \beta_2$)	.021 (.340)
N	250
Control-group mean for girls	5%
Control-group mean for boys	2%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

4.4 Hygiene Knowledge

Similar to what was reported for the performance evaluation, to measure students' knowledge and practice of hygiene, we asked students to identify instances in which they should wash their hands (for example, before eating, after touching animals, before preparing food). We defined a threshold of hygiene knowledge as the ability to identify at least four situations in which people should wash their hands. We also report impacts on whether students wash their hands at critical moments, in particular before eating and after using the latrine. The results in Exhibit 45 and Exhibit 46 indicate that the presence of mentors

does not have statistically significant effects on boys or girls in terms of overall hygiene knowledge or whether they wash their hands at critical moments.

By looking at the qualitative findings, while there seem to be an improved perception among various stakeholders, including mentors, that hygiene has improved among students, stakeholders also perceived that a barrier to improved hygiene is that the program was not designed to address lack of latrines, hand-washing stations or water scarcity at schools or in communities, which are element that influence hygiene and handwashing practices. As suggested by the review of project documents, CRS and school administrators worked on raising the awareness of PTA and school management committees (COGES) on the necessity of ensuring that hand-washing stations are repaired and replaced when necessary, if the hygienic behaviors of hand-washing with soap at critical times are to be mainstreamed. These barriers to access to hand-washing stations might help explain the lack of impacts on the mentorship program on these outcomes.

Exhibit 45. Impact on Knowledge of Hygiene

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	-.002 (.982)
Treatment effect for boys ($\beta_1 + \beta_2$)	-.10 (.327)
N	254
Control-group mean for girls	22%
Control-group mean for boys	22%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Exhibit 46. Impact on Washing Hands at Critical Moments

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	-.02 (.759)
Treatment effect for boys ($\beta_1 + \beta_2$)	-.12 (.110)
N	233
Control-group mean for girls	90%
Control-group mean for boys	96%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

4.5 Nutritional Knowledge

In this section we examine whether the mentoring program has an impact on students' overall nutritional knowledge, captured by an indicator that measures whether the students achieved a passing score on a test of food nutrition and dietary practices. A passing score is defined as being able to name at least one food with iron, one food with vitamin A, one benefit of iron and one benefit of vitamin A. The results are presented in Exhibit 47 and indicate that both girls and boys in the treatment group are more likely to be knowledgeable about nutrition than boys and girls in the control group (5 and 6 percentage points, respectively). However, the effect is not statistically significant.

Exhibit 47. Impact on Overall Nutritional Knowledge

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	.05 (0.400)
Treatment effect for boys ($\beta_1 + \beta_2$)	.06 (.204)
N	254
Control-group mean for girls	8%
Control-group mean for boys	9%

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

SECTION 5. QUALITATIVE FINDINGS

To better understand and contextualize the findings of the performance and impact evaluations, we gathered and analyzed qualitative data related to the implementation of BBII activities and the perceived influence of those activities on students' literacy and nutrition and hygiene outcomes. Key data sources supporting this analysis include teacher observations in all BBII schools and interviews and focus group discussions with implementers, partners, and stakeholders at a subset of BBII schools (three treatment schools and two control schools). Below is a summary of the main findings by the qualitative research domain. Additional detail regarding the findings from the teacher observations and the interviews and focus group discussions is provided in the narrative that follows.

Summary of Main Qualitative Findings	
Relevance	Overall, interview and focus group participants reported satisfaction with the project, saying they that believed the project interventions are meeting the needs of beneficiaries and are aligned with Burkina Faso's and the U.S. government's development objectives. Respondents also believed that the project adequately considers economic, cultural, and political contexts. According to implementers and stakeholders, the primary strengths of the project design include the focus on training teachers in evidence-based literacy techniques, the reinforcement and coaching provided by school administrators through the teacher observations, and the inclusion of canteens and distribution of micro-nutrients as key strategies. The primary weaknesses, according to stakeholders, are that teachers do not receive enough learning materials to support all the students in their classrooms, that the reading clubs have encountered challenges recruiting facilitators, that too few libraries have been built to ensure access for all communities, , and that participation and engagement in PTAs is lower than the PTAs desire.
Effectiveness	Overall, implementers and stakeholders reported that students' literacy and nutrition and hygiene has improved and that BBII interventions have contributed to these results. Stakeholders report that they have observed improvements in students' literacy skills, motivation to learn, and hand washing behaviors. The new approach to literacy instruction, increased engagement of school directors and administrators in supervising teachers, increased support for school feeding activities, , availability of mentors, and provision of micronutrients to students through PTAs in schools with teachers who refuse to distribute them are believed to contribute to the success of the program. Challenges and barriers to success include inconsistent adoption of the new techniques among teachers, reluctance among teachers to distribute micro-nutrients, delays in delivering instructional materials and resources, lack of effective training and recruitment of reading club facilitators, and lack of formal training of enough teachers to deliver information to students about handwashing and nutrition. Though challenges exist, respondents said that CRS has effectively managed partners and that the program has coordinated and collaborated effectively with other stakeholders.
Efficiency	Respondents reported that the project resources have been sufficient to implement scheduled activities and, for the most part, objectives have been achieved on time. Some activities, including the provision of pedagogical materials for teachers and learning materials for students, have been delayed. Further, respondents noted that the project encountered challenges in engaging teachers in distributing micro-nutrients. Despite challenges, respondents reported that CRS has adequately responded to internal and external factors that have hindered the efficient implementation of project activities. For example, the

Summary of Main Qualitative Findings
project modified its approach and began distributing micronutrients to students through PTAs in schools where teachers refused to distribute them.
Perceived Impact
Stakeholders believe that teachers who implemented the practices taught in the literacy training delivered higher quality literacy instruction to students and the improved instruction, combined with interactive learning materials and the presence of canteens, helps to improve student motivation and engagement in school. Stakeholders also believe that the mindset of parents and community actors towards education has improved, especially towards girls. Regarding hygiene, stakeholders believe that handwashing behavior has improved among students and observe installation of handwashing devices in homes, markets, mosques, and restaurants, suggested that handwashing has increased among parents and families as well. To increase the impact of BBII literacy interventions, interview and focus group participants recommend more intensive training and monitoring of teachers, provision of additional learning materials, additional training of mentors, increased sensitization of parents, training of SILC members in fund management, and building more libraries closer to schools or increasing access to existing libraries or books. To increase the impact of hygiene and nutrition activities, stakeholders recommend closer monitoring of the installation and operation of handwashing devices, formal training of teachers in teaching nutrition and hygiene, building of latrines, and development of strategies to support handwashing in schools with water scarcity issues.
Sustainability
Implementers and stakeholders expect those who have been directly impacted by the program, including teachers, students, mentors, and parents to continue to benefit from the program. They also report that the program has demonstrated its value to the community and government and there is support for continuing activities. Some transition of activities from CRS to MENA has occurred, and CRS has led sustainability plans related to school feeding, SILC groups, mentors, and libraries. However there is an inconsistent understanding among partners and stakeholders about which specific activities will be sustained and who will lead those efforts. Of particular concern to teachers, school directors, district administrators and mayors over the continued training of teachers . Although CRS has increased the capacity of school administrators and mayors to oversee training of new teachers, further communication over sustainability plans with stakeholders may be needed.
Classroom Observations of Teachers' Instructional Practice
Classroom observation outcomes were more or less in line with the results of student and teacher surveys. In observed lessons, teachers mostly focused on reading skills, especially decoding. According to the classroom observations, a critical improvement since the midline study is that there is additional use of learning materials such as cubes, bananagrams, and word strips that are used during decoding lessons. However, observations also found that during decoding and encoding lessons, teachers and students frequently use the incorrect sounds for letters that can make combinations of syllables and word formation activities confusing. The observations also detected other examples of teachers not using the new instructional methods. Teachers often read sentences and words aloud first, then students repeat what the teacher said, making it difficult to determine if students were reading on their own or merely repeating words. Similarly, during the vast majority of lessons observed, teachers asked students to copy letters, words, or sentences, but not to write on their own. Teachers also did not use some techniques during the observed sessions including: word grouping, punctuation, liaisons, and pronunciations.

5.1 Classroom Observation of Teaching Practices

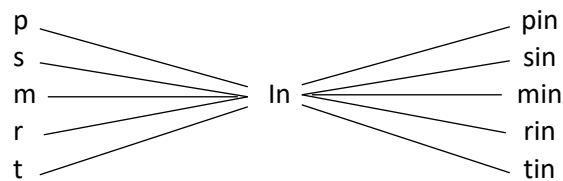
The observational data showed that teachers mostly focused on reading/decoding lessons, similar to midline. Out of 42 lessons, one of the lessons focused on comprehension, 38 focused on decoding, and 3 lessons included the two sequences. Thus, only 4 of the 42 lessons were focused on comprehension, while the other 38 were focusing on decoding. Below, we discuss observed practices related to reading/decoding, reading comprehension, reading groups, writing groups, reading games, use of BBII materials, and the development of reading and writing skills. We also describe how instructional practices could be better applied in classrooms

5.1.1 Reading/Decoding Lessons

According to the manual developed by BBII for the teacher training, lessons focusing on decoding should address the core elements discussed below.

Letter recognition. After having isolated the letter or sound of the day, the teacher invites students to observe and describe the letter's form (e.g., curve, lines) and compare it to usual objects. The teacher can also ask students to copy or write the letter.

Combination. The teacher asks students to associate consonants and vowels to form syllables, for example, by using slates with handles or with the help of the following diagram:



Morphemes and tool words. The teacher invites students to identify morphemes and to memorize tool words.³⁰

Reading aloud. The teacher invites students to read aloud words, sentences, or texts. It allows the teacher to assess student progress.

Identification of word groupings. The teacher helps students to identify groups of words and recognize them when reading aloud. This implies that students are being asked to read sentences since these are groups of words that are pronounced in only one breath.

Respect of punctuation. The teacher helps students to identify punctuation marks and to respect them when reading aloud.

³⁰ A *morpheme* is the smallest grammatical unit in a language. It may or may not stand alone. For example, there are three morphemes in the word 'singers': 'sing' (to sing), '-er' (a person who does), '-s' (the plural marker). Recognizing morphemes is important in decoding, especially recognizing morphemes that are not pronounced. Grammatical morphemes are also important to understanding a text. *Tool words* are frequent words that children need to recognize easily (e.g., you, two, yes).

Respect of liaisons. The teacher helps students to connect words when they are reading aloud, which means pronouncing a latent word-final consonant immediately before a following vowel sound.

Articulation of words. The teacher detects difficulties encountered by students in pronouncing some words and helps them to pronounce words correctly, for example, by cutting the word into syllables or by asking children to find words starting/ending with or containing the same sounds in the targeted word.

Fluency. These previous elements should help students to read a text with fluency and expressiveness. The tool allowed enumerators to report which elements are addressed by teachers during the reading/decoding lessons.

Exhibit 48. Core Elements Addressed during Decoding Lessons

Elements	Number of lessons during which the teacher addressed	Average percentage
Letter recognition	26	63%
Combination	27	66%
Morphemes and tool words	0	N/A
Reading aloud	33	80%
Breath groups' recognition	0	N/A
Respect of punctuation marks	0	N/A
Liaisons' respect	1	2%
Words' pronunciation	4	10%
Reading fluency	1	2%

During the reading/decoding lessons, teachers focused on letter recognition, asking students to read and copy letters. In a very few cases, they invited students to observe and describe letters (for example, by counting the overall number of “legs” in the letters *n* and *m*). In a third of the lessons, a ‘combination’ was made, most often using the diagram shown above. Students are often asked to read aloud. Usually, students come in the front of the blackboard to read some words or a sentence, one after the other, after the teacher reads it. Because the teacher reads the sentence before the students do, it is difficult to determine whether students are actually reading or just repeating the words. In many cases, it is assumed that they are just repeating instead of reading. Some elements were almost never addressed during the recorded lessons: ‘word grouping’, ‘punctuation’, ‘liaisons’, ‘pronunciation’, and as a result proper ‘fluency’ as well.

5.1.2 Reading/Comprehension Lessons

We reported above that the comprehension exercise was only tackled during four lessons.³¹ According to the manual developed by BBII for the teacher training, lessons focusing on comprehension should involve the following core items:

- Defining new words
- Comprehension of a whole sentence (syntax)
- Explicit teaching of comprehension (e.g., connectors, substitution, punctuation)
- Implicit comprehension and inference

³¹ The four schools with comprehension exercises include: Biliga, Bourzabga B, Soubeira Natenga, Yargo Yarcé A

- Making hypotheses
- Use of the dictionary
- Identification of strategies to locate answers in a text

In the four lessons on comprehension, the activities were related to basic questions of understanding. For example, the interaction below provides an overview of the activity.

Teacher: *What does the text deal with?*

Student: *Timbila is hungry.*

Teacher: *Is Timbila a student?*

Students: *Yes.*

Teacher: *Who gave his lunch to Timbila? Look into the text!*

Students: *...*

Teacher: *Look more attentively into the text!*

Students: *Hameye gave his lunch.*

Teacher: *Why does Timbila need a lunch?*

Students: *Because he is hungry.*

In two lessons, the teacher defined new words that students did not know. No other elements were addressed.

5.1.3 Reading Groups

During 24 of the 42 lessons observed, the teacher asked students to work in groups. Most often, they asked groups to split words into syllables and to write syllables or dictated words, as well as lines of some graphemes. The degree of collaboration varied from class to class. In some cases, the “secretary of the group” writes/works alone. In each of the lessons observed, the teacher provides different instructions to different groups, in order to work more closely with some groups. In one case, the teacher asked some groups to go work outside, as recommended in the guide. However, he gave the same instructions to the groups leaving the classroom and to those staying in.

5.1.4 Writing Groups

Writing groups can be used to work on spelling and other conventions (e.g., grammar, punctuation) or on written production and written expression. We did not observe such groups. Tasks observed included splitting words into syllables, copying syllables, writing syllables or words dictated, or writing lines of given graphemes. In the best cases, group members control what the secretary does. However, there is no process for reviewing spelling or grammar. Written production is never worked on, neither in groups nor individually. In none of the lessons were students asked to write something that was not dictated or simply copied.

Writing Groups

Spelling and conventions of written texts

The teacher dictates a sentence to children who write it individually before collaborating to improve spelling, grammar, and other conventions.

Written production

The teacher asks students to individually write something that has not been dictated, copied, or memorized, before collaborating to improve their production. For example, students can be asked to describe a picture, to write the follow-up of a story, to tell something personal.

5.1.5 Reading Games

As mentioned, a question on reading games was added to the observation grid to identify whether the teacher had students play reading games. Unfortunately, we did not have any documentation on games recommended by the BBII approach; the guide for teacher trainings does not provide examples.

We observed reading games during seven lessons. As noted above, games were observed and reported very frequently by enumerators. However, the intent of games in pedagogy is to entertain students in a way that captures their attention and enhances learning of the targeted skill/technique. If an activity is carried out without this entertainment/fun aspect, it is usually not considered a game, even if groups are rated and ratings are compared between groups. In many of the “games” observed, it was more about giving groups ratings than about an actual incorporation of an entertaining aspect.



Source: CRS

5.1.6 Use of BBII Materials

Exhibit 49 provides a summary of the materials available in the classroom and how many of them are actually used.

Exhibit 49. Classroom Materials Available and Used

Learning Materials	Available	Used
Blackboard	42	42
Little slates	41	39
Large slates	41	23
Posters of reading text pictures	41	14
Wood cubes	41	9
Bananagram	41	5
Slates with handles (missing on the tool, added during video recoding)	ND	5
Word/graphemes strips	41	4
Sounds' reading table	42	3
Lire au Burkina handbook	42	2
Illustrated dictionary	29	0
Manuel de la méthode Boscher CP1	34	0
Livre Flamboyant CP2	29	0
Je lis et j'écris, classiques africains CE2	0	0
Mamadou et Bineta sont devenus grands (CM)	0	0
Grammaire, conjugaison, orthographe (CM)	0	0
Livre Flamboyant CE1	1	0
Je lis et j'écris, classiques africains CM1	0	0

There was improvement in the use of learning materials such as letter cubes, bananagrams, or word strips during decoding lessons at endline as compared to midline. During 13 lessons of the 42 observed, students were asked to handle such materials to create syllables or words. Reading books were used during very few lessons (only two).

5.1.7 Developing Reading and Writing Skills

The previous section highlights how teachers implement BBII recommendations. The tool also proposes a section intended to capture which reading-writing skills are tackled during the lessons, using BBII steps or other steps.

Exhibit 50. Reading and Writing Skills Practiced

Activity		Baseline	Endline
a.	Worked with students on recognition of letters or mastery of the complete alphabet	80%	62%
b.	Carried out activities on recognition of sounds of letters and letter combinations	100%	81%
c.	Had students decode an unknown word, sentence, or text, without repetition or memorization	80%	74%
d.	Had students encode a word, sentence, or text using knowledge of sounds and letters, regardless of spelling or other conventions of written texts	40%	64%
e.	Developed students' lexical awareness or vocabulary: finding new words on a given subject, deducing new words' meaning using their structure or the context, using tools such as dictionaries or vocabulary sheets, and so on	20%	7%
f.	Had students read a word, a sentence, or a text, aloud or not	60%	50%
g.	Had students read a sentence or a text with fluency and expression (respecting punctuation, not stopping at each word, reading for meaning)	0%	5%
h.	Asked students to answer simple comprehension questions or to locate answers in a text	60%	19%
i.	Asked students to answer more subtle comprehension questions or questions of implicit comprehension involving, for example, causes and consequences, chronology, or riddles	60%	0%
j.	Asked students to make a hypothesis about a text	0%	0%
k.	Asked students to establish links from a text to their real life or to another text	20%	7%
l.	Asked students to copy letters, words, or sentences	ND	88%
m.	Asked students to write a word or a sentence, without copying or reciting but perhaps with guidance such as a pattern or a structure	0%	0%
n.	Asked students to write on a free topic	0%	0%
o.	Asked students to deduce or practice rules of spelling, grammar, or conjugation	0%	0%
p.	Helped students to improve their own written production for style, coherence, spelling, punctuation, and so on	0%	0%

Patterns observed are similar to those observed during the midline. Teachers focused on the alphabet and letter sounds as well as decoding. They also asked students to write some syllables or words, which was rated as encoding (item 4). In 88% of lessons observed, students were asked to copy letters, words, or sentences. In contrast, they were never asked to write something on their own, that is, something that did not involve copying or writing under dictation. Indeed, they were not asked to write on a free topic or to improve their own production since they did not produce their own text. Conventions of written texts

were never addressed although plural, gender marks, punctuation, and capital letters can be taught in early grades.

Moreover, they are often asked to read aloud, although there is no specific activity to develop. Comprehension is also rarely included. However, we can highlight three teachers who tried to link the text being read with the life experiences of students. One teacher made students play marbles before working on the sentence of the day that dealt with marbles. Another teacher brought a real frog into the classroom, which captured the students' attention.

5.1.8 Other Considerations

Teachers seemed to understand the importance of decoding. However, their efforts could be more efficient by following the recommendations below.

Teachers should not read or pronounce the word or sentence to be read before asking students to read/decode it. Teachers help students to find the sentence of the day. When they find it, teachers can repeat the sentences several times and also make students repeat it several times. But if teachers and students say the text aloud before applying decoding strategies, no decoding is needed anymore. The students repeat the word/sentence without having to associate a sound to the letters they see because they have already memorized the sentence.

Use of syllables to encode and go from oral to written. Students are often asked to split words into syllables after having read the word that is already written on the blackboard or on the slates. Splitting words into syllables helps students move from oral articulation to writing. By splitting the syllables orally, the task of encoding is made easier for the child, since he will encode the first syllable first, then the second. To decode a word means to read it without having heard it. However, if the teacher says the word first, then it is no longer relevant to ask children to split syllables. The only way this could be beneficial to the child's decoding would be for the teacher to cut the words into syllables without saying the word, then help the students to decode one syllable at a time. For example, the following scenario illustrates a good decoding practice:

Teacher: How many syllables do you hear in the word "singer"?

Students: Two syllables: sin-ger.

Teacher: Right, let's try to write the first syllable. How could we write "sin"? What is the first sound you hear?

Students: "sss"

Teacher: Right, which letter can make "sss"?

Students: S!

Reinforce teachers in differentiating the name and the sound of letters. To decode and encode, children need to know the sounds produced by letters. However, teacher and students often used wrong sounds that make combination activities difficult. For example, to read "mar", one needs to know the sound of the three letters composing this syllable. However, sometimes, teachers asked students to combine "mé" with "ar" which gave "mé-ar" and not the proper "mar". The sound of the letter M is [m], not "mé". Mar actually has three sounds: [m] [a] [r]. It would therefore be constructive for teachers to differentiate properly between the names and proper sounds of letters.

Lastly, teachers should ensure that reading groups provide students with the opportunity for collaboration and make students understand how some techniques help to read or write rather than asking them to blindly believe it. The BBII approach recommends explaining to students why different strategies are useful in learning how to read. It is indeed important to understand how splitting a word into syllables will help to figure out how to encode it. However, during many lessons, teachers gave simple instructions that stated goals but did not explain the reasoning behind each step, as in the following situations:

- Why it is important to split syllables? To be good readers!
- Why it is important to know the alphabet? To be good readers!

5.2 Relevance

Through interviews with CRS, MENA, project implementers, county mayors, and focus groups with parents, mentors, and students, the research team assessed the relevance of BBII interventions. Interview topics focused on stakeholders' perspectives on the strengths and weaknesses of the project design and the extent to which the project considers economic, cultural, and political contexts. Stakeholders were also asked to share their perceptions on the extent to which the interventions are meeting the needs of beneficiaries and are aligned with Burkina Faso's education and development strategies and with the U.S. government's development objectives. Lastly, stakeholders shared their satisfaction with intervention activities. Below is a summary of the qualitative findings on the relevance of BBII interventions.

5.2.1 Strengths and Weaknesses of Project Design

Overall stakeholders reported that a key strength of the project is that the content of literacy training fits the needs of teachers and students. The new approaches instilled in teachers during the training make use of playful materials like cubes, bananagrams, and large slates that are attractive to students and facilitate interactive group work. These practical approaches, compared to the classical approach teachers were using before, incentivize students' curiosity and increase engagement in the classroom. Moreover, the techniques are easy for teachers to adopt and integrate into their teaching and are sufficiently flexible to accommodate the variable teaching styles of teachers. Teachers are also able to consider the specific needs of students, including their different learning styles and abilities.

Teacher observations are another perceived strength of the program and, according to stakeholders, the observations reinforced the skills taught during the training and increased the capacity of district administrators and school directors to supervise teachers. The observations engage district administrators, school directors, and educational specialists in the process and provide district officials with greater opportunities to visit schools and learn directly what schools are facing.

"This partnership has been worthwhile because without it we would not be able to train and supervise teachers. These activities are among our scope of work but with limited resources, it would be difficult to perform them".
- School District Administrator

Other perceived strengths of the design include the focus on literacy skills, the canteens, and the distribution of micronutrients to support student' health and reduce illness. Stakeholders appreciate BBII's targeting of literacy skills because students require them to master other subject areas, such as

mathematics or natural sciences. Thus, improved literacy skills can facilitate learning across disciplines. Implementers and stakeholders also believe that canteens are well aligned with students' needs and motivations and that they critically support school attendance and attentiveness in class. Finally, distributing micronutrients prevents illness and supports students' nutrition, which is perceived to support students' health and reduce barriers to school attendance.

According to stakeholders, key weaknesses of the design of the literacy activities are that teachers do not have sufficient time to learn the new techniques and that some of the new techniques take too long to apply during a class session. Teachers and some school directors reported that the schedule for training did not provide sufficient time for teachers to learn, practice, and master the new techniques.

According to stakeholders, weaknesses of the non-classroom-based elements of the program are that too few teachers, mentors and community members who were identified and trained to facilitate reading clubs volunteered to lead them, that parent participation and engagement in PTAs is low, and that teachers, students, and parents at the schools visited for data collection do not have access to nearby libraries. Regarding reading clubs, interview and focus group participants reported that reading clubs were valuable but in some of the schools visited for data collection, reading clubs did not have facilitators. In addition, although BBII trained teachers and mentors in reading club facilitation, some interview respondents did not recall this training being available or felt that more training was needed. The intent of the program was to train teachers, mentors, and community members to be facilitators and that these trained individuals would then lead the after-school reading clubs. However, according to implementers, few of them ended up conducting the reading clubs. This suggests the project design may have underestimated the motivation of teachers, mentors and community members to take on this responsibility.

The PTA and library access components were also perceived to be weaker interventions. Though PTAs make contributions to schools, PTA members reported in focus groups that members are prone to skip meetings or abandon the organizations because of time commitments to work or other income-generating activities. For example, in one school PTA members dropped out when they began work at a small gold-mining site. Non-PTA members reported similar barriers to joining a PTA and claim that activities such as working their farms prevent them from having time to join.

"The nearest library is 20 km. However, I bring back some documents for my students and I ask them to tell their parents to register them but because of the distance it is a little difficult for the children".
- Teacher

Among stakeholders interviewed, particularly teachers, access to libraries was perceived to be a relatively weaker component of the project design. Implementers were successful in reaching its objectives in terms of building new libraries, and report that some of the new libraries built are near schools, which facilitates access for teachers, students and parents at those schools. However, teachers participating in interviews reported that libraries were still too far away for them and their students to visit. This physical distance meant that these BBII schools did not experience improved access, which therefore limited the contributions that libraries could make to the literacy of all school-age children targeted by BBII.

5.2.2 Alignment with Economic, Cultural, and Political Contexts

Stakeholders involved in planning and implementation report that BBII considered various social contexts during the design and implementation of program activities. According to interviews, BBII included all

schools, independent of religious affiliation (Catholic schools, Muslim schools, state schools) and took into account the needs and interests of a diverse set of actors including women, men, children, religious leaders, opinion leaders, and counselors. Interview participants suggested that CRS adapted to the needs of the field and new information. As an example, during the planning phases, BBII conducted a situational analysis to identify relevant actors, their skills, their needs, and their challenges, which demonstrated the economic barriers facing parents that discourage them from sending their children to school. As a result, the program added the SILC component to assist parents with this burden.

5.2.3 Alignment with Burkina Faso and U.S. Government Priorities

According to stakeholders BBII aligns with the government priorities and strategies. The project supports the objectives of MENA and the Program for the Strategic Development of Education (Programme de Développement Stratégique de l'Éducation de Base/PDSEB). MENA views all BBII activities as framed in the PDSEB and, therefore, aligned with MENA's objectives and priorities. Moreover, CRS accompanies MENA in the delivery of activities and essentially represents or is an extension of MENA, signaling close integration between CRS' and MENA's efforts.

5.2.4 Stakeholder Satisfaction

Generally, satisfaction with the project is high among key stakeholder groups. Teachers, students, mentors, and parents hold favorable views about the project and report that it has been beneficial to them. Teachers appreciate the training provided by the project on new literacy instructional techniques, report that they intended to continue using them, and buy into their value in yielding better reading and writing outcomes for their students. One area of dissatisfaction among teachers and other stakeholders was that they believe there was an insufficient number of books or instructional materials provided to meet the demands of their class sizes. Most stakeholders interviewed also reported that they would have liked all teachers to receive consistent training in health and nutrition. BBII trained all teachers with a basic module on health, hygiene and nutrition and some teachers with a more intensive training on health, but teachers and other stakeholders interviewed believed that teachers taught students about WASH using their own knowledge or only basic information that was shared with them. It's possible that teachers did not remember receiving the specific training or that other stakeholders were unclear on what exact training was provided by BBII. However, among teachers and stakeholders interviewed, more rigorous and consistent training was perceived to be needed.

*"Reading books are insufficient. I only have 7 books for a class of 72 pupils".
- Teacher from grade 5*

Focus group discussions with students indicated that they were happy about using instructional materials like books, slates, and games. In addition, they reported that they regularly ate and liked the food from the canteen at school and the rations. Some of the focus group participants were also in reading clubs, while others stated that their clubs were not yet functional. Those in reading clubs said that they joined because they were interested in reading and believed the clubs helped them to become better readers.

Mentors stated that they appreciated and benefited from the training provided by CRS. The training strengthened their skills in support of girls' learning and management of their personal lives. Additionally, mentors valued the personal development skills achieved through the program, such as gaining confidence to speak in public and learning how to sensitize and interact with communities. They also appreciated bicycles donated by CRS to support their travel, although they stated that most of the bicycles are no longer usable.

Parents participating in SILCs stated that they are satisfied with capacity building training provided by BBII. They report that, as a result of BBII activities, they became more aware of the importance of education and are more involved in supporting their children. They were able to pay for school fees and scholastic materials for their children through the savings yielded from the SILC groups. Some could also use savings to provide their family with food, buy animals, or launch small income-generating activities. Both SILC and non-SILC members collectively believe that BBII supports the literacy and health of their children and are supportive of the interventions.

"The SILC was very beneficial to us. It allowed us to face our kids schooling expenses and pay for food for our families." - PTA Member

5.3 Effectiveness

Through interviews with the stakeholder groups, the research team assessed the effectiveness of implementation strategies and activities. Interview topics focused on the extent to which the project is achieving its objectives, successes and challenges of program implementation, and the effectiveness of management arrangements and stakeholder collaboration. Below is a summary of the qualitative findings on project effectiveness.

5.3.1 Achievement of Objectives

"The methods and materials have been very useful for learning because methods are much more appropriate than the classical method. For my students, at the beginning of the year, I had between 30 to 40 percent of my students who could read well, today I am at 60%, but by the end of the year, I plan to reach 90 percent in reading."
- Teacher from grade 4

Quality of Instruction. Stakeholders widely believe that the new instructional approach coupled with the utilization of learning materials have contributed to the quality of teaching delivered to students. The perceived benefits of the new techniques are that they facilitate increased practical interactions with students and result in improved attentiveness and acquisition of literacy skills. Stakeholders, particularly teachers who participated in interviews, reported that the use of new instructional techniques and interactive materials improved student engagement. They reported that whereas students used to be bored or fall asleep in class, the new practical approaches to learning incentivizes curiosity

during class time, motivating students to attend more often.

These perceptions contradict the findings from the classroom observations and performance evaluation to some extent. Though teachers report that they appreciated the training and that they believe that they use the new techniques in their classrooms, they offered few concrete examples of using the different techniques taught during the literacy training. They frequently mentioned using learning materials, but not the others. Therefore they may have bought-in to the idea of the new literacy instructional techniques but this may not have led to consistent implementation in the classroom. Also, as described below in Sec 5.3.2, school directors, district administrators, and mayors reported that adoption of the techniques was inconsistent across schools and classrooms. Thus while the teachers interviewed for the evaluation may have reported that they use the techniques, this may not reflect teachers' belief across BBII schools.

Teacher observations by school administrators are also perceived to reinforce instructional skills and assist teachers with their practice. Interview participants who have been involved in observations report that

observations are a supportive process for teachers and provide opportunities for them to improve upon their skills. Those conducting the observations report that teachers implement their recommendations and that they notice changes in teachers' practices in subsequent observations. They believe that the observations encourage teachers to better prepare for their classes and be more "present" with students. Teachers similarly reported that the observations improve their knowledge and that they integrate recommendations into their teaching practice.

Student Attendance, Attentiveness and Enrollment. Most stakeholders believe that over the past year, student attendance and attentiveness has increased and that these improvements are important factors in increasing student literacy. They report that students come to school more often, are more engaged in class, and more willing to spend time outside of class participating in group work or reading clubs. School directors also reported that, overall, absences due to illness have decreased over the past year. In focus groups, students had varying reports about their experiences with attendance. In some groups, students said they hadn't missed school. Others reported that they had missed school due to illness.

In terms of enrollment, district administrators, school directors, mayors, and mentors mostly reported that enrollment has increased over the past year. They cited increased numbers of school registrations and increased numbers of students taking exams. Some also reported that enrollment had particularly increased among girls. However, stakeholders also mentioned other factors unrelated to BBII that increased or decreased enrollment. For example, in one case parental migration into the local area led to increased school enrollment. In other cases, parents moved their children to schools near the mine site that parents began working at or existing schools experienced decreased enrollment because a new school opened nearby. Concerns were also expressed that enrollment is not as high as it should be.

School Feeding. Stakeholders widely reported that canteens contribute to attentiveness and attendance by enticing students to come to and stay at school. Students in focus groups report that they like the food, and parents reported that their kids attend more often due to the canteen. Moreover, parents report that children too young for school want to go just because of the canteen, and students stay longer at school, even up to 12 hours, to study. Other stakeholders also agree that the canteen is a key support for attendance, and several reported that it is the intervention with the greatest impact on attendance and enrollment.

"If CRS was not in Kaya, mainly through the canteen project, many schools might have closed or at least half of them, and this is truer since this year we experienced bad agricultural harvest."
-- Implementing Partner

Reading Clubs. To a lesser extent, stakeholders believe that reading clubs influence students' literacy. Teachers report that students who participate in reading clubs gain confidence, are better able to express themselves in class, and develop greater interest in reading; and that the reading clubs complement the work of classroom teachers and improve academic performance. However, reading clubs were an optional activity and not all schools visited by the evaluation team had operating reading clubs, nor do they reach all children. In particular, students who are not interested in reading or prefer to play instead of spending extra time reading often do not join the groups, and therefore do not accrue the benefits.

Mentoring. The mentoring is particularly appreciated and is perceived to positively influence attendance and enrollment through multiple mechanisms. Mentors educate girls about menstrual hygiene management, which improves their ability to manage menses, allowing them to attend school more frequently. Mentors and other stakeholders also believe that the mentoring helps girls avoid pregnancy and early marriage, which makes them more likely to stay enrolled in school and continue their studies.

“Before our interventions, girls did not know what to do in case of menses. Now they know what to do and what type of hygiene they should have. Girls now know that menses are not a disease and are no longer shamed when it happens, and they also go to school without any problem.” - Mentor

Mentors also intervene with girls, their parents, and their teachers to encourage attendance. Mentors report that they monitor girls to make sure they do not go to work at mining sites, talk to parents about not working and having more time to study at home, and visit with teachers and parents about absences or attentiveness in class. One focus group with mentors reported that their activities also influence boys, who often receive advice from mentors and put their recommendations into practice.

Though interview and focus group participants believe the mentoring program has a positive influence on some aspects of girls’ lives, there was little concrete evidence provided in interviews and focus groups that mentoring leads to an improvement in literacy skills. The perceived benefits are more related to school attendance, parents’ attitudes towards educating girls and managing hygiene.

Parent Sensitization. Sensitization of parents through BBII activities is perceived to change parental attitudes toward education and to encourage attendance and enrollment. Teachers reported that parents have greater understanding of the importance of education when compared to the time before introduction of BBII. More parents attend meetings and inquire about their children’s performance in school. They also allow their children time to do group work at school outside of class time. Other stakeholders confirmed that parents have generally become more supportive of their children’s studies and more willing to enroll their children in school than was true before the program. For example, some parents have gotten solar lamps to help their children study, and parents who are themselves not literate will encourage reading by flipping through books with their children. Some stakeholders attribute these changes to awareness-raising activities by the program, and others believe it is a response to seeing increased motivation among their children.

In spite of this progress, stakeholders also report that there are parents who remain unsupportive of education or whose support is limited. They note that parents may struggle to support their children if they have limited literacy skills and that additional sensitization and follow-up with parents is needed. Parental support of reading clubs is also variable. For example, some parents don’t allow their children to attend reading clubs on the weekends.

SILC groups. SILCs are generally perceived to be positive and help members save to pay for school fees and scholastic materials, making it easier for students to attend school and learn literacy skills. SILC members reported using savings to support their children’s needs, such as paying for treatment when their children are sick, or to support development of income-generating activities, such as small businesses. SILC members and non-SILC members reported facing similar challenges in affording school fees on top of food and basic needs, particularly during the dry season or when harvests are low. Though the SILC is helpful, implementers also reported that membership drops when there is a bad harvest because parents do not have enough money to save.

Libraries. Implementing partners report that BBII achieved its objectives in building additional libraries and has increased use and access. They report that parents visit the libraries with their children more often than previously, and they have observed that mentors also attend libraries with students. However, both implementers and teachers report that teachers do not use the library very much, nor do they encourage their students to do so. Teachers interviewed also report that the libraries are far away from

their particular schools and from their students' homes, but could not comment on access project-wide. According to teachers, some students at their schools are enrolled at the library but do not visit because of the distance. Implementers also reported that girls may face more barriers than boys because they are more likely to be obliged to do domestic work alongside their mothers and do not have the same amount of free time as boys to visit libraries.

Teacher Attendance. Perceptions about teacher attendance are quite variable. For example, district officials report seeing fewer teacher absences this year and note that, when absences occur, it is because of health or family reasons. Other stakeholders report that teacher attendance is a challenge and that not living in the village and being required to travel each day to reach the school makes them tired when they arrive at their class. Teachers had variable responses regarding their attendance over the past year, with some reporting that their attendance had increased over the previous year and others reporting that it had decreased. Similar to administrators, they attributed their absences to illness or social reasons.

WASH. Stakeholders who participated in interviews and focus groups largely report that they have observed an increase in handwashing and hygiene practices since BBII began. Teachers report that they teach handwashing to students and inform them about when students should wash their hands (for example, before eating, after using the toilet, before cooking). Although they do not directly observe whether the children wash their hands each time they should, teachers generally report that students are cleaner and wash their hands while present at school.

"Yes, there was some improvement in the practice because I never saw a student going out of toilets without washing his hands since the BBII project came." - Teacher

Students in focus groups also report that their teachers have told them about the importance of handwashing and that they know when they should wash their hands at school and at home. In addition to teachers, stakeholders also reported that mentors provide education and encouragement to students about hygiene. Mentors will intervene and work

with students who have poor hygiene and may pay for soap for students.

Other stakeholders, including parents, district officials, school directors, mayors, and mentors agree that hygiene and handwashing has improved among students. Some also suggest that these practices have expanded to siblings, parents, and the community. Parents note that their children tell their siblings to wash their hands if they try to eat before washing. Stakeholders also report that some parents have installed handwashing devices in their homes. Similarly, handwashing devices have also been installed in mosques, markets, and restaurants, although there is some disagreement on the extent to which this has spread to the community. For example, one teacher reported that many children are still sent to school unclean, and other stakeholders believe that students "would" transmit these practices to parents, although they had no direct knowledge if this was the case. A perceived barrier to improved hygiene is that the program was not designed³² to address lack of latrines or water scarcity at schools or in communities, but these issues influence handwashing practices. In these contexts, although the knowledge was transmitted, lack of water and infrastructure is a major limitation and inhibits students' ability to put their knowledge into practice. Some stakeholders reported that BBII could have been more effective if it had taken these WASH-related challenges into account.

"Students have theoretical knowledge but practices are a bit tricky because of water scarcity." - Mayor

³² The Kom-Yilma project, a separate initiative, supported boreholes, water access, latrine construction, WASH education and sensitization in 219 schools and 17 community preschools

Nutrition Knowledge and Micronutrients. The distribution of micronutrients and, to a lesser extent, teaching of nutrition in schools have perceived effects on students' health. Stakeholders report that students know about vitamin A and the importance of eating healthy, more so than before the program. The distribution of micronutrients was perceived to be particularly effective at improving nutrition outcomes and contributing to improvements in attendance and attentiveness. Stakeholders report that fewer children are sick than in previous years and that students and parents use and appreciate the rations.

5.3.2 Successes and Challenges of Program Implementation

According to stakeholders, key successes of implementation include development and provision of a new instructional training program; distribution of instructional materials; stocking of canteens; establishment of reading clubs, PTAs, SILCs, and libraries; distribution of micronutrients; installation of handwashing devices; and delivery of WASH and nutrition information to students.

In terms of the instructional training, stakeholders reported that the newly developed evidence-based training delivered a complete sequence of initial training, monitoring, coaching, and follow-up. In addition, instructional materials, such as slates, cubes, books, dictionaries, and bananagrams support classroom instruction and engage students.

BBII also successfully established new resources and services within schools and the surrounding communities. Implementers and stakeholders report that canteens are generally stocked and are accessed by students. BBII has also supported the launching of reading clubs, PTAs, SILCs, and libraries, all of which are considered valuable by stakeholders.

To support hygiene and nutrition, BBII has endeavored to distribute micronutrients, increase students' knowledge of handwashing and key nutrients, and install handwashing devices in schools to encourage handwashing behaviors. Delivery of micronutrients is being targeted to PTAs where teachers refuse to perform distributions and, thus far, this strategy is perceived to be effective. Regarding handwashing and nutrition education, stakeholders report that teachers have taught students about these topics to some degree. Most stakeholders also report that handwashing devices are usually available at schools and accessed by students.

According to stakeholders, key implementation challenges include inconsistent adoption and application of new literacy techniques, insufficient availability of instructional materials, challenges recruiting facilitators for readings clubs, barriers to parent participation in PTAs, limited participation in SILCs, lack of access to libraries, insufficient training in handwashing and nutrition instruction, and teacher reluctance to distribute micronutrients.

Stakeholders noted that, although they are generally pleased with the level of uptake among teachers as a group, not all teachers apply the methods each day. Also, turnover—new teachers entering schools and trained teachers leaving—leads to inconsistent application of the literacy techniques across classrooms and schools. Stakeholders also expressed concerns that teachers did not have enough instructional materials to support the new teaching methodology or that they encounter major delays with the delivery of materials.

Stakeholders also report barriers to participation in reading clubs, PTAs, SILCs, and libraries. Some schools do not have operational reading clubs or do not have enough to meet the demands of all students. Finding facilitators and obtaining the support of parents to allow their children to participate outside of class hours were mentioned as key challenges. Both PTAs and SILCs are widely viewed as beneficial among members and non-members but according to PTA and SILC members, many parents do not join or drop out. Reasons include not having time to balance work and group activities, not being able to afford to save, or feeling intimidated by the amount of work required. Libraries are also viewed positively, but remain physically distant from schools, hindering teacher, parent, and student access.

“Those who are not in the board think that the work is complicated. We all know that the work is very important but it is tiresome as well.”
- PTA Member

Educating students about handwashing and nutrition also presented challenges, according to teachers, school directors and district administrators. According to interviews, not all teachers recalled receiving any training on educating students about handwashing and nutrition. Some of these teachers stated they were training their students based on their general knowledge of the topics, though CRS did provide a module to all BBII teachers during the literacy training on health, nutrition, and hygiene. Some teachers also noted that some handwashing devices are broken and not functional, which hinders students’ capacity to put their knowledge into practice.

Another reported challenge was distributing micronutrients to teachers to give to students. Implementers found that some teachers tend to be reluctant to participate in this activity, and some teachers reported that they did not perform the task since they were not trained on the dosage to administer. In response, implementers began distributing the micronutrients to PTAs instead of teachers where they were refusing and reported that parents were willing partners in the activity. As one school director explained, there are many parents who may be illiterate and therefore unable or not sure how to support the literacy activities. However, they can use the micronutrients and prepare the ration for their children, which engages them in BBII.

5.3.3 Collaboration and Management

CRS, partners, and stakeholders reported that collaboration within the project is strong and effective. Partners appreciated that CRS provides support but respects their autonomy and exudes flexibility. Similarly, CRS attributed success of the collaboration to clearly defined roles, with CRS serving as a

“For example, there are actors involved in the management of the canteen, others in reading and writing, others in health and nutrition, and there is good coordination between these actors.” - Implementing partner

technical and financial support and partners leading the planning and implementation of activities. CRS perceived partners to be fully engaged and to have taken ownership over their areas of responsibilities. Some interview participants reported encountering minor challenges with collaboration, such as over scheduling or logistics, but noted that they were resolved after better communicating with each other.

CRS and partners also reported that program activities have been consistently monitored, although additional monitoring could benefit the project. In addition to holding meetings, CRS conducts regular field visits and performs weekly and quarterly monitoring activities. CRS believes that monitoring has helped them detect and respond to challenges. For example, they discovered a miscommunication between community stakeholders and individuals preparing the meals in the canteens that might not

have emerged without successful monitoring. Multiple interview participants suggested additional monitoring or improved monitoring, such as more frequent evaluations of literacy skills, closer monitoring of teacher practice, and monitoring of the functionality of handwashing devices. However, financial limitations and the size of the program are perceived barriers to implementing such changes.

5.4 Efficiency

Through analysis of interviews and focus groups, the research team assessed the efficiency of the project. Interview and discussion topics focused on efficiency in the use of project resources and the timeliness of project activities, as well as the project's responses to internal and external factors that may hinder implementation. Below is a summary of the qualitative findings on BBII efficiency.

5.4.1 Efficiency of Use of Project Resources

Overall, CRS, implementing partners, and stakeholders reported that project coordination and management was productive and efficient and that objectives were met in the intended timeframes. Partners reported receiving sufficient monitoring and support from CRS and cited their budgetary management and clear delineation of the roles of each partner as strengths of CRS' management approach. Partners reported that each component of BBII was monitored and one partner reported being so impressed with CRS' budget management that they have modified their organization's management process to reflect what they have learned from CRS.

A challenge for the project was meeting the demand for refresher trainings for teachers. The project successfully met its training objectives but added refresher trainings each year of the project except the final one. During this last year, the project did not have sufficient funds to provide this to all teachers.. Teachers expressed that refresher trainings are needed in order to support improved practice for previously trained teachers but were also concerned about new teachers arriving at BBII schools who would not be exposed to the new techniques. Collaborating with teachers also presented some budget and management challenges. For example, there was some miscommunication with teachers over receiving per diems for the teacher trainings. Teachers in some schools opposed distributing the micronutrients, and were supported by the teachers' union, and some teachers at BBII schools lacked motivation to distribute them.

Another reported limitation was the availability and quality of materials and equipment. For example, handwashing equipment and instructional materials were delayed in some cases, hindering the implementation of WASH activities. Teachers also cited similar challenges with instructional materials.. For example, multiple teachers reported not having enough materials for all their students. Mentors in the focus groups reported that, while they were appreciative of the bicycles given to them to help them travel around to perform their daily functions, their bicycles are now in poor condition and cannot be used much longer.

5.4.2 Response to Factors That Could Hinder Implementation

Regarding teacher refresher trainings, CRS agreed that the training was needed and made several efforts to provide this added support. CRS provided refresher trainings, though they had already reached their training objectives. CRS was unable to fund a refresher training in the final year of the project, but provided a refresher training to school directors, who can then provide instructional support to teachers..

CRS also worked with provinces to use BBII modules in their trainings of teachers in hopes of exposing more teachers to the techniques. In response to teacher resistance to distributing the micronutrients, the project adjusted the approach and began distributing the micronutrients directly through PTAs, which CRS and stakeholders report has been a successful modification.

5.5 Perceived Impact

Through analysis of interviews and focus groups with all stakeholders, the research team assessed the perceived impact of the project on intended outcomes. Interview topics focused on stakeholders' perception of the effect of the project on children's education and health outcomes. Stakeholders were also asked to provide recommendations to improve the success of the project. Below is a summary of the qualitative findings on the perceived impact of BBII.

5.5.1 Perceived Impact of Program

Interview and focus group participants reported mostly positive views about the impact of the program. They reported that teachers who applied their training delivered higher quality literacy instruction to students, and that these students have improved their literacy skills. The improved instruction, combined with interactive materials, the presence of canteens, and the availability of reading clubs is also perceived to help to improve student engagement. Within the community, stakeholders believe that mindsets toward education have changed. Now more parents and other stakeholders have a deeper understanding that education is a key factor for social change and that all children should go to school, including girls. Similarly, stakeholders believe that interest and demand for reading has increased among students, but that mayors, parents, and other community members are now more supportive of reading.

Implementation of BBII's literacy activities also expanded the capacity of district administrators to train and supervise teachers, which would not have been possible, given their limited financial resources, without BBII. It also engaged mayors and linked them to school directors and teachers, giving them exposure to the needs and realities of schools. This information is believed to empower mayors to take corrective actions and, in some instances, mayors have even built more schools for their communities.

In terms of hygiene and nutrition, stakeholders report noticing a positive change in handwashing practices. Using the tippy-tap for handwashing entails a playful feature that the children enjoy using. Some stakeholders also noticed that tippy-taps were present in some houses, restaurants, mosques, and market places. For some of them, the presence of these devices indicates some degree of community sensitization.

5.5.2 Respondents' Recommended Strategies to Increase Impact

In order to increase the impact of BBII literacy activities, stakeholders made several recommendations regarding literacy instruction, reading clubs, mentoring, and economic and cultural supports for education and literacy. Stakeholders recommend that teachers receive more intensive training in literacy instruction, with sufficient time to practice techniques, to support their continued development. Stakeholders also report that more frequent observations would allow additional opportunities for teachers to improve their practice and for observers to detect if their recommendations have been implemented. Additional books and equipment, such as tables and chairs, as well as infrastructure investments are also perceived

to be critical to supporting student learning. According to stakeholders, electricity at schools is needed to increase opportunities for students to study at night, and books are needed so that teachers and reading clubs can access them.

Similar to teachers, mentors reported additional training and material needs in order to continue and improve upon their work. Mentors reported that additional training in mentorship and local languages would improve communication and outreach to the community and improve their interventions with students and families. They also report that new bicycles or motorbikes would provide continued or improved transportation so that they can reach their mentees and mentees' families and schools.

Most stakeholder types reported that additional awareness-raising and sensitization of parents was essential to impacting parental attitudes toward education and BBII activities. According to stakeholders, some parents still do not support literacy or do not encourage their children to spend time at school, in libraries, or in reading clubs. They believe that more frequent and intensive sensitization would increase the level of parental awareness about literacy and BBII activities. For example, mentors thought that BBII's sensitization

"A crucial element which was important for us was the facilitation of our activities by CRS through radio sensitizations. These sensitizations allowed parents to understand the importance of sending children at schools and particularly girls. This really helped us. If it was still possible to organize sensitization through radio, it would enable us to improve our effectiveness in the ground." - Mentors

through the radio was effective in getting parents to understand the importance of sending children to school, especially girls. They believe additional similar efforts would produce more impactful results.

Other recommendations related to improving the impact of BBII on literacy were to train SILC members in savings and fund management and to further increase access to libraries. Teachers and stakeholders believe libraries are too far for students and that libraries should be built at the school-level or that traveling libraries should be created that rotate through different schools. They believe this would reduce barriers to access libraries and facilitate more visits by teachers, students, and parents. Implementing partners also suggest institutionalizing librarians within the county, which would better integrate them into local government structures.

In order to increase the impact of nutrition and hygiene interventions, stakeholders recommend regular monitoring of the operation of handwashing devices to ensure they are available to students and community members. Construction of latrines and strategies to address water scarcity are also needed since these greatly hinder handwashing behaviors. Stakeholders also suggested providing formal training in nutrition as teachers felt that they only received basic information to share and that more substantive training would improve the knowledge they transmit to students. One stakeholder also extended this, suggesting that in order to better address illness, BBII should have trained teachers in using small pharmacy boxes and managing small cases of illness.

5.6 Sustainability

To assess the sustainability of project interventions, the research team asked all stakeholders, except students, to identify major factors that are likely to influence the achievement or non-achievement of project sustainability and to describe current sustainability activities implemented by CRS and its partners. Respondents were also asked to recommend strategies to sustain activities after funding ends. Below is a summary of the findings.

Stakeholders generally believe that the BBII program has demonstrated its value and should be sustained. There is a willingness across stakeholder types to support program activities and, more critically, to support the literacy, hygiene, and nutrition of students, including girls. Teachers, school directors, and school district administrators reported intentions to continue with the new instructional techniques at BBII schools after the program ends. Mayors also plan to continue visiting schools and reported intentions to try to identify ways to support continued activities. Additionally, mentors report that they will continue to mentor girls, and PTA and SILC members believe that those groups can be sustained.

In terms of literacy and hygiene outcomes, stakeholders report that they believe the improved literacy skills and nutrition and hygiene knowledge among beneficiaries will persist beyond the life of the program. As an illustration, one mentor reported that the girls who have improved their skills have the potential to earn degrees and avoid pregnancy well into the future. Similarly, schools and parents and community members who were sensitized about hygiene practices can retain their knowledge and, potentially, demonstrate behaviors to others.

"The issue we have is the incoming of new teachers and the leaving of the current teacher. We need to think on how to deal with that if we don't want the results we reach to be challenged." Implementing Partner

In terms of sustainability activities, key areas of focus for CRS have been on school feeding, libraries, mentoring, and SILC groups. To support school feeding, the national budget includes a line item for school feeding and the GoBF is planning to increase funds for the procurement of commodities for schools feeding to provide for 4 months' worth of food during the 2018/2019 school year, including in the MGD project zone. Starting in FY2019, school feeding will be managed by the communes and CRS has worked extensively with the communities to encourage endogenous canteens.

To support the long-term viability of libraries, CRS gradually transferred librarians' salaries to the municipalities to build up ownership and accountability within local authorities. CRS also trained mayors on fundraising strategies and on the importance of supporting libraries going forward. In addition FAVL, has developed additional capacity over the life of the project and will be able to provide support to existing libraries after the end of the project.

The mentoring activity is strongly positioned for sustainability, given that they do not compensation from the project therefore only has minimal costs related to the initial training, and provision of bicycles after mentors are appointed. According to implementers, some mentors have also organized themselves to go and share their experience and best practices with communities outside of their own. Similarly, mentors participating in focus groups expressed a desire to continue their work, but conceded that mentoring is intensive and does not allow them time for other businesses or occupations. However, given the results of the impact evaluation, CRS may want to explore further into why it was not successful in improving girls' literacy and consider modifying the model in the future. Therefore, lack of remuneration is a long-term challenge.

According to implementers, the SILC groups also have potential to remain sustainable because they follow the Private Service Provider (PSP), in which agents are recruited from the community and trained to become independent providers after 8 months of practice (one fully SILC cycle). PSPs are then independent and have the capacity to organize SILC activities without direct support from CRS. After their first year, PSps are then funded by the SILC groups they manage.

Stakeholders also expressed optimism about continuing the PTAs and SILCs. Members who participated in focus groups plan to continue their work, and implementing partners believe that SILCs are well positioned to continue. For example, new SILCs do not need to be started in existing communities; instead the SILCs that have been started can be expanded. Yet a key challenge is that, with bad harvests, sometimes SILC members cannot save and end up dropping out. New strategies will need to be developed to ensure SILC membership provides benefits robust enough for households to withstand these economic challenges and stay engaged with the SILC. Similarly, PTA's currently struggle with maintaining engagement among members. Identifying methods of maintaining and increasing engagement will be critical to ensuring the PTAs remain viable.

However, in spite of the general buy-in expressed and the key accomplishments of CRS to date, participants in interviews and focus groups had inconsistent understandings of how activities would be sustained going forward. Of particular concern to school directors, school district administrators and mayors is how refresher trainings for previously trained teachers or training for new teachers will be implemented. Although stakeholders are optimistic about current teachers continuing to apply the BBII methods, many are not aware of how knowledge of these methods will be spread beyond those who were initially trained during the program. According to implementers, CRS has transferred the literacy training module to MENA and school administrators have been trained to provide on-the-job training to teachers during school visits and conduct classroom observations. Mayors have also been engaged and are now more aware of education issues in their counties and better understand their role in supporting schools. These are potentially important factors that will support ongoing training of teachers. To further this support, CRS may need to increase communication with partners and stakeholders, particularly school directors and administrators to clarify sustainability plans, which may help alleviate concerns and uncertainties raised during interviews.



Source: CRS

SECTION 6. CONCLUSION

IMPAQ designed a mixed methodology with both quantitative and qualitative instruments to conduct a performance evaluation of the BBII interventions and an impact evaluation of its mentoring component. A total of 44 BBII schools were selected to be part of the evaluation: 22 treatment schools were randomly assigned to receive the mentoring program (in addition to all other BBII components). The remaining 22 control schools did not receive the mentoring program but received all other BBII components. The control schools also formed the sampling frame for the performance evaluation. Although performance and impact evaluations were designed in parallel, they followed a slightly different timeline. The performance evaluation spans data collection in three time periods: baseline (2015), midline (2017), and endline (2018). The impact evaluation collected data only at baseline (2015) and endline (2018).

This final round of the performance evaluation measures changes in health, hygiene and dietary practices, as well as in attendance between baseline and endline. The final round of the impact evaluation measures the causal effect of the mentoring program on literacy levels, as well as on knowledge of health and hygiene practices, school attendance and nutritional knowledge by comparing endline outcomes between students in treatment and control schools.

For the endline performance and impact evaluations, we employed a variety of data collection methods including: (1) surveys of students, parents, teachers, PTA members, and school district administrators, (2) classroom observations, (3) focus group discussions, and (4) key informant interviews. For the endline performance evaluation we collected data for 600 students, grades 2 to 6, and 327 parents. In each of the 22 schools, we also surveyed teachers of grades 2 to 6, as well as any of the PTA members for a total of 108 and 134, respectively. To measure program impacts we use data collected on fifth-grade students, including 313 students that we were able to track from the baseline impact evaluation sample, and 282 that were re-sampled randomly at endline.

This section summarizes key findings from the performance and impact evaluation, as well as qualitative findings and classrooms observation, highlights study limitations, and provides recommendations for the evaluation and the overall project.

6.1 Key Findings

6.1.1 Key Performance Evaluation Findings

IMPAQ examined students', parents', PTAs', and teachers' survey data to measure progress on the desired outcomes at endline relative to baseline in these seven areas:

- Nutrition knowledge
- Hygiene knowledge and practices
- Food security
- Attendance
- Literacy
- School engagement
- Savings Cooperatives

As described in detail in [Section 3](#) of this report, the data show statistically significant improvements in several of the above-mentioned areas. The main ones are highlighted below.

Nutrition knowledge. The data indicate that students' nutrition knowledge improved at endline compared to baseline. More specifically:

- The proportion of students who had heard of vitamin A increased from 32 percent to 62 percent between baseline and endline, a statistically significant 30 percentage point change ($p < .01$).
- The proportion of students who had heard of iron increased from 9 percent to 29 percent between baseline and endline, a statistically significant 20-percentage-point change ($p < .01$).
- We also observed large and statistically significant changes in the proportion of students who can cite a benefit of vitamin A and iron.
- Overall students' nutrition knowledge, measured as the proportion of students who can achieve a passing score on a test of food nutrition and dietary practices, also increased between baseline and endline (from 1 percent to 9 percent, a statistically significant 8-percentage-points change). However, the endline level of overall nutrition knowledge remains low. The statistically significant improvements in teachers' nutrition knowledge may explain the increase in students' knowledge as teachers were in charge of transferring such knowledge to students in the project.

Knowledge of Hygiene. We defined a threshold for 'hygiene knowledge' as the ability to identify at least four situations in which people should wash their hands. While the overall proportion of students who achieved a passing score on the test of good health and hygiene practices remains relatively low at endline (20 percent), we observe a large and statistically significant (15 percentage points) increase compared to baseline. This increase is consistent with significant improvements in self-reported handwashing practices (12 percentage points) and handwashing knowledge (36 percentage points) at 'critical moments', defined as washing hands after using the latrine and before eating. The notion that almost all students (97 percent) at endline reported that their teachers had taught them about the importance of washing hands at critical moments can explain these improvements.

Food Security. 'Food security' was measured by looking at children's food intake at breakfast and lunch the day before data collection and also by constructing a measure of 'minimum acceptable diet'. The data indicate improvements in some indicators. In particular:

- The proportion of students that reported feeling full after breakfast remained high at baseline, at 96 percent. Consistently, the proportion of students reporting they were hungry during the day from baseline to endline has not changed. This result needs to be interpreted with caution due to social desirability bias of self-reported data on food security.
- Although overall the proportion of students in target schools who indicate they are hungry during the day remains low at about four percent, we also observed a statistically significant decrease (from 74 percent to 30 percent) in the proportion of students who went home to eat lunch (and an increase in the proportion of students who ate at the canteen).
- Regarding the minimum acceptable diet, the data indicate that the proportion of children who received a minimum acceptable diet increased from baseline (60 percent) to endline (83 percent), a statistically significant 23-percentage-point change, based on students' data. This is consistent with the increase in the percentage of students receiving a minimum acceptable diet as reported by parents.

Attendance. The data show that both students' and teachers' attendance at endline remain high, as at baseline:

- Student attendance was measured based on school records and using data from three representative months: November, January, and April. The endline statistics show that all students attend school at least 80% of the time, similar to the baseline figures. However, our

experience in the field suggests that these attendance data, as recorded by teachers, are likely to be overestimated. Thus, results need to be interpreted with this caveat in mind.

- In terms of teachers' attendance, we defined a teacher who teaches 'regularly' as one who teaches at least 90 percent of normal school days during the year. The data indicate that there are no statistically significant changes in teachers' attendance between baseline and endline.

Literacy. We examined teachers' and students' datasets for literacy indicators. More specifically:

- There were no statistically significant changes in the proportion of teachers using new techniques and devoting at least 45 minutes a day to literacy instructions at endline compared to baseline. These outcomes were consistent with findings from interviews. School directors and district administrators reported that not all teachers used the new techniques regularly. The classroom observations also found that, among the lessons observed, teachers did not address (or very rarely addressed) six of the nine core elements of decoding instruction.
- There was an increase in students' attentiveness reported by teachers (11 percentage points), but it was not statistically significant. Teachers identified a slight increase (3 percentage points) in the proportion of students who were attentive during class from baseline to endline. This change was not statistically significant at conventional levels. However, given the difficulty and subjectivity of measuring attentiveness, this outcome should be interpreted with caution.
- Although there were no changes in the proportion of teachers using new techniques, the student data indicate that the proportion of second-grade students with reading proficiency (measured through ASER assessment) at grade level increased by 17 percentage points (from 15 percent at baseline to 33 percent at endline), and the difference is statistically significant at the 1 percent level. The effect is larger for boys (from 12 percent to 33 percent) than for girls (from 17 percent to 33 percent). This counterintuitive result could be explained by different socioeconomic backgrounds of students (e.g., more educated parents) in the baseline sample compared to the endline sample.

School engagement. We also analyzed other outcomes to capture parents' engagement in schools and savings and internal lending community (SILC) groups. Several key findings are summarized below.

- The data indicate that the proportion of parents who were members of the PTA increased significantly by 11 percentage points. Part of these changes need to be interpreted by keeping in mind that the endline sample contains more highly educated households as compared to the baseline.
- Compared to baseline, the proportion of parents who were SILC members increased significantly from 9 percent at baseline to 40 at endline ($p < 0.01$). Among parents who were SILC members, there was a 35-percentage-point increase in the proportion of parents who reported that they used their savings to cover school expenses, significant at the 1 percent level. The data suggest that parents have become more aware of the importance of education, especially for girls, and more involved in school activities. In particular, at endline, all parents (100 percent) showed positive attitudes toward girls' education; this represents a 21-percentage-point increase from baseline, which is also a statistically significant finding ($p < 0.01$). The endline sample contains more highly educated households as compared to the baseline, which may explain these positive differences on attitudes toward girls' schooling and the importance of education in positively affecting later outcomes in a girl's life.

6.1.2 Key Impact Evaluation Findings

The impact evaluation was designed to estimate the effect of the mentorship program on girls' reading proficiency and also to assess potential spillover effects on boys. The data indicate that there is no effect on reading proficiency for girls, while there was a positive and statistically significant effect on boys, i.e., boys in the treatment group are 21 percentage points more likely to read at grade level than boys in the control group.

When interpreting the results of the impact analysis, it is important to keep in mind that mentors' activities are focused on increasing girls' school attendance, support them when they drop-out from school and making sure girls have the necessary support to study, which is in line with the results of the qualitative findings. One focus group with mentors reported that their activities also influence boys, who often receive advice from the mentors and put their recommendations into practice. This indicates that the effect on school performance would be mostly indirect, through attendance. However, the lack of quality attendance data (as described in chapter 4), makes it difficult to assess the impact on attendance. In particular, all students in the impact evaluation sample are reported to have 100 percent attendance, and there is not enough variation in the sample to meaningfully estimate program impacts and assess whether boys and girls have been affected differently.

The lack of statistically significant effects on girls' reading proficiency and positive effects on that of the boys could potentially be an indication of particularly strong spillover effects on boys and a reduced effect on girls, for various other reasons that cannot be identified with the current data. For example, in our experience evaluating education programs in West Africa, we often observed that teachers do not usually treat boys and girls equally when applying their teaching techniques in their classrooms (e.g., they engage girls less in classroom activities). While this would potentially happen in both treatment and control schools, this would still make it more difficult to detect the incremental impact of the mentorship relative to the other program components.

While the confirmatory outcome of interest for the impact evaluation is literacy, the mentor's home visits might also lead parents to be more cognizant of their children's diets (thus affecting children's food security), as well as more cognizant of their children's hygiene practices and the importance of consistent school attendance. The impact evaluation results indicate that there are generally not statistically significant effects for either girls or boys on any of those outcomes. However, the data show that girls in the treatment group are less likely to report the mentor as a reason for their success in school. This counterintuitive result seems to align with the lack of statistically significant changes on girls' reading proficiency.

6.1.3 Key Findings from the Qualitative Assessment

We also explored findings from the qualitative assessment in the following domains: (1) relevance, (2) effectiveness, (3) efficiency, (4) perceived impact, and (5) sustainability.

Relevance. Overall, interview and focus group participants reported satisfaction with the project, saying they believed the project interventions are meeting the needs of beneficiaries and are aligned with Burkina Faso's and the U.S. government's development objectives. Respondents also believed that the project adequately considers economic, cultural, and political contexts. According to implementers and stakeholders, the primary strengths of the project design include the focus on training teachers in

evidence-based literacy techniques, the reinforcement and coaching provided by school administrators through the teacher observations, and the inclusion of canteens and distribution of micro-nutrients as key strategies. The primary weaknesses, according to stakeholders, are that teachers do not receive enough learning materials to support all the students in their classrooms, that the reading clubs have encountered challenges recruiting facilitators, that too few libraries have been built to ensure access for all communities, and that participation and engagement in PTAs is lower than the PTAs desire.

Effectiveness. Overall, implementers and stakeholders reported that students' literacy and nutrition and hygiene has improved and that BBII interventions have contributed to these results. Stakeholders report that they have observed improvements in students' literacy skills, motivation to learn, and hand washing behaviors. The new approach to literacy instruction, increased engagement of school directors and administrators in supervising teachers, increased support for school feeding activities, , availability of mentors, and provision of micronutrients to students through PTAs in schools with teachers who refuse to distribute them are believed to contribute to the success of the program. Challenges and barriers to success include inconsistent adoption of the new techniques among teachers, reluctance among teachers to distribute micro-nutrients, delays in delivering instructional materials and resources, lack of effective training and recruitment of reading club facilitators, and lack of formal training of enough teachers to deliver information to students about handwashing and nutrition. Though challenges exist, respondents said that CRS has effectively managed partners and that the program has coordinated and collaborated effectively with other stakeholders.

Efficiency. Respondents reported that the project resources have been sufficient to implement scheduled activities and, for the most part, objectives have been achieved on time. Some activities, including the provision of pedagogical materials for teachers and learning materials for students, have been delayed. Further, respondents noted that the project encountered challenges in engaging teachers in distributing micro-nutrients. Despite challenges, respondents reported that CRS has adequately responded to internal and external factors that have hindered the efficient implementation of project activities. For example, the project modified its approach and began distributing micronutrients to students through PTAs in schools where teachers refused to distribute them.

Perceived Impact. Stakeholders believe that teachers who implemented the practices taught in the literacy training delivered higher quality literacy instruction to students and the improved instruction, combined with interactive learning materials and the presence of canteens, helps to improve student motivation and engagement in school. Stakeholders also believe that the mindset of parents and community actors towards education has improved, especially towards girls. Regarding hygiene, stakeholders believe that handwashing behavior has improved among students and observe installation of handwashing devices in homes, markets, mosques, and restaurants, suggested that handwashing has increased among parents and families as well. To increase the impact of BBII literacy interventions, interview and focus group participants recommend more intensive training and monitoring of teachers, provision of additional learning materials, additional training of mentors, increased sensitization of parents, training of SILC members in fund management, and building more libraries closer to schools or increasing access to existing libraries or books. To increase the impact of hygiene and nutrition activities, stakeholders recommend closer monitoring of the installation and operation of handwashing devices, formal training of teachers in teaching nutrition and hygiene, building of latrines, and development of strategies to support handwashing in schools with water scarcity issues.

Sustainability. Implementers and stakeholders expect those who have been directly impacted by the program, including teachers, students, mentors, and parents to continue to benefit from the program. They also report that the program has demonstrated its value to the community and government and there is support for continuing activities. Some transition of activities from CRS to MENA has occurred, and CRS has led sustainability plans related to school feeding, SILC groups, mentors, and libraries. However there is an inconsistent understanding among partners and stakeholders about which specific activities will be sustained and who will lead those efforts. Of particular concern to teachers, school directors, district administrators and mayors over the continued training of teachers. Although CRS has increased the capacity of school administrators and mayors to oversee training of new teachers, further communication over sustainability plans with stakeholders may be needed.

6.1.4 Key Findings from Classroom Observation

Consistent with midline observations, teachers mostly focused on reading skills, especially decoding. According to the classroom observations, a critical improvement since the midline study is that there is additional use of learning materials such as cubes, bananagrams, and word strips that are used during decoding lessons. However, observations also found that during decoding and encoding lessons, teachers and students frequently use the incorrect sounds for letters that can make combinations of syllables and word formation activities confusing. The observations also detected other examples of teachers not using the new instructional methods. Teachers often read sentences and words aloud first, then students repeat what the teacher said, making it difficult to determine if students were reading on their own or merely repeating words. Similarly, during the vast majority of lessons observed, teachers asked students to copy letters, words, or sentences, but not to write on their own. Teachers also did not use some techniques during the observed sessions including: word grouping, punctuation, liaisons, and pronunciations.

6.2 Limitations

There are some limitations of the study that are worth noting:

- An important limitation of the study is that both performance and impact evaluations relied on self-reported data for a number of socially and culturally sensitive subjects, such as food consumption, hygiene practices, and student attendance. This self-reported data should be interpreted with caution and is particularly susceptible to social desirability bias. To help counter biases related to hygiene practices, we integrated observational data of children's handwashing practices (at critical moments) at the school. However, this method has its limitations since the observation cannot be tied to each surveyed student. In addition, observing students' handwashing practices before eating at the canteen could be a challenge when almost all the students at the school eat at the canteen.
- As described in [Section 2](#), at each data collection point for the performance evaluation (baseline and endline), we selected new samples of individuals to survey for most grades. A limitation of this approach is that there might be systematic differences in the two sets of samples that could confound the observed changes in the outcomes of interest over time. Inspection of the data indicate that the baseline and endline samples were similar along many demographic covariates, except for parents' educational attainment, number of children under 16, households' accessibility to electricity and latrines, teachers' class size, and literacy training received by

teachers (the latter was expected because teachers received the training after baseline data collection).

- For the impact analysis, one limitation of the analysis is the large students' attrition rate between baseline and follow-up. As described in detail [Section 2](#), about 60 percent of students who were in second grade at baseline were lost from baseline to endline, and these students have been replaced with a new random sample of fifth graders at endline. While the main estimation results are overall robust to the inclusion of these replacements, a more robust estimation approach would require having a system in place to track students over time in order to minimize attrition rates and reduce potential biases from attrition and/or students joining schools after randomization. However, an extensive tracking system was not feasible in the context of this evaluation.
- Qualitative findings should be treated with caution. Though schools were selected randomly for data collection, individual interview respondents and focus groups were sampled purposively and not randomly. The number of participants was also small relative to the target population. Thus interview and focus group participants' perspectives may not be generalizable. In addition, focus groups and key informant interviews provide self-report information and interpretations which are subject to bias associated with their interests, motivations or particular experiences. Additionally, the qualitative assessment provides in-depth information about the experience of a sub-set of actors that can help illustrate and contextualize topics of interest in the study. It is not intended or designed to describe trends in the overall target population.

6.3 Recommendations

We present the following recommendations to CRS based on both lessons learned from our experience in the field and our findings after analyzing the collected data. The recommendations are not intended to address all challenges identified through the study; instead they focus on the main drivers of project success, as well as any required changes for future projects and/or evaluations. The recommendations are grouped by category.

6.3.1 Literacy Activities

Consider options for further institutionalizing literacy training for new teachers and refresher trainings for previously trained teachers at the school or district levels. According to stakeholders, BBII met objectives for delivering training to teachers and enhanced the capacity of school directors and administrators to reinforce instructional techniques through increased observation and supervision. However, stakeholders reported in interviews uncertainty as to whether training of new teachers would be available and of the same quality as under BBII. Since teacher mobility is common among BBII schools, stakeholders were concerned that once trained teachers left, schools and districts would have limited capacity to train new teachers to the same extent as was done under BBII. Teachers and stakeholders also suggested resources be identified to provide additional refresher trainings to teachers to reinforce what they learned from BBII. Implementers similarly acknowledged that supporting activities in a large number of schools made it challenging to support continued training of each teacher. For BBII or other initiatives, CRS may want to consider placing greater emphasis on increasing school or district capacity, as appropriate, to deliver trainings to teachers. Refining the train-the-trainer design, or similar options may be fruitful.

Revise the structure and content of teacher training to more effectively address teacher motivation..

Several interview participants reported that the training did not provide teachers with sufficient time to practice and gain confidence in the new techniques and that teachers sometimes struggle to apply the technique fully before a class session ends. According to teachers, this was compounded by the lack of sufficient learning materials provided to them to support the application of these new practices, which was confirmed through classroom observation on availability and usage of learning materials. Teacher survey data also suggests that teacher uptake of the new practices is inconsistent across teachers and remained unchanged over the life of the project. To address these challenges, after the mid-line evaluation, CRS conducted a study on barriers to using the new techniques and found that teacher motivation to attend the training as well as implement the techniques was an important factor. Recommendations for improvement included improving follow-up conditions and meetings, improving the organizational quality of the training sessions, having more systematic training for new teachers, and increasing the number of days of the training sessions. It appears that at endline, teachers are still not fully adopting the BBII instructional methods. CRS may want to consider implementing these recommendations in future projects, or if they were implemented, but not effective, consulting again with teachers about why these changes did not lead to improvement..

Conduct more periodic assessment of student literacy and observations of teacher practice. CRS and partners cited the value of monitoring but also reported that close monitoring of BBII schools faces constraints due to resources and logistics. CRS regularly collects administrative reports on classroom observations, analyzes the data quarterly, and provides feedback and recommendations to school administrators. However, according to interviews, more periodic and rapid feedback on literacy skills could help improve monitoring and better identify whether implementation of project activities are correlated with improvements in literacy outcomes. Such information may provide CRS, partners and stakeholders with rapid-cycle information that can inform further actions and modifications to program activities. In terms of teacher observations, the teachers, school directors, and district officials interviewed believed the observation process was valuable, and some interview participants expressed interest in more frequent observations and follow-up. Additional observations may help reinforce the application of skills learned during the training and may allow discussion of factors that motivate or de-motivate teachers' use of the new instructional techniques. Though CRS has provided training on these observations and can support increased observations, in order to be sustainable, the government and school administrators would also need to commit to this increased activity. CRS may want to consider engaging government partners and school administrators in conversations about how to address barriers related to taking on these additional responsibilities.

Promote or invest in school infrastructure and school libraries. Interview respondents suggested that electrifying schools would increase the impact of literacy activities by providing students with more time in the day to be able to study or participate in reading activities. Respondents believe that since BBII began, more students have received solar lamps for their homes to encourage studying at night. Stakeholders believe that these were helpful to supporting improved literacy, so CRS may also want to consider directly providing these items or helping develop strategies for families and communities to obtain them. Libraries were also appreciated, but survey data show that a very low proportion of students visited libraries with their parents, which may be explained by the libraries' physical distance from the schools visited. This physical distance was cited as a key reason teachers, students, and parents did not

access libraries. Interview participants suggest creating libraries at schools or nearby or potentially creating mobile libraries that can rotate from school to school. To improve library access, CRS could consider including school libraries in future interventions or working with libraries to provide access to their books to schools that are further away.

Re-visit the design of reading clubs to include identification of appropriate facilitators and increased engagement by parents and students. During interviews and focus groups, students, parents and teachers reported that reading clubs are helpful in supporting student literacy. However, implementation challenges—such as an inability to identify facilitators, lack of available training for facilitators, and hesitancy on the part of parents to let their children participate outside of school hours—were common. Also, reading clubs attracted those students who were interested in becoming better readers and were willing to spend time engaged in reading instead of playing. These factors suggest that the design of the reading clubs may not have been well aligned with realities on the ground. CRS could consider re-visiting the design of the intervention and examine options for developing the capacity of facilitators, further sensitizing parents to the value of reading clubs, and developing strategies to recruit less motivated students as well. For example, our experience with children and youth interventions has shown us that integrating games or sports into activities can help increase participation and engagement.

Identify ways to increase parent and community sensitization on the importance of literacy and of supporting schools. Parent survey data suggest that parents have become more aware of the importance of education, especially for girls, and more involved in school activities. Interview and focus group participants also reported that parental and community support for education had improved and that sensitization efforts during BBII have been helpful in improving attitudes. However, many also report that this improvement is not universal and that parents and communities have a continued need for sensitization. For example, respondents reported that some parents do not allow their children to attend reading clubs on weekends and that some parents do not support the PTA because they say they do not have the time or they feel burdened by the work required to participate in such activities. CRS could consider re-delivering sensitization activities to target communities or modifying sensitization efforts to reach more reluctant parents. For example, an approach to consider could be a door-to-door campaign with the collaboration of communities to increase parents' awareness.

Encourage school administrators to keep consistent records of teacher attendance to help them monitor teacher performance. Although the quantitative data showed high teacher attendance, the quality of the attendance data is uncertain given the sensitive nature of teacher absenteeism at schools. Some school district administrators or school administrators do not keep a record of absentees, and respondents reported varying levels of absenteeism. More accurate tracking of attendance would help district and school administrators monitor teacher performance in the future, once BBII is over. CRS may also want to consider developing administrator capacity to track and monitor attendance in future projects.

Further investigate why mentoring had no effect on girls' literacy but only on that of boys. The lack of statistically significant effects of mentorship on girls' reading proficiency, despite positive effects on boys, could potentially be an indication of particularly strong spillover effects on boys, whereas the effect on girls was potentially diluted. A more in-depth qualitative analysis post-project with mentors, as well as

focus groups with students and parents could help to understand the reasons why we observe no effects on girls' literacy, yet see a positive effect on boys' literacy.

6.3.2 Health and Hygiene Activities

Consider investing in equipment and infrastructure to support adoption of WASH practices. Interview participants report that latrines and operational handwashing devices are critical to supporting the translation of hygiene knowledge into practice. Respondents expressed concern that lack of these items can inhibit adoption of appropriate handwashing behaviors and hygiene management. Water scarcity is also a challenge in some BBII schools, which also makes it challenging to encourage handwashing and hygiene. Some interview respondents reported concerns that the WASH component did not adequately consider water-scarcity issues and, therefore, CRS may want to consider exploring or developing strategies to implement WASH at schools with water challenges. In future initiatives, CRS may also want to consider addressing water scarcity as a component of its intervention.

Work with schools to ensure that schools' handwashing stations are in working order. Some respondents noted that handwashing stations are sometimes out of order and that no effort is made by the school or the PTA to repair/replace them. Respondents also suggest that additional monitoring of handwashing devices would be beneficial. CRS could collaborate with local actors to create a specific monitoring plan and identify the institutions responsible for funding and maintaining repairs.

Monitor the effectiveness of distributing micronutrients to PTAs and continue to identify ways to engage parents in health and dietary activities. Earlier in the project, implementers encountered challenges with teachers exhibiting reluctance to distribute the micronutrients and modified the approach to distribute them to parents instead. Thus far, implementers and stakeholders are optimistic that the revised approach is working. Some interview respondents suggested that working with parents is easier and more effective than trying to motivate teachers. CRS may want to consider assessing whether the new approach is more effective than using teachers and consider focusing on parents for future projects.

6.3.3 SILC Group Activities

Provide additional training to SILC groups on management and re-visit strategies to facilitate continued savings during periods of economic or environmental shocks. SILC members and implementers who support SILC activities reported that the savings cooperatives are beneficial but that they sometimes struggle with management of group activities and maintaining membership and engagement. SILC members specifically reported requiring further support in running the groups effectively, particularly in managing savings and group funds. Additionally, based on the survey data, a higher proportion of parent SILC members reported that they are using their savings for school fees. However, fewer respondents reported that the savings helped "a lot" with school expenses, while the proportion of those who said that the savings helped "some" increased. This is consistent with another challenge mentioned by SILC members and implementers, namely the reduction in available income to save and contribute to the SILC during times of economic vulnerability, such as during the dry season or after a bad harvest. Parents report that during these times, affording school fees and food security is a major issue, which means that having income to contribute to a fund is not feasible. Implementers also acknowledge that drop-outs from the SILC groups occur during times of economic stress. CRS may want to consider enhancing their support of

SILC groups with additional trainings, while exploring strategies, such as providing partial matching funds for savings or other financial incentives to encourage savings during times of acute economic hardship.

6.3.4 Recommendation for Sustainability

Communicate more widely with stakeholders about sustainability plans and the actors responsible for specific activities. Although CRS has engaged in sustainability planning related to school feeding, SILC groups, mentoring, libraries, and teacher training there remains inconsistent understanding among stakeholder groups over which components of BBII will be sustained and by whom. In addition, some stakeholders do not appear to understand which responsibilities are incumbent upon them to continue or feel unprepared to deliver activities of the same quality as under BBII. Though CRS may have a clear conception of how sustainability will occur, this can be a complex undertaking and more communication and sensitization.

Refine the SILC groups and library activities and re-visit the design of the mentoring component when planning next steps. CRS has prioritized four key components for sustainability: school feeding, SILC groups, libraries, and mentoring. According to implementers, each of these activities has a clear sustainability plan and appropriate supports have been identified to promote their continuation. However, CRS may want to consider working with appropriate actors to refine these activities for future implementation to address some of the challenges identified by stakeholders to improve their impact. For example, training PSPs in new methods for maintaining member engagement during challenging economic times, such as dry seasons or poor harvests, or identifying funds for seed capital may help sustain activities. Also, exploring approaches to facilitating access to libraries for those schools that are far distances or eliciting support to build additional libraries or mobile libraries could be helpful. In addition, CRS may want to conduct further case studies into the mentoring component before solidifying plans to continue or expand the activity.

Continue to engage government stakeholders and local actors to maintain buy-in for school feeding programs and monitor progress at national and local levels. The school feeding component was identified among stakeholders as an impactful intervention and is perceived to be critical in encouraging school attendance and promoting attentiveness in class. Stakeholders believe it is a successful strategy that supports both food security and educational goals and should continue. CRS has been successful at building buy-in and capacity among key actors and given the strategy's importance should continue to promote its sustainability even after the life of the project. CRS may want to consider continuing to track the activities and progress of national government and local communities, particularly as responsibilities shift to local communes in FY2019, and identify future opportunities to expand or support the government's efforts.

6.3.4 Recommendation for Future Evaluations

Consider new assessment for subjective indicators such as attentiveness for a more accurate analysis. One limitation of the analysis is that some indicators, like student attentiveness, are difficult to measure objectively when using teachers' self-reported data. Measuring students' attentiveness of students at individual level is also costly in terms of time and resources. However, future projects could consider allocating more funds to measure this indicator at classroom level, through observations. Although attentiveness measures at the classroom level cannot be linked to each surveyed student, classroom observations are more cost effective and can help measure students' attentiveness with more precision.

Improve monitoring and evaluation of indicators that are tied to social desirability biases. Some of the key indicators for BBII program, including hunger and attendance have been collected without any challenges. However, the analysis of these outcome indicators need to be interpreted with caution due to their social desirability biases. Principals are less likely to share their teacher absenteeism as it could reflect negatively on their performance. Teachers may do the same for reporting on their students' attendance, especially when they did not keep a consistent attendance log. Moreover, respondents are less likely to share their food insecurity with strangers. Future projects should consider a mechanism to complement the survey results on such outcome indicators with monitoring and evaluation data. For example, allocating more funds to conduct household observations on dietary practices for a sub-sample of respondents, or providing an incentive mechanism for teachers or principals to keep updated attendance logs to allow more frequent and consistent measures of attendance and thus improve the reliability of the data collected.



Source: CRS

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APPENDICES

- A. Conceptual Framework**
- B. Additional Tables and Complementary Outcomes**
- C. ASER-Reading Test Instructions**
- D. Questionnaires**
- E. BBII Evaluation Schools**
- F. Alternative Regressions**

APPENDIX A. CONCEPTUAL FRAMEWORK

Strategic Objectives and Results	Key Questions	Data Collection Method	Data Source
SO1. Improved Literacy of School-Age Children	- What percentage of students (boys and girls) have increased their reading comprehension compared to baseline? What factors contributed to this? What factors inhibited this? - What percent of girl students in mentoring schools can read and understand grade level text compared to non-mentoring school? - What percent of boy students in mentoring schools can read and understand grade level text compared to non-mentoring school?	Evaluation	Student literacy assessment (ASER-reading test) & Teacher interviews.
IR1.1. Improved Quality of Literacy Instruction	- Have teachers' literacy instruction trainings been completed as per the project timeline and budget? - To what extent are teachers implementing literacy teaching techniques acquired through the project? - Are changes in classrooms starting to be evident (e.g., they see improved reading abilities of students)? If not, why not? What needs to change? - How much time per day do teachers devote to literacy instruction? - What challenges do teachers face in using the new literacy teaching techniques? - What aspects do they find most useful and why? - In what way has the quality of education improved as a result of the adoption of technical trainings for teachers? - Have community library targets been met? How many exist? Where they are in place, to what degree do community members (including students and teacher) have access? - Are there any differences in teacher attendance between mentoring and non-mentoring schools?	CRS/ Monitoring & Evaluation	CRS program data (training reports), Teacher surveys & Teacher key informant interviews. Classroom observations. Observations of libraries (as feasible) & FAVL staff interviews.

Strategic Objectives and Results	Key Questions	Data Collection Method	Data Source
Output. 1.1.1. More Consistent Teacher Attendance	To what extent has teachers' attendance improved in schools compared to the baseline? If so, why? What are the greatest inhibiting factors to teachers' attendance? What project interventions influenced the improvement of teacher attendance? Are there any differences in teacher attendance between mentoring and non-mentoring schools?	Evaluation	Key informant interviews with school administrators & Teacher interviews.
Output. 1.1.2. Better Access to School Supplies & Materials	• To what extent have school supplies and materials been distributed as per the project timeline and budget? • What materials have been supplied? • Which school supplies do teachers find most useful and why? Which supplies and materials provided do students like and why? • What other supplies would teachers and students prefer? • Are material kits being used as intended? • Do teachers/students need additional training to better use these materials? • What has been the contribution to the education process of these materials?	CRS/ Monitoring & Evaluation	Distribution reports (CRS program data). Classroom observations. Teacher surveys, Teacher key informant interviews, & Student interviews.
Output. 1.1.3. Improved Literacy Instructional Materials	• To what extent have literacy instructional materials been distributed as per the project timeline and budget? Do the teachers consider these materials to be an improvement over what they previously had? How? How are teachers using the materials provided? What, if any, other materials would they prefer? What do students like and dislike about using the literacy materials that have been provided? • To what extent have reading groups been established? What are the characteristics of a successful reading group? Are the reading groups segregated by gender, grade level, etc.? Who provides oversight of the reading group most often (teachers or older students)? Why do / do not students join reading groups? Have students or teachers noticed any change since students have joined reading groups? (Personal confidence, better grades, more social cohesion among students, etc.)	CRS/Monitoring & Evaluation	Distribution reports (CRS program data). Classroom observations. Teacher key informant interviews & Student interviews.

Strategic Objectives and Results	Key Questions	Data Collection Method	Data Source
Output. 1.1.4. Increased Skills and Knowledge of Teachers	To what extent have teachers been trained as per the project timeline and budget? What percent of teachers demonstrate use of new teaching techniques and knowledge? In what ways has the quality of teaching improved based on the tools and techniques used by teachers? What aspects of the trainings were not widely adopted and why? How can the trainings have greater impact? What additional training topics would help the teachers be even more effective in literacy instruction?	CRS/Monitoring & Evaluation	Training reports (CRS program data). Teacher survey & Key informant interviews. Classroom observations.
Output. 1.1.5. Increased Skills and Knowledge of School Administrators	To what extent have school administrators been trained as per the project timeline and budget? What percent of school administrators demonstrate use of new techniques or tools? To what extent do school administrators find the classroom-observation technique useful? How is the technique received by teachers? Have the observations led to constructive feedback? If so, has the feedback been received by teachers and affected their teaching techniques? In what way has the quality of education improved based on techniques used by the administrators?	CRS/Monitoring & Evaluation	CRS program data (training reports). School District Administrators interviews & Teacher interviews.
IR1.2. Improved Attentiveness Output 1.2.1. Reduced Short-Term Hunger	To what extent have school meals been distributed as per the project's budget and timeline? What percent of students in target schools indicate that they are hungry during the school days? How do students appreciate the ration size? What percent of students eat the entire school lunch at school and what percent bring a portion home for family members?	Evaluation	Distribution reports, student surveys & student interviews
Output 1.2.1.1/1.3.1.1 Increased Access to Food (School Feeding)	To what extent have Take Home Rations (THR) been distributed as per the project's timeline and budget? How do students like the commodities provided for school meals? What percent of school-level warehouses demonstrate appropriate storage of commodities?	CRS/Monitoring & Evaluation	Distribution reports (CRS program data). Student interviews & warehouse

Strategic Objectives and Results	Key Questions	Data Collection Method	Data Source
			observations (as feasible).
IR1.3. Improved Student Attendance	- What is the current student attendance rate? Has the percent of students (girls and boys) that regularly (80%) attend schools changed compared to the baseline? If so, what are the greatest pull factors for students? - What is the girl students' attendance rate in the mentoring program? To what extent has the girl students' attendance in mentoring schools differed compared to the non-mentoring schools? To what extent have mentoring activities influenced student attendance, including boy students?	Evaluation	Student attendance logs & Student interviews.
Output. 1.3.1 Increased Economic & Cultural Incentives (Or Decreased Disincentives)	To what extent has the girls mentoring activity been implemented as per the project's timeline and budget? Have the mentors been recruited and trained as per the project's timeline and budget? Have the mentors conducted regular mentoring activities as planned? Have the SILC activities been implemented as per the project's timeline and budget?	CRS/Monitoring & Evaluation	CRS program data (training reports, activity reports). OCADES key informant interviews.
Output 1.3.4. Increased Student Enrollment	To what extent has the enrollment of school-aged students (girls and boys) changed compared to the baseline? If so, how? Which factors have facilitated or have been obstacles towards enrollment?	Evaluation	Student registers & Teacher/school key informant interview.
Output. 1.3.5. Increased Community Understanding of Benefits of Education	To what degree have the awareness-raising activities on the importance of education been completed as planned? Has the parents' knowledge of the importance of education changed compared to baseline? Has the parents' level of contribution to the school canteen changed?	CRS/Monitoring & Evaluation	CRS program data Parent survey.

Strategic Objectives and Results	Key Questions	Data Collection Method	Data Source
SO2. Increased Use of Health and Dietary Practices	To what extent have the use of standard health practices and dietary diversity among students increased from baseline?	Evaluation	Student survey & Parent survey.
<i>IR2.1 Improved Knowledge of Health and Hygiene Practices</i>	What percent of students have increased their knowledge of health and hygiene practices compared to baseline? To what extent have students improved their hygiene-related practices (what percent of school children wash their hands at critical moments)? To what extent has the project supplied handwashing stations to schools as planned?	CRS/Monitoring & Evaluation	CRS program data (distribution reports) Student surveys and observations (as feasible).
<i>IR 2.2 Increased Knowledge of Safe Food Prep and Storage Practices</i>	To what extent has the project completed trainings for food preparers as planned?	CRS/Monitoring & Evaluation	Training reports.
<i>IR 2.3 Increased Knowledge of Nutrition</i>	What percent of students have increased their knowledge of nutrition and dietary practices compared to baseline? What percent of children receiving a minimum acceptable diet has changed, if any, compared to baseline? To what extent have PTA, COGES members, and food preparers been trained in good nutrition and dietary practices as planned?	Evaluation	Student survey & Parent survey. PTA/COGES/Food preparers training reports (including post-test results).
<i>IR2.5 Increased Access to Preventative Health Interventions</i>	To what extent has the project distributed micronutrients to students as planned? To what degree has students' knowledge of vitamin A, iron, and deworming medication changed since baseline?	Evaluation	Sample of student distribution records (school level), student surveys, CRS program

Strategic Objectives and Results	Key Questions	Data Collection Method	Data Source
			data/distribution reports.
<i>IR2.6 Increased Access to Requisite Food Prep and Storage Tools and Equipment</i>	To what extent has the project distributed food preparation and storage supplies as planned to preschools?	Evaluation	Distribution reports.
<i>FR 1: Output 1.4.1. & 2.7.1 Increased Capacity of Government institutions</i>	To what extent have local government officials been trained as planned?	Evaluation	Training reports.
<i>FR 2: Output 1.4.2. & 2.7.2 Improved Policy or Regulatory Framework</i>	To what extent have committees been formed and started drafting policy improvements in education-related policies?	Evaluation	Committee member interview.
<i>FR 4: Output 1.4.4 & 2.7.4 Increased Engagement of Local Organizations and Community Groups</i>	To what extent are PTAs holding regular meetings? To what degree is this frequency different from baseline?	Evaluation	PTA survey.

Source: Terms of Reference (TOR)

Exhibit 51. Assessing Key Variables and their Targets

Indicator	Baseline		Midline		Endline		Target (Life of the project)	Target Met? (Y/N)
	Percent	Total Estimated Numbers	Percent	Total Estimated Numbers	Percent	Total Estimated Numbers		
1. Percentage of students (boys and girls) who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade-level text.	Boys: 13%	12,707	16%	16,943	33%	36,999	30%	Y
	Girls: 18%	16,313	32%	30,707	33%	33,033	30%	Y
2. Percentage of teachers who devote at least an average of 45 minutes a day to literacy instruction.	55%	1,795	66%	2,635	51%	2,376	2,612	Y
3. Percentage of teachers who attend and teach school at least 90% of scheduled school days per year.	85%	2,775	88%	3514	89%	4,146	2,515	Y
4. Percentage of school administrators and officials who demonstrate use of at least one new technique, skill, or tool as a result of USDA assistance. ^b	61%	49	97%	79	100%	81	79	Y

5. Number of preschool teachers (bissongo caregivers) in target preschools who demonstrate use of at least one new teaching technique, skill, or tool.	N/A	N/A	N/A	N/A	N/A	N/A	72	N/A
6. Percentage of teachers/educators/teaching assistants in target schools who demonstrate use of new and quality teaching techniques or tools as a result of USDA assistance. ³³	52%	1,677	44%	1,757	49%	2282	2005	Y
7. Percentage of students in target schools who are identified as attentive ³⁴ during class/instruction.	43%	74,400	47%	94,870	45%	74,483	161,836	N
8. Percentage of students in target schools who indicate that they are hungry or very hungry during the school days.	4%	8,075	7%	14,130	4%	8,485	3,913	N
9. Percentage of students regularly (80%) attending USDA-	Boys: 100%	105,894	98%	103,776	100%	112,118	135,807	N

³³ Teachers who declared using at least 5 of the 7 activities.

³⁴ We asked teachers on a scale of 1 to 10, where 1 is 'not attentive at all', to rate their students' attentiveness. Passing attentiveness score was defined as a score of 7 or more on a scale of 1 to 10.

supported classrooms/schools (boys and girls).	Girls: 100%	95,958	99%	94,998	99%	99,098	120,433	N
10. Percentage of group members that spend money from SILC on education costs.	48%	14,758	63%	19,369	83%	25,518	30,672	N
11. Percentage of girl students who cite mentors as one of the top 3 reasons for their success or improvement in school. ^c	N/A	N/A	N/A	N/A	2%	4,242	10,583	N
12. Percentage of school-aged children receiving a minimum acceptable diet (boys and girls).	Boys: 56%	59,301	69%	73,067	79%	88,573	60%	Y
	Girls: 63%	60,454	74%	71,009	86%	86,085	67%	Y
13. Percentage of school children that wash their hands at critical moments: before eating and after using the latrine.	78%	157,445	82%	165,519	91%	193,026	89%	Y
14. Percentage of students in target schools who achieve a passing score on a test of good health and hygiene practices by naming at least 4 situations in which they should wash their hands.	5%	10,093	4%	8,075	20%	42,423	35,013	Y

15. Percentage of students in target schools who achieve a passing score on a test on food nutrition and dietary practices by naming at least one food with iron and one with vitamin A and by naming one benefit of each.	1%	2,019	3%	6,056	9%	19,091	24,715	N
16. Number of months of community and/or government support for school canteens.	5 months	N/A	3 months	N/A	4 months	N/A	4	Y

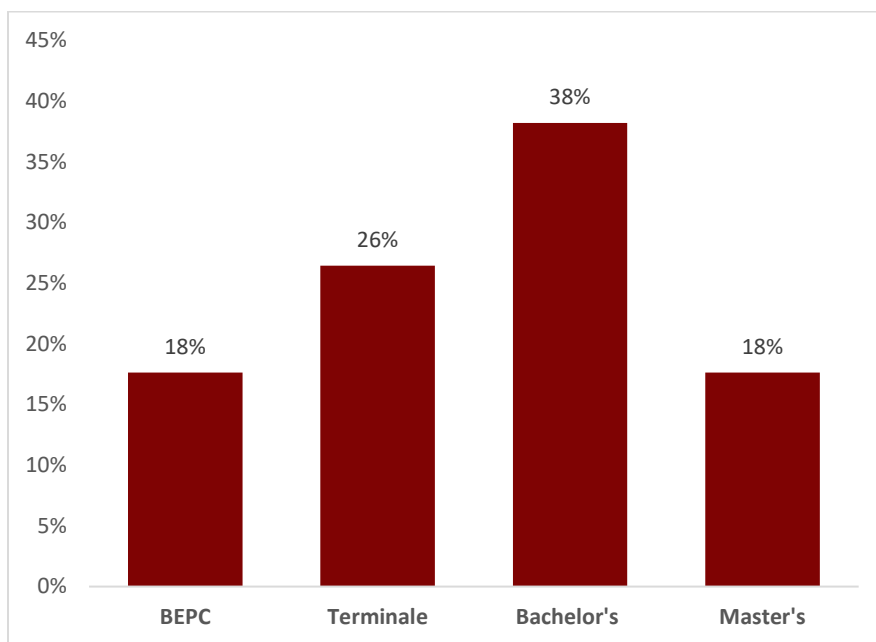
APPENDIX B. ADDITIONAL TABLES AND COMPLEMENTARY OUTCOMES

Exhibit 52. Gender Composition of Students

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Proportion of female students	48%	343	50%	600	3 (0.4067)

Source: student survey; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01

Exhibit 53. CCEB Level of Education



Source: School administrative survey

Exhibit 54. Minimum Acceptable Diet Reported by Parents

Outcome Variable	Percent	Observations
Household receiving a minimum acceptable diet		
The proportion of parents that offered their child cereals (e.g. pasta, rice, noodles, etc.)	99%	327
The proportion of parents that offered their child white roots like white potato	3%	327
The proportion of parents that offered their child vitamin A rich vegetables (e.g. carrot, etc.)	3%	327
The proportion of parents that offered their child dark green leafy vegetables like spinach	75%	327

Outcome Variable	Percent	Observations
Household receiving a minimum acceptable diet		
The proportion of parents that offered their child other vegetables (e.g. eggplant, tomato)	47%	327
The proportion of parents that offered their child vitamin A rich fruit like mango & papaya	40%	327
The proportion of parents that offered their child other fruit (e.g. watermelon, coconut)	12%	327
The proportion of parents that offered their child internal organs (e.g. liver, heart)	3%	327
The proportion of parents that offered their child flesh meat (e.g. chicken, pork, beef)	19%	327
The proportion of parents that offered their child any bird's eggs	3%	327
The proportion of parents that offered their child seafood (e.g. shrimp, fish)	54%	327
The proportion of parents that offered their child nuts and seeds (e.g. lentils, beans)	56%	327
The proportion of parents that offered their child dairy products (e.g. milk, cheese)	6%	327
The proportion of parents that offered their child oils and fats like butter	57%	327
The proportion of parents that offered their child any sweets (e.g. sugar, honey)	28%	327
On the scale of 1 to 15, FAO dietary diversity index reported by parents	5	327

Source: Parent survey authors' calculations

Exhibit 55. Teacher Reported Utilization of Classroom Activities for this Week

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Each Student checks his or her own work and gives himself/herself a mark/comment					
Already use	27%	101	53%	89	26*** (0.0002)
Planning to use	20%	101	30%	89	11* (0.0940)
Not used and not planning to use	53%	101	17%	89	-37*** (0.0000)
Students check each other's work					

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Already use	67%	101	54%	89	-13* (0.0593)
Planning to use	17%	101	42%	89	25*** (0.0001)
Not used and not planning to use	16%	101	4%	89	-11** (0.0108)
Whole class checks the work of one student					
Already use	62%	101	60%	89	-3 (0.6921)
Planning to use	21%	101	33%	89	12 (0.0661)
Not used and not planning to use	17%	101	8%	89	-9** (0.639)
Students write solutions on a slate and show the teacher and class					
Already use	77%	101	58%	89	-19*** (0.0052)
Planning to use	18%	101	35%	89	17*** (0.0073)
Not used and not planning to use	5%	101	7%	89	2 (0.6001)
Students of different skill levels are paired together					
Already use	69%	101	55%	89	-14** (0.0430)
Planning to use	24%	101	39%	89	16** (0.0206)
Not used and not planning to use	7%	101	6%	89	1 (0.7123)
Students of the same skill level are paired together					
Already use	41%	101	19%	89	-21*** (0.0012)
Planning to use	16%	101	19%	89	4 (0.5564)
Not used and not planning to use	44%	101	62%	89	19** (0.0119)
Teacher asks group of 3 or more students to work together on a project and later provides feedback on group performance					

Indicator	Baseline		Endline		Difference in Means
	Percent	Total Number of Observations	Percent	Total Number of Observations	(p-value)
Already use	48%	101	64%	89	17** (0.0223)
Planning to use	19%	101	31%	89	13** (0.0440)
Not used and not planning to use	34%	101	4%	89	-29*** (0.0000)

Source: teacher survey; authors' calculation; * P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01;

APPENDIX C. ASER-READING TEST

Niveau I	Niveau H
Question de compréhension (sur l'histoire du Niveau H): 1. Qu'est-ce que Doudou a trouvé? 2. Qu'est-ce que Fatou a donné à manger à la tortue? 3. Où est-ce que Doudou a ramené la tortue?	Doudou a trouvé une petite tortue dans le champ. Il emporte la tortue à la maison et la met dans une caisse. Fatou donne un peu de riz à la tortue, mais le petit animal ne veut pas manger. C'est la nuit, tout le monde dort, mais la petite tortue ne dort pas. Le matin, Doudou ramène la tortue au champ.
Niveau J Le maire de la commune est passé un matin nous rendre visite à l'école. Sur place, il n'était pas content de la propreté de la cour de l'école. Le lendemain, il a réuni toute son équipe. A la fin de cet entretien, il a décidé de convoquer une réunion à l'école. Les enseignants, les élèves et la population se sont retrouvés un samedi soir pour discuter.	Question de compréhension (sur l'histoire du Niveau J): 1. Qu'est-ce qui n'a pas plu au maire lors de sa visite à l'école ? 2. A quel moment les gens se sont réunis pour discuter ? -En début de semaine -En fin de semaine -En milieu de semaine 3. Qu'a fait le maire après la visite ?

Niveau C	Niveau D	Niveau E	Niveau F
aim ph br ian ail eur oin ier euil ion ouille	fort sac moto fille chien vite nuit ballon loin joli	panthères famille distraction voisin traverser mangues vêtements récompense lentement champion fauteuil	DEMARRER ICI Ali va au champ. Elle entend les oiseaux chanter. Fatou regarde son ami Fama.
Niveau B lon ma lu ou on bi ra toi pou au	Niveau A n t m a l e u r i o s p		Niveau G Ce matin, le son des tam-tams réveille les travailleurs dans le village. Le dimanche et le mardi, j'accompagne mon oncle à la pêche. Tout le monde se bouscule et discute pour avoir un bon prix.

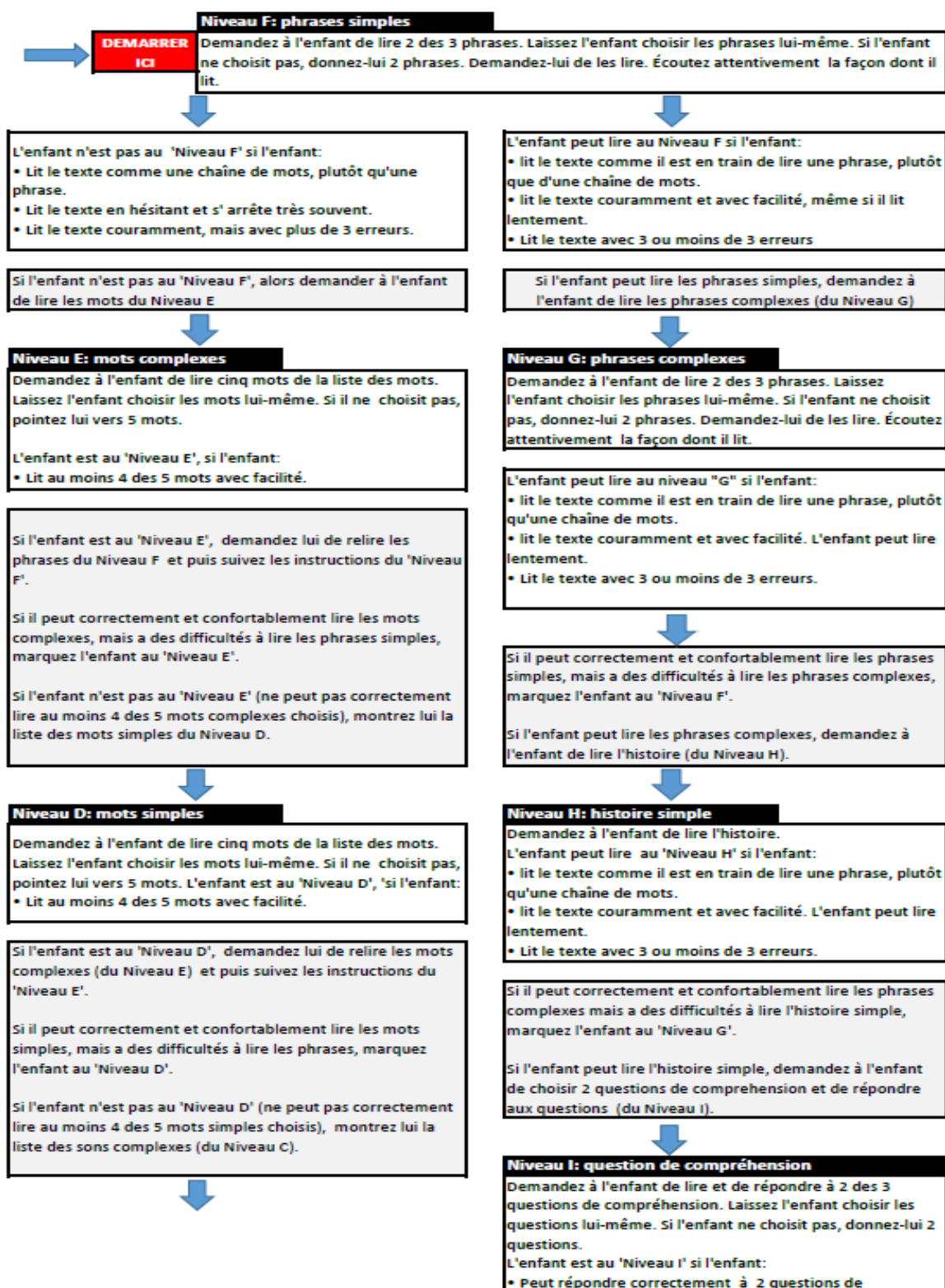
NON

NON

NON

OUI

OUI



Niveau C: sons complexes

Demandez à l'enfant de lire cinq sons de la liste des sons.
Laissez l'enfant choisir les sons lui-même. Si il ne choisit pas, pointez lui vers 5 sons.

L'enfant est au 'Niveau C', si l'enfant:

- Lit au moins 4 des 5 sons avec facilité.

Si l'enfant est au 'Niveau C', demandez lui de relire les mots simples (du Niveau D) et puis suivez les instructions du 'Niveau D'.

Si il peut correctement et confortablement lire les sons complexes, mais a des difficultés à lire les mots simples, marquez l'enfant au 'Niveau C'.

Si l'enfant n'est pas au 'Niveau C' (ne peut pas correctement lire au moins 4 des 5 sons complexes choisis), montrez lui la liste des sons simples (du Niveau B).

Niveau B: sons simples

Demandez à l'enfant de lire cinq sons de la liste des sons.
Laissez l'enfant choisir les sons lui-même. Si il ne choisit pas, pointez lui vers 5 sons.

L'enfant est au 'Niveau B', si l'enfant:

- Lit au moins 4 des 5 sons avec facilité

Si l'enfant est au 'Niveau B', demandez lui de relire les sons complexes (du Niveau C) et puis suivez les instructions du 'Niveau C'.

Si il peut correctement et confortablement lire les sons simples, mais a des difficultés à lire les sons complexes marquez l'enfant au 'Niveau B'.

Si l'enfant n'est pas au 'Niveau B' (ne peut pas correctement lire au moins 4 des 5 sons simples choisis), montrez lui la liste des lettres.

Niveau A: lettres

Demandez à l'enfant de lire cinq lettres de la liste des lettres.
Laissez l'enfant choisir les lettres lui-même. Si il ne choisit pas, pointez lui vers 5 lettres

L'enfant est au 'Niveau A', si l'enfant:

- Lit au moins 4 des 5 sons avec facilité.

Si l'enfant est au 'Niveau A', demandez lui de relire les sons simples (du Niveau B) et puis suivez les instructions du 'Niveau B'.

Si il peut correctement et confortablement lire les lettres, mais a des difficultés à lire les sons simples marquez l'enfant au 'Niveau A'.

Si l'enfant n'est pas au 'Niveau A' (ne peut pas correctement lire au moins 4 des 5 lettres choisis), marquez l'enfant au 'Niveau 0'

compréhension.

Si il peut correctement et confortablement lire l'histoire simple mais a des difficultés à répondre correctement à 2 questions de compréhension marquez l'enfant au 'Niveau H'.

Si l'enfant peut répondre à 2 questions de compréhension demandez à l'enfant de lire l'histoire complexe (du Niveau J).

Niveau J: histoire complexe

Demandez à l'enfant de lire l'histoire.

L'enfant peut lire au 'Niveau J' si l'enfant:

- lit le texte comme il est en train de lire une phrase, plutôt qu'une chaîne de mots.
- lit le texte couramment et avec facilité. L'enfant peut lire lentement.
- Lit le texte avec 3 ou moins de 3 erreurs.

Si il peut correctement répondre à 2 questions de compréhension mais a des difficultés à lire l'histoire complexe marquez l'enfant au 'Niveau I'.

Si l'enfant peut lire l'histoire complexe demandez à l'enfant de choisir 2 questions de compréhension et de répondre aux questions du Niveau K.

Niveau K: Question de compréhension

Demandez à l'enfant de lire et de répondre à 2 des 3 questions de compréhension. Laissez l'enfant choisir les questions lui-même. Si l'enfant ne choisit pas, donnez lui 2 questions.

L'enfant est au 'Niveau K' si l'enfant:

- Peut répondre correctement à 2 questions de compréhension.

Si il peut correctement et confortablement lire l'histoire complexe mais a des difficultés à répondre correctement à 2 questions de compréhension marquez l'enfant au 'Niveau J'.

Si l'enfant peut répondre à 2 questions de compréhension, marquez l'enfant au 'Niveau K'.

APPENDIX D. QUESTIONNAIRES



ENDLINE EVALUATION CRS MC GOVERN-DOLE BURKINA FASO

Student Survey

Basic Information

Enum	Last Name: First Name:	ID :
Supervisor	Who is your supervisor?	
Date	Date (JJ/MM/AAAA)	
Prov	1. Bam 2. Santamega	I__
Com	Write the commune 's name	
CEB	Write the CEB's name	CODE I__I__I__I__I__I__I__I__
School	Write the school name	CODE I__I__I__I__I__I__I__I__
StudentID	Student ID	CODE I__I__I__I__I__I__I__I__
preloadlastname	What is the last name of the student?	
preloadfirstname	What is the first name of the student?	
preloadgender	1. Male 2. Female	I__
preloadgrade	What grade/class are the student in? 1. CP2 2. CE1 3. CE2 4. CM1 5. CM2	I__

Parent Consent:

parentconsent	Has the caregiver given consent for her/his child to participate in this survey? 1. Caregiver consented → parentname 2. No consent → STOP- Consult with your supervisor, and proceed to the next child on your list.	I__
 If you don't have the parent's consent terminate the survey. Consult with your supervisor, and proceed to the next child on your list.		
parentname	What is the last name of the caregiver giving consent?	
parentfirstname	What is the first name of the caregiver giving consent?	

Dear student:

You have been selected to participate in a survey about health, nutrition, and education for the Cantine Scolaire project. Your participation in this interview is entirely voluntary. If, at any time, you wish to discontinue participation, you may do so without penalty. If you accept, please respond to all questions as candidly as possible. If you do not know the answer to a question, you may simply say so. All responses will be kept strictly confidential.

Consent	Do you accept if I ask you some questions? 1. Yes → fname 2. No → thanks 3. Not found → thanks	I__	*Select only one option
 If child says No or Not found, thank him/her, terminate the survey and proceed to the next child on your list.			

N.B: If the respondent refuses to answer any question mark an "R" for the answer and proceed to the next question.

Personal Information

Great! Now I want to ask you some questions about you

fname	What is your first name?		
lname	What is your last name?		
gender	Record gender 1. Male 2. Female	I__	*select only one option *Ask only if necessary

newsch1	When you registered for the first time in this school, in which grade were you?	I__I	
dob	Do you know your Date of Birth? 1. Yes 2. No → yearborn	I__I	*select only one option
dob1	What is your Date of Birth? Day/Month/Year :	[If answered → Isintro] [Jan 2000- Dec 2013]	
yearborn	Do you know what year you were born? 1. Yes 2. No → qage	I__I	*select only one option
yearborn1	What year were you born?	[If answered → Isintro] [Jan 2000- Dec 2013]	
qage	Do you know your age? 1. Yes 2. No → Isintro	I__I	*select only one option
ageq	How old are you?	.....	record number ≥5 & ≤17

Literacy

Thank you! Now I would like to ask some questions about what you do in class...

Isintro	I would like you to think about yesterday. Do you remember what you did yesterday? 1. Yes 2. No	I__I	*Select only one option *If No, talk to child about yesterday - did you go to school yesterday, did you play with your friends, etc. to help them remember.
Is1	Did your class teacher make you read on your own in class yesterday? 1. Yes 2. No	I__I	* Select only one option
Is2	Did you spend time reading to someone else in class yesterday? 1. Yes 2. No	I__I	* Select only one option
Is3	Did you spend time writing in class yesterday? 1. Yes 2. No	I__I	* Select only one option

Is4	Did you spend time doing word work in class yesterday? 1. Yes 2. No	I__I	* Select only one option
Is5	Did you spend time listening to someone's reading in class yesterday? 1. Yes 2. No	I__I	* Select only one option
Is6	A reading group is a small group of students who regularly meet outside of school for reading, vocabulary and reading comprehension activities. Do you take part in a reading group? 1. Yes 2. No → fs2	I__I	* Select only one option
Is6why	Are there specific reasons why you don't participate to a reading group/club?	I__I	* Select all options that apply
readgrp_others	If others, precise.		
Ls6f	Does your reading group have a group notebook? 1. Yes 2. No		
Is6a	Does your reading group consist of all the children in your class or a smaller number of children? 1. Everyone → Is6c 2. Just some	I__I	* Select only one option
Is6b	Does your reading group consist of <<just boys/just girls>> or both? 1. Just boys/girls 2. Both	I__I	* Select only one option
Is6c	How long have you been part of a reading group? 1. Less than this school semester 2. All of this semester 3. All of this semester and part of last 4. Both this semester and last 5. Longer than 2 semesters 6. Can't remember/don't know	I__I	* Select only one option
Ls6d	How many times do you participate in the reading group's activities per month? 1. Once 2. Twice 3. Three or more times 4. Don't know	I__I	* Select only one option

Ls6e	Do you have an adult who gives you support for the reading groups? 1. Yes 2. No → fs2	I__I	* Select only one option
Ls6g	Who is the adult that supports you? 1. A teacher 2. A mentor 3. Another member of the community	I__I	* Select only one option
mentor	Do you think you work well at school?	I__I	
mentora	Why do you think you are working well at school?	I__I	*Select all options that apply
mentora_otters	If others, precise	I__I	
mentorb	Why do you think you don't work well at school?	I__I	*Select all options that apply
mentorb_otters	If others, precise	I__I	

Food Security

Now, I would like you to think about all the meals you ate yesterday.

fs2	Now thinking about what you did yesterday, did you eat something at home before coming to school? 1. Yes 2. No → fs3	I__I	* Select only one option
fs2a	Did you feel full after eating this meal or could you have eaten more? 1. I felt full → fs3 2. I could have eaten more	I__I	* Select only one option
fs2b	Why did you not eat more food? 1. There wasn't any more food 2. There wasn't anything I liked; 3. Something else (specify) _____	I__I	* Select only one option
fs3	Did you go home to eat during lunch break yesterday? 1. Yes 2. No → fs4	I__I	* Select only one option
fs3a	Did you feel full after eating lunch at home or could you have eaten more? 1. I felt full → fs4 2. I could have eaten more	I__I	*Select only one option

fs3b	Why did you not eat more food? 1. There wasn't any more food 2. There wasn't anything I liked; 3. Something else (specify) _____	☐	* Select only one option
fs4	Did you eat at the canteen while you were at school yesterday? 1. Yes 2. No → fs5	☐	* Select only one option
fs4a	Did you feel full after eating at the canteen or could you have eaten more? 1. I felt full → fs5 2. I could have eaten more	☐	*Select only one option
fs4b	Why did you not eat more food? 1. There wasn't any more food 2. There wasn't anything I liked; 3. Something else (specify) _____	☐	*Select only one option
fs5	Did you have dinner yesterday? 1. Yes 2. No	☐	* Select only one option
fs6a	Now think about when you went to bed last night, did you feel full or did you feel you could eat more food? 1. I felt full → fs7 2. I could have eaten more	☐	* Select only one option
fs6b	Why did you not eat more food? 1. There wasn't any more food 2. There wasn't anything I liked; 3. Something else (specify) _____	☐	* Select only one option
fs7	We just talked about all the meals you ate yesterday. Now, I want you take a minute and think of all the different foods you ate yesterday. [INTERVIEW AID: USE FLASH CARDS WITH PICTURES OF EACH FOOD TYPE, so children can easily recognize what we are asking them about] Are you ready? Okay. Did you eat any:		
fs7a	a. Cereals: porridge, bread, noodles, corn, millet, sorghum, rice, cake, macaronis, boule d'acassa (foura), zoom-koom? 1. Yes → fs7a1 2. No	☐	* Select only one option
fs7a1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	☐	* Select only one option

fs7b	b. White roots and tubers: Potatoes, yams, cassava, manioc? 1. Yes → fs7b1 2. No	I _ I	* Select only one option
fs7b1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I _ I	* Select only one option
fs7c	c. Vitamin A rich vegetables and tuber: Carrots, orange sweet potatoes, squash? 1. Yes → fs7c1 2. No	I _ I	* Select only one option
fs7c1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I _ I	* Select only one option
fs7d	d. Dark green leaves from manioc, baobab, sorrel, or spinach? 1. Yes → fs7d1 2. No	I _ I	* Select only one option
fs7d1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I _ I	* Select only one option
fs7e	e. Other vegetables like eggplant, local eggplant, okra, peppers, onions, tomatoes? 1. Yes → fs7e1 2. No	I _ I	* Select only one option
fs7e1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I _ I	* Select only one option
fs7f	f. Vitamin A rich fruit : Ripe mangoes, papaya, melon? 3. Yes → fs7f1 4. No	I _ I	* Select only one option
fs7f1	Did you eat it at home, school or at both places? 1. Home 2. School	I _ I	* Select only one option

	3. Both		
fs7g	g. Other fruits: Watermelon, oranges, coconut, tamarind, néré, shea, patagium (kaga).... Or other wild fruits and their juices? Bissap juice and monkey bread (teudo) 1. Yes → fs7g1 2. No	I__I	* Select only one option
fs7g1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I__I	* Select only one option
fs7h	h. Organs: Internal organs: liver, heart, intestines, etc.? 1. Yes → fs7h1 2. No	I__I	* Select only one option
fs7h1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I__I	* Select only one option
fs7i	i. Meat, such as: chicken, mutton, goat, duck, rabbit, pork, beef, turkey, guinea fowl, or other poultry/birds? 1. Yes → fs7i1 2. No	I__I	* Select only one option
fs7i1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I__I	* Select only one option
fs7j	j. Eggs from chicken, ducks, or other birds? 3. Yes → fs7j1 4. No	I__I	* Select only one option
fs7j1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	I__I	* Select only one option
fs7k	k. Fish, shrimp, or another type? 1. Yes → fs7k1 2. No	I__I	* Select only one option

fs7k1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	☐	* Select only one option
fs7l	l. Lentils, beans, nuts, peanuts, groundnuts, sesame, boule d'arachide (Moore : mougoudougou / Fulfulde : sorondobo), touto d'arachide (kourakoura), beignet de haricot (gonre)? 1. Yes → fs7l1 2. No	☐	* Select only one option
fs7l1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	☐	* Select only one option
fs7m	m. Milk, cheese, yogurt? 1. Yes → fs7m1 2. No	☐	* Select only one option
fs7m1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	☐	* Select only one option
fs7n	n. Oil, butter and other fats? 1. Yes → fs7n1 2. No	☐	* Select only one option
fs7n1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	☐	* Select only one option
fs7o	o. Sweets: sugar, honey, candy, chocolate, cookies? 1. Yes → fs7o1 2. No	☐	* Select only one option
fs7o1	Did you eat it at home, school or at both places? 1. Home 2. School 3. Both	☐	* Select only one option

Nutrition Knowledge

Let's continue to talk about the meals you had yesterday.

vita	Let's continue to think about meals. Have you heard of Vitamin A? 1. Yes 2. No → iron	☐	* Select only one option
vita1a	What do you think Vitamin A does? 1. Good vision 2. Protects against diseases 3. Helps with growth 4. Keeps skin healthy 5. Other (specify) _____ 6. I don't know	☐ ☐ ☐ ☐ ☐ ☐	*Select all that apply
vita2a	Can you name a food that has Vitamin A? 1. Liver 2. Small whole fish 3. Dairy products (milk, yogurt) 4. The egg yolk 5. Carrot 6. The orange-fleshed sweet potato 7. Squash (orange) 8. Vegetable edible dark green leaves 9. Red palm oil 10. Papaya 11. Mango 12. Néré four 13. Green bell pepper 14. Melon (yellow and orange) 15. Other (specify) _____ 16. I don't know	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	*Select all that apply
iron	We just finished talking about vitamin A. Do you know that there is iron in the food we eat? 1. Yes 2. No → Nuttimeout	☐	* Select only one option
iron2a	What do you think iron does? 1. Good vision 2. Protects against diseases 3. Helps with growth 4. Muscle function 5. Brain function 6. Regulates body temperature 7. Prevents fatigue 8. Oxygen carrier in the body 9. Maintains healthy skin 10. Hemoglobin formation	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	* Select all that apply

hand1	What did you use to wash your hands? 1. Water 2. Ashes 3. Sand 4. Soap 5. Other (Specify) _____	☐ ☐ ☐ ☐	* Select all that apply *If they say Water, PROBE – Did you use anything else *Do not read the list
handwash	In your opinion, when do you think a person should wash their hands? 1. Before eating? 2. Before touching or preparing food? 3. Before giving food to someone else? 4. When you have dirt on your hands? 5. After touching something dirty? 6. After using the latrine?	☐ ☐ ☐ ☐ ☐ ☐	* Select all that apply
hand2a	Did you wash your hands today? a. Before eating? 1. Yes 2. No 3. Did not eat today	☐	* Select only one option

hand2b	b. Before touching or preparing food? 1. Yes 2. No 3. Did not touch/prepare food today	☐	* Select only one option
hand2c	c. Before giving food to someone else? 1. Yes 2. No 3. Did not give food to others today	☐	* Select only one option
hand2d	d. When you had dirt on your hands? 1. Yes 2. No 3. Did not have dirt on hands today	☐	* Select only one option
hand2e	e. After touching something dirty? 1. Yes 2. No 3. Did not touch something dirty today	☐	* Select only one option
hand2f	f. After using the latrine? 1. Yes 2. No 3. Did not use latrine today	☐	* Select only one option
teachwas h1	Did your teacher ask about washing your hands yesterday?	☐	* Select only one option

	1. Yes→ teachwash3 2. No 3. Can't remember/don't know		
teachwas h2	Did your teacher ask about washing your hands this in the last 5 school days? 1. Yes 2. No 3. Can't remember/don't know	I__I	* Select only one option
teachwas h3	Did your teacher teach you about the importance of washing your hands? 1. Yes 2. No → water 3. Can't remember/don't know	I__I	* Select only one option
Teachwas h4	Did the teacher tell you about the critical moments when to wash your hands? 1. Yes 2. No 3. Can't remember/don't know	I__I	* Select only one option
water	Do you have access to water at home for washing? 1. Yes 2. No	I__I	* Select only one option
 If the child is in grade 2 (CP2) got to <i>readassess</i>, otherwise thanks the students and terminate the survey.			

Reading Assessment:

Here is the final set of questions! I would like to play a little game with you...

readassess	What level did the student read at? 1. 0 2. A 3. B 4. C 5. D 6. E 7. F 8. G 9. H 10. I 11. J 12. K 13. No Assessment	I__I	* Select only one option * Only if they are in second grade
readassess2	Why didn't the student take the test? 1. Not CP2 2. The CP2 child refused or could not do it (redo the survey with a replacement child)	I__I	* Select only one option

thanks	Thank you so much for answering my questions. Candy for everyone!
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OBSERVATIONS

OBSERVATION : Hand washing

Wash1	Which critical moment did you observe: 1. Before eating 2. After using the latrines 3. Did not eat or use the latrines (<i>Specify why:_____</i>)	I__I	*If 3, finish the observations * Select only one option
wash1_why	Did not eat or use the latrines (<i>Specify why:_____</i>)	I__I	
Wash2a	What proportion/percentage of students washed their hands before going to eat?	I__I	* Select only one option
wash2b	What proportion/percentage of students washed their hands after using the latrines?	I__I	
comments	Particular comments on the survey.	I__I	



MDLINE EVALUATOIN CRS MC GOVERN-DOLE BURKINA FASO

Parent Survey

BASIC INFORMATION

enum	Last Name: First Name:	ID :
supervisor	Who is your supervisor?	
date	Date (JJ/MM/AAAA)	
prov	3. Bam 4. Santamega	|_ |
com	Write the commune 's name	
ceb	Write the CEB's name	CODE |_ |_ |_ |_ |_ |_ |_ |_ |
school	Write the school name	CODE |_ |_ |_ |_ |_ |_ |_ |_ |
Studgrade	1. CP2 2. CE1 3. CE2 4. CM1 5. CM2	
studentid	Student's name	CODE |_ |_ |_ |_ |_ |_ |_ |_ |

Dear mother:

Hello, my name is <insert own name>. You have been selected to participate in a survey about health, nutrition, and education for the Cantine Scolaire project. Your participation in this interview is entirely voluntary and you have no obligation to participate. If, at any time, you wish to discontinue participation, you may do so without penalty. If you accept, please respond to all questions as candidly as possible. If you do not know the answer to a question, you may simply say so. All responses will be kept strictly confidential.

parent	Are you the parent or primary caregiver of <<insert student name>>? 3. Yes, parent 4. Yes, primary or secondary caregiver 5. No → STOP – thanks them and terminate the survey. Consult with your supervisor, and proceed to the next mother on your list.	|_ |	*Select only one option
---------------	---	---	-------------------------



If the respondent is not the parent or caregiver of the student on your list, thank them and terminate the survey. Consult with your supervisor, and proceed to the next mother on your list.

Consentp	Can I talk to you for a few minutes? I have some questions to ask you about some of the things you do every day. Is it okay if I ask you some questions? 3. Yes 4. No → thanks them and terminate the survey, and proceed to the next mother on your list.	I__I	* Select only one option
-----------------	---	------	--------------------------



If the parent or caregiver of the student says NO, thank him/her, terminate the survey and proceed to the next mother on your list.

N.B: If the respondent refuses to answer any question mark an "R" for the answer and proceed to the next question.

Personal Information

Great! Now I want to ask you some questions about you

parentname	What is your first name?		
parentlname	What is your last name?		
genderp	Ask only if needed 1. Male 2. Female	I__I	* Select only one option
dobp	Do you know your date of birth? 3. Yes 4. I don't know → yearbornp	I__I	* Select only one option
dop1	What date were you born? Day/Month/Year	*If answered →kid [Jan 1916 – Dec 2004]	
yearbornp	Do you know what year you were born? 1. Yes 2. I don't know → qagep	I__I	* Select only one option
yearbornp1	In what year were you born?	*If answered →kid *[1916 -2002]	
qagep	Do you know your age? 1. Yes 2. I don't know → kid	I__I	* Select only one option
agep	How old are you?	.....	*record age >=13 & <=99

Household Environment

Good! Now I would like ask you a few questions about your household

kid	How many children 16 years old or younger live with you?	.....	>=0 record number =<25
ownkid	How many of the children 16 years old or younger who live with you are your own children?	.....	>=0 record number =<25 cannot exceed kid
kid05	How many of the children living with you are 5 years or younger?	.....	>=0 record number =<25 cannot exceed kid
kid612	How many of the children living with you are between the ages of 6 and 12?	.....	>=0 record number =<25 cannot exceed kid
adult	How many people 17 years or older, including yourself, live in the place where you live?	.....	>=0 record number =<25
roof	Is the roof in the place where you live made of thatch, metal or something else? 1. Thatch 2. Metal 3. Combination for straw and metal 4. Something else	I__I	* Select only one option
elec2	What energy do you use for lighting?		
elec2a	City provided electricity 1. Yes 2. No	I__I	* Select only one option
elec2b	Solar 1. Yes 2. No	I__I	* Select only one option
elec2c	Generator 1. Yes 2. No	I__I	* Select only one option
elec2d	Car battery 1. Yes 2. No	I__I	* Select only one option
elec2e	Other (specify) 3. Yes 4. No	I__I	* Select only one option
latrine	Do you have a latrine at your home? 1. Yes 2. No	I__I	* Select only one option

latty	What type of latrine is it? 1. Flush or pour 2. Ventilated pit latrine 3. Pit latrine with slab 4. Pit latrine without slab 5. Bucket latrines	I__I	* Select only one option *Have flash cards with pictures of different types of latrines, so respondent can easily identify the type. Also, include description for interviewers to use, if needed.
stuff	Do you have any of the following items in the place where you live?		
stuffa	Table or desk 1. Yes 2. No	I__I	* Select only one option
stuffb	Telephone or mobile phone 1. Yes 2. No	I__I	* Select only one option
stuffc	Bicycle 1. Yes 2. No	I__I	* Select only one option
stuffd	Motorcycle 1. Yes 2. No	I__I	* Select only one option
stoffe	Radio 1. Yes 2. No	I__I	* Select only one option
stufff	Television 1. Yes 2. No	I__I	* Select only one option
stuffg	Books, newspapers, or magazines 1. Yes 2. No	I__I	* Select only one option
stuffh	A separate room for the children 1. Yes 2. No	I__I	* Select only one option
read	Can you read French or in any local language? Would that be French, a local language, or both? 1. Yes, local 2. Yes, French 3. Yes, both 4. No	I__I	* Select only one option
write	What about writing? Can you write in French or any local language? Would that be French, a local language or both?	I__I	* Select only one option

	1. Yes, local 2. Yes, French 3. Yes, both 4. No		
edu	What is the highest grade in school that you have completed? 0. None 1. 1-4th grade 2. 5-6th grade 3. 7-10th grade 4. 10th-13th grade 5. Some college 6. Completed Bachelor's 7. More than Bachelor's 8. Vocational or professional school	I__I	* Select only one option
jobtyp	What is your main job or work? 1. Paid worker: Farming/livestock 2. Own Farming/Livestock 3. Teacher 4. Government job 5. Stay at home, take care of the home and children 6. Self-employed - business, craft and trade 7. Mining 8. Other (specify) _____	I__I	* Select only one option
livestock	Which of the following livestock do you work with?		
livestocka	Chicken/poultry 1. Yes 2. No	I__I	* Select only one option
livestockb	Goats/sheep 1. Yes 2. No	I__I	* Select only one option
livestockc	Cows 1. Yes 2. No	I__I	* Select only one option
livestockd	Donkeys 1. Yes 2. No	I__I	* Select only one option
livestocke	Pigs 1. Yes 2. No	I__I	* Select only one option
ceci	Are you a member of a savings group? 1. Yes	I__I	* Select only one option

	2. No→ meet		
ceci2	Have you used a portion of your savings in the savings group for school expenses? 1. Yes 2. No→ meet	I__I	* Select only one option
ceci3	Did the saving help for schooling and tuition fee? 1. A little 2. Moderately 3. Significantly	I__I	* Select only one option

School Interaction

Thank you! Now, I would like to ask you a few questions about your participation in school activities

meet	In the last 12 months, did you, or another adult in your household, meet one-on-one with <<insert child name>>'s teacher for any reason? 1. Yes, I met 2. Yes, another adult 3. Yes, me and another adult 4. No → act	I__I	* Select only one option
meetnum	How many times did <<you or another adult in this household>> meet one-on-one with <<insert child name>>'s teacher in the last 12 months? 1. Once 2. Two or three times 3. More than three times	I__I	* Select only one option
meetwhy	What were the reasons why <<you or another adult in this household>> met one-on-one for Periodic school scheduled parent-teacher conference with <<insert child name>>'s teacher in the last 12 months? 7. Child's performance 8. Disciplinary issues 9. Just touching base 10. Other (specify) _____	I__I I__I I__I I__I I__I	*Select all that apply

act	In the last 12 months, did you or another adult in your household: 1. Attend a class while the teacher was teaching? 2. Have a meal with <<insert child's name>> while <<he/she>> was at school 3. Attend a PTA general assembly (APE/ AME) 4. Participate in a school community project (such as cleaning or community fields) 5. Help the school as cook or store keeper 6. Help watch over a reading group 7. Visit the classroom 8. Attend a performance put on by children in <<child name>>'s class? 9. Something else? (specify) _____	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	* Select all that apply
PTA	Are you a member of the PTA at <NAME>'s school? 1. Yes 2. No	☐	* Select only one option
girl	In the past it was mainly boys who went to school. Nowadays both boys and girls are going to school. In your opinion, is this a good thing or a bad thing?? 3. Good →girlgood 4. Bad→girlbad 5. Don't know→lib	☐	* Select only one option
girlgood	Why do you think it's a good thing for girls to go to school? 3. Educating girls improves living standards of the whole family 4. Educating girls improves their health 5. Educating girls improves the health of the children they will have; 6. Girls should also be able to fulfill themselves; 7. Educating girls allows them to find better work 8. Other (specify) _____	☐	* Select only one option
girlbad	Why do you think that it's a bad thing for girls to go to school? 1. Girls are supposed to stay at home; 2. Girls don't need school; 3. Girls don't work outside the home, so what is the point? 4. Girls should not be out in public; 5. There are no school for girls only and they should not be going to school with boys	☐	* Select only one option

	6. Other (specify) _____		
lib	Do you know where the library closest to where you live is located? 3. Yes 4. No	I__I	* Select only one option
libvisit	Have you ever visited a library? 1. Yes 2. No→ libkid	I__I	* Select only one option
libborrow	What kinds of books/publications do you borrow from the library most of the times? 1. Comic book 2. Children's book 3. Books in local language 4. African literature 5. European literature 6. Other (specify) _____ 7. Don't know		
libfreq	Now, think back to the last six months - that would be last <<insert month>>. Did you visit a library within the last six months that is since <<insert month>>? 1. Yes 2. No→ libkid	I__I	* Select only one option
liblastvisit	How many times in the last six months did you visit a library that is since <<insert month>>?	.....	*record number ≥0 & ≤50
libkid	Has <<insert child name>> ever visited a library either with you, with the school or with someone else? 1. Yes 2. No	I__I	* Select only one option

Food Security and Diet

Now I want you to take a minute and think about all the food being prepared in your household...

decide	Are you the person who makes the decision regarding what children eat in your household? 3. Yes→ cook 4. No	I__I	* Select only one option
decwho	Who in your household makes decisions regarding what the children eat? (enumerator: record what the relationship to that person is, as well as his/her name)		

cook	Are you the person who prepares or cooks the food for the household? 1. Yes→ nunmeal 2. No	I__I	* Select only one option
cookwho	Who in your household prepares or cooks food? (record response)		
nummeal	How many meals did children 16 years and younger living in your household eat yesterday?	.....	*record number ≥0 & ≤9
fs7P	Now, I want you take a minute and think of all the food you or another adult offered <<insert child name>> yesterday. Did you serve:		
fs7Pa	a. Cereals: porridge, bread, noodles, corn, millet, sorghum, macaronis, cake, acassa, rice..? 3. Yes→ fs7Pa1 4. No	I__I	* Select only one option
fs7Pa1	How many times did you serve this to her/him yesterday?	..... .	*record number [0-9]
fs7Pb	b. White roots and tubers: potatoes, yams, cassava...? 1. Yes→ fs7Pb1 2. No	I__I	*Select only one option
fs7Pb1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pc	c. Vitamin A rich vegetables and tuber: carrots, orange sweet potatoes...? 3. Yes→ fs7Pc1 4. No	I__I	* Select only one option
fs7Pc1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pd	d. Dark green leaves of cassava, baobab, manioc, baobab, sorrel, spinach ... ? 3. Yes→ fs7Pd1 4. No	I__I	* Select only one option
fs7Pd1	How many times did you serve this to her/him yesterday?	..... .	*record number

fs7Pe	e. Other vegetables as in eggplant, gombo, bell peppers, tomatoes, onions...? 5. Yes→ fs7Pe1 6. No	|_|	* Select only one option
fs7Pe1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pf	f. Vitamin A rich fruits: ripe mangoes, papaya, melon...? 1. Yes→ fs7Pf1 2. No	|_|	* Select only one option
fs7Pf1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pg	g. Other fruits: watermelon, oranges, coconut, tamarind, néré, karité, patagium (kaga), or other wild fruits and their juice? 3. Yes→ fs7Pg1 4. No	|_|	* Select only one option
fs7Pg1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Ph	h. Organs: liver, heart, intestines...? 3. Yes→ fs7Ph1 4. No	|_|	* Select only one option
fs7Ph1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pi	i. Meat of chicken, sheep, goat, duck, rabbit, pork, cow, turkey, or other poultry? 5. Yes→ fs7Pi1 6. No	|_|	* Select only one option
fs7Pi1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pj	j. Eggs, from chicken, ducks, or other birds? 1. Yes→ fs7Pj1 2. No	|_|	* Select only one option
fs7Pj1	How many times did you serve this to her/him yesterday?	..... .	*record number

fs7Pk	k. Fish, shrimp, or other seafood? 3. Yes→ fs7Pk1 4. No	|_|	* Select only one option
fs7Pk1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pl	l. Lentils, beans, groundnuts, other nuts, ground peas, peanut balls? (Moore : mougoudougou / Fulfulde : sorondobo), touto d'arachide (kourakoura), beignet de haricot (gonre)? 3. Yes→ fs7Pl1 4. No	|_|	* Select only one option
fs7Pl1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pm	m. Milk, cheese, yogurt? 3. Yes→ fs7Pm1 4. No	|_|	* Select only one option
fs7Pm1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Pn	n. Oil, butter and other fats? 3. Yes→ fs7Pn1 4. No	|_|	* Select only one option
fs7Pn1	How many times did you serve this to her/him yesterday?	..... .	*record number
fs7Po	o. Sweets: sugar, honey, candy chocolate, cookies? 3. Yes→ fs7Po1 4. No	|_|	* Select only one option
fs7Po1	How many times did you serve this to her/him yesterday?	..... .	*record number [0-9]
pfs1	Now, I want you to think about the last month. Was there a time in the last month, when you were worried that you did not have enough food to feed your family? 1. Yes 2. No	|_|	* Select only one option
pfs2	Was there a time in the last month when you or another adult in your household ate a smaller meal because there wasn't enough food? 1. Yes 2. No	|_|	* Select only one option

pfs3	Was there a time in the last month when you or another adult in your household did not eat a meal because there wasn't enough food? 1. Yes 2. No	☐	* Select only one option
pfs4	Was there a time in the last month, when one or more of your children ate a smaller meal because there wasn't enough food? 1. Yes 2. No	☐	* Select only one option
pfs5	Was there a time in the last month, when one or more of your children did not eat a meal because there wasn't enough food? 1. Yes 2. No	☐	* Select only one option
pfs6	Was there a time in the last month, when there was no food in your household because you could not afford to buy any? 1. Yes 2. No	☐	* Select only one option
pfs7	Was there a time in the last month, when you or another adult in your household went a whole day without eating because there wasn't enough food? 1. Yes 2. No	☐	* Select only one option
pfs8	Was there a time in the last month, when one or more of the children in your household went a whole day without eating because there wasn't enough food? 1. Yes 2. No	☐	* Select only one option

Nutrition Knowledge

That's quite a lot of different foods you ate yesterday. Let's continue to think about meals.

Vitap	Now, let me ask you, have you heard of Vitamin A? 3. Oui 4. Non→ ironp	☐	* Select only one option
Vitap1a	What do you think Vitamin A does? 1. Good vision 2. Protects against diseases 3. Helps with growth 4. Keeps skin healthy 5. Other (specify) 6. I don't know	☐ ☐ ☐ ☐ ☐ ☐	*Select all that apply

	28. dark green leafy vegetables (baobab leaf, spinach)	☐	
	29. Eggs	☐	
	30. Potatoes	☐	
	31. Tofu	☐	
	32. Green beans	☐	
	33. Nuts (sesame, cashew)	☐	
	34. Green bell pepper	☐	
	35. Watermelon	☐	
	36. Tomato	☐	
	37. Other (specify) _____	☐	
	38. I don't know	☐	

Hygiene Health

Okay, we are almost done! Now I have some questions about washing now.

Handp	Did you wash your hands today? 3. Oui 4. Non→ handbwashP	☐	* Select only one option
Handp1	What did you use to wash your hands? [<i>Do not give examples or read the options to the respondent</i>] 6. Water 7. Ashes 8. Sand 9. Soap	☐ ☐ ☐ ☐	* Select all that apply *Do not give examples or read list to respondent
Handwashp	In your opinion, when do you think a person should wash their hands? 7. Before eating? 8. Before touching or preparing food? 9. Before giving food to someone else? 10. When you have dirt on your hands? 11. After touching something dirty? 12. After using the latrine?	☐ ☐ ☐ ☐ ☐ ☐	* Choose all that apply
Handp2	Did you wash your hands today?		
Handp2a	a. Before eating? 4. Yes 5. No 6. Did not eat today	☐	* Select only one option
Handp2b	b. Before touching or preparing food? 4. Yes 5. No 6. Did not touch/prepare food today	☐	* Select only one option
Handp2c	c. Before giving food to someone else? 4. Yes	☐	* Select only one option

	5. No 6. Did not give food to others today		
Handp2d	d. When you have dirt on your hands? 4. Yes 5. No 6. Did not have dirt on hands today	I__I	* Select only one option
handP2e	e. After touching something dirty? 4. Yes 5. No 6. Did not touch something dirty today	I__I	* Select only one option
handP2f	f. After using the latrine? 4. Yes 5. No 6. Did not use latrine today	I__I	* Select only one option
waterP	Do you have water at home for washing? 3. Yes 4. No	I__I	* Select only one option

source	How far do you have to go to get water? 1. Less than 1/2 km 2. 1/2 km to 1 km 3. 1 to less than 2 kms 4. 2 to less than 3 kms 5. 4 to less than 5 kms 6. 5 kms or more	I__I	* Select only one option
thank2	Thank you so much for answering my questions.		
APPROB	This test was approved by the supervisor 1. Yes 2. No	I__I	* Select only one option



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Teacher Questionnaire

BASIC INFORMATION

Enum	Last Name: First Name:	ID :
date	Date (DD/MM/YYYY)	
Supervisor	Who is your supervisor?	
Prov	5. Bam 6. Santamega	|_|
Com	Write the commune 's name	
CEB	Write the CEB's name	CODE |_|_|_|_|_|_|_|_|
School	Write the school name	CODE |_|_|_|_|_|_|_|_|
studentid	CODE |_|_|_|_|_|_|_|_|	
preloadfnameo	Student's first name	
Preloadlnameo	Student's last name	
Preloadstudgrade	1. CP2 2. CE1 3. CE2 4. CM1 5. CM2	|_|
preloadstudgender	1. Male 2. Female	Select only one option
Teacherconfirm	Is the person the teacher of the student on your list? 1. Yes 2. No	

Dear Teacher :

You have been selected to participate in a survey about health, nutrition, and education for the Cantine Scolaire project. Your participation in this interview is voluntary. If, at any time, you wish to discontinue participation, you may do so without penalty. If you accept, please respond to all questions as candidly as possible. If you do not know the answer to a question, you may simply say so. All responses will be kept strictly confidential.

Consent	Do you accept participation in this survey? 1. Yes → lastname 2. No → STOP – thank them and terminate the survey. Consult with your supervisor, and proceed to the next teacher on your list.	I__I	* Select only one option
 If the response to “consent” is NO, thank the respondent and terminate the survey and proceed to the next teacher on your list.			

Personal Information

Great! Now I would like to ask some questions about you...

lastname	What is your last name? _____		
name	What is your first name? _____		
genderq	Ask only if necessary 3. Male 4. Female	I__I	* Select only one option
dob	Do you know your date of birth? 5. Yes 6. I don't know →yearborn	I__I	* Select only one option
dob1	What is your date of birth? Day/Month/Year	If answered →gradeteach	
yearborn	Do you know what year you were born? 3. Yes 4. I don't know →qagep	I__I	* Select only one option
yearborn1	What year were you born?	If answered →gradeteach *[1916 -2002]	
qage	Do you know your age? 1. Yes 2. I don't know →gradeteach	I__I	* Select only one option
Ageq	How old are you?	.....	*record age >=13 & =<99

gradeteach	In which grade do you mainly teach? 1. CP1 2. CP2 3. CE1 4. CE2 5. CM1 6. CM2	I__I	* Select only one option
gradenow	What grade do you currently teach? 1. CP1 2. CP2 3. CE1 4. CE2 5. CM1 6. CM2	I__I	* Select only one option
kid	How many children are in your main class?	..... ...	*record number>=0 and =<150
teachlen	How long have you been working as a teacher? 1. Less than a year 2. 1-2 years 3. 3-5 years 4. 6-10 years 5. 11 years or more	I__I	* Select only one option
gradelen	How long have you been teaching this grade? 1. Less than a year 2. 1-2 years 3. 3-5 years 4. 6-10 years 5. 11 years or more	I__I	* Select only one option
classlen	How long have you been teaching your main class? 1. Less than a year 2. 1-2 years 3. 3-5 years 4. 6-10 years 5. 11 years or more	I__I	* Select only one option

admin	Do you have any administrative duties, other than those for your classes that you do regularly for the school? 3. Yes 4. No→ edu	I__I	* Select only one option
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adminpct	What percent of your time, on average, throughout the school year, would you estimate that you spend on these administrative duties? 1. 0% - 25% 2. 26% - 50% 3. 51 % - 75% 4. 76% - 100%	I__I	* Select only one option
edu	What is the highest level of education you have completed? 1. BEPC 2. Baccalaureat 3. Bachelor's degree 4. Master's degree 5. Master 1 6. Master 2 7. Other (specify) _____	I__I	* Select only one option
teachcert	Have you ever received formal training in teaching children such a completing a teaching certification program or a course in teaching? 1. Yes, I have a certificate or degree in teaching 2. Yes, I have taken classes or courses but do not have certificate or degree 3. No	I__I	* Select only one option
readcert	Have you ever received formal training in teaching children to read and write such as completing a certification program or a course in teaching these techniques? 1. Yes, I have a certificate or degree in teaching 2. Yes, I have taken classes or courses but do not have a certificate or degree 3. No	I__I	* Select only one option

Literacy Instruction

Thank you! Now I would like to ask some questions about teaching and literacy instruction

style	Do you know what "learning style" means? 1. Yes 2. No → lect1	I__I	* Select only one option
styledesc	In your own words, can you please describe what learning style means to you? 11. Listening/feeling 12. Watching/observing	I__I I__I I__I I__I	*Select all that apply *do not read the options

	13. Thinking 14. Doing		
lect1	On average, how much time do you spend teaching reading each week? 1. 0-10% 2. 11%-20% 3. 21%-40% 4. 41%-60% 5. 61%-80% 6. 81%-100%	I__I	* Select only one option
lectex1	Please give me an example of an activity or technique that you use to teach reading. 1. Phonological awareness 2. Phonetics 3. Standard reading 4. Vocabulary 5. Comprehension 6. Identification of key sounds in another sentence 7. Identification for key sounds 8. Repetition of words, sounds, and syllables 9. Reading with punctuation symbols 10. Don't know→ vocab	I__I	*Select only one option *Do not read the list or give examples
lectex1a	How much time, in minutes, do you spend on this activity, on average, every day?	..... ...	*Record time in minutes (0-600)
lectex2	Please give me another example of an activity that you use to teach reading. 1. Phonological awareness 2. Phonetics 3. Standard reading 4. Vocabulary 5. Comprehension 6. Identification of key sounds in another sentence 7. Identification for key sounds 8. Repetition of words, sounds, and syllables 9. Reading with punctuation symbols 10. Don't know→ vocab	I__I	*Select only one option *Do not read the list or give examples
lectex2a	How much time, in minutes, do you spend on this activity, on average, every day?	..... ...	*Record time in minutes (0-420)
lectex3	Please give me another example of an activity that you use to teach reading.	I__I	*Select only one option

	1. Phonological awareness 2. Phonetics 3. Standard reading 4. Vocabulary 5. Comprehension 6. Identification of key sounds in another sentence 7. Identification for key sounds 8. Repetition of words, sounds, and syllables 9. Reading with punctuation symbols 10. Don't know→ vocab		*Do not read the list or give examples
lectex3a	How much time, in minutes, do you spend on this activity, on average, every day?	..... ...	*Record time in minutes (0-600)
lectex4	Please give me another example of an activity that you use to teach reading. [Do not read the list or give examples] 1. Phonological awareness 2. Phonetics 3. Standard reading 4. Vocabulary 5. Comprehension 6. Identification of key sounds in another sentence 7. Identification for key sounds 8. Repetition of words, sounds, and syllables 9. Reading with punctuation symbols 10. Don't know→ vocab	I__I	*Select only one option *Do not read the list or give examples
lectex4a	How much time, in minutes, do you spend on this activity, on average, every day?	..... ...	*Record time in minutes (0-420)
vocab	Do you include vocabulary in your reading/writing activities? 1. Yes→ comp 2. No 3. I don't know→ comp	I__I	* Select only one option
vocab1	Why do you not use vocabulary in your reading/writing activities? 1. Not appropriate for the grade 2. Student should already know the skill 3. I am not sure what it is 4. I don't think students should learn it 5. I don't think that is it is the right technique 6. Other (specify) _____	I__I I__I I__I I__I I__I I__I	*Select all that apply

comp	Do you include comprehension in your reading/writing activities? 1. Yes→ read 2. No 3. I don't know→ read	I__I	* Select only one option
comp1	Why do you not use comprehension in your reading/writing activities? 1. Not appropriate for the grade 2. Student should already know the skill 3. I am not sure what it is 4. I don't think students should learn it 5. I don't think that is it is the right technique 6. Other (specify) _____	I__I I__I I__I I__I I__I I__I	* Select all that apply
read	Are you either planning to or have you already had your students read by themselves today? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to → readno	I__I	* Select only one option
readyes	How long <<are you planning to have the children/did the children>> read by themselves today? Please tell me how many minutes on average.	..... .	* Record the number of minutes
readno	Do you usually have the children read by themselves? 1. Yes 2. No→ readp	I__I	* Select only one option
readfreq	How often do you usually have the children read by themselves? 1. Never 2. Once per week 3. 2-4 times per week 4. Every day 5. Not sure/I don't know	I__I	* Select only one option
readnoyes	For how long do the children usually read by themselves when they do this activity? Please tell me how many minutes on average a day.	..... .	* Record the number of minutes
readp	Are you either planning to or have already had your students read to one or more other people today? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to → readpno	I__I	* Select only one option

readpyes	How long are you planning to have the children/did the children>> read to one or more other people today? Please tell me how many minutes on average a day.	..... .	* Record the number of minutes
readpno	Do you usually have the children read to one or more people? 1. Yes 2. No→ listen	I__I	* Select only one option
readpfreq	How often do you usually have the children read to one or more people? 1. Never 2. Once per week 3. 2-4 times per week 4. Every day 5. Not sure/I don't know	I__I	* Select only one option
readpnoyes	For how long do the children usually read to one or more people when they do this activity? Please tell me how many minutes on average a day.	..... .	* Record the number of minutes
listen	Are you either planning to, or have you already had your students listen to someone else reading today? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to → listenno	I__I	* Select only one option
listenyes	How long <<are you planning to have the children/did the children>> listen to someone reading today? Please tell me how many minutes on average.	..... .	* Record the number of minutes
listenno	Do you usually have the children listen to one or more people reading? 1. Yes 2. No→ write	I__I	* Select only one option
listenfreq	How often do you usually have the children listen to one or more people reading? 1. Never 2. Once per week 3. 2-4 times per week 4. Every day 5. Not sure/I don't know	I__I	* Select only one option
Listennoyes	For how long do the children usually listen to other people reading when they do this activity? Please tell me how many minutes on average a day.	..... .	* Record the number of minutes
Write	Are you either planning to, or have you already had your students write today? 1. Yes, I already did it 2. Yes, I plan to do it	I__I	* Select only one option

	3. No, I haven't done it and don't plan to. → writeno		
Writeyes	For how long are you planning to have the children/did the children>> write today? Please tell me how many minutes on average.	..... .	* Record the number of minutes
Writeno	Do you usually have the children write? 1. Yes 2. No→ word	I__I	* Select only one option
Writefreq	How often do you usually have the children write? 1. Never 2. Once per week 3. 2-4 times per week 4. Every day 5. Not sure/I don't know	I__I	* Select only one option
writenoyes	For how long do the children usually write they do this activity? Please tell me how many minutes on average a day.	..... .	* Record the number of minutes
Word	Are you either planning to, or have you already had your students do a word play today? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to → wordno	I__I	* Select only one option
Wordyes	How long <<are you planning to have the children/did the children>> do word play today? Please tell me how many minutes on average.	..... .	* Record the number of minutes
Wordno	Do you usually have the children do word play? 1. Yes 2. No→ littrain	I__I	* Select only one option
wordfreq	How often do you usually have the children do word play? 1. Never 2. Once per week 3. 2-4 times per week 4. Every day 5. Not sure/I don't know	I__I	* Select only one option
wordnoyes	For how long do the children do word play when they do this activity? Please tell me how many minutes on average a day.	..... .	* Record the number of minutes
Littrain	Did you receive training on teaching literacy in the last 12 months? 1. Yes 2. No	I__I	* Select only one option
Please tell me if you have already done, or plan to do any of the following TODAY :			
eval	Each student checks his or her own work and gives himself/herself a mark/comments 1. Yes, I already did it	I__I	* Select only one option

	2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.		*Read the options one after the other
eval1	Students check each other's work 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval2	The whole class checks the work of a student (E.g.: From work on the blackboard or an oral answer provided to the teacher with whole class listening) 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval3	Students write solutions on a slate and show to teacher and class 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval4	Students of different skill levels are paired together (so that lower levels learn from others) 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval5	Students of the same skill level are paired together (so that they reinforce each other.) 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval6	Teacher asks group (3 or more) of students to work together on a project and later provides feedback to the group on its performance. 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
Please tell me if you have already used or plan to use any of the following THIS WEEK, that is between Monday and Saturday THIS WEEK :			
evalb	Each student checks his or her own work and gives himself/herself a mark/comments 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to	I__I	* Select only one option *Read the options one after the other
eval2b	Students check each other's work 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to	I__I	* Select only one option

eval3b	The whole class checks the work of a student (E.g., From work on the blackboard or an oral answer provided to the teacher with whole class listening) 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to	I__I	* Select only one option
eval4b	Students write solutions on a slate and show to teacher and class 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval5b	Students of different skill levels are paired together (so that lower levels learn from others) 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval6b	Students of the same skill level are paired together (so that they reinforce each other.) 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
eval7b	Teacher asks group (3 or more) of students to work together on a project and later provides feedback to the group on its performance. 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	I__I	* Select only one option
meet	Did you meet individually with students during class time yesterday? 1. Yes 2. No→ meetno	I__I	* Select only one option
meetyes	For how long did you meet students individually yesterday? Please tell me the total number of minutes.	..... .	* Record the number of minutes
meetno	Do you usually meet individually with students during class time? 1. Yes 2. No→ grp	I__I	* Select only one option
meetnoyes	For how long do you usually meet individually with students during class time? Please tell me how many minutes on average.	..... .	* Record the number of minutes
Grp	Did you meet with small groups of students during class time yesterday? 1. Yes 2. No→ grpno	I__I	* Select only one option

Grpyes	For how long did you meet with each group? Please tell me how many minutes on average.	..... .	* Record the number of minutes
Grpno	Do you usually meet with small groups of students during class time? 1. Yes 2. No→ libdist	I__I	* Select only one option
grpnoyes	For how long do you usually meet with the groups during class time? Please tell me how many minutes on average.	..... .	* Record the number of minutes
Libdist	How far is the closest library? Please tell me how many kilometers approximately.	..... .	* Record in Kilometer * >=0 & <=100
Libvisit	Do you sometimes take your students to this library? 1. Yes→ libvistf 2. No	I__I	* Select only one option
Novisit	Why not? 1. Too far 2. Students don't behave well enough 3. I do not know if they have the appropriate books for my students 4. They do not have books that are appropriate for my students 5. I do not know if they have enough books for my students 6. They do not enough books for my students 7. I do not have funding to take my students 8. I do not have enough parents willing to come with me to the library 9. Other (specify) _____ After this question, go to “ attentive ”	 I__I I__I I__I I__I I__I I__I I__I I__I	*Select all that apply
Libvisitf	How long ago did you visit? 1. A week ago or less 2. 2-3 weeks ago 3. A month ago 4. 2-5 months ago 5. 6-11 months ago 6. One year ago or more 7. I don't remember	I__I	* Select only one option
matrelev	Does the library have materials that are relevant to your students? 1. Yes 2. No	I__I	* Select only one option

matenough	Does the library have enough materials for your students? 1. Yes 2. No	I__I	* Select only one option
attentive	Overall this week, on a scale of 1 to 10, where 1 is Not attentive at all and 10 is very attentive , how would you rate your students' level of attentiveness? 1. 1 2. 2 3. 3 4. 4 5. 5 6. 6 7. 7 8. 8 9. 9 10. 10	I__I	* Select only one option
readgrp	Are any students in your school in a reading group? 1. Yes 2. No	I__I	* Select only one option
Setup	Have you helped your students set up a reading group? 1. Yes 2. No	I__I	* Select only one option
clubnum	How many reading clubs have you helped the students to create?	I__I	
Sup	Do you supervise or help a reading group? 1. Yes 2. No	I__I	* Select only one option
whyclub	What kind of issues prevented you to organize or/and support a reading group?	I__I	
whyclub_others	If others, precise.	I__I	

Interactions with Parents

Great! Now I would like to ask you about your interaction with parents

meetp	In the last 12 months, did you meet individually with the parents of the children you teach for any reason? 5. Yes 6. No → act	I__I	* Select only one option
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meetnump	How many times did you meet individually with parents of the children you teach? 1. Once 2. Twice 3. More than three times	☐	* Select only one option
meetwhyp	What were the typical reasons for meeting individually with the parents of the children you teach in the last 12 months? 1. Periodic school scheduled parent-teacher conference 2. Child's performance 3. Disciplinary issues 4. Just touching base 5. Other (specify) _____	☐ ☐ ☐ ☐ ☐	*Select all that apply *Do not read the options
Act	In the last 12 months, did any of the parents of the children you teach attend a class while you were teaching? 1. Yes 2. No	☐	* Select only one option

Nutrition Knowledge

Now I have some questions about nutrition.

vita	Now, I'd like to ask you a question: have you heard of vitamin A? 5. Yes 6. No→iron	☐	* Select only one option
vita1a	What do you think Vitamin A does? Anything else? 10. Good vision 11. Protects against diseases 12. Helps with growth 13. Keeps skin healthy 14. Other (specify) 15. I don't know	☐ ☐ ☐ ☐ ☐ ☐	*Select all that apply *Do not give examples or read the list

	48. Eggs 49. Potatoes 50. Tofu 51. Green beans 52. Nuts (sesame, cashew) 53. Green pepper 54. Watermelon 55. Tomato 56. Other (specify) 57. I don't know	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
nutteach	Do you teach about nutrition in your classes usually? 1. Yes 2. No	☐	* Select only one option
nutteach1	Did you teach, or plan to teach about nutrition in your classes this week, meaning between this Monday and Saturday? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to.	☐	* Select only one option
nutteach2	Did you teach or plan to teach about nutrition in your classes today? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to. → nuttrain	☐	* Select only one option
nutteach3	How long <<did you teach/are you planning on teaching>> about nutrition in your classes today? Please tell me the number of minutes you <<taught/plan to teach>>.		* Record the number of minutes
Nuttrain	Did you receive training on teaching about nutrition in the last 12 months? 1. Yes 2. No 3. I don't know	☐	* Select only one option

Hygiene Health

Okay, we are almost done! I have some questions about hygiene now.

Stuprop	On a typical day, how many of your students, would you say, wash their hands before eating at school? Would you say 5. None 6. Less than half 7. About half 8. More than half	☐	* Select only one option
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	9. Almost all 10. All 11. I don't know		
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hygteach	Do you teach about hygiene in your classes usually? 1. Yes 2. No	I__I	* Select only one option
hygteach1	Did you teach or plan to teach about hygiene in your classes this week, meaning between this Monday and Saturday? 7. Yes, I already did it 8. Yes, I plan to do it 9. No, I haven't done it and don't plan to.	I__I	* Select only one option
hygteach2	Did you teach or plan to teach about hygiene in your classes today? 1. Yes, I already did it 2. Yes, I plan to do it 3. No, I haven't done it and don't plan to. → hygtrain	I__I	* Select only one option
hygteach3	How long <<did you teach/are you planning on teaching>>about hygiene in your classes today? Please tell me the number of minutes you <<taught/plan to teach>>.		*Record the number of minutes [0-420]
Hygtrain	Did you receive training on teaching about hygiene in the last 12 months? 1. Yes 2. No 3. I don't know	I__I	* Select only one option
Thanks	Thank you very much for answering my questions.		



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PTA Questionnaire

Basic Information

Enum	Last Name: First Name:	ID :
Supervisor	Who is your supervisor?	
Date	Date (JJ/MM/AAAA)	
Prov	7. Bam 8. Santamega	I__
Com	Write the commune 's name	
CEB	Write the CEB's name	CODE I__I__I__I__I__I__I__I__I__
School	Write the school name	CODE I__I__I__I__I__I__I__I__I__

Dear PTA:

You have been selected to participate in a survey about health, nutrition, and education for the Cantine Scolaire project. Your participation in this interview is voluntary. If, at any time, you wish to discontinue participation, you may do so without penalty. If you accept, please respond to all questions as candidly as possible. If you do not know the answer to a question, you may simply say so. All responses will be kept strictly confidential.

Consent	Do you accept participation in this survey? 1. Yes → PTAT 2. No → THANKS 3. Not answered	I__	*Select only one option
If No or Not answered, thank the respondent and end the survey.			

Personal Information

Great! Now I want to ask you some questions about you

PTAT	Are you a member of the school's Parent Teacher Association? 1. Yes 2. No	I__I	* Select only one option
 If No, thank the respondent and end the survey and look for a member of the Parents Teacher Association with the help of the principal.			
pname	What is your last name?		
pfirstname	What is your first name?		
bureau	What is your responsibility within the PTA Bureau? 1. Secretary 2. Treasurer 3. President	I__I	* Select only one option
genderpta	Enter the gender 1. Male 2. Female	I__I	* Select only one option
dobpta	Do you know your date of birth? 1. Yes → dobpta1 2. I don't know → yearbornpta	I__I	* Select only one option
dobpta1	What is your date of birth? Day/Month/Year :	If answered → kidPTA	
yearbornpta	Do you know what year you were born? 1. Yes → yearbornpta1 2. I don't know → agepta	I__I	* Select only one option
year bornpta1	What year were you born?	If answered → kidPTA *[1916 -2002]	
agepta	Do you know your age? 3. Yes → agepta1 4. I don't know → kidpta	I__I	* Select only one option
agepta1	How old are you?	.....	RECORD AGE >= 15
kidpta	How many children 16 years old or younger live with you?	.....	>=0 record number =<25
ownkidpta	How many of the children 16 years old or younger who live with you are your own children?	.....	>=0 record number =<20 cannot exceed "kidpta"
kidpta05	How many of the children living with you are 5 years or younger?	.....	>=0 record number =<25 cannot exceed "kidpta"

kidpta612	How many of the children living with you are between the ages of 6 and 12?	.....	>=0 record number =<25 cannot exceed “kidpta”
adultpta	How many people 17 years or older, including yourself, live in the place where you live?	.....	>=0 record number =<25

PTA Activities

Thank you! Now I would like to ask you some questions about parent teacher association activities

pta01	In the last 6 months, when did the PTA organize the last general assembly with parents and teachers to discuss the school’s life? 1. May 2. April 3. March 4. February 5. January 6. December 7. November 8. No general assembly in the past 6 months	I__I	* Select only one option
pta02	How many general assemblies did the PTA organize this school year? 1. 4 times 2. 3 times 3. 2 times 4. 1 time 5. Never	I__I	* Select only one option *If it is more than 4 times, select 4
pta03	How many meetings of the APE council took place this year?	.....	record the number
pta04	Are you a member of A SILC? 1. Yes → pta04b 2. No → pta06	I__I	* Select only one option
pta04b	How many members of the APE are members of a SILC?	.....	record the number
pta05	Did you use a portion of your savings from your SILC group for educational expenses of your children? 1. Yes 2. No	I__I	* Select only one option
pta06	Does the canteen function?	I__I	* Select only one option

	1. Yes → pta07 2. No → meetnumt		
pta07	During this current school year, how many months did the canteen function?	.....	*record the number ≥ 0 & ≤ 12 If « Not applicable » or « Don't know », write -99
pta08	During the school year, how many months were the canteen's expenses covered by the Ministry of Education?	.....	*record the number ≥ 0 & ≤ 12 pta08 $\leq$ pta07 [Cannot exceed number of months in PTA07] If « Not applicable » or « Don't know », write -99
pta09	During the school year, how many months was the canteen covered by the parents and the community?	.....	*record the number pta09 $\leq$ pta07 – pta08 *If pta09 > (pta07 – pta08) → ask pta09 again If « Not applicable » or « Don't know », write -99
pta10_cr	During the school year, how many months was the canteen covered by CRS (Cathwell)?	.....	*record the number pta10_cr $\leq$ pta07 – pta08 – pta09 *If pta10_cr > (ppta07 – pta08 – pta09) → ask pta10_cr again
pta10_ot	During the school year, how many months was the canteen covered by other partners?	.....	*record the number pta10_ot $\leq$ pta07 – pta08 – pta09 – pta10_cr *If pta10_cr > pta07 – pta08 – pta09 – pta10_cr → ask pta10_cr again If « Not applicable » or « Don't know », write -99

pta11	When the canteen is functioning, how often do parents contribute with wood for the kitchen? 1. All days that it functions 2. Most of the days that it functions 3. Rarely 4. Never	I__I	* Select only one option <i>Explain that the parents can contribute with wood even if it is the children who bring it.</i>
pta12	When the canteen is functioning, how often do parents contribute with utensils? 1. All days that it functions 2. Most of the days that it functions 3. Rarely 4. Never	I__I	* Select only one option
pta13	When the canteen is functioning, how often do parents contribute with offering storage? 1. All days that it functions 2. Most of the days that it functions 3. Rarely 4. Never	I__I	* Select only one option
pta14	When the canteen is functioning, does the community pay women who cook? 1. Yes 2. No 3. Don't know	I__I	* Select only one option
pta17	How many students contribute in-kind with food for the canteen (e.g. cereals, sorghum, corn, beans, etc.)? 1. All Students 2. More than 75% 3. Between 50%-75% 4. Less than 50% 5. Don't know	I__I	* Select only one option
MEETNUMT	How many times have you met with the teacher (of your child) during the last 12 months? 1. Once 2. Twice or three times 3. More than three times	I__I	* Select only one option
MEETWHYT	What are the reasons that you met individually with the teacher in the last 12 months? 1. Student performance 2. Disciplinary issues 3. Just touching base 4. Other (Specify) _____	I__I I__I I__I I__I	*Select all that apply

		I__I	
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PTA School Participation

Thank you! Now, I would like to ask you a few questions about your participation in school activities.

In the past 12 months, did you or another adult in your household:			
ACT2	Have a meal with students while in school? 1. Yes 2. No	I__I	* Select only one option
ACT3	Attend a PTA general assembly? 1. Yes 2. No	I__I	* Select only one option
ACT4	Participate in a school community project such as cleaning or "champs collectif"? 1. Yes 2. No	I__I	* Select only one option
ACT5	Help the school as a cook or store keeper? 1. Yes 2. No	I__I	* Select only one option
ACT6	Help watch over a reading group? 1. Yes 2. No	I__I	* Select only one option
ACT7	Visit the classroom 1. Yes 2. No	I__I	* Select only one option
ACT8	Attend a performance put on by the children in class? 1. Yes 2. No	I__I	* Select only one option
ACT9	Something else? 1. Yes (specify) ----- 2. No	I__I	* Select only one option

GIRL	In the past it was mainly boys who went to school. Nowadays both boys and girls are going to school. In your opinion, is this a good thing or a bad thing? 1. Good → girlgood	I__I	* Select only one option
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	2. Bad → girlbad 3. Don't know → lib		
GIRLGOOD	Why do you think it's a good thing for girls to go to school? 1. Educating girls improves living standards of the whole family 2. Educating girls improves their health 3. Educating girls improves the health of the children they will have; 4. Girls should also be able to fulfill themselves; 5. Educating girls allows them to find better work 6. Other (specify)	I__I	* Select only one option
GIRLBAD	Why do you think it's a bad thing for girls to go to school? 1. Girls are supposed to stay at home; 2. Girls don't need school; 3. Girls don't work outside the home, so what is the point? 4. Girls should not be out in public; 5. There are no school for girls only and they should not be going to school with boys 6. Other (specify)	I__I	* Select only one option
LIB	Do you know where the library closest to where you live is located? 1. Yes 2. No	I__I	* Select only one option
LIBVISITPTA	Have you ever visited a library or "bibliotheque"? 1. Yes 2. No → THANK2	I__I	* Select only one option
LIBFREQ	Now, think back to the last six months - that would be since last <<insert month>>. Did you visit a library or "bibliotheque" within the last six months that is since <<insert month>>? 1. Yes 2. No	I__I	* Select only one option
THANK2	Thank you very much for answering my questions.		
APPROB	This test was approved by the supervisor. 1. Yes 2. No	I__I	* Select only one option



MDLINE EVALUATOIN CRS MC GOVERN-DOLE BURKINA FASO

Chef de Circonscription d'Education de Base (CCEB) Questionnaire

This questionnaire is to be used by CCEBs and CPIs (Conseillers Pédagogiques Itinérants/Educational Consultants). For each CEB, both a CCEB and a CPI need to be interviewed, that is two persons per CEB)

School Information

Date	Date (JJ/MM/AAAA)	
Prov	9. Bam 10. Santamega	|_|
Com	Commune name	
CEB	CEB name	CODE |_|_|_|_|_|_|_|_|
School	School name	CODE |_|_|_|_|_|_|_|_|

Personal Information

Firname	What is your first name?
Lastname	What is your last name?
Gender	1. Male 2. Female

CCEB Activities

1. How long have you been CCEB (Chef de Circonscription de l'Education de Base) or CPI (Conseiller Pédagogique Itinérant)?
2. What did you do before?
3. What is your level of education/training?
4. What do you think about the "training style" and how does it manifest itself for the training?
(don't read the list)

The important Level Modality	Very important	Important	Sometimes Important	Not important	No Opinion
a) Feeling/touching					
b) Watching/observing					
c) Thinking					
d) Doing					

5. Which do you think are the most important techniques when teaching reading?
 - a) Phonological awareness
 - b) Phonetic techniques
 - c) Lectures
 - d) Vocabulary
 - e) Comprehension
 - f) Other (specify)

6. Have you led a training for teachers this school year (for reading)?

7. If yes, how many training sessions?

8. How many teachers have you trained to teach reading?

9. Which subjects/themes have you taught? (**don't read the list**)
 - a) Phonological awareness
 - b) Phonetic techniques
 - c) Lectures (courante means something like flowing)
 - d) Vocabulary
 - e) Comprehension
 - f) Other

10. When you gave a reading training, how have you supervised/followed-up with the teachers after the training?

11. Have you observed/supervised/monitored teachers in their classes this school year?
 - 11.1 If yes**, how many times?
 - 11.2 If yes**, how much time did you stay within one class, on average?

12. According to your observations, what proportion of teachers who uses the “package” of the following five activities every day? (**enumerators: cite the 5 activities**)
 - Writing
 - Hear others reading
 - Read aloud to others
 - Read alone
 - Play with words

APPENDIX E. BBII EVALUATION SCHOOLS

Province	School Name	Data Collection Method		
		Quantitative	Qualitative	Classroom Observation
Treatment Schools				
Bam	Vato	✓		✓
Bam	Gougre	✓		✓
Bam	Kangarin A	✓	✓	✓
Bam	Kongoussi S.5 A	✓		✓
Bam	Tikare B	✓		✓
Bam	Pittenga	✓		✓
Bam	Yilou A	✓		✓
Bam	Zimtanga	✓		✓
Sanmatenga	Barsalogho centre	✓		✓
Sanmatenga	Boussouma "D"	✓		✓
Sanmatenga	Dablo	✓		✓
Sanmatenga	Foube A	✓		✓
Sanmatenga	Issaogo	✓		✓
Sanmatenga	Namissiguima	✓		✓
Sanmatenga	Nessemtena	✓	✓	✓
Sanmatenga	Noaka	✓		✓
Sanmatenga	Pibaore	✓		✓
Sanmatenga	Pissila A	✓		✓
Sanmatenga	Roumba mossi	✓		✓
Sanmatenga	Toeghin	✓	✓	✓
Sanmatenga	Yargo Yarce	✓		✓
Sanmatenga	Zincko Classique	✓		✓
Control Schools				
Bam	Bani	✓		✓
Bam	Billiga	✓		✓
Bam	Boulounga	✓	✓	✓
Bam	Bourzanga B	✓		✓
Bam	Foulou	✓		✓
Bam	Kargo	✓		✓
Bam	Kougsabla	✓		✓

Province	School Name	Data Collection Method		
		Quantitative	Qualitative	Classroom Observation
Bam	Silmidougou (Mane)	✓		✓
Bam	Manegtaba A	✓		✓
Bam	Gassongo	✓		✓
Bam	Vousnango A	✓		✓
Sanmatenga	Gouaradji	✓		✓
Sanmatenga	Guibtenga	✓		✓
Sanmatenga	Guiendbila	✓		✓
Sanmatenga	Lebda	✓		✓
Sanmatenga	Ouanobian	✓		✓
Sanmatenga	Sanba mossi	✓		✓
Sanmatenga	Silmidougou (Rouko)	✓		✓
Sanmatenga	Soaga	✓		✓
Sanmatenga	Solomnore	✓		✓
Sanmatenga	Soubeira Natenga	✓	✓	✓
Sanmatenga	Tamasgo	✓		✓

APPENDIX F. ALTERNATIVE REGRESSION MODEL RESULTS FOR IMPACT ANALYSIS

This appendix reports the alternative model specification, including the replacement students who were enrolled in school since baseline. We used the same regression specification described in equation (1) in [Section 2.1.3](#), but we did not include the baseline mother's level of education, number of children, and baseline value of the outcome since they are not available for the replacements.

Exhibit 56. Impact on ASER Reading Proficiency

Variable	Coefficient (P-Value)
Treatment effect for girls (β_1)	-.05 (0.437)
Treatment effect for boys ($\beta_1 + \beta_2$)	.12** (.044)
N	412
Control-group mean for girls	25%
Control-group mean for boys	28%

* P-value < 0.1, ** p-value < 0.05, *** p-value < 0.01