Foreign Agricultural Service, United States Department of Agriculture

McGovern-Dole Food for Education Project, "Learning for Life" in Guatemala

Midterm Evaluation

January 2020

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Midterm Evaluation of the McGovern-Dole Food for Education Project "Learning for Life" in Guatemala

Learning for Life is a McGovern-Dole Food for Education project financed by the United States Department of Agriculture (USDA) under agreement FFE-520-2016/010-00, implemented in the department of Totonicapán in the western highlands of Guatemala by Catholic Relief Services – United States Conference of Catholic Bishops (CRS) and its local partners Proyecto de Desarrollo Santiago (PRODESSA) and Pastoral Social Caritas Arquidiócesis de Los Altos (PSC).

The project promotes a school feeding program with commodities donated by USDA to complement those purchased with funds from the Ministry of Education of Guatemala. Also, the project promotes the implementation of two literacy methodologies: *Jardín de Letras* (*Kotz'i'j tz'ib'* in K'iche' language) to teach reading and writing in both K'iche' and Spanish languages, and *Kemom Ch'ab'al*, applied throughout primary school (first through sixth grades) to strengthen reading comprehension skills in both languages.

The purpose of this midterm evaluation is to assess the progress towards the project goals and to establish a midterm point of comparison between the baseline evaluation (FY 2018) and the final evaluation (FY 2021), covering the first three years of the implementation of phase two of the project. This report answers 12 research questions related to the relevance, efficiency, effectiveness, impact and sustainability of the project, and measures 11 outcome indicators, comparing them to the baseline measurements and midterm goals.

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Guatemala, January 2020

Acronyms

ADOC	Organizational and Community Development Association (external evaluator) *Asociación de Desarrollo Organizacional y Comunitario*
AIR	American Institutes for Research
CRS	Catholic Relief Services – United States Conference of Catholic Bishops
DC	District Coordinator of the Departmental Ministry of Education
DDS	Dietary Diversity Score
DIGEDUCA	General Directorate for Educational Evaluation and Research *Dirección General de Evaluación e Investigación Educativa*
EGRA	Early Grade Reading Assessment
ELGI	Early Grade Reading Test *Evaluación de Lectura para Grados Iniciales*
INTECAP	Technical Institute for Training and Productivity *Instituto Técnico en Capacitación y Productividad*
MDES	Minimum detectable effect size
MEAL	Monitoring, Evaluation, Accountability and Learning
MGD	McGovern-Dole Food for Education project
MINEDUC	Ministry of Education of Guatemala *Ministerio de Educación de Guatemala*
PA	Pedagogical Assistant of the Departmental Ministry of Education
PRODESSA	Proyecto de Desarrollo Santiago (implementing partner)
PMP	Performance monitoring plan
PSC	Pastoral Social Cáritas Arquidiócesis de Los Altos (implementing partner)
SINAE	National Educational Accompaniment System *Sistema Nacional de Acompañamiento Educativo*
TAC	Technical-Administrative Coordinator of the Departmental Ministry of Education
USDA	United States Department of Agriculture

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1.1 Project background

Learning for Life is a McGovern-Dole Food for Education project financed by the United States Department of Agriculture (USDA) under agreement FFE-520-2016/010-00, implemented in the department of Totonicapán in the western highlands of Guatemala by Catholic Relief Services – United States Conference of Catholic Bishops (CRS) and its local partners Proyecto de Desarrollo Santiago (PRODESSA) and Pastoral Social Caritas Arquidiócesis de Los Altos (PSC).

Currently, the project is halfway through its second phase (implemented from FY 2017 through FY 2021). Phase one of the project was implemented from FY 2014 through early 2018.[1] The strategic objectives of the project aim to improve literacy of school age children and increase the use of health and dietary practices in 337 schools of six (out of eight) municipalities of Totonicapán. The project promotes a school feeding program with food donated by USDA to complement those purchased with funds from the Ministry of Education of Guatemala. Also promotes the implementation of two literacy methodologies: *Jardín de Letras* (*Kotz'i'j tz'ib'* in K'iche' language) to teach reading and writing in both K'iche′ and Spanish to early grade students, and *Kemom Ch'ab'al*, which is applied throughout primary school to strengthen reading comprehension skills in both languages.

The project's participants are more than 69,000 individuals, including 8,139 pre-primary students, 39,831 primary students, 1,795 teachers, 337 school principals and 19,521 volunteer parents who contribute to the preparation of school meals.

1.2 Midterm evaluation purpose and methodology

The purpose of this midterm evaluation is to assess the progress towards the project goals and to establish a midterm point of comparison between the baseline evaluation (FY 2018) and the final evaluation (FY 2021), covering the first three years of the implementation of phase two of the project. This report answers 12 research questions related to the relevance, efficiency, effectiveness, impact and sustainability of the project, measures 11 outcome indicators and compares them to the baseline measurements and midterm goals.

The information may be useful for project staff in making strategic decisions during the last two years of implementation of the phase two. It may be used by the Ministry of Education for supervision and accompaniment of teachers and school principals within the target area and to compare results with other similar contexts. Various stakeholders involved in literacy instruction, hygiene, school health and nutrition, and school feeding could replicate successful practices and collaborate on the sustainability of results. The project will disseminate the information via learning events (departmental level), meetings and briefs.

This midterm evaluation was performed by the consulting firm ADOC, who hired a team of 63 enumerators to support the field work. ADOC also conducted the baseline evaluation and a

[1] Phase one was award number: FFE-520-2013/029-00.

special study on reading scores within the target area in 2018 and has evaluated other MGD projects in the country.

The external evaluation team followed the same methodology as in the baseline evaluation. The same tools were applied, and others were added according to the specific needs of this midterm evaluation. The same criteria were followed for the design and validation of data collection instruments, enumerator training and in-field supervision.

ADOC managed the review of the ethics committee of the local University of "San Pablo de Guatemala" on the research protocol, data collection instruments and consent forms. Throughout the process of this midterm evaluation, efforts were made to ensure respect for and security of informants, confidentiality, cultural relevance and appropriateness to the context of the target area.

The quantitative sample randomly selected 135 schools, following the sample design created by the American Institutes for Research (AIR) included in the project's evaluation plan. In each school, the principal and a representative sample of students, teachers and volunteer parents were interviewed/surveyed. Guided observation measured the use of educational materials distributed by the project, students' attention in the classroom, infrastructure, health and nutrition practices, food preparation and storage practices.

A representative sample of 1,261 first graders, 1,245 second graders, 1,839 third graders, and 1,649 sixth graders were assessed with the Ministry of Education's standardized reading tests, provided to the Learning for Life project under a confidentiality agreement by the General Directorate for Educational Evaluation and Research (DIGEDUCA - the branch of the Ministry of Education in charge of research and the national standardized tests). DIGEDUCA trained external evaluator's key staff to strengthen their capacity to administer the tests and standardize enumerators. The ELGI test, a Spanish-language adaptation of EGRA (Early Grade Reading Assessment) for Guatemalan context, was applied in the early grades (first and second grades) using digital forms specially developed for the project and validated by the DIGEDUCA. Reading comprehension skills tests for third and sixth grades were applied using printed forms that were then double digitized to minimize the likelihood of data entry errors. The test scoring process was carried out by the Ministry of Education to ensure compliance with their standard procedures and data analysis was based on models created by them.

The collected data were triangulated with qualitative information provided by informants during interviews and focus groups. Diversity was promoted in the focus groups of project participants and in addition 53 internal and external actors were interviewed. The qualitative data were processed in the same way and with the same software as in the baseline.

In formulating the findings, conclusions and recommendations, the external evaluation team took into account the limitations of the study and the contributions of the project's management and technical team captured during workshops reflecting on the preliminary results.

1.3 Midterm evaluation conclusions

The external evaluator finds that the actions of the Learning for Life project are adequately directed towards achieving the two strategic objectives, the financial management of the project is efficient and effective, performing actions beyond those planned. Important progress is observed in improving school attendance, student' attentiveness and hygiene, health,

nutrition, food preparation and food storage practices, while improvement in reading instruction seems to be occurring at a slower pace due to various challenges in the national education system that are also recognized by the Ministry of Education in various studies cited in this document.

Informants recognize that the Learning for Life project has contributed to the improvement of students' reading skills within the target area, which is evidenced by an increase in midterm indicator measurements compared to the baseline. To better support this progress, it is important that the project focuses on increasing the fidelity of the implementation of its literacy methodologies over the next two years by seeking opportunities to work closely with the local structure of the Ministry of Education.

There is also evidence of a significant increase in hygiene, health, and food preparation and storage practices. All of the qualitative informants stated that the project has strongly contributed to this improvement through training and technical accompaniment in the schools.

The Learning for Life project, together with other stakeholders, has been influencing and building capacity since its first phase of implementation, resulting in important advances in the formulation and implementation of policies and regulations and in the creation of official programs. Examples of the project's support in this area are the implementation of the National School Feeding Law, the creation and implementation of the Municipal Intercultural Education Policy in Totonicapán, the first drafts of the Ministry of Education's National Educational Materials and Texts Program, and the creation of the national program "Committed to First Grade."

In general, the project is recognized and accepted by participants and has achieved strategic alignment at national, regional and community levels, maintaining excellent relationships with government structures, allies and other stakeholders, which undoubtedly increases the likelihood of sustainability of results.

1.4 Midterm evaluation recommendations

The external evaluation team presents a set of 19 recommendations so that they can be analyzed by the project and the donor to implement an action plan to support the adequate achievement of the goals towards the end line.

Some recommendations on the project's literacy interventions relate to raising awareness of teachers' key roles in helping students acquire literacy skills and how those skills are used as building blocks for the rest of their academic journeys. Another important point is to strengthen the fidelity of implementation of the project's literacy methodologies.

Regarding health and nutrition, the external evaluator recommends reinforcing some hygiene practices during trainings, establish in what ways the project will support schools to maintain and improve the dietary diversity, and increase schools' local purchasing capacities, among other aspects.

2 Project background

Learning for Life is a McGovern-Dole Food for Education project financed by the United States Department of Agriculture (USDA) under agreement FFE-520-2016/010-00, implemented in Guatemala by Catholic Relief Services – United States Conference of Catholic Bishops (CRS) and its local partners: Proyecto de Desarrollo Santiago (PRODESSA) and Pastoral Social Caritas Arquidiócesis de Los Altos (PSC).

The project is halfway through its second phase (implemented from FY 2017 through FY 2021). Phase one of the project was implemented from FY 2014 through early 2018.[2]

The overall theory of change postulates that children's literacy will improve if they attend school more regularly, if they eat school meals with adequate nutritional value to ensure classroom attentiveness, and if teachers improve literacy instruction skills.

The two strategic objectives of Learning for Life aim to: 1) Improve literacy of school age children, and, 2) increase the use of health and dietary practices. Under these two strategic objectives, the Learning for Life project implements 18 different activities, which lead to immediate and intermediate results (see Annex 1 of project framework for reference).

3 Geographic area

New studies of the socio-economic and educational conditions of the department of Totonicapán have not been released since the baseline evaluation of the project. The only updated data is the total population of 418,569 according to the national census in 2018 (INE, 2019).

Figure 1 Learning for Life project's geographic location

Source: Learning for Life data system

The Learning for Life project's coverage area is mostly rural, located in the department of Totonicapán in the western highlands of Guatemala. In phase two, the project supports 337 public primary schools in six municipalities: Momostenango, Santa Lucía La Reforma, San

[2] Phase one was award number: FFE-520-2013/029-00.

Andrés Xecul, San Bartolo Aguas Calientes, Santa María Chiquimula and Totonicapán (northern rural area only for Totonicapán municipality). The municipalities of Santa María Chiquimula and Totonicapán did not participate in phase one and began receiving project interventions in phase two of the project.

4 Target population

The project targets preschool and primary school students, teachers, school administrators and volunteer parents in 337 schools in six municipalities (225 schools that participated in the first phase of the project and 112 new schools). Each year, the project evaluates with the Ministry of Education the possibility of serving new public schools that open during the project within the target area.

Table 1 shows the number of each type of participant registered by the project in the 2019 fiscal year.

Table 1 Number of participants in the Learning for Life project in the 2019 fiscal year

Type of participant	Number of participants
Preschool students	8,139
Primary school students	39,831
Teachers	1,795
School principals	337
Volunteers	19,521
Total	69,623

Source: Learning for Life monitoring system data

5 Midterm evaluation purpose

According to the terms of reference, the purpose of this external midterm evaluation is to assess progress toward achieving project goals and indicators to establish a midpoint comparison between the baseline evaluation (second quarter of the 2018 fiscal year) and the final evaluation (end of the 2021 fiscal year), specifically:

i) To critically and objectively review the implementing experience and the implementing environment,
ii) to assess progress in implementation,
iii) to assess the relevance of the intervention,
iv) to provide an early signal of the effectiveness of the interventions,
v) to document lessons learned,
vi) to assess sustainability efforts to date, and,
vii) to discuss and recommend mid-course corrections, if necessary.

The midterm evaluation considers the first three years of implementation of the second phase of the Learning for Life project (from October 2017 to September 2019).

The midterm evaluation process met the established purpose and this report is intended to provide integrated information to the donor, the project's internal staff and stakeholders. The Ministry of Education and other organizations interested in literacy, school feeding, health and hygiene practices in school can use this information to extend project activities or replicate successful practices. The results of the official standardized reading tests applied to a large sample of students during this midterm evaluation may be used by the Ministry at regional and national levels to compare with similar bilingual contexts and make decisions about accompaniment to teachers and school principals in the department of Totonicapán.

After receiving feedback and approval from USDA for this report, the external evaluator and the project team will meet to analyze the final results and recommendations, to build an action plan for the last two years of the second phase of the project.

6 Midterm evaluation methodology

The midterm evaluation follows the baseline evaluation methodology, maintaining the tools and calculation procedures for the indicators, adding some items or tools to obtain data and information to answer the specific midterm evaluation questions. The same criteria for data collection tool design and validation, enumerator training and in-field supervision were applied.

Quantitative and qualitative data collection occurred at the end of the 2019 school year from beginning of September to the second half of October.

The quantitative sample keeps the original design created by the American Institutes for Research (AIR) included in the approved evaluation plan for Learning for Life (see annex 5 for details). This design includes a two-level cluster random assignment of schools with treatment assignment at level 2 (level 2: schools, level 1: individuals), with a confidence interval of 95% (alpha = 5%), statistical power of 80% (beta = 20%) and minimum detectable effect sizes (MDES) from 0.20 to 0.31 standard deviations (depending on the variable being measured).

The quantitative sample size calculated to maintain that power of inference during the midterm evaluation is 135 schools, which was achieved during midterm data collection and represents 40% of total of schools participating in the Learning for Life project.

The midterm evaluation also included qualitative data collection to complement and explain quantitative findings. Qualitative data were collected and triangulated through focus groups and key informant interviews, using the same software (Atlas.ti), coding and analysis procedures as in the baseline. The rigor and quality criteria used to order the qualitative data were dependence, credibility, transfer and confirmation, allowing open codification at first level to create categories, axial at second level to compare categories, and selective at the last level for narratives and explanations.

After data analysis, the main researcher and a coordinator from the external evaluator team met with management and technical staff of the project in order to present and consider preliminary findings, clarify specific details of implementation and identify further analysis possibilities. The conclusions and recommendations were formulated taking their contributions into account.

6.1 External evaluation team

ADOC (Organizational and Community Development Association, for its acronym in Spanish) is a non-profit association with operations in Guatemala since 2002 with experience in social research, design, monitoring, evaluation and implementation of humanitarian projects. They have worked with various NGOs and donors in Guatemala and Central America (including evaluation of other MGD projects in the country), also with the private sector in the framework of corporate-social responsibility.

ADOC performed the Learning for Life project baseline evaluation and a special longitudinal study on literacy outcomes in 2018 (post-test).

The ADOC midterm evaluation team consisted of one main researcher, three advisors, three in field coordinators, nine team supervisors and 56 enumerators. Most of the midterm evaluation team also participated in the baseline evaluation. During data collection the staff were distributed into nine teams to be able to complete data collection in a timely fashion.

6.2 Evaluation ethics

In order to ensure that national and international standards related to research ethics were applicable and in compliance with the Code of Federal Regulations, Title 45, Part 46 (Protection of Human Subjects, 2018), the external evaluator managed an ethics committee review from the local university "Universidad San Pablo de Guatemala" on the research protocol, data collection tools and informants' consent and assent forms.

Application of the national standardized reading tests, provided by the Ministry of Education, required a signed confidentiality agreement from all individuals who had access to them (typography, data collectors, data entry and supervisors) and personnel involved in the study.

Data collection methods and tools were validated for cultural relevance and contextual appropriateness before the baseline evaluation. The majority of the same tools were used for midterm data collection and new tools/methods were evaluated and field tested for cultural relevance and appropriateness in participant schools outside the selected sample.

The great majority of enumerators in the midterm evaluation are from the project's geographical coverage area, to ensure linguistic and cultural appropriateness. There was at least one bilingual (K'iche'/Spanish) person in each enumerator team to communicate with monolingual K'iche' informants.

The enumerators were hired according to their knowledge of the local culture and region, their experience applying the national standardized reading tests and their data collection skills. The supervisors were selected for their capacities and previous experience working with ADOC.

Students assessed in first, third and sixth grade were selected using random numbers generating software, in line with the project's USDA-approved evaluation plan. For longitudinal purposes, enumerators intentionally looked for the same second grade students assessed in 2018 (when they were in first grade).

Each supervisor found out which school his/her team would evaluate one day before the visit, while each enumerator found out on the morning of the visit. This was to prevent schools from being notified of the visits too far in advance, ensuring school days were relatively

"typical." Enumerators and supervisors were not trained in the test scoring or data analysis procedures, as these were controlled by the DIGEDUCA and data cleaning personnel of ADOC to mitigate biases/manipulation. Data quality was monitored daily. No systematic biases or conflicts of interest were identified during the midterm evaluation. All information was handled under confidential terms, with proper data security and protocols. After data analysis, the external evaluator team delivered the tests and participant databases to the Learning for Life team in CRS's office for safe keeping and audit requirements. Additionally, the external evaluator erased all information from their physical and electronic files.

6.3 Quantitative sample

According to the sampling plan for the midterm evaluation, a total of 135 schools (as observation units) were selected, out of which 135 (100.0%) were evaluated. 85.9% of the 135 schools included in the midterm sample were also evaluated in the baseline. Nine schools (6.7%) in the original sample had to be replaced since they did not allow the evaluation team to enter because of special activities due to local festivities or because teachers refused. Replacement schools were randomly selected to reach the full 135 school sample, after grouping by cluster and size.

In each school, the school principal and a sample of key informants were surveyed/interviewed, including students of first, second, third and sixth grade, teachers, and volunteer parents. Furthermore, guided observation tools were used to study student attention in the classroom, literacy materials, infrastructure, child health and nutrition practices, food preparation and food storage practices.

Informants sample sizes and demographic information are described later in this document for each indicator.

To study the effects of literacy interventions, participant schools were distributed into different groups of packaged treatment interventions, in line with the project's evaluation plan approved by USDA.

- Group 1-A: new schools incorporated in the second phase of the project that began to receive literacy interventions in the 2019 school year. This was the control group for 2018.
- Group 1-B: new schools incorporated in the second phase of the project that began to receive literacy interventions in the 2018 school year.
- Group 2-A and 2-B: participant schools coming from the first phase of the project and receiving literacy interventions since the 2014 school year.

The difference for groups with suffix -A and groups with suffix -B lies in the project's literacy methodology for first grade, thus, schools within groups -A receive *Kemom Ch'ab'al* and those with -B*, Jardín de Letras.* All groups receive *Kemom Ch'ab'al* from second to sixth grade (see Annex 2 for explanation of these methodologies).

After the 2018 school year, the Learning for Life project's evaluation plan no longer considered a counterfactual scenario with a control group of schools due to ethical concerns about not providing project interventions in the target area. Data coming from control group 1-A were useful to compare results between students not receiving/receiving project's bilingual literacy methodologies during a special longitudinal study that collected data at the beginning

and end of the 2018 school year. As of 2019 school year, schools of group 1-A began to receive *Kemom Ch'ab'al* methodology.

Tables 2 and 3 show the number of sampled schools by intervention group and by municipality.

Table 2 Number of sampled schools by intervention group

Group	Number of sampled schools	Total project schools in group
1-A	27	35
1-B	40	53
2-A	34	160
2-B	34	65
TOTAL	135	313[3]

Source: Learning for Life midterm evaluation database

Table 3 Number of sampled schools by municipality

Municipality	Number of sampled schools	Total project schools in municipality
Momostenango	45	144
San Andrés Xecul	8	21
San Bartolo Aguas Calientes	8	30
Santa Lucía La Reforma	7	35
Santa María Chiquimula	39	66
Totonicapán	28	41
TOTAL	135	337

Source: Learning for Life midterm evaluation database

Most of participant schools are rural, however there are some differences in their structures. According to the classification of the Ministry of Education and depending on the number of students enrolled, a '*gradada*' school (Spanish term with no English translation) is one with enough students so that there is just one grade assigned to each teacher; in a 'multigrade' school, two or more grades share the same teacher and the school principal usually is also a teacher; and, a 'one-room' school has only one person serving as the school principal and the teacher for all primary school grades. Table 4 displays the proportions of each type of school within the coverage area and the midterm sample.

[3] The project covers 337 schools. The total project schools with an intervention group assigned are 313, because 7 schools were created by the Ministry of Education after the random assignment of packaged interventions and 17 schools received literacy materials from a previous edition of the *Jardín de Letras* methodology (taken out of the sample).

Table 4 Percentage of schools by type

Type	Percentage in coverage area	Percentage in sample
Gradada school	32.0	39.3
Multigrade school	58.2	57.8
One-room school	9.8	3.0

Source: Learning for Life midterm evaluation database

6.4 Qualitative sample

A total of 10 focus groups were conducted in communities among the six municipalities covered by the Learning for Life project. The focus groups promoted participant diversity, with participants including: 49 volunteer fathers, 73 volunteer mothers, 18 male school principals and teachers, and 17 female school principals and teachers.

In addition, 53 different actors were interviewed, including USDA personnel in Guatemala, officials in the departmental office of the Ministry of Education, management and technical staff of CRS and its implementing partners for the project.

6.5 Limitations of the midterm evaluation

As with any large study, there were limitations in carrying out this evaluation.

- One limitation possibly biasing results of this midterm evaluation is that the visits of the enumerator teams were announced by external evaluator's staff to the school principals several days in advance for logistical reasons. The advance notice to schools could have affected school cleanliness or attendance variables or other aspects evaluated the day of the visit. (A coordinator from ADOC contacted the principals by phone. As mentioned earlier, neither the supervisors nor the enumerators were aware of the visiting plan to mitigate conflict of interest.)
- Reading tests and tools related to hunger and attention variables were applied at different moments during school day, according to the characteristics of each school and the decisions of each principal, hence the reported perceptions of student hunger or tiredness could have been reported higher or lower due to possible differences in sensations of fatigue or hunger at the different times of day these tools were applied and the different times of day that schools serve school meals.
- The cluster sample design only permits generalizations for each intervention group and the whole target area. It is not possible to generalize findings at municipal level because schools of each municipality were randomly distributed into different intervention groups and the number of schools sampled per municipality may not be statistically representative of the total schools in the municipality.
- Cross-contamination is a possibility through the exchange of first grade literacy materials (*Kemom Ch'ab'al / Jardín de Letras*) between teachers or by teachers transferred among schools of different intervention groups.
- Because of the high proportion of multigrade schools in the target area and also in the sample, many school principals are also teachers using the project's reading

methodologies in one or more grades simultaneously. For that reason, their perceptions may have been counted both in principals and teachers sample as they were surveyed with tools designed for principals as well as with tools designed for teachers.

- The Ministry of Education conducted testing with a national sample in 2019 using the same standardized reading tests as this midterm evaluation but the results were not yet available at the time of this report. However, the project has sufficient information to anchor and compare the midterm evaluation results with national results when they become available with the DIGEDUCA. The baseline and midterm results were statistically analyzed in the same way so that they are comparable over time within the target area.
- Currently, there is only a K'iche' test available for early grade reading (called ESWUJ), used the baseline evaluation. However, in the approved evaluation terms of reference the Learning for Life project had to make a cost-benefit decision to keep midterm evaluation costs within budget while also measuring second grade reading levels to measure the reading levels for the corresponding indicator. In third and sixth grade, a validated reading comprehension test does not yet exist in K'iche' language, limiting knowledge of student reading progress in this language. Additionally, the Ministry of Education has no published any data, nor studied K'iche' language learning indicators, so the project would not be able to compare any project data obtained with national data.

7 Midterm evaluation questions and answers

The terms of reference for this midterm evaluation included a list of possible evaluation questions, from which the project and the external evaluator chose the most feasible in order to assess relevance, efficiency, effectiveness, impact and sustainability during the first three years of implementation. This section includes a concise analysis of the 12 evaluation questions agreed upon between the external evaluator and the project.

All answers were obtained by triangulation through the below techniques and informant groups. There is further discussion around the results of these questions in sections 8 and 9. The data collected to answer these questions, as well as to report on project indicators, were used to create the recommendations included in section 10.

1	**Evaluation question**
	To what extent does the project design align with the Ministry of Education's current goals, objectives and strategies?
Criteria	
• Relevance	
Answer	
The actions of the project are in compliance with the McGovern-Dole results framework and entirely aligned with the National School Feeding Law and the Ministry of Education's strategic plan at the time of evaluation (priorities, actions, and strategy) (MINEDUC, 2016).	

Method
• Qualitative
Techniques
• Document and literature review • Focus groups • Interviews
Source / informants
• Ministry of Education's strategic plan for 2016-2020 (MINEDUC, 2016) • Ministry of Education departmental level staff • CRS, PSC and PRODESSA project staff

2	Evaluation question
	How appropriate are project interventions for Totonicapán's local culture and context?
Criteria	
• Relevance	
Answer	
All informants report that school feeding interventions and bilingual educational interventions of the project are relevant to the social and cultural context of the target area. The educational materials, training contents and human interactions provided and supported by the Learning for Life project respect and support the bilingualism, multiethnicity and cultural characteristics of Totonicapán department.	
Method	
• Qualitative	
Techniques	
• Focus groups • Interviews	
Source / informants	
• Volunteer parents • School principals • Teachers • Ministry of Education departmental staff • CRS, PSC and PRODESSA project staff	

	Evaluation question

3	What factors have inhibited the achievement of project goals, objectives and expected results?

Criteria

- Effectiveness

Answer

There were no project internal inhibitory factors detected during the midterm evaluation. Some external factors were identified, for instance, school dropouts, mainly due to economic conditions.

Also, the evaluation found a lower than expected level of teacher commitment to implementing the literacy methodologies as prescribed, despite proper planning, training and accompaniment from the project. Some considerations for this low level of commitment have to do with linguistic challenges (regional variations of K'iche' or Spanish monolingual teachers) and lack of classroom time due to other educational activities/courses.

Method

- Qualitative

Techniques

- Focus groups
- Interviews

Source / informants

- USDA staff in Guatemala
- Ministry of Education departmental staff
- Volunteer parents
- School principals
- Teachers
- CRS, PSC and PRODESSA project staff

4	**Evaluation question**
	What factors have facilitated the achievement of project goals, objectives and expected results?

Criteria

- Effectiveness

Answer

In general, the project is well accepted by the participants and has reached strategic alignment at different levels of intervention, has built processes and procedures to facilitate communications within and between executing organizations and other allies and

stakeholders, sustaining a complex system of relationships in adherence to government structures and local context and leveraging capacities already installed.

Method

- Qualitative

Techniques

- Focus groups
- Interviews

Source / informants

- USDA staff in Guatemala
- Ministry of Education departmental staff
- Volunteer parents
- School principals
- Teachers
- CRS, PSC and PRODESSA project staff

5	**Evaluation question**
	How can project interventions be adjusted to achieve project targets?

Criteria

- Effectiveness

Answer

No need for specific adjustment of project activities was identified. It is important that the project keeps seizing opportunities for alliances with the private sector, at local and national levels, and with local government (municipalities).

It is necessary to find a way to work with the local structure of the Ministry of Education to increase the fidelity of implementation of the project's literacy methodologies.

Method

- Qualitative

Techniques

- Focus groups
- Interviews

Source / informants

- USDA staff in Guatemala
- Ministry of Education departmental staff
- Volunteer parents
- School principals
- Teachers

- CRS, PSC and PRODESSA project staff

6	Evaluation question
	What alternative interventions would be more cost-effective while still achieving the same results?

Criteria

- Efficiency

Answer

Consistent with the perceptions of USDA personnel in Guatemala, CRS and implementing partners staff, the financial management of the project is efficient and effective, performing actions and tasks beyond those planned. To achieve the same results beyond the life of the project, there are costs involved that cannot be eliminated and most likely cannot be reduced, therefore they should only be assumed by other actors (transferred).

The Learning for Life project has already found ways to reduce costs. For example, the educational materials of the literacy methodologies have been re-edited to be as compact as possible, including the essential contents and meeting the requests of the Ministry of Education. On the other hand, trainings and technical accompaniment to principals, teachers, PTA's and volunteers must be conducted continuously due to turnover and other factors.

Method

- Qualitative

Techniques

- Focus groups
- Interviews

Source / informants

- USDA staff in Guatemala
- Ministry of Education departmental staff
- CRS, PSC and PRODESSA project staff

7	Evaluation question
	In what ways has the project had an impact, if any, on school-aged children's literacy, enrollment and attendance?

Criteria

- Impact

Answer

The results of the national standardized tests applied during midterm data collection to a representative sample of approximately 6,000 students suggest an increase in the values of all reading skills indicators, compared to the baseline.

Monitoring data of the project show a slight decreasing trend in the overall number of school-aged children enrolling in school within the target area during the last three years, mirroring the same (but more marked) downward tendency at the national level registered by the Ministry of Education. However, the enrollment numbers for first and second grade students in the project coverage area are showing an increase in the past two years.

The average attendance rates monitored by the project during the last school year is similar to the rate measured during midterm evaluation data collection. The average school attendance rates meet project targets and denote an increase from the baseline.

Method

- Quantitative and qualitative

Techniques

- Official standardized reading tests for first, second, third and sixth grade
- Headcount in classroom
- Focus groups
- Interviews

Source / informants

- Project monitoring system
- Students
- Volunteer parents
- School principals
- Teachers

8	**Evaluation question**
	Is there a notable difference in first grade literacy scores between schools that have used the early grade bilingual literacy methodology *Jardín de Letras* for two or more years compared with schools that do not have this methodology?

Criteria

- Impact

Answer

No, in this midterm evaluation, test results do not show advantages for groups of schools with the early grade literacy methodology *Jardín de Letras*, compared to those without it. This evaluation was unable to measure whether students made gains (or not) in K'iche' language because only Spanish language test results were compared. During this evaluation it

was not possible to apply the early grade reading test in K'iche' due to time and budget constraints.
Method
• Quantitative
Techniques
• Official standardized early grade reading test
Source / informants
• Students

	Evaluation question
9	Is there a notable difference in third and sixth grade literacy scores based on the number of years that schools have used the bilingual reading comprehension methodology *Kemom Ch'ab'al*?
Criteria	
• Impact	
Answer	
No, in this midterm evaluation, test results do not show any difference in third and sixth grade reading scores in schools with more years of use of the *Kemom Ch'ab'al* methodology. This evaluation was unable to measure whether students made gains (or not) in K'iche' language because only Spanish language test results were compared. No reading comprehension test was administered in K'iche' because the Ministry of Education does not have a validated version available for third and sixth grade.	
Method	
• Quantitative	
Techniques	
• Official standardized reading tests for third and sixth grade	
Source / informants	
• Students	

	Evaluation question
10	Are there notable longer-term effects on reading comprehension in third grade students that have received the early grade bilingual literacy methodology *Jardín de Letras* in 2017 compared to students who did not?

Criteria
• Impact
Answer
No, in this midterm evaluation, test results do not show any difference between third grade students who received *Jardín de Letras* in 2017 and those who did not. This evaluation was unable to measure whether students made gains (or not) in K'iche' language because only Spanish language test results were compared. No reading comprehension test was administered in K'iche' because the Ministry of Education does not have a validated version available for third grade.
Method
• Quantitative
Techniques
• Official standardized reading test for third grade
Source / informants
• Students

11	Evaluation question
	What evidence is there to suggest whether the effects of the various interventions will be sustained beyond the life of the project?
Criteria	
• Sustainability	
Answer	
The factors reported by the internal and external informants indicate a high probability of key project interventions and results being sustainable after project life because of influence and capacity building at different levels. At the national level, advances in the implementation of the National School Feeding Law, supported by Learning for Life and other MGD project implementers in Guatemala, and good relationships with the outgoing and incoming central ministerial authorities, strongly imply the sustainability of the results. Recently, as a result of the influence from the project and other stakeholders, the Ministry of Education has created the national program "Committed to First Grade," which seeks to generate conditions to help students achieve the expected literacy competencies, specifically train first grade teachers and ensure that schools have culturally relevant educational materials. Furthermore, the Ministry of Education has stated interest in reproducing the educational materials of the *Jardín de Letras* methodology in K'iche' and other Mayan languages both within and beyond the project's coverage area.	

At the time of this evaluation, the Ministry of Education was about to pass the National Educational Materials and Texts Program. The project collaborated during the construction of the first drafts.

At the regional level, CRS and its implementing partners are constantly boosting dialogue spaces with the elected municipal authorities and the departmental ministerial structure in Totonicapán. The accompaniment of the project to the development of the Municipal Intercultural Education Policy, passed by the Mayor of Totonicapán, is another promising factor that points towards project's results sustainability since the policy helps designate funding and municipal efforts toward different areas of education in Totonicapán municipality, prioritizing reading comprehension as a fundamental educational area.

At local levels, the project has advanced significantly in capacity building for volunteer parents, teachers and school principals.

With these advances, it will be key to continue to strengthen the scale-up of the National School Feeding Law, particularly in regards to production planning, certification of local producers and streamlining processes between government ministries. To better sustain advances in bilingual literacy, the project should also continue to push for policies that support bilingual materials creation and distribution, as well as continue to train teachers and Ministry of Education officials on bilingual literacy methodologies and school administration skills.

Method

- Qualitative

Techniques

- Focus groups
- Interviews

Source / informants

- USDA staff in Guatemala
- Ministry of Education departmental staff
- Volunteer parents
- School principals
- Teachers
- CRS, PSC and PRODESSA project staff

12	**Evaluation question**
	What factors were key to eliciting community support/involvement?

Criteria

- Sustainability

Answer

The Learning for Life project was able to harness the already existing culture of volunteerism in most communities of Totonicapán department, which has been a key factor for the involvement and support of community members.
Method
• Qualitative
Techniques
• Focus groups • Interviews
Source / informants
• Ministry of Education departmental staff • Volunteer parents • School principals • Teachers • CRS, PSC and PRODESSA project staff

8 Midterm evaluation findings

The midterm evaluation measures 11 outcome indicators as part of the Learning for Life project's performance monitoring plan (PMP). This section presents the midterm values, compares them with the baseline values and describes the main quantitative and qualitative findings. (Annex 4 includes a table integrating the values of all indicators.)

8.1 Literacy indicators

Since the baseline, the General Directorate for Educational Evaluation and Research (DIGEDUCA - the branch of the Ministry of Education in charge of research and the national standardized tests) granted permission to the Learning for Life project to use the national standardized reading tests in early grades (first and second), third and sixth grades of primary school, under a strict confidentiality agreement. Use of the national standardized tests in baseline, post-test, midterm, and final evaluations allows the project to compare student reading outcomes to the competencies that the Ministry of Education believes students of those grades should develop, according to the National Base Curriculum.

Using a longitudinal approach, the same cohorts of students evaluated in the baseline at the beginning of the 2018 school year were also assessed by the project at end of the school year with the same standardized reading tests. For this reason, the literacy indicators are presented with three datapoints, referred to as: baseline (March 2018) , post-test (September 2018) and midterm (September 2019); whilst the rest of indicators are presented with two datapoints (baseline and midterm).

During the baseline, post-test and midterm evaluations, the external evaluator adhered to the Ministry's methodology and protocols. Prior to enumerator training and midterm data collection, the main researcher, coordinators and team supervisors attended a workshop

conducted by the DIGEDUCA, to reinforce their enumerator training skills, and ensure correct application and management of the standardized tests.

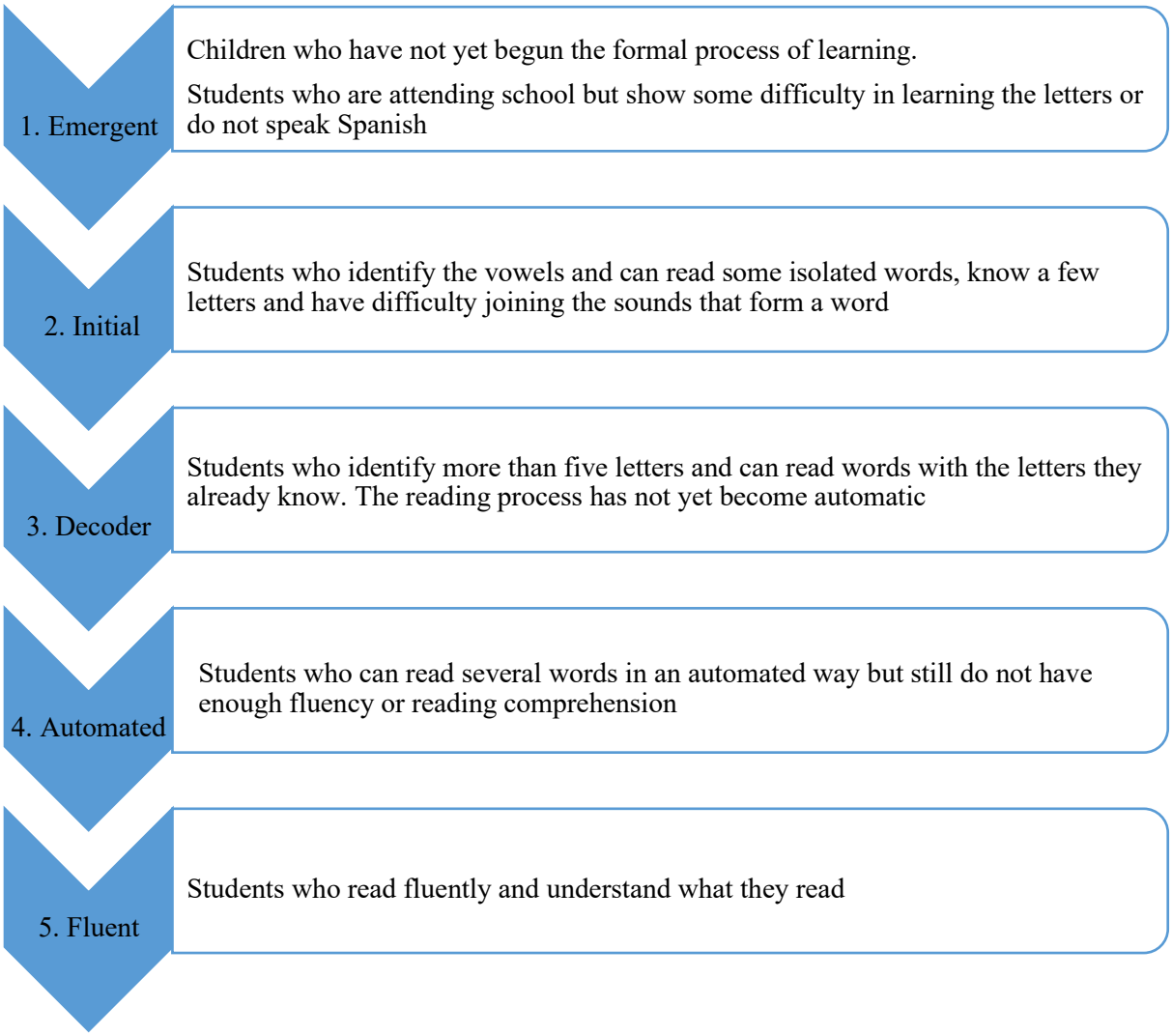
The external evaluator team developed digital forms using the software Tangerine, validated by the DIGEDUCA, for the one-on-one administration of the early grade reading tests. The tests for third and sixth grade were self-administered with printed forms distributed to students and double digitized in order to minimize data entry errors.

The scoring process was done by the DIGEDUCA to ensure compliance with their standard procedures and validity of results. Data analyses were conducted by the external evaluator's team, and the databases were shared with the DIGEDUCA to also support the government with a wider data sample to be used for national research.

The ELGI test (Spanish-language adaptation of the Early Grade Reading Assessment created by the Ministry of Education of Guatemala) was applied to a sample of first and second grade students. According to the Ministry of Education, the ELGI test is applicable to "early grades," which in Guatemala are considered first through third grade. The Ministry of Education also created a model to both explain and predict how students learn reading skills. Once the midterm evaluation tests results were scored by the DIGEDUCA, the Ministry of Education model was then applied to interpret results. The reading prediction model categorizes students into one of five stages of learning. When developing the model, the researchers determined that some reading skills predict which reading skills will be learned next. For example, knowledge of letter names and sounds, and phonological awareness predict the ability to decode; decoding predicts fluidity; and the latter predicts reading comprehension. (Cotto & Del Valle, 2017)

Figure 2 provides a short description of each stage. Cotto & Del Valle (2017) present a more detailed description (p. 26-30).

Figure 2 Stages in the model to explain and predict how students learn to read

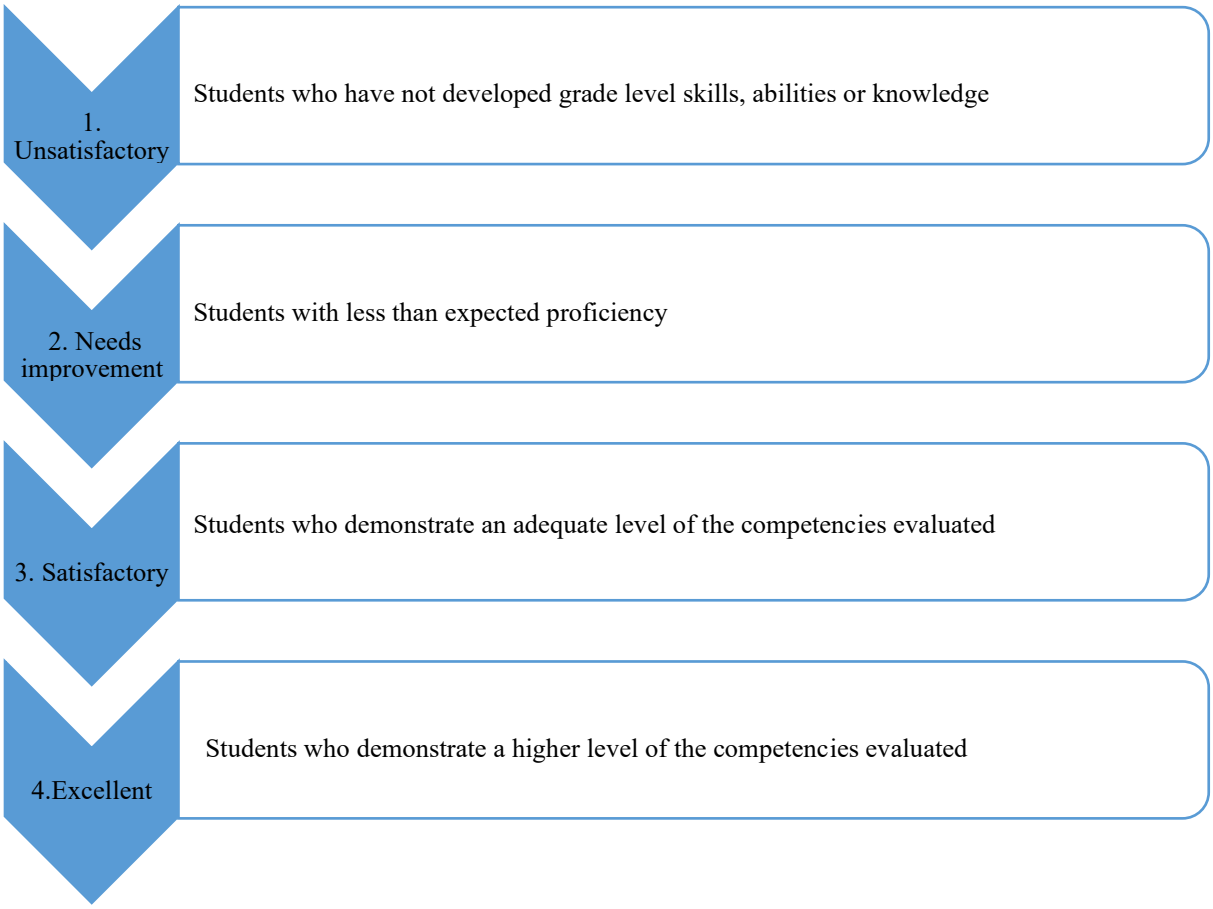


Source: own elaboration with data from Cotto & Del Valle, 2017

The national standardized reading comprehension tests at grade level were applied to third and sixth graders. Results were analyzed according to the levels of performance and levels of achievement developed by the Ministry of Education in 2006 with the Bookmark Method. The two-stage scoring process first goes through a traditional count of correct responses and then uses data anchoring based on individual question responses for data comparability. (Quim & Santos, 2015, p.12) The midterm evaluation results for third and sixth grades are compared to the prior two datapoints: baseline and post-test.

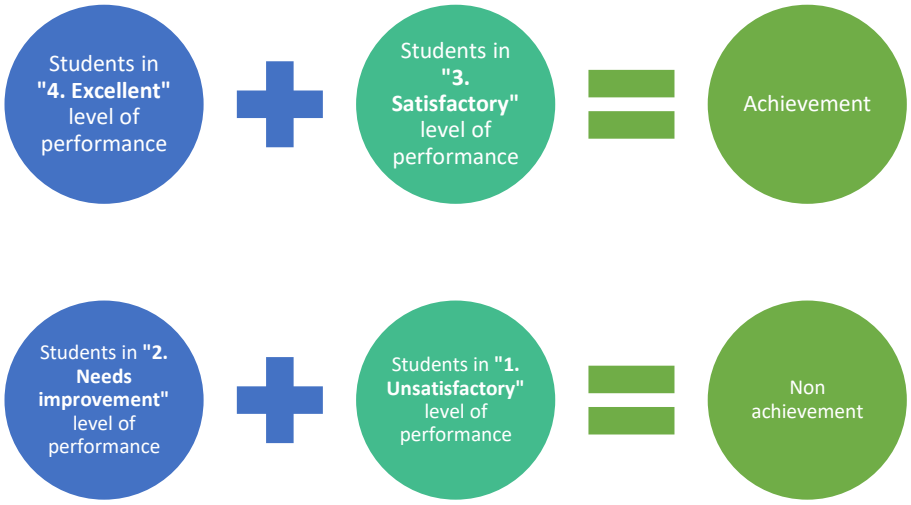
Depending on the test results, each student is categorized into one of four performance levels and into one of two achievement levels (Quim & Santos, 2015, p.13). The figures below display an explanation on these levels

Figure 3 Student's performance levels, according to the standardized reading tests results



Source: own elaboration with data from Quim & Santos, 2015

Figure 4 Student's achievement levels, according to the standardized reading tests results



Source: own elaboration with data from Quim & Santos, 2015

Learning for Life is, through another external consultancy and in parallel with this evaluation, carrying out a special study on the fidelity of implementation of the project's literacy methodologies and the analysis will include the correlation with the results of the official standardized reading tests in order to find possible supplementary explanations.

8.1.1 (Indicator 4) Percent of students who, by the end of one grade of primary schooling, demonstrate that they can read and understand the meaning of grade level text

During the midterm evaluation, a sample of 1,261 first grade students (610 girls and 651 boys) of 135 schools were assessed with ELGI (9 students on average per school). The indicator is measured adding the percentage of students in stages "4. Automated" and "5. Fluent" of the Ministry's model.

The midterm value for this indicator is 26.6%, surpassing the project's goal of 21.0% for the midterm. The disaggregation by sex is 28.2% for girls and 25.0% for boys, showing a slight advantage for girls that is not maintained for the other grades assessed.

Table 5 Historical values of indicator 4: Percentage of first grade students who demonstrate reading skills at grade level

Baseline value (March 2018)	Post-test value (September 2018)	Midterm value (September 2019)
1.7	21.9	26.6

Source: Learning for Life evaluation database

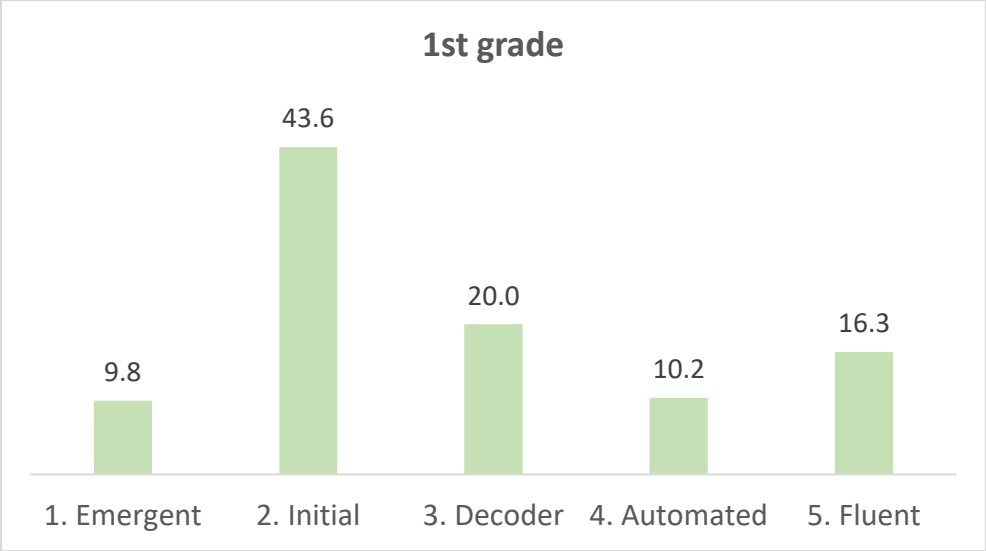
The post-test (21.9%) and the midterm values (26.6%) were collected at the end of the school year, consequently they are comparable, registering an increase of 4.7% in one calendar

year. The baseline value (1.7%) was collected at the beginning of the 2018 school year, when first grade students would still likely have low first grade reading competencies.

Some teachers recognize the various contributions of the Learning for Life project, such as its bilingual literacy methodologies, reading materials distribution, teacher and principal training and accompaniment. A female teacher in San Andrés Xecul municipality mentioned, "I indeed realize that the tools are useful and that children like them and want to learn more. I feel motivated to apply techniques that I learned, books are practical tools that help children a lot, because now they can read and also understand what they read." A male school principal in Totonicapán municipality expressed that teachers in his school, "are very happy because we are seeing the change. Now children learn to read faster. We are applying the techniques, guides and practical and dynamic exercises that help children ... in the past fewer children learned to read."

Graph 1 shows the distribution of assessed students in the five stages of learning to read. The frequency distribution is consistent within the four treatment groups. No statistical differences were detected in the results of the different intervention groups. This suggests that no advantages were detected for groups that had the *Jardín de Letras* treatment compared to groups that had the *Kemom Ch'ab'al* reading comprehension methodology.

Graph 1 Percentage of first grade students in each of the five stages of learning to read



Source: Learning for Life midterm evaluation database

The distribution of children among the five stages in the midterm is very similar to the post-test 2018 results and the results for the public sector at national level in 2014 (the most recent year that the Ministry of Education's data is available on national standardized testing.), denoting that there is a trend for first grade students to remain in the first two stages of learning, even after completing their first year of primary schooling. According to the Ministry of Education, that situation could be closely related to teaching practices. (Cotto & Del Valle, 2015, p.30-31) Similarly, the way teachers are assigned to first grade, often as a punishment or as a space for new teachers, may also influence first grade results. Del Valle & Mirón (2017) made a special study to characterize the first-grade teachers' profile in the public sector and found that just 50% teachers surveyed had been assigned to first grade voluntarily. To address this issue, the new official program "Committed to First Grade" intends to eliminate non-standardized

methods of assigning teachers in schools, providing a profile with the competencies that first grade teachers should meet.

Annex 3 includes a comparative table of the average reading skills of children assessed with ELGI in each of the three datapoints of Learning for Life evaluation (baseline, post-test and midterm), according to the constructs described by the Ministry of Education to explain the structure of the test. The values of the reading skills variables included in that table are consistent with the stages of learning the students were in.

8.1.2 (Indicator 5) Percent of students who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text

A total of 1,245 second grade students (634 girls and 611 boys) of the same 135 schools were also evaluated with ELGI (9 students on average per school). Just like for first grade, the percent of second grade students in the last two learning stages were summed for this indicator's measurement.

A representative sample of this cohort was also assessed during baseline and post-test in 2018 when they were in first grade. This allows the project to better understand how students of early grades in target schools are learning to read and developing essential reading skills for the upcoming school years. Table 6 presents the longitudinal results.

Table 6 Percentage of students in the cohort 1st grade 2018 / 2nd grade 2019 who demonstrate reading skills at grade level

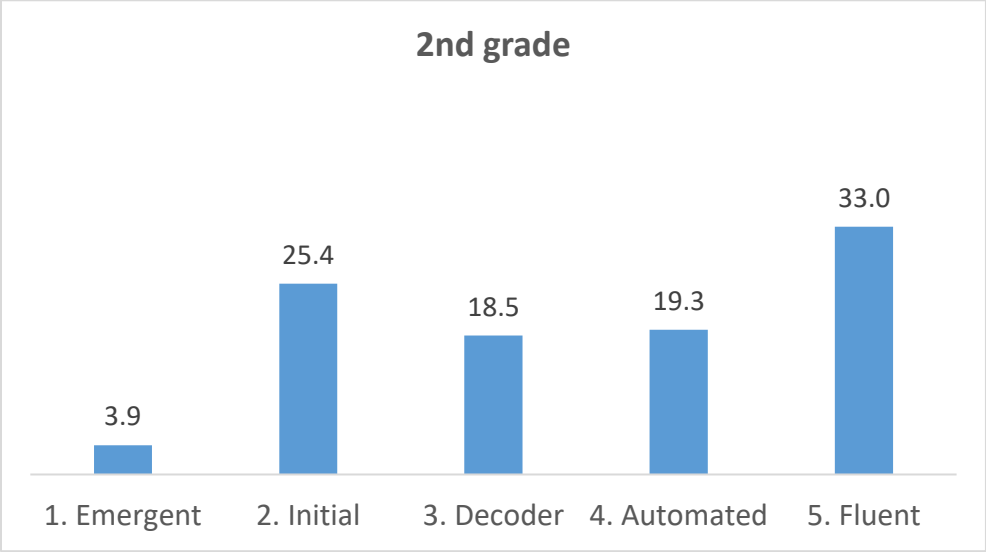
Beginning of 1st grade (March 2018)	End of 1st grade (September 2018)	End of 2nd grade (September 2019)
1.7	21.9	52.3

Source: Learning for Life evaluation database

For second grade students, the midterm value for indicator 5 is 52.3%, surpassing the midterm goal by 21.3% (the project's midterm goal is 31.0%). The disaggregation by sex is 52.7% for girls and 51.9% for boys, suggesting a balanced performance for both genders.

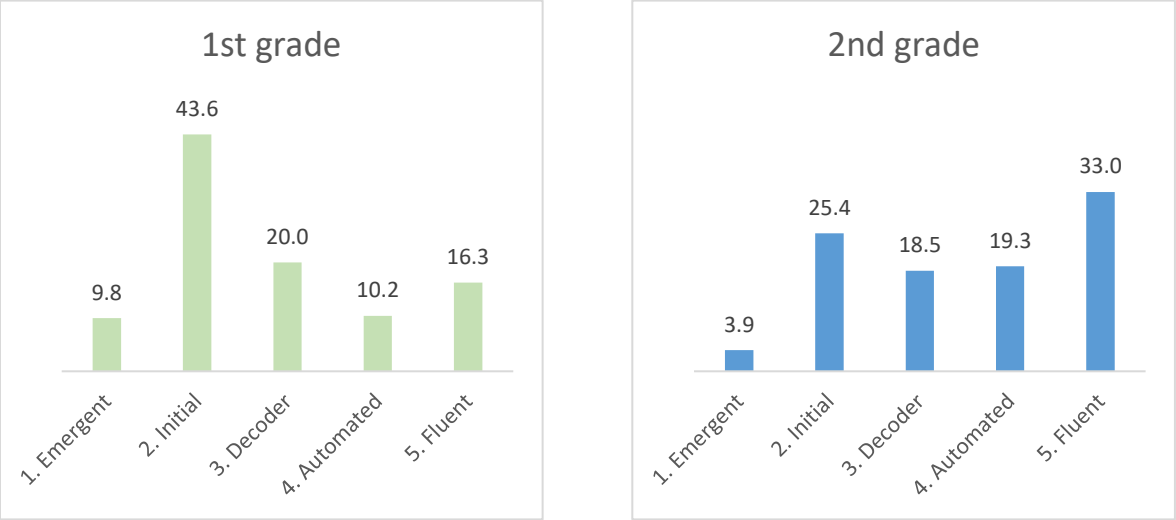
Graph 2 shows the distribution of students in the five stages of learning to read and graph 3 compares first and second grade results for this midterm evaluation.

Graph 2 Percentage of second grade students in each of the five stages of learning to read



Source: Learning for Life midterm evaluation database

Graph 3 Comparison between first and second grade 2019 literacy results



Source: Learning for Life midterm evaluation database

Logically, students should follow a natural learning progression for reading skills, which is also explained by the gradual movement of the students toward the last stage (5. Fluent). But, almost a half of the second grade students are still not achieving an adequate level of fluency and nearly a third of them seem to be stagnated in the first two stages of learning, despite two years of primary schooling. Data suggest a kind of bottleneck in stage three which is consistent with a special study done by PRODESSA in ten participant schools in the 2018 school year. (Paz, 2018) This study suggests that most early grade teaching practices focus on decoding and mechanical writing, rather than on developing reading fluency, creative expression, or other important literacy building blocks.

Nevertheless, various informants want to see a gradual improvement of reading skills. During focus groups, for example, some teachers indicate that there seems to be more interest in

reading than before the project. They recognize the benefits of the training and the books distributed by the Learning for Life project and some materials distributed by the Ministry of Education.

8.1.3 (Indicator 6) Percent of students who, by the end of three and six grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text

During midterm data collection, the official standardized reading tests for third and sixth grade were applied to 3,488 students (3rd grade: 909 girls and 930 boys, 6th grade: 809 girls and 840 boys.)

As mentioned earlier and according to the Ministry's model, the value of this indicator was obtained from the percentage of children who attain achievement (levels three and four of the model). This indicator aggregates the percentages for third and sixth grades for a total of 19.9%, which is 3.9% higher than the midterm goal (16.0%), and 3.2% higher than one calendar year before.

Table 7 Historical values of indicator 6: Percentage of third and sixth grade students who demonstrate reading skills at grade level

Baseline value (March 2018)	Post-test value (September 2018)	Midterm value (September 2019)
8.3	16.7	19.9

Source: Learning for Life evaluation database

Table 8 presents a disaggregation of the historical values of this indicator by grade and sex. There are no statistically significant differences between girls' and boys' performance. Data for sixth grade suggests a consistent trend of lower reading achievement at grade level compared to the National Base Curriculum's expected competencies.

Table 8 Historical percentage values of indicator 6: Percentage of third and sixth grade students who demonstrate reading skills at grade level, by grade and sex

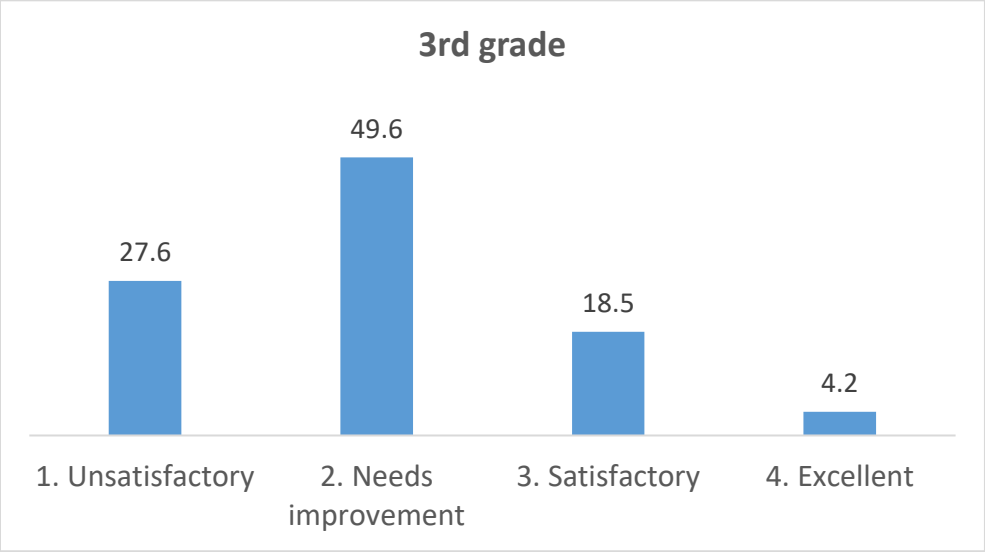
Grade	Baseline value (March 2018)		Post-test value (September 2018)		Midterm value (September 2019)	
	Girls	Boys	Girls	Boys	Girls	Boys
3rd	8.9	9.7	20.4	18.5	22.9	22.6
6th	7.2	7.1	14.4	13.2	15.9	17.4

Source: Learning for Life evaluation database

The official reading tests for third and sixth grade assess diverse competences and skills at grade level and are therefore not comparable between grades. During test self-administration, students are invited to perceive, compare, analyze, relate, infer, hypothesize, generalize and understand grade level texts. Reading comprehension can occur at several levels and the instruments evaluate the students' literal, inferential and analytical levels (Quim & Santos, 2015,

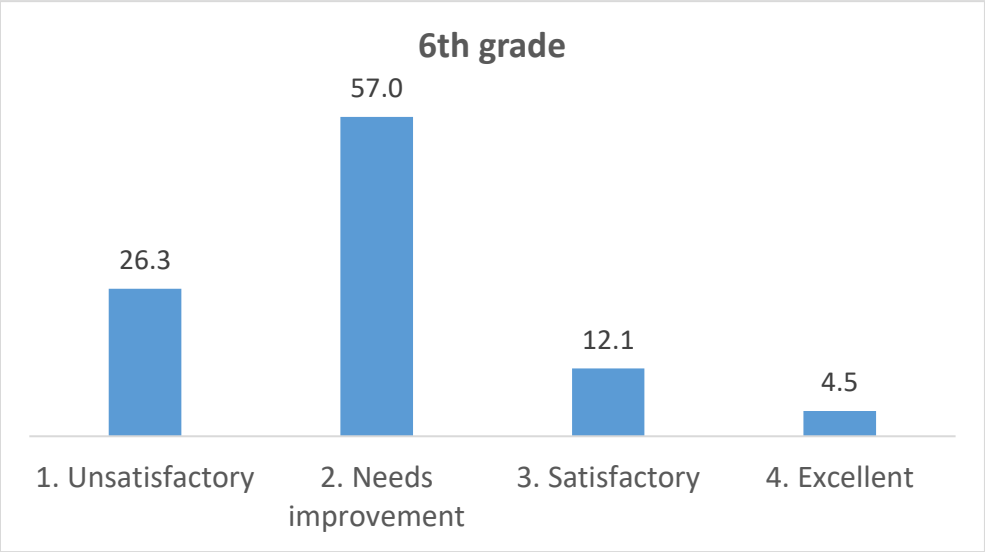
p.11). Graph 4 and graph 5 display the percentage of children of each grade in each performance level. It can be noted that the shape of distribution of students across levels is very similar for both third and sixth grades.

Graph 4 Percentage of third grade students in each of the four reading performance levels



Source: Learning for Life midterm evaluation database

Graph 5 Percentage of sixth grade students in each of the four reading performance levels



Source: Learning for Life midterm evaluation database

In focus groups, some teachers recognized that the application of *Kemom Ch'ab'al* methodology and tools have been very important in supporting students to improve their bilingual reading comprehension skills. A sixth grade teacher expressed, "I work with sixth graders and I have applied the *Kemom Ch'ab'al* reading program, with the book activities in both Spanish and K'iche'. Children are motivated and interested, they also have a workbook to solve the exercises of each lesson, now they are better prepared." Regarding students' reading performance and parental support, another teacher explained, "There are many factors that

influence children's performance in reading. Some children do not have the support of their parents because they are not motivated to read at home and that is reflected in the school. In many cases, parents have few economic resources."

8.2 School personnel techniques indicators

8.2.1 (Indicator 10) Number 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

This indicator value is measured in accordance with the results of the fidelity of implementation special study (carried out simultaneously during the midterm evaluation) which verified how closely a sample of teachers implemented *Kemom Ch'ab'al* and *Jardín de Letras* methodologies as prescribed. The analysis model considered the dimensions of adherence, dose, quality, differentiation and acceptance. The results were obtained from self-administered questionnaires to teachers and principals, short interviews to a random sample of students and the guided observation of a random sample of students' workbooks to check if exercises had been filled out by the student and corrected by the teacher. The model produced a measure for each classroom reflecting how closely the teacher follows the prescribed project methodologies. The spectrum for the measure were divided into four levels of implementation: "1. Not applied properly", "2. Improvement required", "3. Partial implementation" and "4. Proper implementaton."

The midterm value of this indicator (27.1%) was obtained summing the percentage of teachers in levels three and four. This value is below the midterm goal of approximately 38% of teachers demonstrating new techniques and tools as result of the project. Table 9 presents the percentage obtained with the midterm sample and the extrapolation to the total population of teachers in the target area. The baseline value is only for reference as it was obtained with a simpler tool (the baseline tool items were also included in the midterm questionnaire for teachers).

Table 9 Historical values of indicator 10: percentage and number of teachers who demonstrate use of new techniques or tools

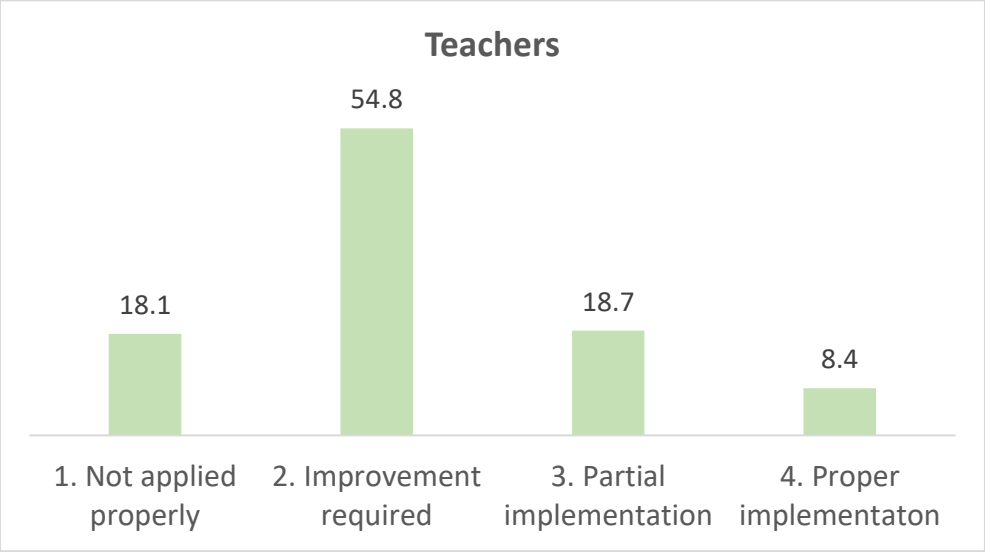
	Baseline value (March 2018)	Midterm value (September 2019)
Percentage of teachers demonstrating new techniques or tools according to the sample	24.5	27.1
Extrapolation to the registered number of teachers in the target area	499 (294 women, 205 men)	535 (375 women, 160 men)

Source: Learning for Life evaluation database

A total of 487 classrooms of the sampled schools were considered to measure this indicator. 57.9% of teachers sampled were women and 42.1% were men, which is consistent with a greater proportion of female teachers in the project's target area. Graph 6 shows the percentage of teachers in each level of implementation. Table 10 below displays the number of

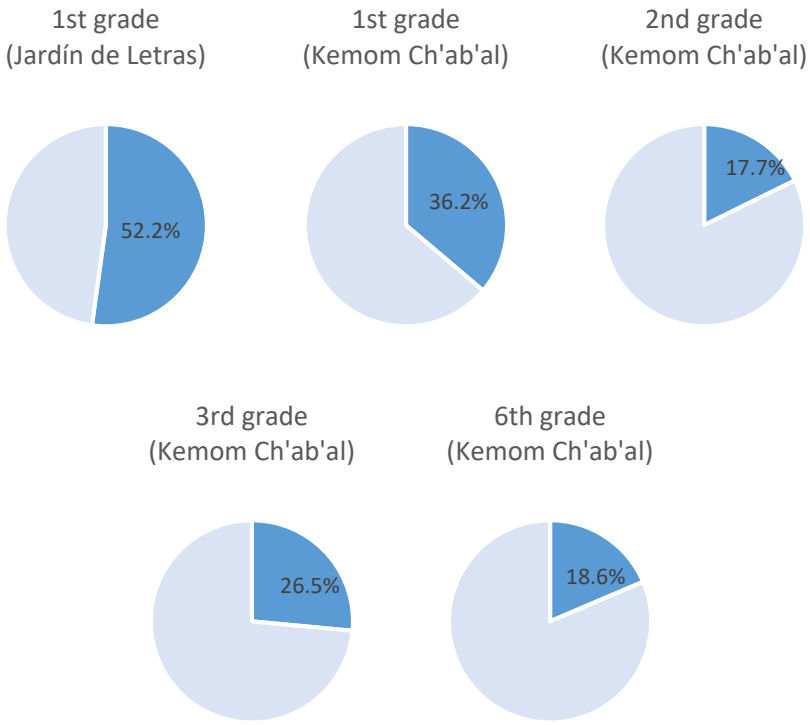
classrooms considered and graph 7 shows the percentage of teachers meeting indicator 10, dissagregated by grade and literacy methodology.

Graph 6 Percentage of teachers in each level of implementation of Kemom Ch'ab'al and Jardín de Letras methodologies



Source: Learning for Life midterm evaluation database

Graph 7 Percentage of teachers using new or improved techniques (levels 3 or 4 of implementation) by grade and literacy intervention



Source: Learning for Life midterm evaluation database

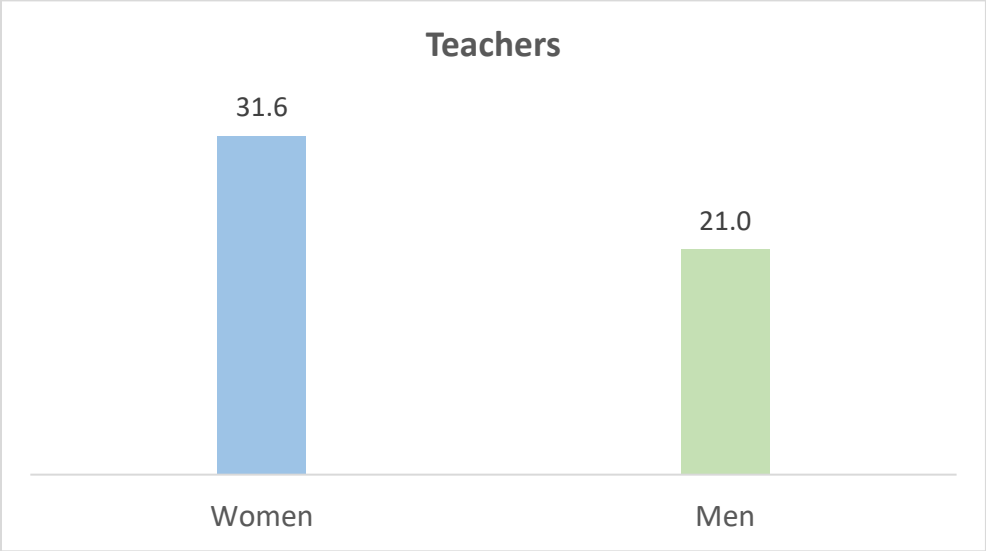
Table 10 Number of sampled classrooms, by grade and literacy intervention

Grade	Literacy intervention	Number of classrooms
1	*Jardín de Letras*	69
1	*Kemom Ch'ab'al*	58
2	*Kemom Ch'ab'al*	130
3	*Kemom Ch'ab'al*	117
6	*Kemom Ch'ab'al*	113
	TOTAL	487

Source: Learning for Life midterm evaluation database

It is interesting to note that data indicate that female teachers tend to use the methodologies as prescribed more than their male counterparts (see graph 8). No associated factors have yet been identified.

Graph 8 Comparative of indicator 10: percentage of women and men using new or improved teaching techniques (levels 3 or 4 of implementation)



Source: Learning for Life midterm evaluation database

Each teacher surveyed was asked to quantify her/his own level of reading comprehension in each language. Data shows an average of reading comprehension of 84.7% in Spanish and 68.2% in K'iche'. Totonicapán's context shows very balanced levels of student verbal bilingualism (K'iche'/Spanish) when students enter school (Mérida & Montúfar, 2016). Teachers' linguistic skills could be factors associated with teaching practices, and these in turn with the reading skills of their students.

All participant teachers in focus groups affirmed that they have applied techniques and tools supported by the project to improve student reading comprehension. A teacher in Santa María Chiquimula municipality highlited, "The program has been very useful for children, because each book is specialized for one grade, … stories in the books increase their interest. Children understand the topics better because they are made for their age ...".

Most teachers believe that the application of *Kemom Ch´ab´al* tools/books is very feasible, because they contain real stories and encourage students to read. Referring to his students, a teacher in Momostenango municipality said, "We have seen that little by little they are adopting a culture of reading that is helping to develop themselves." A teacher in Santa María Chiquimula also declared, "It has been very gratifying to see how children get excited and interested in reading. They are exploring, discovering and building their learning. We have changed from traditional ways of teaching to creative and dynamic methods."

Teachers also noted some barriers to implementing the project's methodologies, which include: time, language and lack of support at home. A female school principal in Momostengango municipality said, "I, as the school principal, can confirm that we all use the Learning for Life reading programs. They are very good. I also work with first graders. Each teacher has their own perspective regarding their experience in the application, although the worst enemy is time." A group of teachers in San Bartolo Aguas Calientes municipality informed that, "According to our experience as teachers, we have observed that there are coworkers who do not master the K'iche´ language and its application is difficult for them. This generates a greater investment of time to understand and apply the methodologies directly with the children they serve". Another teacher in Santa María Chiquimula expressed, "I have always wanted (and I hope it becomes a national level priority) to propose implementing a school for parents, because parents are the starting point."

8.2.2 (Indicator 12) Number of school administrators and officials in target schools who demonstrate use of new techniques or tools as a result of USDA assistance

Data collected suggest a significant increment from the baselinte (from 40.4% to 87.4% of sampled school principals), surpassing the midterm goal of 50%. This indicator was measured using the same tools as in the baseline evaluation.

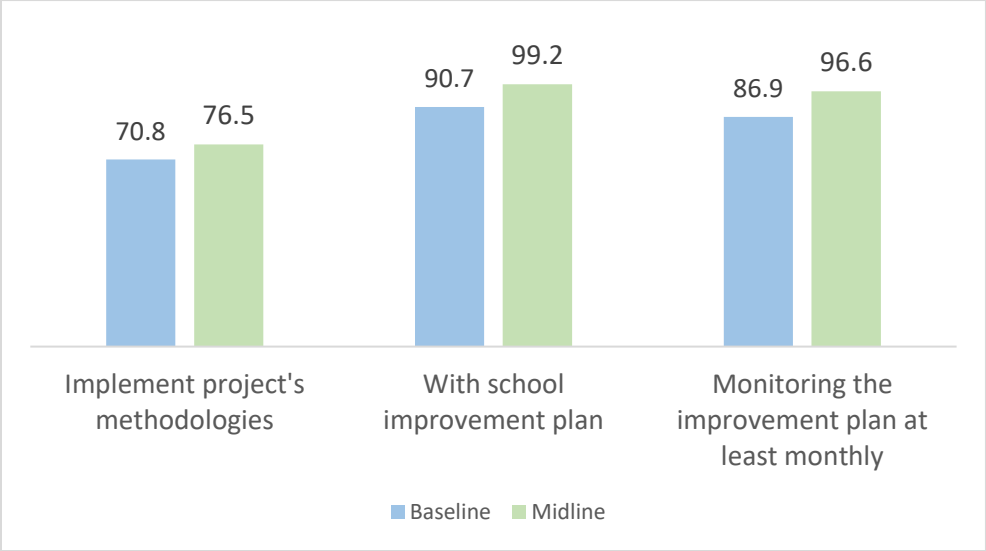
Table 11 Historical values of indicator 12: Percentage and number of school administrators who demonstrate use of new techniques or tools

	Baseline value (March 2018)	Midterm value (September 2019)
Percentage of school administrators who demonstrate use of new techniques or tools according to the sample	40.4	87.4
Extrapolation to the registered number of school administrators in the target area	134 (55 women, 79 men)	295 (127 women, 168 men)

Source: Learning for Life evaluation database

As shown in graph 9, there is an increment from the baseline to the midterm in the use of techniques and tools for school administration supported by the project.

Graph 9 Variables used to measure use of new techniques or tools for school administration



Source: Learning for Life evaluation database

In focus groups, some school principals expressed that the educational tools supported by the project facilitate the teaching-learning process and foment students' interest in reading. A school principal in San Bartolo Aguas Calientes municipality said, "With the Learning for Life project it has been possible to motivate children to improve their fluency and reading comprehension with new techniques and tools."

8.2.3 (Indicator 24) Percentage of DCs, TACs and PAs from the Totonicapán Department of Education that have increased their capacity to fulfill their roles and responsibilities

As of September 2019, Totonicapán Department of Education has 34 supervisors, who use the titles District Coordinator,Technical-Administrative Coordinator or Pedagogical Advisor. These individuals are charged by the Ministry of Education with accompanying and supervising school principals in the Learning for Life target area. Nine of the DC and TAC supervisors were randomly selected and interviewed, and all of them reported an increase in their capacities and the teachers/principals they supervise because of the support of the Learning for Life project. District Coordinators and Technical Administrative Coordinators were prioritized for interviews over Pedagogical Advisors due to their amount of time in their roles (Pedagogical Assistants were newly added in 2019 under new Ministry of Education structuring).

Table 12 Historical values of indicator 24: Percentage of DCs and TACs from the Totonicapán Department of Education that have increased their capacity to fulfill their roles and responsibilities

Baseline value (March 2018)	Midterm value (September 2019)
Reported as zero	100.0

Source: Learning for Life evaluation database

Informants' statements indicate a high level of acceptance and recognition of what the project is doing to push the educational quality in Totonicapán. The following are some textual declarations of the interviewed DCs and TACs:

- "Some activities with the APV project [APV is the Spanish acronym for Learning for Life], such as the different workshops and everything…I can say that they have certainly supported us to fulfill our roles."
- "We appreciate the support given to the Technical Administrative Coordinator, school principals and teaching staff. We have seen favorably the activities and the processes [of the project], in favor of children. All teachers have accepted the project in a very good way and that contributes to improving the quality of education. We are also willing to support the project next year."
- "… thanks to this project the number of students or the enrollment of this year has increased. It has been possible to increase first grade graduation, especially. The training sessions have been well received because of the topics covered."
- "The institution develops training for district principals [administrators], this helps them to improve administrative and management processes in each establishment [school]. The same [principal training] facilitates coordination."
- "… the training for teachers and Pedagogical Advisors improves accompaniment for administrative tasks undertaken by teachers and students in each of the establishments of the district that I manage."

8.3 Student attention span, hunger scale and attendance rate

8.3.1 (Indicator 14) Percentage of students in the classrooms defined as "very attentive" using a scale that defines established criteria

Most teachers in focus groups gave similar opinions to those of a teacher in Momostenango municipality, "Now we have excellent tools and techniques, because they help and motivate children. Now there is more interest in reading. Children are attentive because classes are creative and dynamic. Also, the food given in school helps because children are well fed, pay attention and learn."

Table 13 Historical values of indicator 14: Percentage of students defined as "very attentive"

Baseline value (March 2018)	Midterm value (September 2019)
67.1	75.2

Source: Learning for Life evaluation database

All students assessed with the reading tests were also surveyed regarding attentiveness and hunger. Quantitative data denote an increase in the students' levels of attention in the classroom (75.2%), exceeding the midterm goal of 69.0%, an increasing 8.1 percentage points from baseline.

Similarly to the baseline evaluation, data were triangulated using a scale with a set of criteria. Information came from students' own perception of their attentiveness, teachers' perception of their students' attentiveness, and a guided classroom observation on the day of the

study. Table 14 disaggregates data according to each type of informant. Students' self-perception of their attentiveness was lower than the other two measures. Furthermore, the students' self-perception of their attentiveness seems to be very similar between boys and girls but decreases toward upper grades of primary school (see table 15). This could be due to better self-awareness or knowledge of their environments (time, school subjects, recess, family situations, etc.). Midterm data tools do not include items to further examine the differences between student and teacher perceptions, and observations.

Table 14 Percentage of students defined as "very attentive", by informant

Informant	Baseline value (March 2018)	Midterm value (September 2019)
Students	44.9	59.7
Teachers	75.2	82.8
Observers	81.1	83.0

Source: Learning for Life evaluation database

Table 15 Percentage of students indicating a certain attention level in class, by grade and by sex

Students' perception of attention	Grade				Global		
	1st	2nd	3rd	6th	Girls	Boys	Total
Pays attention all the time	81.0	79.1	50.3	42.8	61.4	58.0	59.7
Pays attention most of the time	5.3	4.2	15.6	28.6	15.2	15.0	15.1
Is easily distracted	8.2	10.1	12.2	12.6	10.3	12.0	11.1
Is always distracted	3.7	4.3	7.9	5.9	5.0	6.6	5.8
Does not know	1.9	2.4	14.0	10.2	8.1	8.5	8.3

Source: Learning for Life midterm evaluation database

Table 16 Percentage of students indicating different feelings at school, by grade and sex

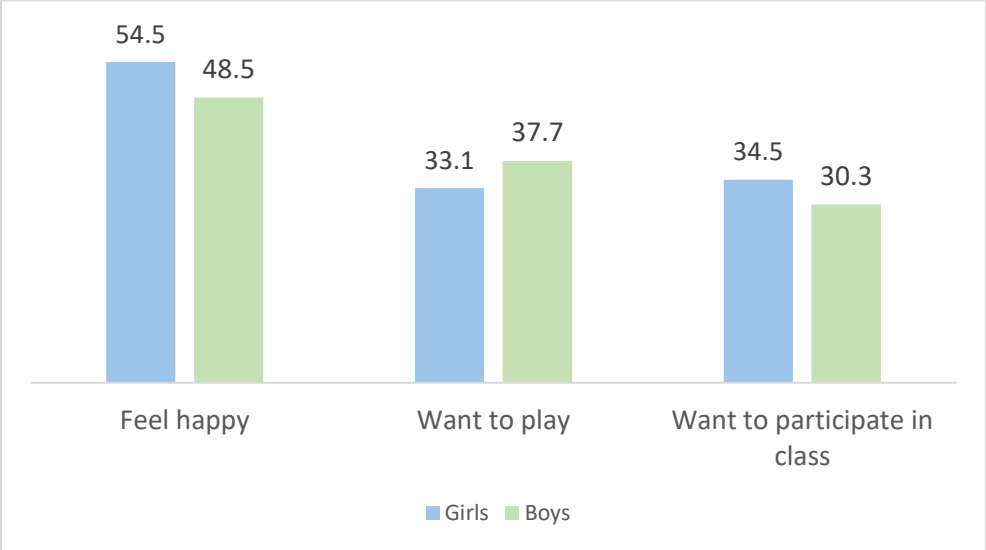
Grade	Percentage of students reporting they feel happy			Percentage of students reporting they want to play			Percentage of students reporting they want to participate in class		
	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
1st	71.3	68.9	70.1	45.7	53.4	49.6	43.7	44.2	44.0
2nd	68.4	68.7	68.6	46.5	48.4	47.4	52.0	46.6	49.4
3rd	45.8	35.0	40.3	26.6	29.8	28.2	26.7	22.1	24.4
6th	43.3	36.7	39.9	22.2	28.9	25.7	24.6	19.5	22.0

Source: Learning for Life midterm evaluation database

Interestingly, as students move through grade school, they seem to feel less happiness and playfulness. Similarly, as students move through the grades, fewer students express wanting to participate in class (see table 16). These findings may well be linked to decreasing attentiveness rates through the grades. Midterm data tools did not include items to further examine this.

As shown in table 16 and graph 10, more girls surveyed reported that they feel happy and willing to participate in class. Conversely, more boys indicated wanting to play in school.

Graph 10 Percentage of girls and boys indicating different feelings at school



Source: Learning for Life midterm evaluation database

8.3.2 (Indicator 15) Percentage of students in participating primary schools who indicate not being hungry during the school day

All parents in focus groups coincided that boys and girls are not hungry when they are at school, because they are provided with food from the project and from the Ministry of Education. They said that school meals are varied and nutritious, and their children have told them that they like the food they receive at school. Some parents expressed that, “The children go to school happy because in addition to learning and playing, they are going to eat” and, “The food given in school has helped a lot, because now they want to go to school." Additionally, teachers said that school meals allow students to pay more attention during the school day. They indicated that, “Children no longer feel hungry when they start classes.”

Quantitative tools collected data from those who feel hunger firsthand: the students. Data were analyzed using the same scale as in the baseline (see table 17). Surveyed students were asked to report if during the school day they felt hungry but also if they experienced hunger related effects, such as sleepiness, illness, sadness or fatigue. The analysis included the students’ attentiveness and variables that indicate the moment of the day the students generally have breakfast.

Table 17 Definition of the hunger scale levels

Category	Level 1	Level 2	Level 3	Level 4
Access to breakfast Score: 40	Had breakfast at home and at school	Had breakfast at home, but not at school	Had breakfast at school, but not at home	Did not have breakfast at school, nor at home
Number of reported effects of hunger (sleepiness, illness, sadness, fatigue, hunger) Score: 30	1 effect	2 effects	3 effects	4 or 5 effects
Student attention results Score: 30	I pay attention all the time	I pay attention most of the time	I get easily distracted	I am always distracted
Level	**Low** **Score 0-25**	**Regular** **Score 26-50**	**Medium** **Score 51-75**	**High** **Score 76-100**

Source: own elaboration

The results suggest sustained regular levels of hunger from the baseline, not reaching the midterm goal of 65.0% of students not being hungry (see table 18). The hunger scale levels in students by grade are presented in table 19.

Table 18 Historical values of indicator 15: Percentage of students who indicate not being hungry during the school day

Baseline value (March 2018)	Midterm value (September 2019)
54.4	52.1

Source: Learning for Life evaluation database

Table 19 Percentage of students in each level of the hunger scale, by grade

Hunger level	Grade				Global
	1st	2nd	3rd	6th	
1. High	0.8	0.4	7.1	5.5	4.5
2. Medium	5.0	5.2	31.1	25.2	19.3
3. Regular	18.1	18.2	24.9	32.8	24.5
4. Low	76.0	76.1	36.9	36.5	52.1

Source: Learning for Life midterm evaluation database

Third and sixth graders seem to be more hungry than younger children. Most of them are in levels two and three of the hunger scale. This could be related to their level of physical activity during the school day, their energy requirements and the school meal serving size. It should also be noted that the percentage of third (83.5%) and sixth graders (87.8%) who indicate to usually having breakfast at home are lower than percentages of first (96.2%) and second (96.6%) graders who usually have breakfast at home.

8.3.3 (Indicator 21) Average student attendance rate in USDA supported classrooms/schools

As mentioned in the baseline report, one of the challenges of the education system at the national level is obtaining daily school attendance records for each student. The Ministry of Education is the only body with the authority to request the records from teachers and many teachers are not willing to permit the project's staff to access their records, therefore measuring a students' attendance indicator had been difficult since the first phase of the Learning for Life project. This fiscal year, the project had access to the updated version of the USDA's indicators manual, which states that the MGD projects must collect data from a representative sample of schools at least twice per reporting period (in the case of Learning for Life, reporting to the donor is on a semi-annual basis).

Learning for Life project's MEAL staff (Monitoring, Evaluation, Accountability and Learning) collected data from 36 schools during the first semester of the 2019 school year and from 29 schools in the second semester. When visiting each school, permission was sought from the principal and teachers to go into the classrooms to count the children present and the data was entered into a digital form for comparison with the number of students officially enrolled according to the Ministry of Education's database (school staff have been very supportive of this procedure). The average attendance rate reported in the project's monitoring system for 2019 is 92.5% (92.6% for girls and 92.0% for boys).

The external evaluation team replicated the student count procedure on the day of the midterm evaluation data collection in each sampled school and obtained an average attendance rate of 89.3%.

The difference between the monitoring system's value (92.5%) and the midterm evaluation's value (89.3%) for this indicator could be due to the fact that the samples of schools were different and that during the evaluation each school was visited only once, while the project makes two or more visits to each school every semester. Yet, both values are very close to the midterm project's goal for this indicator (90.0%).

8.4 Health and nutrition indicators

8.4.1 (Indicator 7) Number of individuals who demonstrate use of new child health and nutrition practices as a result of USDA assistance

The percentage of individuals demonstrating use of new child health and nutrition practices during the midterm evaluation doubles that measured in the baseline (25.9%). The midterm value of this indicator (51.9%) also surpasses the project's midterm goal of approximately 32.8%.

Table 20 Historical values of indicator 7: Percentage and number of individuals who demonstrate use of new child health and nutrition practices

	Baseline value (March 2018)	Midterm value (September 2019)
Percentage of individuals demonstrating new practices according to the sample	25.9	51.9
Extrapolation to the registered number of individuals trained by the project	4,380 (4,205 women, 175 men)	9,672 (8,953 women, 719 men)

Source: Learning for Life evaluation database

There is an important increase in most of the best practices reported or observed at schools the day of the study. The following tables present the percentages for both the baseline and midterm evaluations.

Table 21 Percentage of schools with the following health and nutrition practices observed

Practice	Baseline value (March 2018)	Midterm value (September 2019)
School with dietary diversity +	53.5	99.2
No trash in the classrooms	92.9	96.9
Clean classrooms	90.6	95.3
Weekly planning of menus +	78.2	93.8
Trash cans in the classrooms	87.6	93.8
Schools that distribute meals at the beginning or the middle of the school day +	91.2	93.8
No accumulated trash	88.8	92.2
Clean toilets/latrines	81.8	88.4
Classrooms with hygiene corner	60.0	73.6
Handwashing after using toilet/latrine +	54.7	63.6
Handwashing before eating+	61.8	62.0
Toothbrushing +	45.3	48.8

(Practices marked with '+' are positively weighted into the calculation of the indicator)

Source: Learning for Life evaluation database

Table 22 Percentage of school principals who report health care practices in their schools during the last year

Practice	Baseline value (March 2018)	Midterm value (September 2019)
Deworming	92.2	90.8
Vaccination	18.0	80.7
Delousing	12.5	20.2
Vitamins supplement	7.8	20.2
Vitamin A supplement	18.8	17.6
Basic free medical services	10.9	15.1

Source: Learning for Life evaluation database

The Learning for Life project works with the Ministry of Health and support them with logistics or transporting their staff to conduct municipal health fairs in which the Ministry provides the services shown in table 22.

Table 23 Percentage of schools including each food group in the school meal served the day of the evaluation

Group	Baseline value (March 2018)	Midterm value (September 2019)
Milk and milk products	79.4	95.3
Fruits	44.7	93.0
Sweets (sugar, honey)	88.2	93.0
Vegetables	44.1	90.7
Oil or cream	68.2	89.9
Eggs	34.1	89.1
Varied foods	52.4	84.5
Legumes and seeds	37.1	77.5
Roots and tubers	12.9	73.6
Meats and charcuterie	20.0	69.8
Cereals	62.4	61.2
Fish or seafood	0.0	24.8

Source: Learning for Life evaluation database

Regarding dietary diversity, the midterm data analysis uses the same food group categories as in the baseline. An important increase in access to food in the sampled schools was observed, most likely due to the current implementation of the National School Feeding Law, supported by the project. The average dietary diversity score (DDS) of the school menus and meals served during data collection was 9.4 food groups (out of 12), showing an increment of four points over the baseline. Below is the disaggregation of foods found in school meals served the day of the evaluation (see table 23).

Volunteer parents expressed their opinions about the improvement of child health and nutrition practices in schools: "Before in school we didn't receive much training. There were mothers who didn't know how to prepare food properly and the children got sick. They didn't want the food anymore because their parents told them not to receive it because they got sick." "The trainers of the project tell us that we must put into practice in our homes what we have learned, we do it and now our children get sick less now." "As mothers we feel more secure, because now we prepare the food with a lot of love, because it is for our children, and no one wants them to get sick."

8.4.2 (Indicator 8) Number of individuals who demonstrate use of new safe food preparation and storage practices as a result of USDA assistance

The percentage of individuals demonstrating use of new safe food preparation and storage practices during the midterm evaluation (72.1%) surpasses the baseline value (67.6%) and the midterm goal (68.6%) (see table 24).

Table 24 Historical values of indicator 8: Percentage and number of individuals who demonstrate use of new safe preparation and storage practices

	Baseline value (March 2018)	Midterm value (September 2019)
Percentage of individuals demonstrating new practices according to the sample	67.6	72.1
Extrapolation to the registered number of individuals trained by the project	11,433 (10,747 women, 686 men)	13,437 (12,438 women, 999 men)

Source: Learning for Life evaluation database

As with health and nutrition practices, there is a notable improvement in safe food preparation and storage practices, demonstrated in the table below.

Table 25 Percentage of schools with the following safe food preparation and storage practices observed

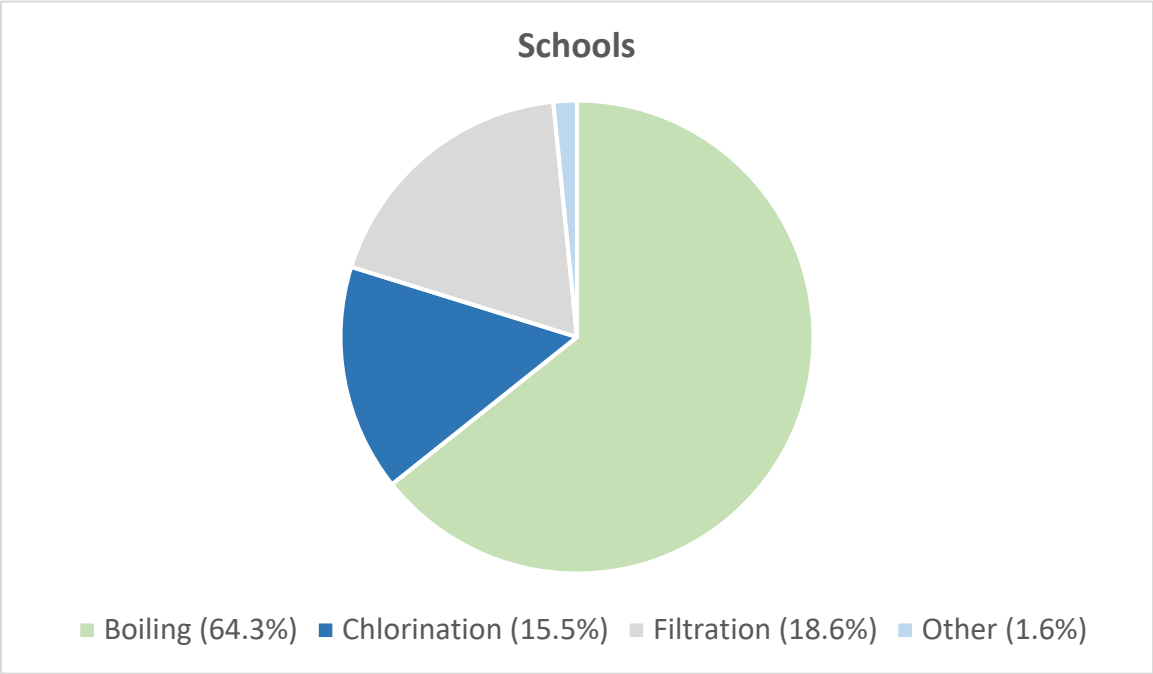
Practice	Baseline value (March 2018)	Midterm value (September 2019)
Washing food before it is cooked +	97.0	100.0
Washing utensils before using them to cook	95.3	100.0
Handwashing before cooking +	94.1	99.2
Wearing aprons to cook	82.9	95.3
Garbage-free kitchen	93.5	94.6
Animal-free kitchen	95.3	93.8
Wearing hairnets to cook	50.6	83.7
Commodity dispatch sheets visible +	48.8	79.1
Kardex (inventory) up to date +	45.2	75.2
Food stored on shelves or inside cabinets +	80.0	73.6
Table for estimating food calculations (per student population) +	45.8	72.9
Food storage facility used exclusively for food +	64.1	70.5
Evidence of rodents or insects -	52.3	24.0

(Practices marked with '+' or '-' are positively or negatively weighted into the calculation of the indicator)

Source: Learning for Life evaluation database

Concerning the access and type of water schools use, interviews with school principals suggest that participants, one way or another, have access to a supply that is sufficient for school population. 91.5% of school principals declared that water supply meets the student populations' needs. Despite these perceptions, however, at least 32.6% of schools do not have access to running water during the school day. Most schools continue boiling water as their main purification method, followed by chlorination and filtration (see graph 11). Two sampled schools reported using other methods, of which they did not report what the other method was that they used.

Graph 11 Percentage of schools using each type of water purification



Source: Learning for Life midterm evaluation database

During focus groups, all volunteer parents confirmed that they have received training on how to prepare and store food, learning nutritious recipes to cook in schools that they can also prepare at home. Parents recognized the importance of hygiene when preparing food. Some mothers said that preparing food requires a lot of work, but that they are rewarded when they see that their children are well fed and nourished.

Additionally, parents expressed their joy because training in health and nutrition practices has helped them a lot. They now pay attention to the expiration date of some foods, which they did not know before. A mother in Momostenango municipality said, "We have received various trainings, for example on how to safely store food, review the effective dates of products, water treatment, the importance of boiling water, hygiene in food preparation and how to avoid food contamination."

Most parents expressed that children enjoy food and they are happy to see that their children are growing up healthy and learning. A volunteer father expressed, "Every day we make different meals, they are very nutritious and children like them very much. In the school there is a menu for each day, the weekly menu is posted on the wall; thanks to the training we receive now we can make many recipes and the children are not bored."

What the parents expressed was very consistent with the training they have received from the Learning for Life project on improving their knowledge and practices of food preparation, hygiene, health and nutrition. All parents expressed that now they have knowledge about proper food handling, preparation and distribution according to the type of menu.

9 Midterm evaluation conclusions

The external evaluator, ADOC, finds, through triangulation, that the Learning for Life project actions adequately support the achievement of intermediate results and strategic objectives.

Regarding the key elements in the theory of change of the project: a) improved school attendance, b) improved child nutrition and c) improved reading instruction, the evidence suggests that important progress has been made towards these components. Particularly, there has been great progress made in improving school attendance and child nutrition, while improving reading instruction seems to be occurring at a slower pace.

The conclusions and recommendations below are organized in relation to the indicators analyzed in the findings section. This set of conclusions extends the answers for the evaluation questions presented earlier in this report.

9.1 Conclusions on the literacy indicators

- Data show progress in the literacy indicators for all assessed grades. In one calendar year, the literacy indicators rose: 4.7% in first grade, 3.3% in third grade and 2.9% in sixth grade (second grade data was not yet collected in baseline or post-test). All literacy indicator values surpassed the midterm goals.
- Teachers, principals, parents, and Ministry of Education officials alike recognize that the Learning for Life project has contributed to improving student literacy skills in target schools.
- Data of where students fall in the reading prediction model (first and second grade) and reading performance model (third and sixth grade) show the same distribution frequencies as the results of the Ministry of Education's national sample from 2014 (the most recent year Ministry of Education data is available at the national level).
- There are higher percentages of students at the first three of the five stages of learning to read (1st grade: 73.4%, 2nd grade: 47.8%), therefore, by the end of the second grade of primary school almost half of the students have not yet achieved the fluency and comprehension skills expected by the Ministry of Education, which is a sign that educational practices need to be changed as several studies suggest that the initial grades define the future trajectory of students (Del Valle & Mirón, 2017).
- There are higher percentages of students at the two lowest of the four reading performance levels for the upper grades assessed (3rd grade: 77.2%, 6th grade: 83.3%). Project data and Ministry of Education data both consistently show that sixth grade students struggle more to meet grade level reading competencies, compared with lower grades. This may be because the higher grades have a greater academic load and teachers tend to spend less time on the reading course, so it is important to promote that students receive more support and use more time at home and in school to practice reading.

9.2 Conclusions on the school personnel techniques indicators

- Teachers, school administrators, supervisors (DCs and TACs), and key personnel of the Departmental Ministry of Education of Totonicapán recognize and welcome the Learning for Life project. This has been a key factor for success to date and could be key to achieving and sustaining results.
- The percentage of teachers who implement the project's literacy methodologies as prescribed (27.1%) is lower than expected (the midterm goal is 759 teachers, approximately 38% of total teachers in coverage area). Qualitative data indicate that teachers and school principals accept the methodologies and recognize their effectiveness, though quantitative data from surveys and direct observation suggest a low fidelity of implementation. Various teachers expressed that some of the barriers that have prevented them from implementing the methodologies are lack of classroom time, linguistic challenges (regional variations of K'iche' or Spanish monolingual teachers) and lack of support at home. Following the overall theory of change of the Learning for Life project, it is inferred that achieving greater fidelity of implementation means improved literacy instruction skills that should result in children's reading skills improvement; therefore this is an important aspect that the project may consider for strategic decision making.
- Principals using new school administration techniques and tools increased by 47% compared to the baseline, and all the educational supervisors (DCs and TACs) interviewed stated that the project's support has contributed to improving their skills in fulfilling their roles and responsibilities, which is very positive as they are all key actors in the success and sustainability of the project's results.

9.3 Conclusions on the student attention span, hunger scale and attendance rate

- Student attentiveness is perceived as better by teachers (82.8%) and external observers (83.0% - by ADOC team) than students self-perception of their attentiveness (59.7%). Student self-perceptions of attentiveness also fall as students move through primary school (1st grade: 81.0%, 2nd grade: 79.1%, 3rd grade: 50.3%, 6th grade: 42.8%). The situation could be related to emotional factors since third and sixth graders manifest in lower percentages of positive feelings at school, such as happiness (1st grade: 70.1%, 2nd grade: 68.6%, 3rd grade: 40.3%, 6th grade: 39.9%), desire to play (1st grade: 49.6%, 2nd grade: 47.4%, 3rd grade: 28.2%, 6th grade: 25.7%) or desire to participate in class (1st grade: 44.0%, 2nd grade: 49.4%, 3rd grade: 24.4%, 6th grade: 22.0%).
- The levels of hunger sensation during the school day are similar to the baseline and indicate that most of students feels low (52.1%) and regular (24.5%) hunger levels. It is likely that the food donated by the Learning for Life project and food bought with Ministry of Education funds under the National School Feeding Law may help assuage high hunger rates. Between 3.2% and 16.5% of students do not eat breakfast at home, which may also suggest why student hunger sensations have not improved since baseline. Additionally, students received school meals at baseline, as well as at midterm, likely leading to similar percentages of hunger sensations.

- The percentages of students feeling medium or high levels of hunger sensation during school day increase in third and sixth grades (1st grade: 5.8%, 2nd grade: 5.6%, 3rd grade: 38.2%, 6th grade: 30.7%), which could be related to their activity levels, caloric needs, or the ration size being served.
- The headcount of students in the classroom on the day of the evaluation (89.3%) compared with the Ministry of Education's enrollment data is similar to project's monitoring data (92.5%) for the average school attendance rate. It is evident that current attendance in participating schools is high.

9.4 Conclusions on the health and nutrition indicators

- There is a notable increase in health and nutrition practices applied in sampled schools. The most observed practices are high dietary diversity (99.2%), the absence of garbage in classrooms (96.9%) and clean classrooms (95.3%). While the least observed practices (similar to the baseline) are children washing their hands after using the toilet/latrine (63.6%), washing their hands before eating (62.0%) and brushing their teeth after eating (48.8%).
- The midterm evaluation also demonstrates an increase in dietary diversity in schools (average DDS incremented from 5.4 in the baseline to 9.4 in the midterm – from a total of 12 food groups), closely related to the fact that the National School Feeding Law now mandates that schools cook nutritionally balanced menus (as of 2019 school year).
- Access to water seems to be a solved problem for most schools. The majority of school principals (91.5%) are of the opinion that the water supply is sufficient for the school population. This may be a contributing factor in improved health and nutrition practices. However, given that 32.6% of schools do not have regular access to running water during the school day, there may also still be a need to improve water access.
- There was an observed increase in safe food preparation and storage practices at midterm. The most observed practices are washing fruits and vegetables before cooking (100.0%), washing utensils before cooking (100.0%), and volunteer parents washing their hands before cooking (99.2%). The least observed practices are regular Kardex (inventory) control (75.2%), food stored on shelves or inside cabinets (73.6%), the use of tables to estimate the proportions for food preparation according to the number of students (72.9%) and the existence of spaces used exclusively for food storage (70.5%).

10 Midterm evaluation recommendations

Based on the findings and conclusions discussed in this report, the external evaluator team suggests the following set of recommendations in order to plan and prioritize important actions that can be implemented in the remaining two years of the project.

10.1 Recommendations on the literacy indicators

1. Improve the awareness of early grade teachers through trainings and Ministry of Education accompaniment about early grade teachers' key roles in helping students

acquire their first literacy skills – and how those literacy skills are used as building blocks for the rest of their academic journeys.

2. Improve effectiveness or increase pedagogical accompaniment for first and second grade teachers in the moments that they are working on phonological awareness and decoding skills, as a first step towards improving achievement in early grade reading, without losing sight of activities that also support fluency and understanding.
3. If financially feasible, continue with the longitudinal study of the cohort 1st grade 2018 – 2nd grade 2019 - 3rd grade 2020 to contribute towards the USDA's and DIGEDUCA's body of research model that explains and predicts students reading acquisition skills.
4. Refine the project's strategy for helping make better use of the methodologies, materials and support provided by the project, taking into account the identified barriers of time, linguistic skills and lack of support for reading at home.
5. If financially feasible, do a special study to assess why sixth grade students have lower reading performance, and use the findings to support a change in teacher training or accompaniment for the grade.

10.2 Recommendations on the school personnel techniques indicators

6. Deepen the analysis of the variables from the fidelity of the implementation study to understand the causes of the low levels of implementation and construct an action plan to increase the level of teacher commitment. Leverage the local structure of the SINAE (Spanish acronym for National Educational Accompaniment System) to help coach teachers and improve commitments.
7. Ensure that school principals and PTAs have access to resources (databases, maps) that can help them solicit support from local organizations or municipal structures.

10.3 Recommendations on the student attention span, hunger scale and attendance rate

8. Better study the decrease in the positive feelings in third and sixth grades students, which could be related to factors such as their home situations, interest in their own education, family economic situation, emotional development or bullying.
9. Due to a greater feeling of hunger during the school day detected for older students, it is recommended to assess whether their nutritional needs are being covered with the school rations sizes being served. Based on the results, the project may consider working with the donor to reassess the end line goal for this indicator.

10.4 Recommendations on the health and nutrition indicators

10. According to the midterm evaluation results, it is important that the project focuses on increasing health practices as follows:
    - During the training of participants, specifically reinforce the importance of proper handwashing before eating and after using the toilet/latrine.
    - Supporting participant schools to maintain the practice of water purification for consumption and food preparation.

- Seeking alliances with local actors to donate toothbrushes and toothpaste to increase this practice in target schools.

11. Establish in what ways the project will support schools to maintain and improve the dietary diversity they have already achieved, according to the guidelines of the Ministry of Education, and increasing schools' local purchasing capacities, for example, through the food fairs organized by the project.
12. Determine and implement practical ways to support standardization of food proportion practices during preparation in accordance to the number of students in each school.
13. Explore the possibility of certifying volunteers trained in safe food preparation. For this, certification or endorsement by the Ministry of Education, the INTECAP (Technical Institute for Training and Productivity in Guatemala) or by other related entity could be sought. This measure would support the empowerment and dignification of the service of volunteers and could help them to be considered by other organizations working on the same topic, in support of sustainability.

10.5 Recommendations on sustainability

14. Meet with the Ministry of Education authorities of the incoming government to explain the details of the project implementation and to align with their priorities.
15. Strengthen the actions of the Municipal Education Office and promote the formulation and implementation of municipal education policies for the other five municipalities covered by the project, in addition to Totonicapán municipality.
16. Explore the local geopolitical environment to determine opportunities for influence and sustainability with the organization of the "*48 Cantones*[4]," due to the strong adherence from communities in the target area of the project to that organization.
17. Set the deadline to begin with the implementation of the project's sustainability plan.
18. Produce documentation that establishes what concrete actions of the project are aligned with government policies at different levels, what government materials have been adapted or could be adapted by the project and what materials the project has transferred or plans to transfer to the government or other organizations.
19. Strengthen the capacities of TACs and PAs under the Ministry of Education's SINAE initiative to closely monitor the implementation of the project's methodologies.

[4] "*48 Cantones*" is an organization of community authorities of Maya-K'iche' populations in Totonicapán department that promotes compliance with ancestral and community principles in public administration. The board of directors is integrated by community mayors from all municipalities of the department. (http://48cantones.org/)

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12 Annexes

12.1. Annex 1: Learning for Life project – Results framework

12.2. Annex 2: Learning for Life Project's Literacy Methodologies

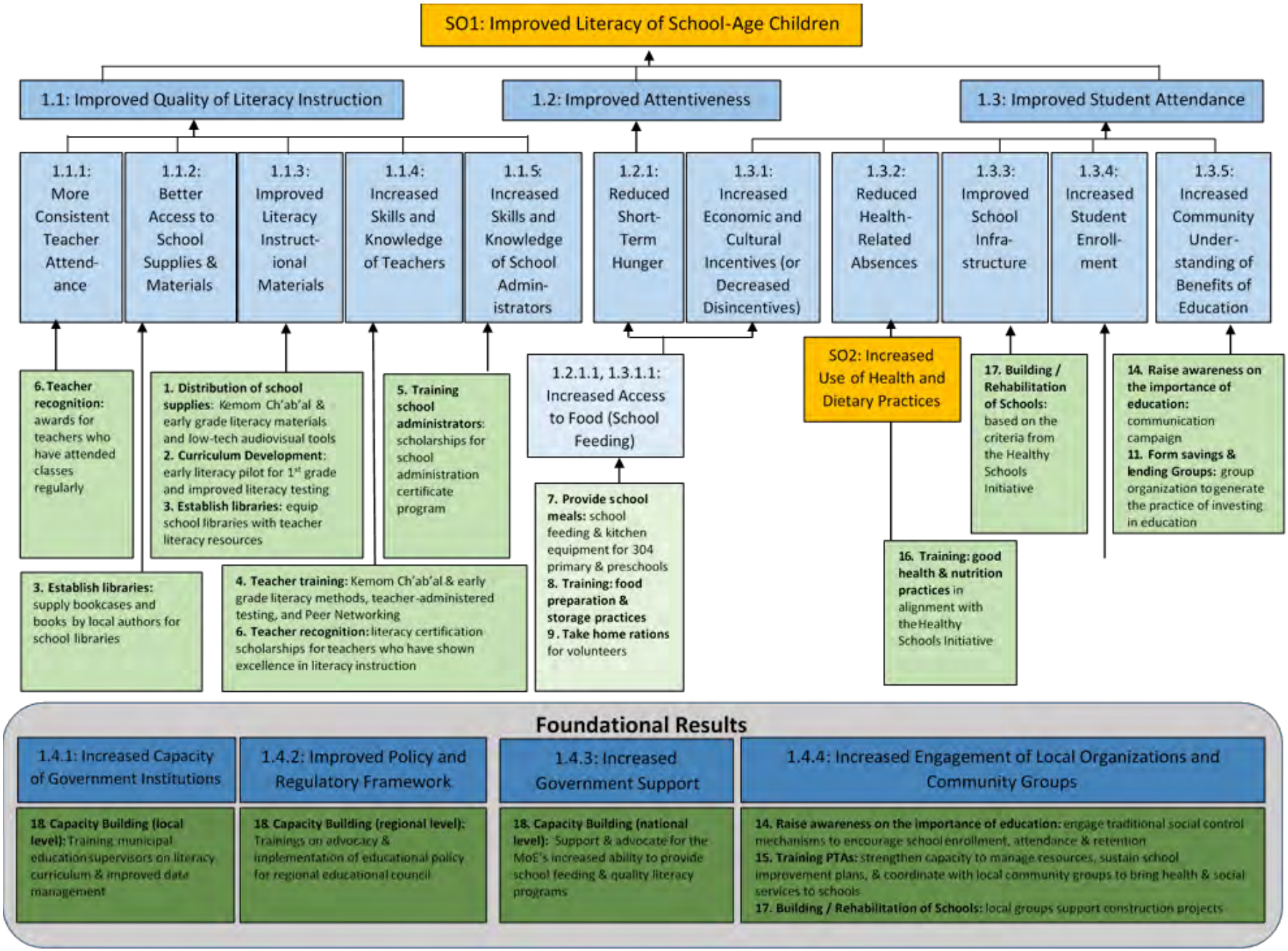
12.3. Annex 3: Reading skills of children assessed with ELGI

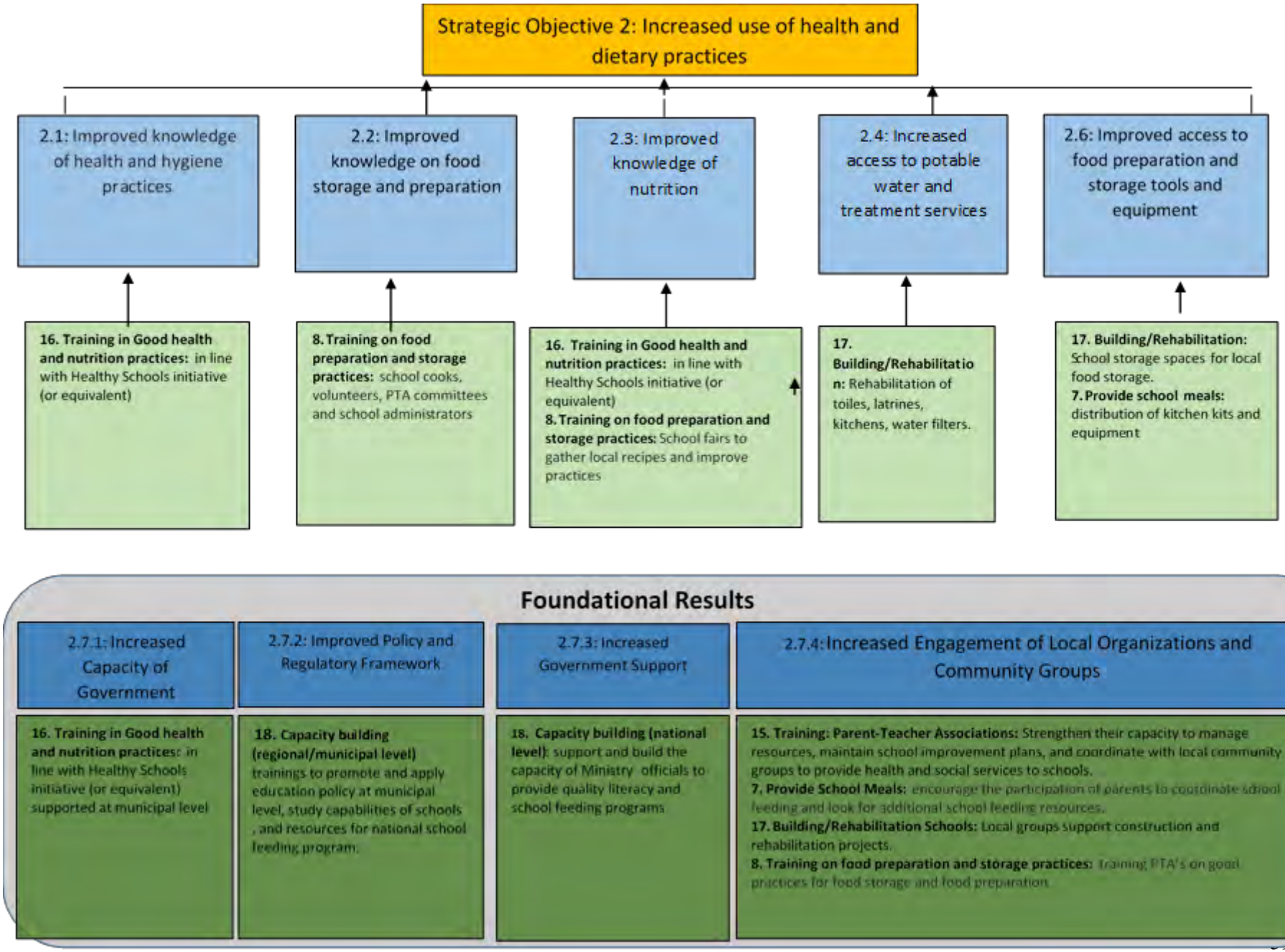
12.4. Annex 4: Evaluation indicators of the Learning for Life project

12.5. Annex 5: Quantitative sampling plan

12.6. Annex 6: Midterm evaluation consultants

12.1 Annex 1: Learning for Life project's results framework




Strategic Objective 2: Increased use of health and dietary practices
2.1: Improved knowledge of health and hygiene practices
2.2: Improved knowledge on food storage and preparation
2.3: Improved knowledge of nutrition
2.4: Increased access to potable water and treatment services
2.6: Improved access to food preparation and storage tools and equipment
16. Training in Good health and nutrition practices: in line with Healthy Schools initiative (or equivalent)
8. Training on food preparation and storage practices: school cooks, volunteers, PTA committees and school administrators
16. Training in Good health and nutrition practices: in line with Healthy Schools initiative (or equivalent)
8. Training on food preparation and storage practices: School fairs to gather local recipes and improve practices
17. Building/Rehabilitation: Rehabilitation of toiles, latrines, kitchens, water filters.
17. Building/Rehabilitation: School storage spaces for local food storage.
7. Provide school meals: distribution of kitchen kits and equipment
Foundational Results
2.7.1: Increased Capacity of Government
2.7.2: Improved Policy and Regulatory Framework
2.7.3: Increased Government Support
2.7.4: Increased Engagement of Local Organizations and Community Groups
16. Training in Good health and nutrition practices: in line with Healthy Schools initiative (or equivalent) supported at municipal level
18. Capacity building (regional/municipal level) trainings to promote and apply education policy at municipal level, study capabilities of schools , and resources for national school feeding program.
18. Capacity building (national level): support and build the capacity of Ministry officials to provide quality literacy and school feeding programs
15. Training: Parent-Teacher Associations: Strengthen their capacity to manage resources, maintain school improvement plans, and coordinate with local community groups to provide health and social services to schools.
7. Provide School Meals: encourage the participation of parents to coordinate school feeding and look for additional school feeding resources.
17. Building/Rehabilitation Schools: Local groups support construction and rehabilitation projects.
8. Training on food preparation and storage practices: training PTA's on good practices for food storage and food preparation

12.2 Annex 2: Learning for Life project's literacy methodologies

Kemom Ch'ab'al

Kemom Ch'ab'al is a reading program for the entire primary school level that promotes integral development of reading skills and learning of values. It implements four priority elements of the Educational Reform in Guatemala:

1. Culture of peace and human rights
2. Gender equity
3. Logical thinking
4. Bilingualism and interculturalism

The Learning for Life project distributes a reading book and a workbook for each student of the primary schools in the coverage area. The project also distributes a pedagogical guide to each teacher. Every lesson in the student book is related to the priority elements and the workbook includes comprehension and analysis activities. All educational materials are specially designed for each grade, are bilingual Spanish/K'iche', and have been carefully designed to be relevant to the Maya-K'iche' cultural context.

The project also conducts several workshops each year so that all teachers are trained to properly apply the methodologies, providing them with tools for three important moments in the reading class: before, during and after reading.

In addition, one of the most important elements that strengthen *Kemom Ch'ab'al* is a program of periodic personalized visits that the project's technical staff carry out to accompany the teachers, resolve their doubts and support them so that the methodology can be applied in the particular circumstances of each classroom.

***Jardín de Letras* (*Kotz'i'j tz'ib'* in K'iche')**

Jardín de Letras is a bilingual program for first grade students to learn to read and write in K'iche' and Spanish with relevant materials and meaningful activities.

The Learning for Life project distributes a workbook to all first grade students in the groups of schools that receive this methodology[5]. The workbook begins with line and shapes tracing to support fine motor skills, then introduces vowels and consonants from both languages to achieve decoding, forming words and sentences to support fluency and writing with special emphasis on children's analysis and creativity.

Similar to what is done with *Kemom Ch'ab'al*, the first grade teachers implementing *Jardín de Letras* also receive several training workshops per year and regular visits for pedagogical accompaniment in the classroom.

[5] Those schools do not receive Kemom Ch'ab'al program materials for first grade, only for second through sixth grade.

12.3 Annex 3: Reading skills of children assessed with ELGI

Table 26 Constructs of the ELGI test

Construct	Skills assessed
1. Oral language	Listen and understand oral language
2. Knowledge of the alphabet	Identify the letters of the alphabet by name and sound
3. Phonological awareness	Identify and employ the sounds forming words
4. Automatic reading speed	Name familiar letters quickly
5. Decoding	Read whole words
6. Fluency	Read with speed and accuracy
7. Reading comprehension	Comprehend a read text
8. Writing	Encode sounds of letters forming words which mean something

Source: Own elaboration with data from Cotto & Del Valle, 2017

Table 27 Comparison of early grade reading skills for first and second grade students assessed with ELGI

Construct	Sub-test[6]	1st grade Baseline (Mar 2018)	1st grade Post-test (Sep 2018)	1st grade Midterm (Sep 2019)	2nd grade Midterm (Sep 2019)	Unit of measurement
1. Oral language	1. Proper understanding of oral instructions	78.4	88.7	87.1	95.4	Percentage of students with proper understanding level
	7.Understanding an oral passage	1.1	2.2	4.1	7.9	Percentage of students who answered all understanding questions correctly after listening a passage
2. Knowledge of the alphabet	2.1 Knowledge of letters names	9.7	23.3	26.3	38.3	Mean of the number of letter names that students identify
	3.1 Knowledge of letters sounds	15.1	42.3	45.5	51.2	Mean of the number of letter sounds that students identify
3. Phonological awareness	4. 1 Recognition of initial phonemes	34.8	74.6	80.3	91.6	Percentage of students with advanced level of phoneme knowledge
	4.2 Separation of phonemes	5.0	32.9	44.3	64.4	Percentage of students with advanced level of phonemes separation
4. Automatic reading speed	2.2 Speed to name letters	17.3	33.2	33.1	52.0	Mean of the number of letter names correctly read per minute
	3.2 Speed to emit the letters sounds	23.9	48.7	51.3	60.3	Mean of the number of letter sounds correctly mentioned per minute
5. Decoding	5.1 Reading short words	17.9	52.3	56.9	79.1	Percentage of students who have read all the short words correctly

[6] The number of each subtest is mapped to a specific ELGI section. ELGI includes 14 sub-tests: 1, 2.1, 2.2, 3.1, 3.2, 4.1, 4.2, 5.1, 5.2, 6, 7, 8, 9 and 10.

Construct	Sub-test[6]	1st grade Baseline (Mar 2018)	1st grade Post-test (Sep 2018)	1st grade Midterm (Sep 2019)	2nd grade Midterm (Sep 2019)	Unit of measurement
	6. Speed to read non sense words	12.3	19.6	15.3	28.6	Mean of the number of non-sense words read per minute
6. Fluency	5.2 Speed to read familiar words	12.4	20.4	23.0	37.2	Mean of the number of familiar words read per minute
	8 Reading a passage fluently	17.4	31.8	32.5	54.9	Mean of the number of words within a passage read correctly per minute
7. Reading comprehension	9. Reading comprehension	2.6	26.6	33.3	60.4	Mean of percentage of correct comprehension answers after reading a passage
8. Writing	10. Writing	2.2	45.1	51.4	79.1	Mean of percentage of correct written words

Source: Learning for Life evaluation database

12.4 Annex 4: Learning for Life project's evaluation indicators

Table 28 Evaluation indicators measurements

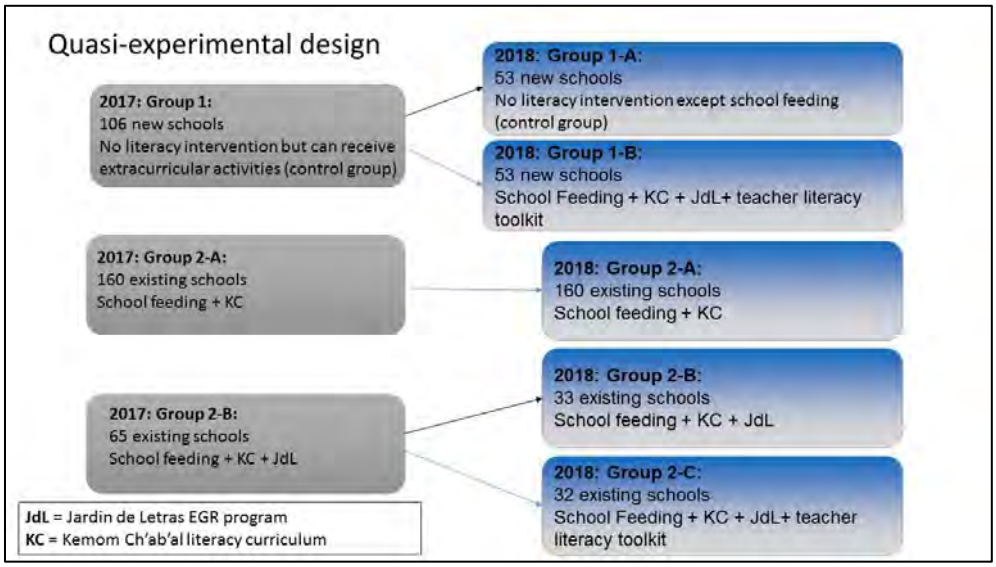
#	Indicator	Baseline value (March 2018)	Post-test value (September 2018)	Midterm value (September 2019)	Midterm goal
4	Percent of students who, by the end of one grade of primary schooling, demonstrate that they can read and understand the meaning of grade level text	1.7	21.9	26.6	**21.0**
5	Percent of students who, by the end of two grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text	-	-	52.3	**31.0**
6	Percent of students who, by the end of three and six grades of primary schooling, demonstrate that they can read and understand the meaning of grade level text	8.3	16.7	19.9	**16.0**
7	Number of individuals who demonstrate use of new child health and nutrition practices as a result of USDA assistance	4,380	-	9,672	**6,105**
8	Number of individuals who demonstrate use of new safe food preparation and storage practices as a result of USDA assistance	11,433	-	13,437	**12,776**
10	Number 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	499	-	535	**759**
12	Number of school administrators and officials in target schools who demonstrate use of new techniques or tools as a result of USDA assistance	134	-	295	**167**
14	Percentage of students in the classrooms defined as "very attentive" using a scale that defines established criteria	67.1	-	75.2	**69.0**
15	Percentage of students in participating primary schools who indicate not being hungry during the school day	54.4	-	52.1	**65.0**

#	Indicator	Baseline value (March 2018)	Post-test value (September 2018)	Midterm value (September 2019)	Midterm goal
21	Average student attendance rate in USDA supported classrooms/schools	87.8	-	89.3	**90.0**
24	Percentage of DCs, TACs and PAs from the Totonicapán Department of Education that have increased their capacity to fulfill their roles and responsibilities	0	-	100.0	**60.0**

Source: Learning for Life evaluation database

12.5 Annex 5: Quantitative sampling plan

The evaluation plan for the MGD Learning for Life project includes a quantitative sample designed by AIR (American Institutes for Research) from the quasi-experimental model shown in the diagram.



The model considers an initial total of 331 schools in phase two of the project and the possible effects over time for 225 schools (160 + 65) that were also covered in phase one. The quasi-experimental design was planned for the 2017 and 2018 school years (in Guatemala the school year runs from January to October) as part of a pilot to show which package of literacy interventions for early grades would work best, using data from a control group (1-A) and four intervention groups (1-B), (2-A), (2-B) and (2-C), with two data points, the first in February 2018 (baseline) and the second in September 2018 (post-test).

The sample size and the initial random selection were made by AIR, the calculations used were based on the formula[7]:

$$MDES = M\sqrt{\frac{\rho}{P(1-P)\,J} + \frac{1-\rho}{P(1-P)\,nJ}}$$

Where:

ρ is the intra-cluster correlation (without covariates), that is the proportion of the overall variance due to variation between the clusters.

P is the proportion of clusters (for example, schools) allocated to the treatment group by the randomization procedure.

n is the number of individuals (for example, pupils) in each cluster.

[7] More information can be found in Chapter 6 of the publication "A guide to running randomized controlled trials for educational researchers", available at https://www.nfer.ac.uk/media/2114/rct01.pdf

J is the total number of clusters randomized.

M is a multiplier based on the t-distribution.

AIR used the PowerUp![8] tool to make the calculations of the number of schools (J in the formula) for the baseline (February 2018) and post-test (September 2018) sample. The chosen model was a two-level cluster random assignment of schools with treatment assignment at level 2 (level 2: schools, level 1: individuals) with a confidence interval of 95% (alpha = 5%), statistical power of 80% (beta = 20%) and intra-cluster correlation of $\rho = 0.125$ (based on previous studies from the Ministry of Education in similar rural bilingual contexts and corroborated after data collection).

AIR also determined that comparisons between groups to detect effects should be 1-A versus 1-B, 2-A versus 2-B and 2-B versus 2-C. After entering the data in the PowerUp! tool for each comparison, the result for the total baseline sample size was 179 schools.

Following the 2018 evaluation results and because the Ministry of Education distributed its own teacher literacy toolkit, the project decided to reduce one intervention by 2019, keeping only the *Kemom Ch'ab'al* and *Jardín de Letras* methodologies. Thus, groups 2-B and 2-C were merged into one, now called only 2-B. In addition, group 1-A started receiving *Jardín de Letras*, since according to the original evaluation plan, the schools in the control group would start receiving the successful reading interventions after 2018.

For the midterm evaluation in 2019, the external evaluation consultant team used the same procedures and tools as AIR. Due to the merger of the 2-B and 2-C group, only two comparisons are necessary in early grades for this evaluation: 1-A versus 1-B and 2-A versus 2-B. By entering the data into the PowerUp! tool with the same parameters as the baseline sample, the total sample size is 135 schools. Please note that the sample size for the midterm evaluation is less than the sample size for the baseline evaluation due to the decrease in the number of comparisons between groups.

The following table shows the MDES (minimum detectable effect sizes) for the variables used to calculate literacy indicators in the midterm evaluation[9] and to run the hypothesis testing to answer the research questions about literacy interventions:

Grade	Comparison between groups	MDES
1st and 2nd	1-A vs 1-B	**0.305 SD**
1st and 2nd	2-A vs 2-B	**0.306 SD**
3rd	1-A vs 1-B	**0.296 SD**
3rd	(1-A + 1-B) vs (2-A + 2-B)	**0.203 SD**
6th	1-A vs 1-B	**0.296 SD**
6th	(1-A + 1-B) vs (2-A + 2-B)	**0.203 SD**

[8] More information can be found at https://cran.r-project.org/web/packages/PowerUpR/readme/README.html

[9] Like in the baseline evaluation, the cluster effect was taken into account only for indicators with data coming from students. The rest of the indicators, by their nature, were analyzed with simple random sampling procedures because they originated from informants such as principals, teachers and volunteers.

12.6 Annex 6: Midterm evaluation consultants

- **Friné Paz, MBA**. Research team leader. More than 10 years of experience in community organization, quantitative and qualitative program evaluation. Experience leading Title II program evaluations. Knowledge and experience in standardized reading tests application and analysis of results.

- **María André Solares, MBA.** Field team manager. Experience in leading and coordinating field teams for quality data collection, including logistical oversight and supervision.

- **Edgar Ruano, BA.** Field coordinator. Experience in community development, team coordination for data collection. Responsible for enumerator training on qualitative and quantitative data collection tools.

- **Eber Barrera.** Field coordinator. Technical supervisor of data collection teams, enumerator trainer for standardized reading tests.