

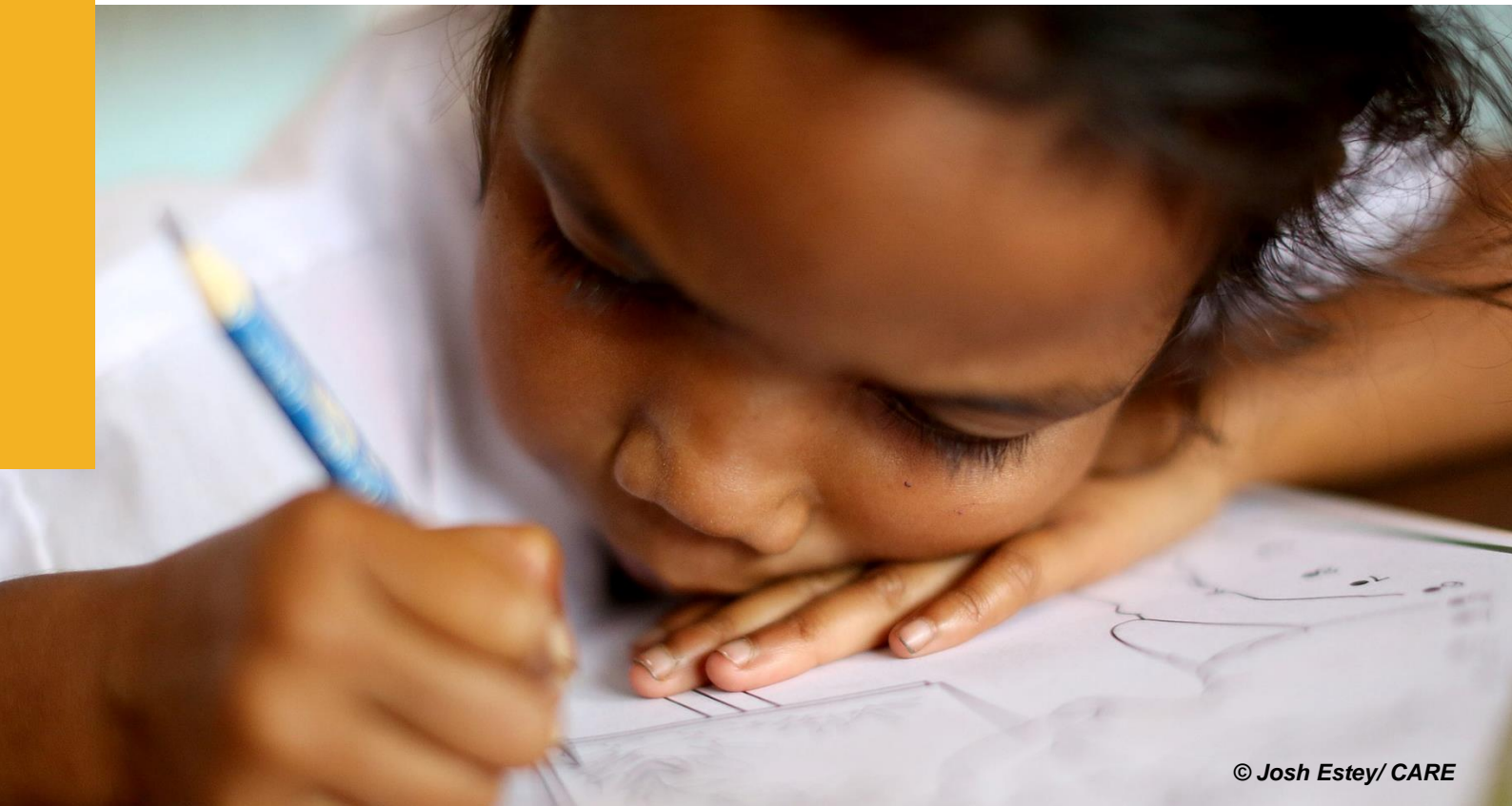


HATUTAN Program in Timor-Leste

Impact Brief

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HATUTAN Background

HATUTAN – or *Hahán ne'ebé Atu fó Tulun ho Nutrisaun no Edukasaun*/ Food to Support Nutrition and Education - is a five-year initiative which aims to improve literacy, health and nutrition outcomes for children and adults in Timor-Leste. To achieve this result, HATUTAN is working with the Government of Timor-Leste to support 445 schools and surrounding communities throughout four of Timor-Leste's most disadvantaged municipalities, Ainaro, Ermera, Liquica and Manatuto.

HATUTAN's baseline study showed that student reading outcomes in target areas are related to a number of factorsⁱ:

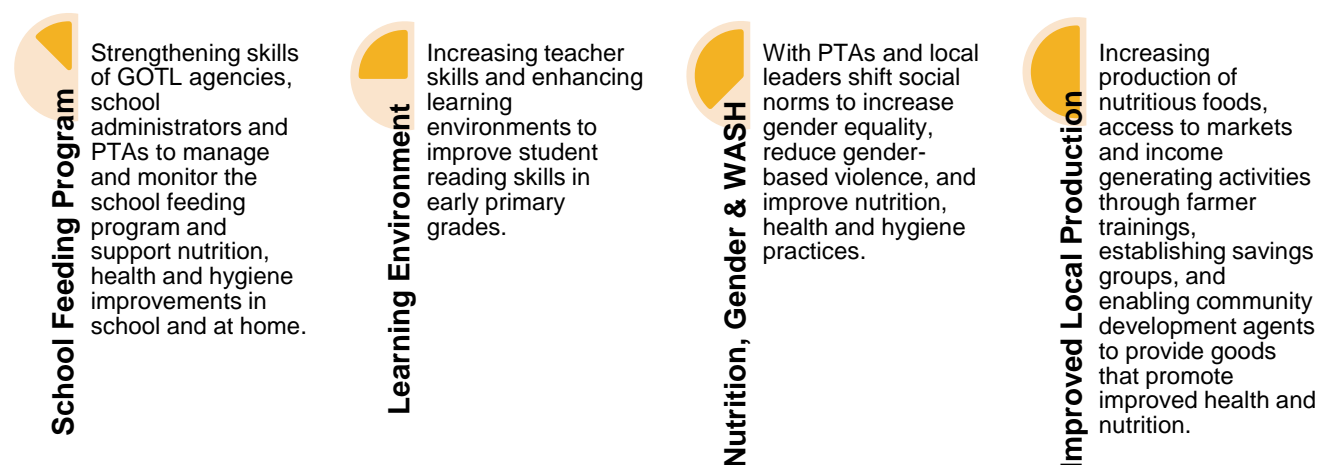
- **Reading materials:** Access to reading materials at home improved literacy scores by 7.3 points.
- **Gender:** Girls scored 6.4 points above boys.
- **Absenteeism:** Students who were absent from school scored 1.2 points lower than their peers.
- **Malnutrition and limited working memory:** Students with higher working memory scores – linked to better nutrition status – scored 0.3 points higher than their peers.

While Timor-Leste has made progress in addressing malnutrition, the 2020 Timor-Leste Food and Nutrition Survey found that 47% of the children under five were stunted, 8% were wasted and 32% underweightⁱⁱ. HATUTAN's baseline identified that malnutrition had a severe impact on student reading outcomes. 37% of the grade 2 students reportedly had difficulty remembering things or concentratingⁱⁱⁱ, and 22% had extremely low memory scores^{iv}, reflecting their inability to retain information for short periods of time – for example, to remember content of the the beginning of a short text by the time they have reached the end. Not surprisingly, poor working memory scores were strongly correlated with poor literacy scores.

In 2005, the government of Timor-Leste (GOTL) established a national school feeding program (SFP)^v for all basic education^{vi} students to improve school attendance, address nutritional needs, improve student attention, performance, and boost the local economy through linkages between schools and

farmers. One of HATUTAN's key objectives is to supplement and strengthen the Government of Timor-Leste's efforts to support education and nutrition through effective and efficient implementation of the SFP in remote and rural schools.

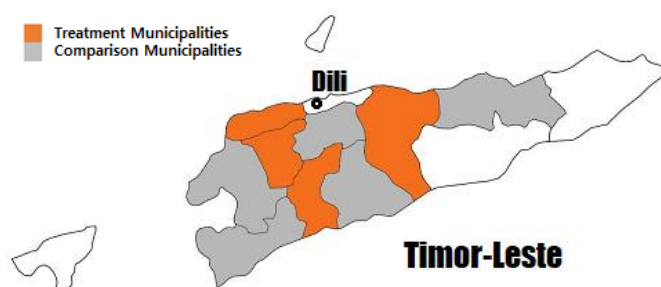
HATUTAN implements a holistic intervention package to respond to the multiple factors affecting student education and health outcomes:



HATUTAN Program Components

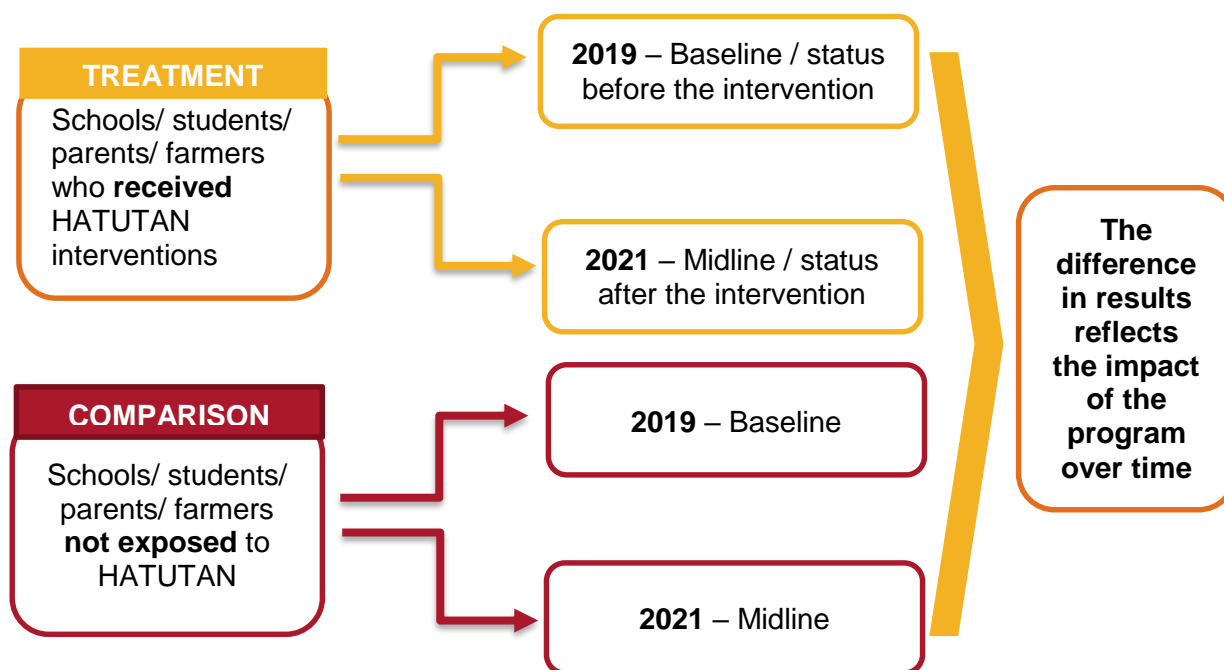
Evaluation Design

HATUTAN uses a quasi-experimental evaluation design. The results from treatment schools are tracked over time and compared with those from a set of schools with similar characteristics in neighboring municipalities (the comparison group). Therefore, the program is able to assess not only whether the situation in intervention communities has improved but also to what extent the gains for the intervention group differ from those who did not receive the program.



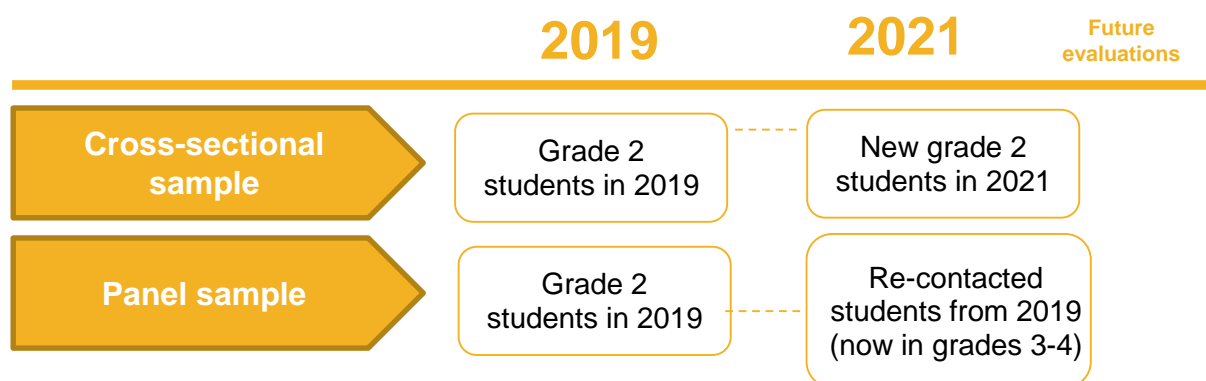
A total of 2,695 students from the treatment municipalities and 1,965 students from the comparison municipalities participated in the Early Grade Reading Assessment (EGRA) during the midline survey. Classroom observations were carried out to determine teaching methods, gendered practices in class, teachers' attitudes toward students and use of reading materials. A school survey assessed school infrastructure, management of the school feeding program, WASH, student enrolment and

attendance and parent-teacher association (PTA) activities in 98 treatment and 87 comparison schools. To understand the students' living environment, including education and nutrition practices, hygiene knowledge and practices, attitudes toward gender-based violence and economic conditions, household surveys took place in 982 treatments and 625 comparison households. About 248 farmers took part in a survey on the use of savings, improved agriculture techniques and selling produce in local markets.



HATUTAN Program Research Design

The HATUTAN midline evaluation relied on two sample types for analysis: a **cross-sectional sample** which included grade 2 students assessed at baseline (2019) and a new cohort of grade 2 students who were assessed at the midline (2021), and a **panel sample** which included the same grade 2 students assessed at baseline who are now attending grades 3 or 4.



Student samples in HATUTAN research

Difference-in-Differences Analysis

HATUTAN assessed **changes over time** for the treatment (intervention) and comparison groups. For example, the program assessed if the gains for grade 2 students in the treatment group were significantly higher (or lower) than those of grade 2 students in the comparison group. This **difference-in-differences** (DiD) analysis allows the program to understand if the intervention is resulting in higher gains in reading skills over time, compared to the gains observed in schools without the intervention. For the students who were in grade 2 in 2019 and were longitudinally tracked in 2021, it also allows the program to determine if the gains in the intervention group exceed the normal learning gains expected during grade progression.

Impact

Mitigating Learning Losses

Figure 1 shows the mean difference in EGRA task results for both groups between midline and baseline. While students performed worse at midline compared to the baseline on every task, reflecting the losses resulting from the COVID-related school closures in 2020, the negative impact is lower in the treatment schools compared to comparison schools on every test. The results indicate that **the program reduced learning losses by 52% on reading fluency and by 42% for reading comprehension.**

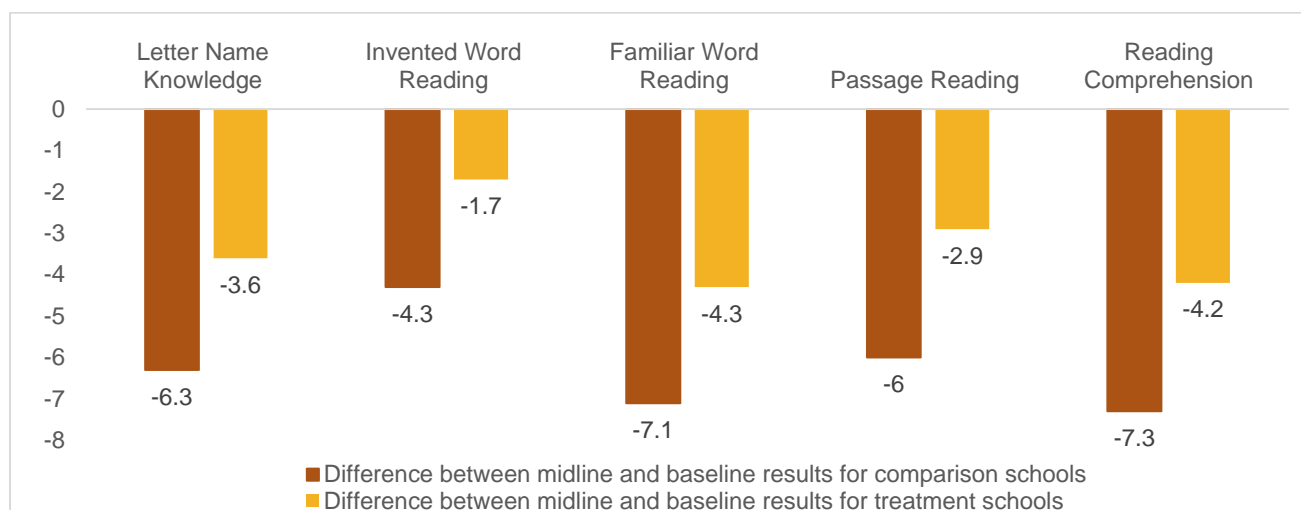


Figure 1: Difference in performance in EGRA tasks between grade 2 students in 2019 and 2021 (cross-sectional sample)

Data from the panel sample suggests, a substantial increase in scores on all subtasks (Figure 2). On average, the treatment group performed about two percentage points better than the comparison group. While the difference is limited, there is a significantly higher gain for male students in treatment schools, in relation to those in comparison sites. Since boys had significantly lower results than girls at the baseline, this result shows that the program is having a positive impact on those who were struggling the most to acquire foundational skills.

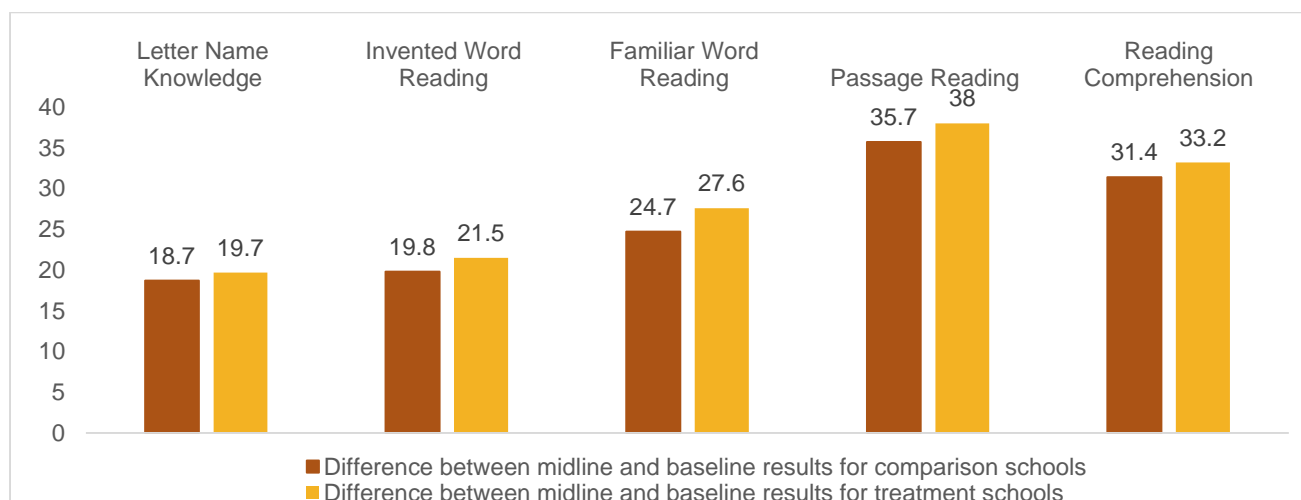


Figure 2: Difference in literacy performance between 2019 and 2021 from grade 2 students surveyed at baseline (panel sample)

Preventing Dropout

The program reduced dropout across grades 1-6 in treatment schools, while dropout rates increased in all grades in comparison schools. Overall, the program reduced dropout by nearly three percentage points in treatment schools, while dropout increased by 1.3 percentage points in comparison schools (Figure 3).

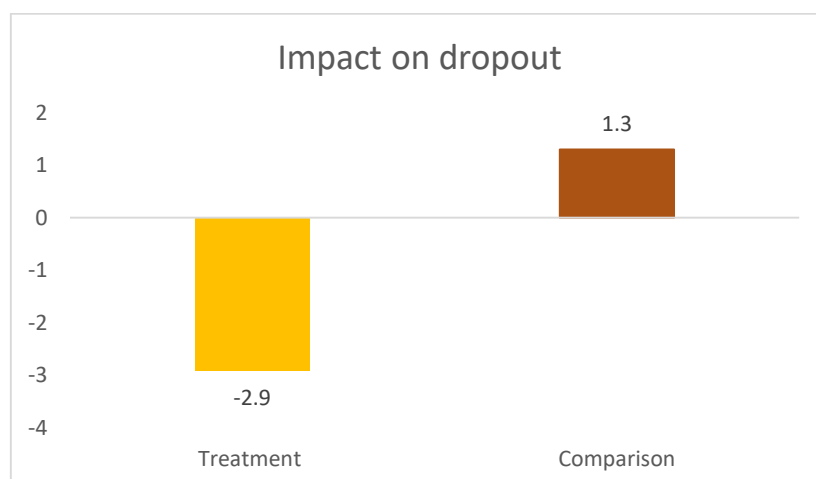


Figure 3: Difference in overall dropout rates for grades 1-6 between 2019 and 2021 for treatment and comparison schools

Improving Learning Environments

Figure 4 shows that teachers from the treatment schools were significantly more likely to use games or exercises in relation to those in comparison schools. The proportion of teachers in treatment schools using games or exercises increased by 16 percentage points but declined by eight percentage points in comparison schools.

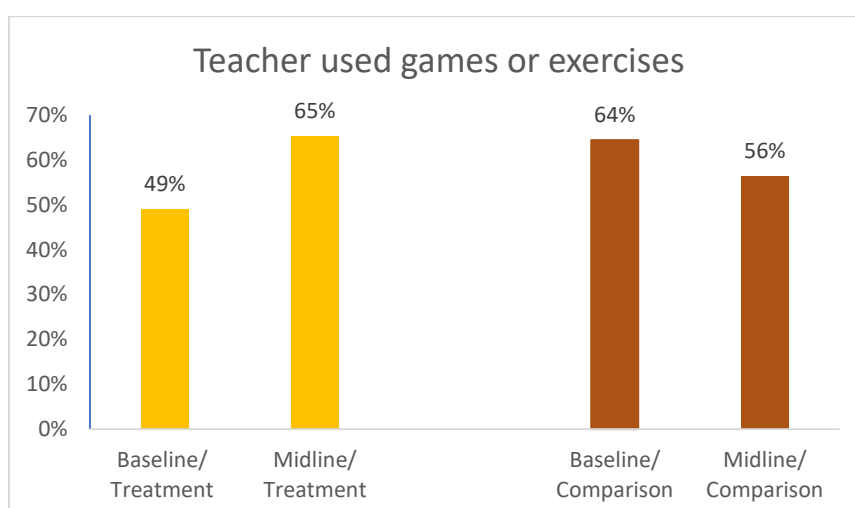


Figure 4: Change over time in teachers' use of games or exercises with students

At midline, 47% of grade 2 classrooms were observed to have a reading corner and 63% had reading materials. At the baseline, only 34% of the classrooms had a reading corner and 52% had reading materials. The results reflect HATUTAN's provision of 30,300 storybooks to 207 schools; support to conduct an inventory of existing books and increase their use; the setup of 99 attractive reading

corners in partnership with school communities; and mentoring 369 teachers and 55 school coordinators on the use of reading materials, games and exercises in class.

Teachers are not only adopting improved practices, but also reducing the use of traditional practices, such as having students copy content from the board. The proportion of classes with students copying from the board decreased by 32 percentage points, while increasing by three percentage points in comparison schools (Figure 5).

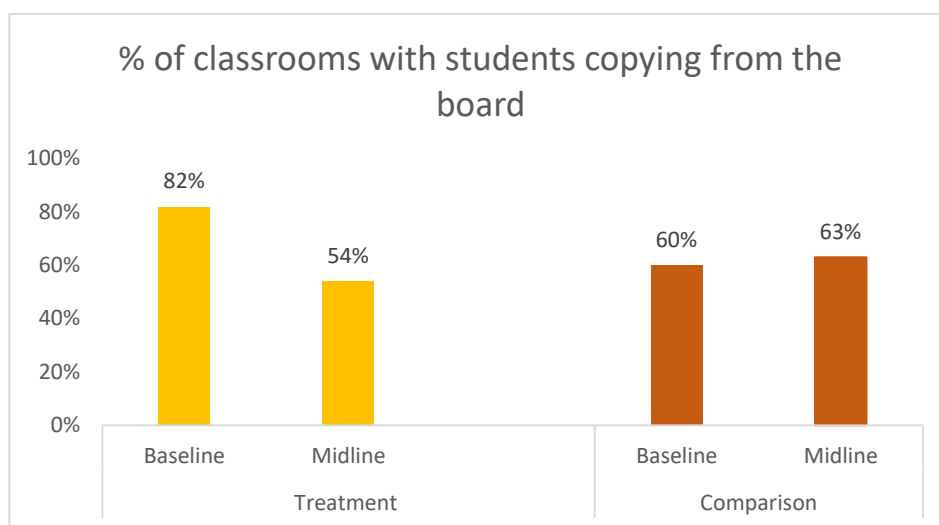


Figure 5: Change over time in the use of traditional teaching practices – students copying from the board

School Feeding Program

One of the HATUTAN program's main objectives is to support the Government of Timor-Leste implement the school feeding program in all basic education and preschools throughout the school year.

Most of the schools in the midline (79%) reported that there is a school feeding program through HATUTAN, compared to 6% that said the same at the baseline. There was a large and significant increase in treatment schools providing meals, from 1% at baseline to 88% in midline.

"The number of attendances has increased. When the school meal is provided and when we prepare a meal, we check the attendance lists and compared them. The previous numbers were smaller, sometimes there were only around 100 students. Now and maybe in the coming days, when the students assemble in the front yard and we count them, there were more than 200 students. This shows that the collaboration between the teachers and the PTAs is working." – Focus group discussion with teachers



In photos: (left) A hot meal with a mix of fortified rice, pinto beans mixed with meat, chayote and carrot donated by parents; (right) students enjoying their school meal © Saikat Saha/ CARE

Students were 3% more likely to have eaten anything at all during the day in schools where meals had been served. Overall, the proportion of students in treatment schools who had eaten anything at all during the day increased by 5.7 percentage points, compared to only 0.6 points in comparison schools (Figure 7).

HATUTAN supports the Government of Timor-Leste's School Feeding Program guidelines, which promote the use of produce grown by local farmers in school meals. The proportion of treatment schools serving meals and purchasing from local producers is far greater (40%) than the proportion of comparison schools serving meals and purchasing from local producers (28%). The results indicate that the provision of USG-donated commodities did not affect local purchases. However, the linkage between schools and farmers remains weak, due to delays in accessing public funds for school feeding at school level. Farmers do not consider schools as a reliable market given delays in distributing GOTL funds that result in unpredictable purchasing by schools.

In terms of access to improved water, canteen and clean food storage facilities – treatment schools are doing better than the comparison schools. Kitchen space has been reported to be available in 97% of the treatment schools, compared to 81% of the comparison schools. Access to water for food preparation has increased by 18 percentage points – from 69% to 87% of the treatment schools – but the number of schools without access to water remains high. Among comparison schools, 83% have access to water for food preparation.

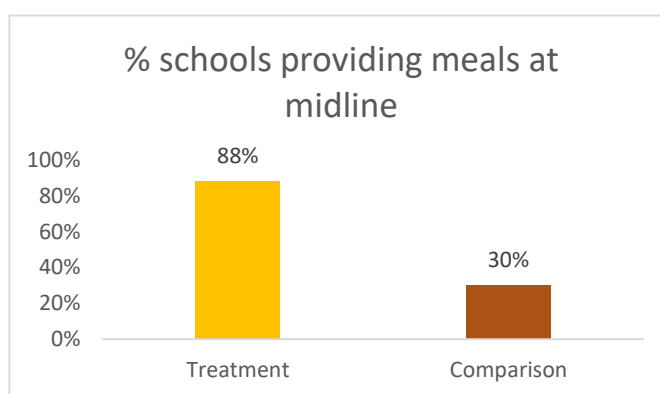


Figure 6: Proportion of schools observed providing meals at the midline

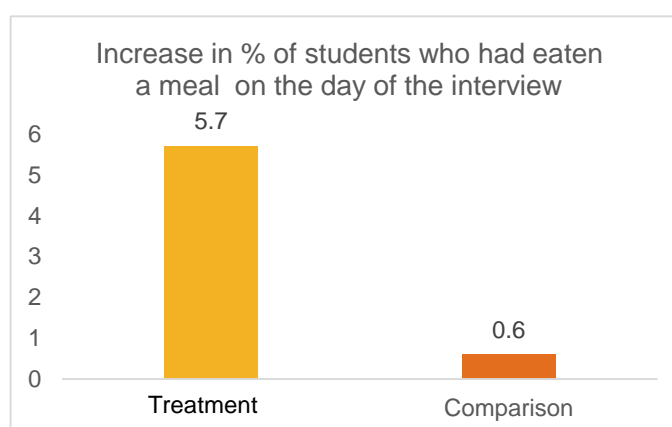


Figure 7: Change over time in the proportion of students who had eaten a meal on the day of the interview, in treatment and comparison schools (results shown in percentage points)

Other Findings

Sanitation: The proportion of households without toilets has decreased from 21% to 16% in treatment sites, while increasing by 3.5 percentage points in the comparison group. The results indicate that the intervention is increasing community awareness on the importance of sanitation.

Breastfeeding: Knowledge of the importance of exclusive breastfeeding increased by 20 percentage points (from 25% to 45%), compared to only 12 percentage points among the comparison group. Knowledge of initiating breastfeeding immediately after delivery increased from 32% to 40% but declined among the comparison group.

Nutrition: Dietary diversity among women of childbearing age declined between baseline and midline in treatment municipalities, reflecting the combined negative impact of the 'hungry season' and limitations to financial access to purchase food during COVID-19.

Hygiene: In general, more mothers were able to identify healthy practices at midline compared to baseline. Still, there is substantial room for improvement in access to water at household level - only 45% have reliable access all year, and only 25% have handwashing stations with soap.

Gender: There was a decline in the percent of respondents who believed that a husband of justified in beating his wife in any scenario. Treatment households saw a slight but not significant improvement in attitudes towards spousal violence compared to comparison households.

The Way Forward

The HATUTAN program was able to mitigate learning losses due to the COVID-19 pandemic. With about two more years of implementation period still remaining, a few recommendations can be made for more efficient and effective operations.

1. **Improving reading fluency:** Many students are able to identify letters, but lack reading fluency. There is a need to boost the use of improved literacy teaching methods to develop students' ability to recognize frequent letter/word sounds and whole words.
2. **Safeguarding:** During the household survey, when asked to caregivers about the reporting abuse of their children, 15% at midline stated they would not be able to report it, which is an increase from 9% at baseline. It reflects existing barriers to accessing restorative justice for children abused at school. On the other hand, school coordinators/ directors are under the impression that systems are fully in place and functioning. Additionally, the use of corporal punishment in school remains high.
3. **Access to SFP resources:** A consistent complaint from the schools has been the budgetary delays hindering the school feeding program's effectiveness and reach. Solutions to avoid delayed transfers and ensure a smooth flow of resources for the SFP could improve the consistency of SFP delivery and boost demand for local produce, giving farmers more incentives to grow and sell their produce to schools.
4. **Safety nets for the most vulnerable:** The reduction in dietary diversity during the ongoing crisis is likely to have a long-term impact on the poorest children, particularly for those affected by natural disasters. The use of take-home rations can complement the government's school feeding program, providing a safety net for the most vulnerable.

References

ⁱ Burton, L. (2019) HATUTAN in Timor-Leste: Baseline Evaluation Report, p.118

ⁱⁱ <https://www.unicef.org/timorleste/press-releases/timor-leste-food-and-nutrition-survey-2020-preliminary-results-steady-progress-made>

ⁱⁱⁱ Burton, L. (2019) HATUTAN in Timor-Leste: Baseline Evaluation Report, p.72

^{iv} Ibid, p.71

^v CARE International and Imron, J. (2019) School Feeding Program Study Report, p.10

^{vi} The education system in Timor-Leste consists of four levels: pre-school, primary education, secondary education, and higher education (university and polytechnic). Primary and secondary schooling comprise "basic education," which is universal, free, and compulsory as per the [National Education Strategic Plan](#).



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For more information, visit: <https://www.careevaluations.org/evaluation/mcgovern-dole-food-fore-education-program-hatutan-midline-evaluation/>