EDUCATION ANALYTICS SERVICE: TEACHER DEVELOPMENT MULTI-YEAR STUDIES

Timor-Leste: Final Report

Elizabeth Cassity, Jennie Chainey, and Debbie Wong

Amendment History

Version No.	Date	Brief description of change	Author
1	31 May 2022	Draft report	Elizabeth Cassity, Jennie Chainey, Debbie Wong
2	7 October 2022	Revised report	Elizabeth Cassity, Jennie Chainey, Debbie Wong

Table of Contents

Abbreviations and acronyms

ACER	Australian Council for Educational Research
ALMA	Apoiu Lideransa liuhosi Mentoria no Aprendizajen
CBA	Curriculum Based Assessment
CFS	Child Friendly Schools
DFAT	Department of Foreign Affairs and Trade
EAS	Education Analytics Service
EDC	Education Section (DFAT)
EGMA	Early Grades Mathematics Assessment
EGRA	Early Grades Reading Assessment
EMBLI	Mother Tongue-Based Multilingual Education
EMIS	Education Management Information System
GTP	Grupu Traballu ba Professor
GTL	Grupu Traballu ba Lider
ICC	Intraclass Correlations
ICFP	Instituto Catolico para Formacao de Professores
MoEYS	Ministry of Education, Youth and Sport (Timor-Leste)
M&E	Monitoring and Evaluation
NGO	Non-governmental organisation
PHD	Partnership for Human Development
PBI	Program Based Inquiry
PLMP	Professional Learning and Mentoring Program
RTI	Research Triangle Institute
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development

Executive summary

Introduction

The Australian Government is supporting the Government of Timor-Leste in education through the Partnership for Human Development (PHD) and Apoiu Lideransa liuhosi Mentoria no Apredizajen[1] (ALMA). ALMA supports the Ministry of Education, Youth and Sport (MoEYS) to develop teacher professional learning, particularly in support of its major reform of rolling out and implementing the National Basic Education Curriculum (new curriculum) across schools in Timor-Leste. Under the Teacher Development Multi-Year Study for Timor-Leste (the Study), the Education Analytics Service (EAS) is investigating how ALMA is making a difference to these teaching and learning outcomes. The Study series was commissioned by the Australian Government's Department of Foreign Affairs and Trade (DFAT), to investigate teaching and learning development initiatives in three countries: Lao PDR, Timor-Leste and Vanuatu.

The new curriculum was developed in 2013 as a staged approach for pre-school to grade 6 with a focus on improving literacy and numeracy, as well as reducing student drop out. MoEYS began implementing the new curriculum for grades 1 and 2 in 2015. The ALMA program, funded by DFAT, was developed in partnership between the Australian Government and MoEYS. The overall program goal of ALMA is to facilitate improved teaching and leadership in schools. Its duration (from 2016 to 2026) reflects the reality that improving teaching requires sustained investment over multiple years. To date, the program has been rolled out in 10 of 13 municipalities.

The ALMA program includes the following core components:

- Leaders of Learning program, involving periodic leadership training for school leaders
- School-based peer professional learning groups
- Mentor support to school leaders and teachers from national and local education mentors
- Educational technology to enable efficient information sharing and monitoring via tablets for school leaders uploaded with the new curriculum and custom-built applications to support classroom observations.

ALMA ultimately aims to transition from a development partner led and implemented program, towards increased leadership and management by MoEYS. A consolidation phase supports an incremental approach to whole-of-government ownership, by transferring core functions of the program to MoEYS to manage whilst reducing PHD's technical support (PHD, 2021).

This Study focuses on understanding the extent to which education stakeholders, including school leaders and teachers, develop teaching knowledge and change teaching practice over time. It also explores the extent to which participation in the ALMA program leads to improvements in learning outcomes for students. This Study of the ALMA program is framed within the context Timor-Leste's introduction of a new curriculum. The purpose of this summary is to provide a brief overview of findings and recommendations over the three years of the Study (2018, 2019, 2021). This Final

---

[1] In January 2019 the Professional Learning and Mentoring Program (PLMP) was officially changed to Apoio Lideransa liuhusi Mentoria no Apredizajen (ALMA). This report will refer to the program as ALMA. The program is still referred to as PLMP in some document names and appendices, if prepared prior to the name change.

Report will contribute to a multi-country report for the Study series, which will explore lessons learnt and recommendations for teacher development in other contexts.

Study questions

The Study seeks to answer the question: ***To what extent does this aid investment produce improved teaching quality and improved student learning?***

Three specific questions related to this broad question are being investigated:

1. To what extent does the ALMA program support improved teaching quality in Timor-Leste?
2. To what extent does the ALMA program support the effective implementation of Timor-Leste's National Basic Education Curriculum?
3. To what extent does teacher involvement in the ALMA program lead to improved learning outcomes for Timor-Leste students?

The Study adopts a mixed methods approach using both qualitative and quantitative data. Case studies include interview data from school leaders (school directors, school coordinators and adjuntos), grades 1 to 4 teachers, ALMA mentors, inspectors, and municipal and national education stakeholders. It also includes classroom observation data of grade 2 teachers.

There have been three rounds of case study data collection in 2018, 2019 and 2021. Two municipalities that implemented ALMA across phases 1 to 5 were selected for each year of the Study. Classroom observations of grade 2 teachers were conducted in four municipalities in 2021. Student assessment data from 2017 was available for secondary analysis. And monitoring and evaluation data from ALMA's Program Based Inquiry (PBI) also provided additional data to inform this Study.

Summary of findings

As presented in this Final Report, there are a number of findings that provide insight into the extent to which teaching practices and student learning outcomes are changing with ALMA's support of school leaders and teachers and the implementation of the new curriculum. Results from the three years of data collection suggest that the ALMA program has been effective in strengthening elements of teaching quality, curriculum implementation and student learning outcomes. These results are consistent across municipalities and ALMA phases. With a sharp focus on developing the knowledge and skills of school leaders and teachers, ALMA has contributed to a number of changes in the education sector. Importantly, the Leaders of Learning program has directly contributed to an improvement in school leader knowledge, particularly instructional leadership, and the establishment of the Grupu Traballu ba Professor[2] (GTP) provides potential for a continuous professional development approach. Overall key Study findings include:

- School leaders have improved their ability to action change and support teacher learning and practice.

---

[2] Previously known as Peer Learning Group (PLG)

- Teachers have strengthened their knowledge of the curriculum, and have applied this knowledge to lesson planning, student-centred activities and more efficient classroom management, but need ongoing support.
- School leaders have improved their use of educational technology (tablets) to document observations, access the teaching guides and curriculum content for teachers, and reporting.
- There are challenges to sustainability for ALMA including some drop off in program support activities, particularly GTPs, after the ALMA rollout has been completed in a municipality.
- Evidence that ALMA has impacted student learning outcomes is inconclusive. While perception data collected during the case studies has indicated an increase in student interest in lessons, engagement and well-being, student improvement in literacy and numeracy cannot be adequately reported on without some form of systematic learning assessment in all schools.
- While teachers may have improved awareness of inclusive education, many are unable to identify and effectively support students with disabilities.
- Most teachers recognise that boys and girls have an equal right to participate in school and incorporate some gender inclusive activities in their classrooms.

To what extent does the ALMA program support improved teaching quality in Timor-Leste?

Results from the overall Study indicate that ALMA has been effective in establishing and strengthening a number of facets of teaching quality including grade 1 to 4 teachers' knowledge, attitudes and practices in line with aspects promoted in the new curriculum that focus on student-centred teaching. Critical to ALMA has been the support and development of school leaders through the Leaders of Learning program and the support of mentors. GTPs have provided teachers with a forum of peer learning where they can discuss and learn from each other about new pedagogical approaches, as well as practice new skills through lesson simulations. Overall, grade 1 to 4 teachers are more aware of student-centred teaching practices and are using these practices in their classrooms, but to varying extents.

A key challenge includes maintaining ongoing learning for teachers and school leaders after the initial rollout of ALMA, given the scale-down of intensive ALMA support.

- Leadership capacity and teaching quality has improved, as reported by a range of school leaders, mentors, teachers and government officials. There is an observable shift to instructional leadership.
- School leaders and teachers report that GTPs are an important forum to improving knowledge about lesson planning, curriculum content, new pedagogical activities and classroom management.
- A range of ALMA-supported activities has helped teachers improve elements of their teaching practice. With a focus on student-centred teaching and learning, teachers use a variety of teaching approaches and resources including student group and pair work, encouraging student interaction and student talk, and making local connections, although consistency across municipalities is uneven.
- Stakeholders reported an improvement in teachers' punctuality and preparation, and all teachers observed had completed lesson plans for all classes.

- The process of observation, feedback, peer learning through GTPs, and general support in terms of preparation and planning for lessons has been reported to contribute to increased teacher confidence and motivation.
- GTPs provide a range of teacher support including the opportunity to share ideas and learn new activities, practice new lessons through simulation, learn about assessment, learn about using local materials in teaching, and as another source of feedback about teaching practice. However, consistent facilitation of GTPs across cluster and municipalities has been uneven.
- Tablets distributed to school leaders as part of ALMA are an important part of classroom resourcing, observation and teacher support, but there are also challenges including access to electricity and the internet.
- There is improved awareness of inclusive education and identifying particular needs, but teachers are less aware of specific classroom practices to ensure the participation of all students.

To what extent does the ALMA program support the effective implementation of Timor-Leste's National Basic Education Curriculum?

The three Study data collections indicate that teachers and principals value ALMA support. By improving access to the curriculum and resources and strengthening teacher support, ALMA is recognised for playing a critical role in supporting the effective implementation of the curriculum.

The Study provided opportunities to understand challenges to implementation of the curriculum, and many of these factors were outside the remit of ALMA but impact the success of ALMA. Teacher support is an important part of ALMA. Peer learning and consistent school leader support has helped align teaching practice with expectations in the curriculum.

- ALMA has improved access to the curriculum lesson plans and activities on school leaders' tablets. This has helped school leaders to more ably support teachers in implementing the curriculum. School leaders are actively able to monitor and observe teachers and their delivery of lessons against lesson plans, but some ongoing technical challenges and difficulties accessing internet in remote areas persist which limit their usability
- Teacher support has enabled implementation of the curriculum by addressing challenges faced by teachers through observations, feedback and GTP sessions
- Teachers attributed success in implementing the curriculum to school leader and mentor support, curriculum materials and peer learning.

To what extent does teacher involvement in the ALMA program lead to improved learning outcomes for Timor-Leste students?

The extent to which ALMA has improved student learning outcomes is inconclusive. Case study data from 2018, 2019 and 2021 indicates that the incorporation of student-centred learning approaches has increased student engagement and interest in lessons, and this was observed by some teachers to improve some student academic outcomes. Evidence about student engagement is an important indicator of student performance and completion, especially without student achievement data. However, without some form of large-scale assessment or program-level monitoring of student learning outcomes it is not possible to attribute student performance to the curriculum reforms or ALMA program.

- ALMA is associated with observations of improved student interest in lessons through the curriculum support provided to teachers.
- The impact of ALMA on student attendance is inconclusive. Reported factors for increased or decreased student attendance are based on context.
- The shift to student-centred approaches through more creative and 'fun' activities encourages students' interest, participation and engagement in lessons.
- Student-centred learning approaches have led to observed improvements in students' happiness and wellbeing in school.

Overall study recommendations

The findings from this Study indicate three areas of potential policy and program consideration. The first area includes considerations about the design and implementation of the program. The second area explores possibilities for more systematic monitoring of student learning outcomes. The third area presents a range of possibilities that inform sustainability of ALMA outputs. The full range of recommendations is outlined in Section 6.

Design and implementation

The design and implementation of the ALMA program presents opportunities for learning about the benefits of investing in and supporting a program that has a sharp focus on school leader and teacher professional learning, with a multi-year duration. This approach contrasts with more common sector wide approaches in education, where teacher professional learning is included as part of an overall level of education system support. Recommendations include:

1. Continue to support and embed a long-term model of professional learning within Timor-Leste schools and government
   a. DFAT continue funding mentors or coaches to support school leaders and teachers to maintain and embed their learning as this intervention transitions towards MoEYS systems.
   b. PHD continue to engage municipal- and national-level education stakeholders to strengthen and systemise the core elements of ALMA to support long-term professional learning (refer section 6.3 for further detail).
   c. DFAT continue to engage in policy dialogue with MoEYS, other key ministries and development partners on areas of policy such as education sector resourcing, assessment, teacher workforce reforms, and teacher professional development.

2. Continue to undertake, develop and embed ALMA monitoring and evaluation (M&E) activities
   a. DFAT continue to engage in-house and independent research and evaluations of ALMA. The program has demonstrated the impact of ongoing learning and improvement in response to the learning needs of educators in Timor-Leste.
   b. DFAT and PHD explore opportunities for further investment and refinement of ALMA's PBI.

3. Support the interpretation and use ALMA M&E findings
   a. PHD support the capacity of government stakeholders to interpret and use monitoring and evaluation data to make informed decisions about where to direct investment or change aspects of interventions, through early engagement.

b. PHD investigate how municipal stakeholders and inspectors are integrating knowledge and evidence from ALMA into management and support of schools.

4. Support research to inform how teacher professional learning support could be better targeted
   a. Conduct further classroom observations in additional clusters and municipalities to better understand which teaching practices are easier or harder to improve, and why, to inform more focused support to teacher professional learning.
   b. Conduct further research into clusters with varied levels of fidelity to build a comparative dataset, to understand if a high level of adherence leads to better teaching quality.
   c. Determine how many teachers are applying the Child Functioning tools

Monitoring student learning

Student learning outcomes data is an important source of evidence in understanding the impact of investments in teacher professional learning. Understanding what students know and can do is also an important source of evidence for teachers and school leaders as they support ongoing student learning. One of the key challenges for the Study in Timor-Leste is that there is very little valid and reliable data on student learning outcomes. Recommendations include:

1. Develop and expand assessments to measure student learning outcomes, progressions and understand learning outcomes
   a. PHD consider how to support ALMA to improve and expand its literacy and numeracy assessment if there are plans to continue to use some form of assessment as part of regular program monitoring.
   b. DFAT consider supporting MoEYS to develop a national assessment of literacy and numeracy at key points during basic education, to understand student achievement.
   c. For any assessment program, consider:
      • Including a contextual survey to better understand student, teacher and/or school background and linkages to student performance. [3]
      • Exploring ways to link student assessment to skills outlined in the new curriculum or link this to international work being conducted around the learning progressions (Adams et al., 2018; Waters, 2019). [4]
      • Disaggregating student learning and contextual data by gender, disability, and language groups, to inform policy and programs for improving equity.

Improving sustainability

The ability of schools to sustain inputs to improve teaching quality, support teachers to implement the new curriculum and improve student learning outcomes is a significant risk to the longevity of ALMA outcomes. Recommendations about sustainability focus on the potential to improve key components of ALMA and to institutionalise interventions through building MoEYS leadership and management of ALMA:

---

[3] Contextual data combined with cognitive student learning outcomes data can be a powerful tool to inform policy decisions around resourcing support for improved student learning and teaching.
[4] This means describing what it looks like for learners to move from early knowledge and skills to more advanced knowledge and skills within an academic domain such as reading or mathematics.

1. Continue to support, develop and refine peer professional learning approaches as a high-impact, low-resource intervention
   a. DFAT and PHD to continue to support and encourage regular GTPs and GTLs. These aspects of ALMA are relatively low-resource and can extract high value from the potential of peer learning.
   b. PHD to conduct deeper investigations into mentoring, GTPs and GTLs and other models of peer learning, to consider how better to improve effectiveness and sustainability.
   c. DFAT to work with MoEYS on ensuring periodic resourcing is available to fund transportation and incentives to support participation in peer-learning activities.

2. Continue to refine mentor component of ALMA to improve the long-term likelihood of mentoring and GTP facilitation being sustained
   a. PHD to focus on adopting approaches that support school leaders and teachers take ownership of their learning, to ensure intellectual and experiential knowledge developed through ALMA can be sustained within schools. For example:
      - develop terms for a partnership arrangement between school leaders and mentors, and teachers and mentors, that outlines how mentors and mentees work together in relation to each partner's responsibilities and goals. 5
      - develop the peer mentoring component of ALMA to build the capacity of experienced teachers to adopt mentoring roles in the long-term, thereby reducing the status disparity with external mentors.
   b. PHD to continue to support ALMA program revision as informed by ongoing monitoring and evaluation, allowing adaptations that may occur at cluster or municipal levels. Ongoing discussion between mentors, leaders and teachers about what works best could provide a pathway to local, contextually appropriate innovation and adaptation.
   c. If inspectors continue in their mentoring roles, there is a need to differentiate between their accountability role and coaching role. Providing capacity support on effective coaching is important, as well as ensuring clear mandates.

3. Provide ongoing funding and technical support to ensure tablet functionality and useability as this intervention transitions towards MoEYS systems
   a. PHD to provide budget for sufficient credit to enable internet connection
   b. PHD to facilitate frequent software updates and timely repairs and provide periodic training on tablet functionality.

4. Incorporate leadership change management principles in ALMA Leaders of Learning component
   a. PHD to include change management training in the Leaders of Learning program such as succession planning, to prevent institutional knowledge gaps created by unforeseen changes at the school and municipal levels.

---

[5] Mentor/mentee partnership agreements should emphasise empowering school leaders and teachers to determine their professional learning priorities within the scope of the new curriculum, as retaining sense of autonomy is vital to fostering self-determination and maintaining motivation.

b. PHD to support the expansion the Leaders of Learning program to include a wider cohort of senior teachers (beyond promising female teachers) to build capacity for senior teachers to adopt some leadership functions.

c. MoEYS and PHD to provide Leaders of Learning inductions to newly deployed municipal and school leaders.

5. Support leaders to expand and retain ALMA knowledge at school level
   a. MoEYS to consider providing management incentives to those in trained leadership roles to encourage additional mentoring responsibilities across their clusters or municipalities.
   b. PHD to provide ongoing mentoring and training for senior teachers and leaders to address staff turnover by ensuring intellectual and experiential knowledge developed through ALMA is retained at the school level.

6. MoEYS and PHD to work together to embed gender and disability inclusive practices within the education system
   a. Building on the existing gender and disability inclusion training, expand capacity building activities for school leaders, teachers and mentors on topics such disability identification, inclusive attitudes and values, and inclusive teaching strategies.
   b. Consider supporting the certification of teachers in disability inclusive practices to support school clusters.
   c. Build on community awareness campaigns to encourage parents to enrol children with disabilities into schools and support continued attendance at school.
   d. Continue to invest in capacity development of female school leaders, as an important step towards improving gender equity in leadership roles.

7. Incorporate pedagogical mentors into the permanent structure of the MoEYS to ensure government ownership
   a. MoEYS to integrate the mentor position into the inspector role through capacity building exercises and provision of additional support, with strong consideration for existing workloads and the need for clear mandates; or
   b. PHD and MoEYS to amend mentor employment arrangements to be contracted directly to the government and sit within the inspectorate.

8. Improve the evidence-base behind ALMA to ensure MoEYS' continued confidence, support and funding of interventiosn through periods of leadership transition
   a. PHD to document international research behind the ALMA approaches
   b. DFAT to continue to invest in improving monitoring and evaluation of ALMA, including the capture of outcomes related to teaching quality and student learning.
   c. PHD to document and disseminate program outcomes throughout MoEYS departments.

9. Continue to work on a long-term strategy for system strengthening to integrate core elements of ALMA into national sector plans, strategies and budgets
   a. DFAT to conduct a cost analysis of ALMA interventions.
   b. DFAT to undertake a needs analysis with MoEYS to determine the current level of human and financial capacity to effectively integrate elements of ALMA into MoEYS.

c. PHD continue working with MoEYS to align transition plan.

d. DFAT continue to work with MoEYS and development partners on budget for 'supporting infrastructure' for ALMA interventions.

1. Introduction

The Australian Government, through the Department of Foreign Affairs and Trade (DFAT) is supporting long-term education reforms in Vanuatu, Lao PDR and Timor-Leste. Through the Education Analytics Service (EAS), DFAT is investigating teaching and learning development initiatives in a study series known as the Teacher Development Multi-Year Study Series.

In the context of Timor-Leste, the Australian Government is supporting the Government of Timor-Leste in education through the Partnership for Human Development (PHD) and Apoiu Lideransa liuhosi Mentoria no Apredizajen (ALMA). ALMA supports the Ministry of Education, Youth and Sport (MoEYS) to develop teacher professional learning, particularly in support of its major reform of rolling out and implementing the National Basic Education Curriculum (new curriculum) across schools in Timor-Leste.

Under the Teacher Development Multi-Year Study for Timor-Leste (the Study), the EAS is assessing how the ALMA program supports leaders and teachers to develop teaching knowledge and to change teaching practice over time, and the extent to which teacher participation in ALMA leads to improvements in learning outcomes for students.

Three reports present the findings at certain points on the Study's timeline.

Timor-Leste Interim Report 1 presents findings from data collected from two municipalities in 2018, and secondary analysis of the 2017 Classroom Based Assessment (CBA) and Early Grade Reading Assessment (EGRA) data. Interim Report 1 recommended the need for: strategies to support school communities to sustain ALMA activities following the active program period, supporting leadership change management through the Leaders of Learning program, introducing periodic refresher training for school leaders and teachers who demonstrate leadership capacity, periodic resourcing to support ongoing school monitoring and Grupu Traballu ba Professor (GTP) sessions, and actively including inspectors and municipal education directors in ALMA activities. The report can be accessed here.

Timor-Leste Interim Report 2 presents findings from data collection in a further two municipalities in 2019. Interim Report 2 built on the recommendations above, and further recommended: working closely with MoEYS on a long-term strategy for sustainability, supporting school leaders to facilitate rotating GTPs and within-school peer learning groups to improve accessibility, introducing accountability measures using tablets, additional training for mentors to support ongoing teacher understanding of the curriculum, expanding the Leaders of Learning program to include a wider cohort of senior teachers, providing ALMA induction training to newly deployed municipal and school leaders, disseminating information about ALMA and its outcomes, and supporting school communities to continue program components in less-costly ways. The report can be access here.

This report constitutes the Final Report of the multi-year study of Timor-Leste's ALMA program. It presents findings from data collection in four municipalities in 2021. It aims to identify the outcomes of participation in this program by reflecting on the three cycles of data collection and contribute to analysis across the three countries in the Study series. The Final Report also presents on lessons learnt and recommendations related to teacher development for Timor-Leste and other contexts.

1.1 Objectives of the Study

The broad question that frames this Study is:

To what extent does this aid investment produce improved teaching quality and improved student learning?

Three specific questions related to this broad question are being investigated:

1. To what extent does the ALMA program support improved teaching quality in Timor-Leste?
2. To what extent does the ALMA program support the effective implementation of Timor-Leste's National Basic Education Curriculum?
3. To what extent does teacher involvement in the ALMA program lead to improved learning outcomes for Timor-Leste students?

1.2 Highlights of ALMA-supported change

Results from the 2018, 2019 and 2021 data collections suggest the ALMA program has been effective in strengthening elements of teaching quality, curriculum implementation and student learning outcomes.

Changes that can be attributed to ALMA include:

- Increased leadership capacity, a shift to instructional leadership, and improved school leader understanding of how to support teachers implement student-centred approaches
- Increased teacher knowledge of curriculum content, lesson planning, pedagogical activities and classroom management strategies
- Improved teacher motivation, confidence, lesson planning and preparation, and punctuality
- Teachers using a variety of student-centred activities in their daily classroom practice
- Improved implementation of the new curriculum through facilitating a peer learning process for teachers to prepare, review and present lessons, provide feedback, share challenges and workshop solutions
- Improved access to the curriculum, lesson plans and activities
- Improvements to student interest in lessons, attendance, engagement and well-being
- Improved monitoring, reporting and increased communication between different levels of education stakeholders
- Improved awareness of inclusive education.

Interim Report 1, Interim Report 2 and Annex C provide further detail on the changes perceived and reported by participants, focusing on changes attributed to ALMA.

2. Country and investment context

2.1 Timor-Leste's new curriculum and the ALMA program

In 2013, the MoEYS began a staged development of a new curriculum for pre-school to grade 6, to improve literacy and numeracy, and reduce student drop out. This nationally led reform process culminated in a new curriculum guided by the principles of close links with local culture and way of life, integrated development of the person, and quality teaching and learning (Government of Timor-Leste, 2015).

The new curriculum organises subject content into sequenced and scripted lessons for each grade level to support teachers to implement the new curriculum, and to ensure content uniformity across classes and schools. It also proposes new pedagogies that aim to transform teaching and learning approaches in Timor-Leste, moving from traditional teacher-centred approaches to student-centred ones, focused on improving relevance and connection to students' lives and based on more active, child-centred and inclusive learning methodologies.

MoEYS began implementing the new curriculum for grades 1 and 2 in 2015, grades 3 and 4 in 2016, and grades 5 and 6 in 2017. To introduce the new curriculum, MoEYS used a cascade teacher training model. MoEYS provided training for local education leaders every trimester break, who then provided training for teachers in their school clusters. The training was aligned to the phased rollout of the new curriculum, and emphasised the new student-centred pedagogies, promoting positive behaviours, and language transition beginning with Tetum as the primary language for literacy in the early years, with a gradual transition to Portuguese. MoEYs developed teachers' guides, student textbooks, an atlas, story books, posters, song recordings and videos (La'o Hamutuk, 2018).

The ALMA program is funded by DFAT and was developed in partnership between Australia and MoEYs, with support from PHD. The ALMA program goal is to facilitate better teaching and leadership to: enable the implementation of the national curriculum, ensure systematic data collection, monitoring and evaluation; and support school-based support and intervention (PHD, 2021). The program's duration (from 2016 to 2026) reflects the reality that improving teaching requires sustained investment over multiple years. To date, ALMA has been rolled out in 10 of 13 municipalities.

The ALMA program includes the following core components:

- **Leaders of Learning program:** Periodic leadership training sessions for school leaders focused on school-based management, observation and feedback skills, provision of teacher support, literacy and numeracy assessment, teacher peer learning groups, inclusive education, and parent-community involvement.

- **School-based peer professional learning groups:** Facilitated peer-learning sessions for school leaders and teachers within a school cluster to collaborate on lesson planning, provide feedback to each other on teaching simulations, discuss resources and problem solve challenges experienced in teaching and learning.

- **Mentor support from educational and local mentors[6]:** Mentors provide on-the-job mentoring support to school leaders as they apply the learning gained from the Leaders of Learning program. Mentors also build teacher capacity through supporting the peer learning groups and student literacy and numeracy assessments, and providing classroom observation and feedback sessions.

- **Educational technology to enable efficient information sharing and monitoring:** School leaders are provided with a tablet uploaded with the new curriculum, lesson plans and materials. Each tablet has custom-built applications and a dashboard (Eskola) to collect, store and submit classroom observation data, and retrieve and analyse information.

From 2016-2018, each phase of ALMA covered 50 per cent of school clusters in two municipalities within a 10-to-12-month period of implementation and an additional six months of consolidation phase (where technical assistance from PHD is reduced and core functions of the program are transferred to MoEYS to manage with reduced technical assistance). This scale-up approach has changed over time.

In late 2018, an internal review recommended several improvements to ALMA (Grimes & PHD Education Sector Team, 2018). These led to updates to the design and implementation of ALMA from 2019 which included:

- Rolling out ALMA to 100 per cent of schools in municipalities, which began in Phase 5 in Lautem and then Cova Lima
- Refresher training for school leaders in all Phase 1-3 municipalities to address some sustainability concerns outlined in the Interim report 1
- Updates to teacher observation forms to simplify and provide clearer criteria
- Chat groups on the school leaders' tablets to improve interschool communication
- Introduction of program-based in inquiry in Lautem only, to provide more evidence on school leader capacity to implement ALMA, teachers' implementation of the new curriculum, and student learning.

Annex A provides an overview of the ALMA program timeline.

Timor-Leste had multiple changes in Ministers of Education, leadership and political affiliations over this reform period, some of whom have challenged the new curriculum approach, particularly in relation to language of instruction. ALMA has navigated changes in political leadership since inception and has continued its objective of transitioning towards greater leadership and management by MoEYS, from a development partner led and implemented program. There are some successes. For example, MoEYS is funding some mentor posts, there are clearer mandates for INFORDEPE (the national training institution) and the inspectorate as partners in the program, and the technological platform – Eskola[7] – is in transition to MoEYS (PHD, 2020). However, with the Government of Timor-Leste reducing its budget allocation for education (USD 111 million in 2020 and projected USD 81 million for 2022), MoEYS is unlikely to have the funding or capacity to manage

---

[6] While the original model of ALMA included 'international' and 'national' mentors, in 2019 these two categories were referred to as 'educational' mentors to reflect MoEYS's ownership of ALMA.

[7] Eskola is an online platform, accessible via a tablet-based application which allows school leaders and MoEYS to collect and monitor data from classroom observations, peer learning, and examination results (Catalpa, n.d.).

ALMA without donor support thereby requiring an incremental approach towards whole-of-government ownership (PHD, 2021).

3. Study design and methodology

A key feature of the Study is its multi-year duration, which acknowledges the complex nature of teacher development and that sustained change in teaching practice takes time, recognises the scale of the program investment, and enables an agile and adaptive approach that is responsive to contextual affordances and limitations. This approach enabled an amendment of the Study design to address unforeseen contextual challenges including:

1. Limited availability of student performance data
2. COVID-19 disruptions.

The Study adopts a mixed methods approach utilising both quantitative and qualitative methods as detailed in Table 1. The *PLMP Evaluation Plan* (EAS, 2017) and *Teacher Development Multi-Year Studies – Conceptual Framework* (EAS, 2017) provide the rationale and overall approach for this Study.

Table 1: Study data sources

Key research questions	Data sources
1. **Teaching Quality** To what extent does the ALMA program support improved teaching quality in Timor-Leste?	Case studies at school and system level (2018, 2019, 2021)
2. **Curriculum Implementation** To what extent does the ALMA program support the effective implementation of Timor-Leste's National Basic Education Curriculum?	Case studies at school and system level (2018, 2019, 2021)
3. **Student Learning** To what extent does teacher involvement in the ALMA program lead to improved learning outcomes for Timor-Leste students?	Case studies at school and system level (2018, 2019, 2021) Secondary analysis of EGRA and CBA (2017) and PBI (2019, 2020)

3.1 Qualitative

Case study data was collected over three collection periods, in 2018, 2019 and 2021. Two municipalities that implemented ALMA across phases 1 to 5 were selected each year of the Study as sites for case study interviews, to explore differences in implementation by municipality, and investigate program sustainability.

In-country partnerships

The Australian Council for Educational Research (ACER) partnered with Belun, a Dili-based NGO, and the Instituto Catolico para Formacao de Professores (ICFP), a teachers' training college based in Baucau, to finalise the data collection instruments and undertake the data collection.

Instrument design

Interviews and observation were the primary data collection methods for the ALMA case studies. The data collection tools included:

1. Individual interview guides
2. GTP observation instrument and group interview guide
3. Classroom observation instruments.

The ACER team worked in partnership with Belun and ICFP, to refine and translate the case study interview guides and classroom observation instruments, respectively.

Sampling

Purposeful sampling was utilised to select the case study sites, presented in Table 2, based on specific criterion (phase, municipality, cluster, school), and with input from DFAT Post and in-country research partners. Eskola data was used to assess intensity of activity, and patterns in student and teacher performance when selecting schools.

Year three of the Study included classroom observation data of grade 2 and grade 3 Tetum literacy lessons across four municipalities, as shown in Table 2. This enabled the triangulation of case study perception data with observations, enriching the datasets related to all three Research Questions.

Table 2: Case study interview, GTP observation sites (years 1-3) and classroom observation sites (year 3 only)

Year of study	Municipality	ALMA Phase	Classroom observations
1	Aileu (Daisoli cluster)	Phase 2	Yes
1	Manufahi (Dotic cluster)	Phase 4	
2	Bobonaro (Raifun Maliana cluster)	Phase 3	
2	Viqueque (Mundo Perdido cluster)	Phase 3	Yes
3	Lautem (Luro cluster)	Phase 5	Yes
3	Liquica (Liquica Vila cluster)	Phase 1	Yes

Fieldwork preparation

In each year of the Study, fieldwork preparation activities were undertaken including:

- Scoping visits to sample sites conducted by research partners to confirm logistical details, interview/classroom observation times, and official communication requirements
- Field research training delivered by ACER to in-country partners, to ensure high quality data collection.

Data collection

Case study interviews

The ACER research team worked in partnership with Belun to undertake a total of 161 interviews with a range of education stakeholders over three years, to obtain a comprehensive understanding

of the impact of ALMA at the local, municipal and national levels (refer Table 3). Interviews were audio-recorded in Tetum and transcribed into English, in preparation for analysis.

Table 3: Interview participants (years 1-3)

Type of stakeholder	Number of respondents interviewed		
	Year 1	Year 2	Year 3
Teachers	26	39	37
School leaders	9	11	10
Mentors	3	0	4
Inspectors	2	2	6
Municipal education directors	2	2	2
Superintendents	0	0	2
MoEYS representatives	0	5	0
Total	**42**	**58**	**61**

Classroom Observations

The ACER research team worked with ICFP to conduct 69 classroom observations of grade 2 and grade 3 Tetum literacy lessons in 17 schools, across four municipalities (as detailed in Table 4). Short post-observation interviews were also conducted with participating teachers to collect additional contextual information, with notes recorded in English.

Table 4: Classroom observations sites (year 3)

Municipality	ALMA Phase	Number of schools	Teachers observed	Classroom observations
Liquica (Liquica Vila cluster)	1	4	12	24
Aileu (Daisoli cluster)	2	4	8	15
Viqueque (Mundo Perdido cluster)	3	5	8	16
Lautem (Luro cluster)	5	4	7	14
Total		**17**	**35**	**69**

Quality assurance

The ACER research team accompanied the Belun research team in years one and two of the Study, to provide a quality assurance role by observing interviews and conducting daily debrief sessions. This was not possible in year three of the Study due to COVID-19 related travel restrictions. To enable data collection to proceed, ACER provided remote training and support. The Belun and ICFP

In-Country Coordinator roles were supplemented with a monitoring responsibility, and ACER conducted remote debriefs throughout the field work period to provide advice and address issues as they arose.

Data analysis

Case study interview data

The ACER team used QSR NVivo 12 Pro to conduct the analysis of the case study interview data. Data was coded aligned with themes identified in the *Teacher Development Multi-Year Studies - Conceptual Framework* (EAS, 2017). QSR NVivo 12 Pro was selected by ACER for coding and analysis because it provides an audit trail for transparency and to the analysis process, an efficient way to organize, compare and synthesize the data, and a way of testing the reliability of the analysis.

Classroom observation data

The ACER team reviewed the contextual information recorded by researchers and created observation maps by theme (interactions, pedagogy, gender, inclusivity), undertaking analysis of theme activities observed across the duration of lessons. The team also reviewed records of the classroom environment. ACER developed the visual displays of the data in an attempt to understand prevalence of practices and differences between municipalities.

3.2 Quantitative

Existing data was used to explore student learning outcomes in Timor-Leste. The quantitative data analysed in the first year of the Study included the 2017 CBA and EGRA data, collected as part of the DFAT-funded *Lessons learned an early assessment (2017) of two innovations in basic education in Timor-Leste* (referred to as the 2017 World Bank Study) (World Bank, 2018). This 2017 World Bank Study was undertaken in response to MoEYS' request to gain early understanding of the impact of two innovations – the new curriculum and PLMP.

ALMA's Program Based Inquiry (PBI) in Lautem provided an additional source that investigated the quality of school leaders' implementation of the ALMA program, how teachers were implementing the national curriculum, and tracking of student learning outcomes in literacy and numeracy over an 18-month period in Lautem. Observations of school leaders and mentor logs, classroom observations and short, program-specific student literacy and numeracy tests were used to collect the data. PBI reporting demonstrated 'a generally positive impact on students' performance in numeracy and literacy after 18 months of regular implementation in Lautem.'[8] However, while these trends may allude to indicative claims about student learning outcomes, the small, non-random sample is not nationally representative.

The sampling of schools for PBI was based on purposive sampling, chosen for the purpose of the study rather than a random selection of schools. School selection criteria included consideration of location in Lautem, accessibility, whether the school had a female leader, and whether the female leader had participated in ALMA's Leaders of Learning program.

---

[8] PHD (2021). *ALMA Progrma-Based Inquiry Round 1 – 3. Summary Report*. Australia Timor-Leste: Partnership for Human Development, p. 5.

The 2017 World Bank Study was administered during a similar period to the initial implementation of ALMA. As of 2017, the ALMA innovation had been implemented in approximately 125 schools in five municipalities.[9] Sixty of these were randomly chosen to serve as the treatment group. With the exception of one municipality[10], an equal number of comparison schools were chosen for inclusion in the study. The final sample included 70 ALMA schools and 58 comparison or non- ALMA schools (World Bank, 2018).

Further details about the Study design and methodology can be found in Annex B.

3.3 Limitations

Several limitations were faced on this Study, including:

1. **Attribution** - Attribution is easier to establish when there is a clear causal relationship between the outcome and any preceding outputs. Teaching itself is a 'noise-filled' context, with a wide range of contextual factors that enable and constrain productive investments in teachers, teaching and education communities. While there may be relationships between various factors associated with student learning outcomes, direct causal relationships are difficult to determine.

2. **Generalisability** - Case studies are intended to explore the experience of the investment by educational stakeholders in a small sample of schools, but across a multitude of variables. In this way, the case studies are intensive rather than extensive, and not intended to generalise the impact of ALMA across Timor-Leste.

3. **Data availability -** A range of existing and planned data sources were intended to contribute to research question 3 (student outcomes) including EGRA, CBA, the 2016 Mother Tongue-Based Multilingual Education (EMBLI) endline data, and the 2015 UNICEF Child Friendly Schools (CFS) evaluation. However, much of this data was either not available or deemed unsuitable for analysis at the time of reporting. As a solution to this data gap, supplemental data was used, including classroom observations, PBI datasets and Eskola data. However, without systematic monitoring of student learning outcomes, it is not possible understand the impact of the curriculum reforms and ALMA on student learning.

---

[9] Manatuto, Aielu, Liquiça, Dili Remote, Atauro.
[10] In Atauro, all of the schools are PLMP schools so none could be selected as comparison schools.

4. Summary of findings from 2021 data collection

This section presents a snapshot of data collected in 2021: case studies and classroom observations in Lautem and Liquica; and classroom observations across four municipalities in Liquica, Aileu, Viqueque and Lautem.

4.1 Case studies and classroom observations in two municipalities (Lautem and Liquica)

Lautem (Luro cluster) and Liquica (Liquica Vila cluster) were selected as case study sites for year three of the Study. A total of 61 interviews were conducted with teachers, school leaders, mentors, inspectors, municipal education directors, and superintendents. Additionally, classroom observations were conducted in Lautem (14) and Liquica (24) to enable triangulation of the case study interview data.

The majority of teachers interviewed in Lautem and Liquica were females (27) compared to males (9). Three female school leaders and seven male school leaders participated in interviews. One female mentor and three male mentors were available for interviews in Lautem and Liquica. All municipal staff interviewed in both Lautem and Liquica were male (11).

Table 5 provides an overview of key findings from the 2021 case study data from Lautem and Liquica, presented by Research Question. Annex C provides full details on the changes perceived and reported by participants, and observed by researchers in Lautem and Liquica.

Table 5: Key findings from 2021 case study data (Lautem and Liquica)

To what extent does the ALMA support improved teaching quality in Timor-Leste?			
	Finding 1	Finding 2	Finding 3
Teacher knowledge	GTPs support teachers in improving knowledge about curriculum content, lesson planning, pedagogical activities and classroom management.	GTPs provide teachers with a forum to learn from each other through peer learning, sharing of ideas and reflection about practice.	Mentors and school leaders support teachers to build knowledge through classroom observations, feedback, and advice on specific teaching challenges, which in turn has contributed to improved teacher confidence.
Teaching practice	Feedback and support from ALMA mentors, school leaders and GTPs have helped teachers improve elements of their teaching practice, particularly in planning and classroom management.	Teachers are using a variety of student-centred activities in their daily classroom practice including the use of pair and group work and encouraging more student talk, but the use of these	

		practices varies across municipalities.	
Teacher professionalism	ALMA has improved teachers' punctuality, and importantly, teachers' preparation as they have completed lesson plans for all classes.		
Assessment	GTPs and ALMA mentors have supported teachers in understanding how to use assessment to monitor students' learning.	ALMA activities have supported teachers in using a variety of methods to assess students' learning including individual exercise, group presentations, tests and drawings or other activities.	
School leadership	ALMA's Leaders of Learning program has contributed to improved leadership capacity including an observable shift to instructional leadership.	Leaders are more engaged with classrooms, and the introduction of classroom monitoring through educational technology has been an important aspect of improving teacher knowledge and practice.	ALMA's Leaders of Learning program has improved school leaders' understanding of student-centred approaches and support of teachers to implement these approaches in their classrooms.

To what extent does the ALMA support the effective implementation of Timor-Leste's National Basic Education Curriculum?			
	Finding 1	**Finding 2**	**Finding 3**
Access to the curriculum	ALMA has improved access to the curriculum, lesson plans and activities on tablets, which helps school leaders to support teachers in implementing the curriculum.	Tablets enable communication for leaders to share information with teachers and schools, as well as support the monitoring of teachers' implementation of lesson plans.	
Teacher support	Mentor support of school leaders and teachers has been a key aspect of ALMA that has enabled implementation of the curriculum by addressing challenges through observations, feedback, and GTP sessions.	Peer learning and school leader support helps teachers address difficulties and challenges with curriculum implementation.	

To what extent does teacher involvement in the ALMA lead to improved learning outcomes for Timor-Leste students?			
	Finding 1	Finding 2	Finding 3
Academic outcomes	Some teachers observed improved student academic outcomes due to curriculum support provided through ALMA activities.	Use of local language in some areas has been observed to improve student understanding in reading or numeracy activities.	
Attendance	Attendance is closely linked to context, and the impact of ALMA on student attendance is inconclusive with a range of opinions from stakeholders.		
Interest in lessons	ALMA support has facilitated student-centred learning through the incorporation of creative and 'fun' activities which encourage student interest in lessons.		
Wellbeing	Through ALMA support and activities, teachers are encouraging students to work together, share and present their work in front of their classes, which is perceived to improve student wellbeing and engagement.	Classroom observations indicate that teachers have cooperative and supportive classroom environments which are more likely to indicate the presence of positive student attitudes and dispositions towards learning.	
Equity			
	Finding 1	Finding 2	Finding 3
Disability inclusion	It is likely that many teachers are unable to accurately identify students with specific disabilities, and at the same time many children with disabilities may not attend school.	ALMA has improved awareness of inclusive education, but many teachers have limited capacity to effectively support students with disabilities.	
Gender	Most teachers recognise that boys and girls have an equal right to participate in the classroom.	Teachers incorporate gender inclusive strategies by supporting boys and girls to work together in groups and select both boys and girls equally to contribute to class discussions.	

Language	Language barriers are a key challenge to teaching literacy in Lautem.	Teachers were observed to employ inclusive practices to support non-Tetum speakers.	

4.2 Classroom observations across four municipalities (Liquica, Aileu, Viqueque, Lautem)

As part of the Study, researchers conducted 69 classroom observations of Tetum literacy lessons in 17 schools across four municipalities. Thirty-five grade 2 and 3 teachers were observed. The classroom observation tool was purposefully designed to capture information relevant to this Study.

The majority of teachers (76 per cent) had been teaching for 11 years or more. Twenty-one percent of these teachers had been teaching for over 26 years. There were more female teachers (22) compared to male teachers (13).

This section discusses which strategies were observed to be prevalent and limited and related insights. Figure 1 summarises the differences observed in the areas of preparation, pedagogy, inclusivity and classroom management by municipality. All these areas are prioritised in the new curriculum. Prevalence is indicated by the blue shading – darker blue indicates a higher proportion of teachers were observed to undertake a practice or reported to do so.

Proportion of teachers	None	1-24%	25-49%	50-74%	75-99%	100%

Figure 1: 2021 classroom observation findings (Liquica, Aileu, Viqueque. Lautem)

	Liquic (Ph 1)	Aileu (Ph 2)	Viqueque (Ph 3)	Lautem (Ph 5)	Summary of findings
PREPARATION					
Lesson preparation Lesson plan in place (obs)					All teachers in Aileu, Liquica and Lautem had a lesson plan in place, and most in Viqueque. All reported they prepare by reviewing the MoET lesson plan and preparing resources.
PEDAGOGY					
Classroom interaction Whole-class, pair/group and individual activities used (obs)					All teachers in Lautem used pair/group activities and a mix of the three interaction types - compared to around three-quarters of teachers in Liquica and Viqueque. In Aileu, half of the teachers did not use pair/group activities.
Pair/group activities used (obs)					

27

	Liquic (Ph 1)	Aileu (Ph 2)	Viqueque (Ph 3)	Lautem (Ph 5)	Summary of findings
Prior knowledge and skills Explicit reference made (obs)					All teachers in Aileu and Viqueque, and most in Liquica and Lautem, made explicit references to students' prior knowledge and/or skills. In Aileu, teachers consistently did this in the first 10 minutes of a lesson, and also through the 60 minute lesson.
Localisation Explicit reference made (obs)					Just over half Lautem teachers made reference to students' cultural heritage, local context or environment – more than in other municipalities. In Viqueque, a few teachers integrated local materials into lessons, and most reported using local materials such as stones, corn, plants and flowers. The use of local materials was not observed elsewhere, but a few teachers did report doing this.
Local materials used (obs and rep)					
Activity types 5+ activity types used (rep)					More Liquica teachers use a greater range of activities in Literacy classes, with half reporting at least 5 activities they regularly use including pair/group activities, individual activities, drawing/painting, question and answer, and role play. This compares to less than a third of teachers in Aileu and Lautem. The range of activities reported in Viqueque were very limited – focused on reading, writing and spelling.
Use of resources 5+ resources used (obs)					All Liquica teachers, and the majority in Aileu and Lautem, were observed to use at least 5 resources. Teachers in Viqueque used the fewest resources. The types of resources varied between municipalities, with teachers in Aileu and Liquica relying on posters, pictures and story books. While teachers in Viqueque and Lautem used storybooks and reference books in some lessons, they rarely used posters and pictures. Physical actions, songs and games were observed mostly in Lautem lessons, followed by Liquica and Aileu.
Classroom setup Grouped tables and chairs (obs)					Classrooms in Liquica and Aileu were set-up in ways more conducive to engaging students in different activities. Most had grouped tables and chairs and in at least half of the classes, teachers were observed to re-arrange formations. In Lautem no classrooms had grouped tables and chairs for student, and half in
Reading area (obs)					

	Liquic (Ph 1)	Aileu (Ph 2)	Viqueque (Ph 3)	Lautem (Ph 5)	Summary of findings
					Viqueque. While most classrooms in Liquica had a reading area, there were none in Viqueque.
Assessment Explicitly checked (obs)					In Liquica, Aileu and Viqueque all teachers explicitly checked for students' understanding (the majority of teachers did this regularly throughout the 60-minute lesson) and observed students practising or applying what they had learnt. In Lautem, only one teacher was observed to not undertake either of these assessment practices.
Observations (obs)					
INCLUSIVITY					
Gender Selection (obs)					All teachers selected girls and boys, but this practice was more extensive in Viqueque and Lautem. The distribution between girls and boys was mostly even except in a few instances.
Regularity (obs)					
Students with particular disabilities Customised support (obs)					More than half of teachers in Viqueque and Lautem were observed to provide customised support to students with disabilities. Support was mostly to children who had difficulties with reading, writing, and pronouncing. One teacher provided support in Liquica, but none in Aileu. However, teachers in Liquica and Aileu reported higher numbers of children with disabilities in their class, and three-quarters were able to report on ways in which they support these students. Teachers in Viqueque and Lautem reported few children with disabilities and few strategies.
Strategies (rep)					
Non-Tetun speakers Customised support (obs)					All teachers in Lautem provided customised support to non-Tetun speakers. Examples included: helping students with difficulties in reading, spelling, pronouncing; translating Tetun into mother-tongue; and using local language to provide instruction. Three-quarters of teachers did this in Liquica, followed by Viqueque and lastly Aileu.
CLASSROOM MANAGEMENT					
Classroom environment Cooperative and supportive (obs)					Most classrooms were assessed to be cooperative and supportive environments, but there were elements of compliance highlighted in most lessons. A small number of classrooms were found to be compliant in Viqueque and Lautem.

	Liquic (Ph 1)	Aileu (Ph 2)	Viqueque (Ph 3)	Lautem (Ph 5)	Summary of findings
					Classrooms in Viqueque had more elements of unruliness, where there were disruptions noted.

obs = observed   rep = reported

Across the four municipalities, the following practices were **prevalent and consistently observed or reported**:

- **Teachers prepared for lessons.** Teachers had lesson plans in place, and reported they prepared for lessons by reviewing the MoEYS lesson plan and preparing resources.
- **Teachers made connections** to students' prior knowledge and/or skills, for example by asking students what they already know or promoting their recall of an earlier activity.
- **Teachers used classroom-based assessment strategies** by checking for students' understanding and observing students practising or applying what they had learnt. For example, prompting or encouraging students to demonstrate or articulate their understandings, moving between groups and providing feedback, or recording notes about students as they worked. It is important to note however, that these observations do not indicate teachers' capacity to interpret where students learning is at, and tailor learning strategies.
- **Teachers had cooperative and supportive classroom environments.** Teachers were consistently observed to have classroom environments where teachers and students work harmoniously, the atmosphere was joyful, interactions respectful, kind and encouraging, and most activity was focused on learning.

Possible insights as to why these practices are more prevalent and consistent could be:

- These four areas are emphasised in the new curriculum. They are also a focus of the ALMA classroom observation form, and therefore observation and feedback. The form includes checking whether the teacher understands the lesson plan and has prepared the materials, if the lesson is linked to previous learnings, whether teachers use different strategies or methods to evaluate student understanding, and if the teacher and student are polite and respectful.
- There could be greater focus on preparation and assessment during GTPs. Based on monitoring data gathered by PHD in 2019, the priority topics discussed during GTP sessions were preparation and implementation of lesson plan (26%) and assessment/evaluation (15%) (PHD, 2020).
- Based on PBI in Lautem, teachers improved most in the area of lesson preparation and implementation (PHD, 2021).

The following practices were **less prevalent, and not consistently observed** across the four municipalities:

- **Teachers' use of pair/group activities, and a mix of whole-class, pair/group and individual activities.** This was observed for all teachers in Lautem, but much less prevalent in Aileu.
- **Teachers' integration of Timorese values, customs and traditions into lessons.** This practice was observed in some lessons in Lautem, but less so in other municipalities. Teachers in Viqueque were more accustomed to integrating local materials into lessons.

- **Teachers' use of a wide range of resources and activities.** More teachers in Liquica reported using a wider range of activities in Literacy classes and were observed to use a more diverse range of resources, than in other municipalities. Viqueque was the most limited.

These practices are also emphasised in the new curriculum and a focus of the ALMA classroom observation form. The form includes checks on whether classrooms maximise student-centred activities, the teacher uses a variety of different teaching approaches and resources, and there is active student participation. It does not include explicit references to localisation.

It would be useful to undertake further investigations as to why some of these practices are more prevalent in some cases, and harder to apply in others. Possible insights include:

- There is less of a focus on teaching methodology in GTPs. Based on monitoring data gathered by PHD in 2019, only 10 per cent focused on teaching methodology (PHD, 2020).
- Based on PBI data in Lautem, teachers' performance improved most in 'pedagogy and didactic' (PHD, 2021). It could be possible that improving the use of pair/group work has been a more of a focus of the Lautem ALMA program or later ALMA phases.
- The extent of localisation may reflect remoteness – the Viqueque and Lautem schools observed are remote schools.
- Remoteness is likely to also contribute to resourcing issues. Insufficient teaching and learning resources and inadequate classroom/school facilities were reported as key challenges to teaching literacy by all teachers in Viqueque and many in Lautem. These issues were reflected in the observations or resource use and classroom set-ups. The extremely limited range of activities reported in Viqueque is concerning and deserves further follow up.

The classroom observations show that **the use of inclusive practices is emerging**, particularly around gender equality, but inconsistent around ensuring inclusion of children with disabilities and children from different language groups.

- **Teachers consistently and evenly selecting girls and boys** to demonstrate ideas or skills (for example, being called up to the board). The practice was more extensive in Viqueque and Lautem.
- **Teachers providing customised support to students with disabilities.** Some teachers in Viqueque and Lautem did this, and none in Aileu. However, teachers in Aileu and Liquica reported higher numbers of students with disabilities than in Viqueque and Lautem and were able to discuss ways in which they support these students.
- **Teachers providing customised support to non-Tetum speakers.** All teachers in Lautem did this, and many in Liquica and Viqueque. The language context in Lautem may necessitate more support. Nearly all teachers in Lautem reported that a key challenge to teaching literacy was related to students' language.
- A key issue across all municipalities was that teachers reported limited strategies to support students who are excelling, with most teachers unable to put forward examples.

Inclusive learning is a key priority of the new curriculum and ALMA. The first two practices are also a focus of the ALMA classroom observation form, which includes checks on whether boys and girls are given the same opportunities, and that students with disabilities are fully included in all activities.

The focus of ALMA on disability-inclusion has also become more focused and refined as ALMA has progressed. For example, while inclusive education was introduced through the ALMA Leadership

Training modules in earlier years, PHD identified the need for additional training on disability-inclusive policy and classroom strategies, as well as child screening tools. These were introduced to school leaders in Lautem in 2019 (PHD, 2020). Again, it would be useful to understand why teachers are finding inclusive practices, particularly related to disability-inclusion, hard to apply in classrooms.

5. Overall study findings: lessons learned within and across municipalities and phases

5.1 Key changes and challenges related to teaching quality

Three years of data collection (2018, 2019 and 2021) across six municipalities has provided opportunities to understand and capture details about changes in school leadership, teachers' knowledge, attitudes and practices after the implementation of Timor-Leste's new curriculum and ALMA.

Results from the overall Study starting in 2018 indicate that ALMA has supported changes to teaching and learning in Timor-Leste. ALMA has been effective in establishing and strengthening a number of facets of teaching quality including grade 1 to 4 teachers' knowledge, attitudes and practices in line with aspects promoted in the new curriculum that focus on student-centred teaching. Overall, grade 1 to 4 teachers are more aware of student-centred teaching practices and are starting to use these practices in their classrooms.

Critical to ALMA has been:

- The support and development of school leaders through the Leaders of Learning program which has provided school leaders with the skills to encourage ongoing teacher professional learning in their schools. School leaders have developed the skills in classroom observation and feedback and there has been an observable shift to instructional leadership
- GTPs which have provided teachers with a forum for peer learning where they can discuss and learn from each other about new pedagogical approaches, as well as practice new skills through lesson simulations
- Mentors who have provided consistent support to both school leaders and teachers throughout the implementation of ALMA.

The Study also documented challenges to supporting the ongoing development of teaching quality in Timor-Leste. These include:

- Maintaining ongoing learning for teachers and school leaders after the initial rollout of ALMA. This issue has been addressed by the program through the establishment of short refresher courses for school leaders. But ALMA's reliance on school leaders means that they are challenged to meet multiple program obligations
- School and municipal leadership changes lead to knowledge gaps and a barrier for the continuation of ALMA activities
- Institutionalising the program interventions established by ALMA.

Many of these challenges are related to the MoEYS budget and the process of integrating the ALMA program within MoEYS, which has experienced changes in leadership that brings varying expectations of ALMA's role in supporting schools.

The COVID-19 pandemic caused significant disruptions to the Timor-Leste education system, with public health measures requiring extended school closures and a shift to home learning. Schools in many municipalities entered lockdown for approximately one to three months between March to June 2020. During this time, most schools were closed throughout the entire period but some schools stayed open, or closed periodically, depending on the local case numbers. Teaching and learning was compromised because of limited telecommunications and parents unable to support their children's learning at home. ALMA mentor support was more limited due to restrictions on travel and fewer GTPs were run.

Teacher knowledge

Between 2018 and 2021 school leaders and teachers in six different municipalities reported that GTPs were an important forum to improving knowledge about lesson planning, curriculum content, new pedagogical activities and classroom management. ALMA has encouraged the development of teacher knowledge through GTPs. GTPs also provide teachers and school leaders with the opportunity to learn from one another and to practice new lesson content. The following statement from a teacher in Lautem encompasses the range of perceptions that teachers shared about how GTPs contributed to their ongoing knowledge:

> I work with other teachers; we always help each other when we find any difficulties. We also collaborate with the teachers from the other filial schools during the GTP, we discuss, share ideas and help each other.

At the same time, there were a number of challenges noted that relate to the ability to attend and engage in GTPs. This Study found that in all municipalities, GTPs were held infrequently after the initial ALMA rollout, and in some school clusters GTPs had stopped being organized altogether. While barriers such as distance, remoteness, a requirement for personal time commitments, and lack of transport have contributed to a decrease in GTPs being held, this Study has suggested that periodic resourcing by the Government of Timor-Leste and rotating GTPs with filial schools could alleviate this challenge.

Teachers have acknowledged the support of mentors and leaders has helped build knowledge. This has occurred through classroom observations and feedback, and advice on specific teaching challenges. A school leader who was part of the ALMA phase 4 rollout in Manufahi said:

> …with the presence of this program…75 percent of teachers have had a change with their preparation, their implementation of the curriculum, their teaching skills…

Mentors and school leaders have a responsibility for building teacher knowledge, and the findings from this Study indicate that this explicit support has been a key part of strengthening teaching quality, and a change from previous practice where such support was limited.

Challenges to the program include school leaders having to manage competing work demands to support teachers and fulfil their own duties as school leader which often includes substitute teaching, and the need to manage succession planning when a leader leaves or is reappointed to

another school. Both the loss of ALMA-trained school leaders and the declining engagement in GTPs in some school clusters presents challenges for sustaining teacher knowledge.

Change in attitudes towards teaching

Across all three data collections for this Study, teachers reported improved motivation and confidence in certain aspects of their teaching and attributed this to school leader and mentor support, in addition to peer learning. Importantly, being better prepared increased a sense of responsibility.

A teacher from year two of the Study said that the new curriculum structure and observation by the school leader made him happy in his work:

> I feel motivated even though I faced so many difficulties. I am happy that curriculum had already planned everything out and I would need to follow through.

Another teacher from year one of the Study said:

> Since 2016, I feel more confident as I gain new knowledge. And I can also feel that, it's not only the student, but I am as their teacher has also moved one more step.

The perception data gathered through the case studies indicates that teachers' confidence in their practice has resulted because of increased knowledge about teaching provided through ALMA. Specifically, this includes the support of mentors and school leaders, as well as knowledge about pedagogy and implementing the curriculum. A risk to confidence in teaching could be decreased support of school leaders, mentors and even inconsistent facilitation of GTPs that provide a valuable source of peer support.

Change in teacher practice

Between 2018 and 2021 this Study found that a range of ALMA-supported activities had helped teachers improve elements of their teaching practice, particularly in planning and classroom management. There was an opportunity to collect classroom observations across four of the six municipalities. These found that teachers are using a variety of student-centred activities in their daily classroom practice. With a focus on student-centred teaching and learning, an emphasis of the new curriculum is on supporting teachers to use a variety of teaching approaches and resources, student group and pair work, encouraging student interaction and student talk, making local connections, and inclusion. At the same time, the consistent use of student-centred practices was varied across municipalities.

The case studies from all three years of the Study found that teachers valued the support of ALMA mentors, schools leaders and GTPs. Observation, feedback and discussion helped them to immediately address challenges they may experience in the classroom. Three ALMA mentors reflected on change in ALMA, and one mentor articulated this in the following statement:

> The presence of ALMA at the schools meant that the teacher's teaching strategies and methods have changed if we compare it to before ALMA… The difference is really in the way that they are planning lessons and implementing lessons.

An inspector also reflected on the contribution of ALMA to schooling in Timor-Leste:

> ALMA's program is very specific. We are very proud of it. It is specifically about implementing teaching practices in the classroom. Other programs do things like providing funding, but this program is very focused, the positive part of it is that it is very focused on the learning process. It is really great.

As discussed in detail in Section 4, the classroom observations provided a snapshot of how teachers were integrating new curriculum and ALMA-supported pedagogical practices since ALMA was implemented in their municipality. In general, across the municipalities teachers were prepared as evidenced through lesson plans for each class. Teaching practices varied between municipalities, and some practices were more consistent across municipalities than others. In nearly all of the classrooms in the four municipalities, teachers were observed to check for student understanding or to observe students applying what they had learned – practices associated with classroom-based assessment. In terms of classroom management, most of the observed classrooms were cooperative and supportive environments.

Inclusive classroom practices were varied across the municipalities, especially in supporting children with disabilities. Although some teachers reported students with disabilities in their classrooms, few were observed using strategies to support students with disabilities in their classrooms. However, teachers were observed providing support to students with difficulty in reading and writing, and to non-Tetum speakers.

Unevenness of some teaching practices across Timor-Leste could be a challenge that requires further investigation, particularly around issues of inclusion. The PBI in Lautem (PHD, 2021) also provides a snapshot of how well teachers implement the new curriculum via mentors' assessments of teachers across four domains – 'preparation and implementation', 'classroom management', 'pedagogy and didactic', and 'inclusivity (gender)'. The Summary Report states that teachers' performance improved across all domains, with the most change in 'preparation and implementation'. Again, this data points to the need for further exploration as to why some practices might be harder to apply.

Another challenge is that there has been no linkage explored around teaching practices and student outcomes – either academic or engagement in lessons (refer to section 5.3 for further detail). Teachers may use practices that are best adapted to context or that they are confident in using in their classrooms. Many of these practices derive from the new curriculum and ALMA support of teachers and school leaders in learning a variety of teaching practices.

Change in teacher professionalism

Across all three years of this Study stakeholders reported an improvement in teachers' punctuality and preparation given that all teachers had completed lesson plans for all classes. Respondents in Year one of this Study focused more on improved punctuality and attendance of teachers, while in Years two and three of the Study stakeholders commented on an improvement in teacher preparation as well. Data from the Study classroom observations indicate that teachers are consistently preparing for lessons, even after ALMA support has wound down.

Multiple respondents attributed improvements in teacher punctuality to the presence of observers.

In year two of the Study, a MoEYS stakeholder described preparation as an important part of professionalism:

> In terms of the quality, of preparation for lessons, changes in methodology, and also with teachers' punctuality, these things have changed. If we compare with the past, the teachers didn't prepare well and also when they taught, they didn't have anyone giving them feedback.

At the same time, a potential challenge is that changes to punctuality seem to be largely due to the presence of mentors, which suggests the sustainability of this outcome may be limited to the active status of this ALMA component.

Change in assessment

GTPs and ALMA mentors have supported teachers in understanding how to use assessment to monitor students' learning. Classroom observations in year three of this Study provided an opportunity to observe how teachers use particular methods to assess student learning. Assessment activities reported by teachers included individual exercises, group presentations, tests and drawings or other activities. Overall, some respondents identified ALMA components as supporting teachers to understand and administer assessments. One mentor explained the change in how teachers conduct assessment as a result of ALMA:

> This program gives ideas and supports teachers so they can identify which students already know how to write, how to read, how to draw. So in the past, they just looked at the class very generally. They would just pass the students. But they didn't know exactly how many students could actually do the work, and how many couldn't.

The use of assessment practices was widely and consistently observed across the Study classroom observations across four municipalities. Teachers consistently used classroom-based assessment strategies by checking for students' understanding and observing students practising or applying what they had learnt. What was not evident from either case studies or classroom observations was that teachers have the capacity and knowledge to interpret assessment results or students' understanding and implement teaching and learning strategies to support student learning. In other words, a challenge is not knowing how teachers use assessment to improve teaching and learning.

Change in school leadership

ALMA support for school leadership is delivered through the Leaders of Learning program, which is one of the core components of the ALMA program. Building capacity of school leaders is critical in supporting implementation of the new curriculum and its pedagogies. An overall program goal is to help school leaders support teachers in using more student-centred approaches to deliver the curriculum with the intent to holistically improve student learning outcomes.

Since 2016, ALMA's Leaders of Learning program has been updated based on the needs of school leaders. The ALMA program has been able to adapt to school leaders' and teachers' diverse and growing needs through responsive ongoing program evaluation.

As a result of the Leaders of Learning program, change in leadership capacity and teaching quality – through school leader support – has been reported by a range of school leaders, mentors, teachers and government officials. A key finding is an observable shift to instructional leadership

as a result of improved leadership capacity. Instructional leadership is a model whereby school leaders work alongside teachers to provide support and guidance in establishing best teaching practices. Instructional leaders 'conduct classroom observations, ensure professional development that enhances student learning and ensure that the school environment is conducive to learning' (Hattie, 2015).

Over the three years of this Study findings also indicate school leaders are more engaged with classrooms, and the introduction of classroom monitoring through educational technology has been an important aspect of improving teacher knowledge and practice. The Leaders of Learning program has improved school leaders' understanding of student-centred approaches and in turn helped leaders support teachers in implementing such practices in their classrooms. An ALMA mentor offered his perception of change in school leadership:

> The changes I've seen with school leaders are that they are undertaking their roles well. They are punctual. They are now doing teacher observations by themselves. They are using the curriculum to do the observations. They also now give feedback to their teachers without our presence. They are also now running GTPs for their teachers by themselves. They are supporting their teachers to organize didactic materials in their classrooms. These have been the changes with the leaders.

The PBI implemented in Lautem also investigated how well school leaders implement the components of ALMA effectively, through structured assessments of school leaders conducting classroom observations. The assessments indicated there was a positive impact on the performance of school leaders to implement ALMA. PHD's summary report (2021) noted:

- The percentage of school leaders rated 'good' or 'very good' by mentors in domains of 'classroom observation', 'counselling', 'reporting', 'informatics', 'attitude (modelling)' increased. The most noticeable improvement was in 'classroom observation'. Leaders were observed to be better at identifying both positive and negative aspects of an observed teacher's performance without intervening in a way that may disrupt the teaching process
- By round 3, school leaders' assessments of teacher performance aligned more closely with the mentors' assessment, which indicates their deeper understanding of good practices and what to look for. But, a large difference remained in 'teacher using strategies to evaluate students' understanding'.

At the same time, there are challenges to the sustainability of instructional leadership, and these are described in more detail in Section 6. As an example, staff turnover and lack of succession planning when a school leader leaves a school is a challenge to retaining knowledge of ALMA investments at the school level. This challenge suggests a need to expand knowledge and practice of school leadership to senior level teachers and replacement leaders.

Change in educational technology

ALMA support for school leadership through educational technology is another core aspect of the program. **Tablets distributed to school leaders as part of ALMA are an important part of classroom resourcing, observation and teacher support. The tablets also enable efficient information sharing and effective classroom observations.**

A municipal officer explained the tablets have eased the need for school leaders to source hard copy materials as they are able find the required information electronically and then share this directly with the teachers. Additionally, school leaders said the tablets have supported their school administrative function through facilitating report writing and submission to MoEYS.

A school leader described the benefit of using a tablet during classroom monitoring:

> The benefit is that when I observe, I can accompany the teachers and immediately submit the reports. As well as see the lesson plan to see if they are following it. The implementation is good. It's fast. The approach of using the tablet is really good.

At the same time, many leaders over the Study said there were challenges with using educational technology. Some of these challenges include unreliable access to electricity or the internet, insufficient credit to upload observations, outdated software, and limited understanding of tablet functionality.

5.2 Key changes and challenges related to new curriculum implementation

Results from the 2018, 2019 and 2021 data collections for this Study indicate that teachers and principals value ALMA support including access to the curriculum and resources, and teacher support. A core function of ALMA is to support MoEYS in supporting teachers and school leaders to implement the new curriculum, and to a large extent, this has been successful.

The three Study data collections provided opportunities to understand challenges to implementation of the curriculum, and many of these factors were outside the remit of ALMA. But factors that impede implementation of the new curriculum have the potential to influence the success of ALMA investments. Many stakeholders in each municipality said that some of these factors include ambitious curriculum content, and limited books and materials. Teachers also reported the time allocated to teach each subject in the curriculum was not enough to cover the required content. Schools located in remote areas also face difficulties in accessing internet connection for school leaders to use their tablets.

Change in access to curriculum and resources

Overall, ALMA has improved access to the curriculum lesson plans and activities through school leaders' tablets. School leaders are actively able to monitor and observe teachers and their delivery of lessons against lesson plans, which supports teachers in implementing the curriculum. Tablets also enable communication for leaders to share information with teachers and schools. At the same time, some ongoing technical challenges persist with tablets which limit their usability.

In 2018, 2019 and 2021, school leaders commented on the benefits of having the curriculum and lesson plans contained on tablets they received through ALMA, which facilitates information sharing and monitoring of how the curriculum is being implemented. Teachers and school leaders said that ALMA's tablet and leadership components have led to changes because of access to complete lessons and support to implement those lessons.

Respondents reported that having access to lesson plans and a complete new curriculum was a significant change from the old curriculum. Many teachers said that access to the lesson plan through the school leader helps them prepare their lessons.

MoEYS respondents also commented on increased access to the curriculum and materials as a result of the tablets and training provided as part of ALMA. Lesson plans in the tablets and the support of the mentors provide teachers access to the curriculum and supporting curriculum implementation in schools:

> Because all the lesson plans are in the tablet, from the first one right through. The mentoring program is to look at if the teacher is following the lesson plan or not, and in one period where should they be up to, it's a way of checking. I think this has been really helpful because it guarantees that this curriculum can be implemented well.

While teachers stated that the electronic availability of lesson plans and the teaching manual was a benefit, not having their own tablet also limited their ready access to the curriculum given their dependence on school leaders for access and support. Further, many teachers said that limited access to didactic materials and classroom resources are a challenge to delivering classes according to the curriculum. Since 2018, school leaders have suggested distributing tablets to all schools, so that all teachers can have access to the new curriculum. Importantly, tablets are particularly useful in rural areas where schools may not have access to as many physical resources as schools closer to more urban areas.

Overall, stakeholders indicated that physical or online (via tablet) access to the curriculum was important and had improved with ALMA support of curriculum implementation. However *how* teachers gain access to the curriculum remains a challenge – physical material may not have been delivered to schools or teachers may not have adequate access via tablets from school leaders.

Change in teacher support

Over three cycles of data collection this Study has found that across the case study municipalities, mentor support of school leaders and teachers has been a key aspect of ALMA. Specifically this has enabled implementation of the curriculum by addressing challenges faced by teachers through observations, feedback and GTP sessions. In addition to this, peer learning and consistent school leader support has helped align teaching practice with expectations in the curriculum. GTP sessions were identified as places where teachers can review and present lessons, receive peer feedback, share challenges and workshop solutions to meet curriculum expectations.

Teacher support is an important part of ALMA. Municipal education stakeholders discussed how ALMA was a critical program within MoEYS to support deeper understanding of the new curriculum and its consistent implementation in schools.

The majority of teachers interviewed over the three cycles of data collection attributed improvements in implementing the curriculum to the curriculum materials, mentor support, classroom observations and peer learning through the GTP component, the latter three activities are ALMA inputs. As summarised by a teacher in Liquica:

> There has been a change because when the mentors observe us, regarding the curriculum plan, they always give us advice. Like you have to run these activities. It's really good for us. Then after the observation is over, we have to talk to them about it... There really has been a

change. Then there is the GTP. At the end of each period we always sit together to talk about what we are going to do, and what we didn't do in the last period. The ALMA program has really made a difference for us.

At the same time, some teachers identified challenges with some aspects of the ALMA model. For example, in 2019 one teacher said mentors do not always provide feedback as part of the observation process, and another said she was pressured to follow lesson plans even if students are not able to keep up. This feedback suggests additional mentor training on their role requirements and techniques for delivering constructive feedback could be beneficial.

Across the municipalities school leaders, mentors and teachers emphasised the value of the GTPs in supporting the effective implementation of the curriculum through facilitating the preparation, review and presentation of lessons, receiving feedback, sharing challenges and workshopping solutions together. One teacher explained how GTPs enable more experienced teachers to support those with limited experience or subject knowledge:

> … for some topics if we don't know we can consult with each other… mathematics is not my area, but it's ok, the new plan helps with this and with what we don't know and we can consult each other.

Key themes that emerged from teacher interviews about how GTPs support curriculum implementation include the following:

- Opportunity to share ideas and experiences with teachers from other schools and within schools
- Opportunity to learn new activities or strategies
- Practising new lessons through simulation
- Build knowledge about new subjects, such as Portuguese or maths
- Learn about assessment, lesson planning and preparation
- Learn ways to use local materials in teaching (such as sticks, stones, beans for maths)
- Feedback on improving teaching practice and classroom management
- Opportunity to ask questions of the mentor.

One challenge for effective curriculum implementation was COVID-19 school disruptions, and as a result GTPs across the country were suspended. Mentors, teachers and school leaders all mentioned that not having a GTP was a challenge in that they were unable to meet to discuss difficulties in curriculum implementation.

5.3 Key changes and challenges to student learning outcomes

This Study has attempted to explore the extent that teacher involvement in ALMA leads to improved learning outcomes for Timor-Leste students. The discussion is presented around four themes: academic outcomes, attendance, student interest in lessons and wellbeing. Case study data from 2018, 2019 and 2021 indicates that the incorporation of student-centred learning approaches has increased student engagement and interest in lessons. Student interest in lessons was observed by some teachers to improve some student academic outcomes.

Evidence about student engagement is an important indicator of student performance and completion, especially without student achievement data. Teacher support is important as students who perceive teachers as creating a caring and well-structured learning environment are more likely to be engaged in school (Klem & Connell, 2004).

However, without some form of large-scale assessment or monitoring of student learning outcomes it is not possible to know if student learning outcomes have improved throughout the curriculum reform and ALMA period of implementation, or attribute student performance to the ALMA program.

Change in academic outcomes

Overall, ALMA is associated with observations of improved student interest in lessons though support provided to teachers through ALMA activities. But this evidence does not suggest any causal links to any improvements (or lack thereof) to academic outcomes. The year three data collection indicated that the use of local language in some non-Tetum speaking areas was observed to improve student understanding in reading and numeracy activities.

In year two of the Study, MoEYS stakeholders were interviewed. One MoEYS stakeholder commented on the lack of assessment at a national scale and how this could impact teaching practice:

> But unfortunately so far there hasn't been an assessment yet. Specifically, to identify how much progress has been made in students' learning that's been positively affected by [ALMA]. But, I think something longer, assessing students' learning outcomes, specifically when we want to know particularly for more interventions, like from one particular person, I think this is not easy.

Without a national assessment strategy in place in Timor-Leste, there is no regular and systemised collection of student learning data. This limitation is evidenced by the available student learning data that could support this Study. There is limited availability of student performance data from national assessments, as the last multi-municipality data collection of student assessment was EGRA and CBA which were administered in 2017. The original Study design included the analysis of anticipated quantitative data sources including a national EGRA (planned for 2019), but there have been no further EGRA or CBA data collections since those conducted in 2017. In the year one data collection for this Study a secondary analysis on EGRA and CBA provided a rough baseline of student learning outcomes in Timor-Leste.

The results of the CBA analysis indicated overall scores favoured students in ALMA schools. But results on the EGRA presented a different finding. For grade 2 students, other than letter identification, for all other components of EGRA there was no difference in mean scores between ALMA schools and non-ALMA schools. Among grade 3 students, there was also no difference in mean scores between ALMA schools and non-ALMA schools. Additionally, at the time of secondary analysis, there was no statistically significant difference between ALMA schools and non-ALMA schools on the two measures of school and teacher quality, the New Curriculum Index and the Teacher Quality Index.

This data gap is also acknowledged by efforts to conduct student literacy and numeracy tests in Lautem as part of ALMA's PBI in 2019, 2020 and 2021. The PBI Summary Report notes the results from PBI indicate that ALMA has made a positive impact on student learning outcomes after 18 months of implementation in Lautem.[11]

However, while the CBA, EGRA and PBI administrations provide an indication of student achievement, the challenge is that without consistent nationwide assessment of student learning outcomes it will be difficult to understand the impact of reforms on student learning outcomes and also to link to changes to improvements in teaching quality or curriculum implementation. Regular and systematised collections of student achievement data can monitor change and be used effectively to make evidence-based decisions and policies related to curricular, teaching standards and practices, as well as professional development programs for teachers and school leaders.

Change in student attendance

In 2018, 2019 and 2021 the impact of ALMA on student attendance is inconclusive. Teachers, school leaders and mentors offered a range of opinions on the factors for increased or decreased student attendance with attendance being closely linked to context.

Few respondents were able to share perceptions of a change in student attendance as a result of ALMA. Those who said they observed some change said that students were more active and interested in the learning process. One school leader said that parents should be involved in ensuring that their children attend school regularly. Two school leaders said school feeding programs may also contribute to the increases in student attendance and participation.

Change in student interest in lessons

Overall, methods learned through ALMA support have facilitated student engagement in the classroom, and improved participation and interest in lessons. The case study data collection over three cycles of the Study indicate that the incorporation of student-centred learning through creative and 'fun' activities encourages students' interest in lessons. The shift to more student-centred approaches has also increased student participation and engagement in classroom activities.

Strategies used by teachers include group work and an increase in the range of activities during lessons. A teacher reflection on the positive impact of student interest in lessons is highlighted:

> In the past…the teacher used to do all the talking. But now, we don't do that. The teacher just speaks a little bit, and then the students do a lot of talking.

Teachers also reflected on changes to students' interest in lessons as a result of what they had learned from ALMA. One teacher said that students are more engaged in learning as a result of lesson plans included in the curriculum:

---

[11] The PBI reported that over half of cohort one students in round one numeracy scored 'high' (80 per cent and above), with that proportion increasing to 69 per cent and 71 percent in the next two rounds (PBI, 2021, p. 5). Literacy performance was 67 per cent and 74 per cent students scoring 'high' in rounds one and two but a decrease to 63 percent in round three with an assumption the COVID-19 impacted learning during round three (p. 5). Cohort two showed similar numbers of students attaining 'high' scores in literacy and numeracy generally improving over the three rounds of testing (PHD, 2021).

> There has been a change because when we teach, the students do the activities themselves... In the past we didn't use lesson plans and we, the teachers, did most of the talking…But now, we just orient them and then they are the ones who do it.

Multiple school leaders observed the change in teaching practice has positively influenced student participation, and one school leader expressed their view that one part of their role is to encourage the students to actively participate in the learning process. Another school leader observed students are more motivated and interested because they are encouraged to be more active in the classroom, which challenges them to think so they can contribute.

Change in student wellbeing

One of the overall program goals of ALMA is to improve student literacy, numeracy and holistic educational outcomes, where holistic education refers to students' wellbeing, social skills, self-confidence, critical thinking and creativity (Annex B, Interim Report 2). **In 2018, 2019 and 2021 it was reported that the introduction of student-centred approaches learnt through ALMA has led to observed improvements to children's wellbeing.**

Key findings suggest that through ALMA support, teachers are encouraging students to work together, share, and present their work in front of their classes. The three data collections throughout this Study indicate that student-centred learning approaches have led to observed improvements in students' happiness and wellbeing. A school leader described the change he observed in student wellbeing:

> The changes have contributed to their wellbeing at school. They can speak up, they can present things. The teachers are teaching the students to create a nice space.

Another school leader specified that teachers are integral to students' self-esteem:

> For the case of the students to have the self-esteem, basically depends to the teachers in this school.

Classroom observations conducted in four municipalities for the 2021 data collection indicate that most teachers have cooperative and supportive classroom environments which are more likely to indicate the presence of positive student attitudes and dispositions towards learning.

6. Study conclusions and recommendations: informing teacher development in Timor-Leste and beyond

This Study offers key lessons related to teacher development that can usefully inform the design, implementation, and sustainability of such programs in Timor-Leste and other contexts. These lessons are explored below, with recommendations for Timor-Leste investments in teacher development.

6.1 Design and implementation

The design and implementation of the ALMA program presents a number of opportunities for learning about the benefits of investing in and supporting a program that has a sharp focus on school leader and teacher professional learning, with a multi-year duration. The ALMA program design is in contrast to more common sector wide approaches in education, where teacher professional learning is included as part of an overall level of education system support. While sector wide approaches have the benefit of supporting overall system reform, school leadership and teacher professional learning programs are often rolled out as one-off approaches of distinct inputs addressing particular areas of need. Teachers and school leaders experience these one-off interventions as short workshops and are then expected to apply the acquired knowledge to their classrooms without follow-up support. The duration of ALMA (2016-2026) reflects the reality that improving teaching (and student learning) requires sustained investment over multiple years and allows for the program to scale-up in a phased approach.

At the same time there are risks to such an intensive donor-funded model. A cornerstone of ALMA is that it is owned by the Government of Timor-Leste, and this aspect is crucial to any program sustainability. However, this is dependent on MoEYS integrating the operation and management of ALMA into its own processes. Aspects of the ALMA program have been designed to embed its core principles such as instructional leadership and teacher professional learning. However, there is a need to further institutionalise ALMA interventions within government and ensure continued support for schools, to sustain program outputs. Funding, budget processes and political decision-making can impact sustainability (refer section 6.3 for further detail). Similarly, that sharp focus on teacher professional learning needs ongoing support into the future.

Rigorous and long-term professional learning program design

This Study has found that the program design and implementation strategy for ALMA (which includes phased intensive program rollouts by municipality, mentor support, and school leader professional learning through an instructional leadership program) is a model that encourages whole-school development and learning. The initial rollout is followed up by refresher training sessions in subsequent years. Follow-up mentor support and the establishment of teacher and leader peer learning groups (GTPs and GTLs) provide ongoing opportunities for teachers and peer leaders to share experiences, challenges, successes, and to learn from one another. The phased expansion by municipality provides the opportunity to learn and refine the program, but also ensures the program can influence system-wide approaches to professional learning.

The most significant challenge to a long-term teacher professional learning program design that is both intensive and responsive is ongoing budget needs, government ownership and long-term commitment and support. ALMA is a program focused on school leaders and teachers, and this could be at the expense of significant investments in other parts of an education sector. But there is merit in supporting depth on an investment that has the potential to become embedded in a teacher and school leader learning system, rather than spreading investments broadly across the entirety of the education sector. However, given a wide range of contextual factors can impact the success of ALMA, continued engagement in certain policy areas should form part of the overall program strategy.

Recommendations:

1. Continue to support and embed a long-term model of professional learning within Timor-Leste schools and government
   a. DFAT continue funding mentors or coaches to support school leaders and teachers to maintain and embed their learning as this intervention transitions towards MoEYS systems.
   b. PHD continue to engage municipal- and national-level education stakeholders to strengthen and systemise the core elements of ALMA to support long-term professional learning (refer section 6.3 for further detail).
   c. DFAT continue to engage in policy dialogue with MoEYS, other key ministries and development partners on areas of policy such as education sector resourcing, assessment, teacher workforce reforms, and teacher professional development.

Ongoing evaluation and learning as part of ALMA

While ALMA was designed with a long-term approach to teacher and school leader professional learning through the Leaders of Learning program and the GTPs, it did not originally include the extent of follow-up inputs that are part of the program design in 2022. These follow-up inputs extended the ALMA roll-out to 100 per cent of schools in a municipality and a longer period of time to implement phases (see Section 2.1). This Study has found that the monitoring, evaluation and learning built into ALMA has resulted in a program that is both adaptive and responsive, and is one that learns from its shortcomings.

Key examples of ongoing learning came from the Independent Program Review of PHD's Education Program (2018) and ACER's long-term teacher development research. ALMA has iteratively learned from evaluation findings and adapted recommendations in order to improve the program. Findings from these evaluations have included slowing out the rollout in municipalities, strengthening early phase interventions through refresher support and training, providing opportunities to share best practices among schools and clusters at the municipal level, encouraging ongoing teacher-leader mentoring and collaborative lesson planning, and building capacity of national and municipal government stakeholders.

For example, ALMA initially conducted nine-month rollouts in each municipality. ALMA shifted to twelve-month rollouts in each municipality to fill any gaps from the nine-month rollout. When ALMA was established in 2016, it rolled out its program to only 50 per cent of schools in each municipality. This was found to be a shortcoming, and in 2019 ALMA was funded to be rolled out to all schools in a municipality. Additionally, in late 2021, ALMA made plans to continue the rollout to municipalities that had participated in Phases 1-3 of ALMA, which means that all schools, not just 50 per cent of schools, will have the opportunity to participate in the ALMA investment.

It was further found in the studies that GTPs and some improved practices and knowledge gained from initial ALMA rollouts were lost when the intensive part of the investment was completed in a municipality. This finding was addressed in 2018 through funding short refresher courses with school leaders. In addition, the Leaders of Learning program – ALMA's core investment in educational leadership – has responded to ongoing feedback and been revised over the years to develop more specific strategies that meet the needs of school leaders. This should be part of any long-term program of learning.

ALMA's PBI in Lautem provides an excellent model for ongoing monitoring and evaluation. However, PBI's drawbacks are that it is highly resource intensive both in terms of funding and human capacity. Having data about ALMA's implementation in more than just one municipality would offer insight into how ALMA may differ in terms of contextual challenges and teacher or leader knowledge in different municipalities.

***Recommendations*:**

1. Continue to undertake, develop and embed ALMA monitoring and evaluation (M&E) activities
   a. DFAT continue to engage in-house and independent research and evaluations of ALMA. The program has demonstrated the impact of ongoing learning and improvement in response to the learning needs of educators in Timor-Leste.
   b. DFAT and PHD explore opportunities for further investment and refinement of ALMA's PBI.

2. Support the interpretation and use ALMA M&E findings
   a. PHD support the capacity of government stakeholders to interpret and use monitoring and evaluation data to make informed decisions about where to direct investment or change aspects of interventions, through early engagement.
   b. PHD investigate how municipal stakeholders and inspectors are integrating knowledge and evidence from ALMA into management and support of schools.

3. Support research to inform how teacher professional learning support could be better targeted
   a. Conduct further classroom observations in additional clusters and municipalities to better understand which teaching practices are easier or harder to improve, and why, to inform more focused support to teacher professional learning.
   b. Conduct further research into clusters with varied levels of fidelity to build a comparative dataset, to understand if a high level of adherence leads to better teaching quality.
   c. Determine how many teachers are applying the Child Functioning tools

6.2 Monitoring student learning

Student learning outcomes data is an important source of evidence in understanding the impact of investments in teacher professional learning. Understanding what students know and can do is also an important source of evidence for teachers and school leaders as they support ongoing student learning. There is limited availability of student performance data from national assessments in Timor-Leste, with the last multi-municipality student assessment (EGRA and CBA) administered in 2017. While that data provided rough baseline of student learning at a particular point in time, no follow up, national assessment has been conducted since then.

Research on data availability conducted for this Study series found that a systematic approach to monitoring student learning outcomes is important for any education and learning system. Such data enables governments to make decisions about need for change in curriculum, teaching support, assessment and resourcing to lift student achievement levels and encourage greater equity within a system (Cassity & Wong, 2022). Importantly, such large-scale assessment data in combination with classroom-based assessment data and student-centred pedagogies that encourage student interest in lessons can support teachers in with a holistic understanding of student progress in school, and whether or not a teacher needs to adjust their pedagogy to better meet the learning needs of students.

One of the key challenges for the Study in Timor-Leste is that there is very little valid and reliable data on student learning outcomes. ALMA is a nation-wide reform that supports teacher and school leader professional learning and the implementation of the new curriculum. But the ability to understand how this important investment is impacting student learning outcomes is constrained by lack of large-scale assessment data.

ALMA's PBI implemented in Lautem in 2019 included simplified student literacy and numeracy tests for grades 1 and 2. These tests were administered three times starting at the baseline of ALMA implementation in Lautem through to the end of the consolidation phase. The purpose of the short assessments was to understand how students progressed against aspects of the curriculum they were taught between each round of assessment (PHD, 2021). While focused in one municipality, the assessment demonstrates how tracking student performance can help a program understand impact.

Another option for monitoring student learning is the Southeast Asia Primary Learning Metrics (SEA-PLM) which is a regional assessment and capacity building program in six ASEAN countries from ASEAN and SEAMEO. The purpose of SEA-PLM is to improve equitable learning outcomes for students in basic education. As such, participation in SEA-PLM would afford MoEYS with a regional assessment that has a capacity support system for improving student learning through a regional network.

ALMA support of improved student learning outcomes is an important area of inquiry. This Study has gathered extensive teacher perception data about how student-centred learning approaches have impacted student engagement, interest in lessons and even wellbeing, which have been found to contribute to student performance. However, without understanding student literacy and numeracy outcomes through systematic assessment it is not possible to directly attribute student learning outcomes to the ALMA program.

Recommendations:

1. Develop and expand assessments to measure student learning outcomes, progressions and understand learning outcomes.
   a. PHD consider how to support ALMA to improve and expand its literacy and numeracy assessment if there are plans to continue to use some form of assessment as part of regular program monitoring.
   b. DFAT consider supporting MoEYS to develop a national assessment of literacy and numeracy at key points during basic education, to understand student achievement.
   c. For any assessment program, consider:
      - Including a contextual survey to better understand student, teacher and/or school background and linkages to student performance. [12]
      - Exploring ways to link student assessment to skills outlined in the new curriculum or link this to international work being conducted around the learning progressions (Adams et al., 2018; Waters, 2019). [13]

---

[12] Contextual data combined with cognitive student learning outcomes data can be a powerful tool to inform policy decisions around resourcing support for improved student learning and teaching.

[13] This means describing what it looks like for learners to move from early knowledge and skills to more advanced knowledge and skills within an academic domain such as reading or mathematics.

- Disaggregating student learning and contextual data by gender, disability, and language groups, to inform policy and programs for improving equity.

6.3 Improving sustainability

ALMA is a program that has sharp focus of teachers and school leaders and is resource-intensive to achieve its program goals. Government ownership of ALMA is a critical goal to institutionalizing long-term learning in MoEYS and across schools in Timor-Leste. The resource-intensive nature of the investment has contributed to ALMA's success, but the intensiveness is also a risk. The ability of schools to sustain inputs to improve teaching quality, support teachers to implement the new curriculum and improve student learning outcomes is a significant risk to the longevity of ALMA outcomes. At the same time, ALMA has built aspects of the program that are designed to enable sustainability and long-term embedding of core principles of instructional leadership and teacher professional learning. Some of these infrastructure supports include GTPs and GTLs, both of which, when conducted at regular intervals, can encourage active peer learning. Another support is training school leaders in key aspects of instructional leadership, which enable the support of teacher professional learning through classroom observation, feedback and a focus on student learning.

ALMA liaises as actively as possible with key stakeholders in MoEYS. One aspect of embedding ALMA within MoEYS includes supporting inspectors to act in mentoring or leadership roles. A key risk is that inspectors' roles are not wholly defined to encompass this aspect of ALMA support. See also Annex C (System outcomes).

School-based peer professional learning groups

While GTPs were consistently highlighted as an effective component of ALMA, they were held infrequently throughout all sampled municipalities, and many stopped being scheduled once active ALMA inputs concluded. Barriers to scheduling and attending regular GTPs include:

- Reliance on municipal and school leaders to coordinate sessions
- Travel distance, poor road conditions and severe weather, particularly for filial schools
- Competing commitments including study or school programs
- Lack of incentives to work on weekends
- Lack of transportation.

Recommendations:

1. Continue to support, develop and refine peer professional learning approaches as a high-impact, low-resource intervention
   a. DFAT and PHD to continue to support and encourage regular GTPs and GTLs. These aspects of ALMA are relatively low-resource and can extract high value from the potential of peer learning.
   b. PHD to conduct deeper investigations into mentoring, GTPs and GTLs and other models of peer learning, to consider how better to improve effectiveness and sustainability.
   c. DFAT to work with MoEYS on ensuring periodic resourcing is available to fund transportation and incentives to support participation in peer-learning activities.

Mentor support

Maintaining individual motivation to continue program outputs after the active ALMA interventions have ended is a risk factor. Although classroom observations found that teacher motivation to prepare for classes remained after mentor inputs ended, enthusiasm for GTPs decreased. This may be in part due to the "expertise trap", an unintended consequence that can occur when mentoring is undertaken by an external person considered to be the expert (Burns, 2022). This power dynamic carries the risk of school leaders and teachers adopting a passive role which impacts their sense of agency and threatens sustainability, as school leaders and teachers may feel incapable of continuing program activities without the mentor's guidance. Further, given the ALMA strategy of integrating mentoring into the inspectorate role as a strategy to support institutionalising ALMA into the government system, power dynamics between school leaders, teachers and inspectors need to be addressed. There is a risk that blurring the mentor role (supporter) and inspector (traditionally, evaluator) creates a "compliance trap", which does not allow self-determination or self-directed growth in the learning process and may reduce school leader and teacher autonomy and motivation (Knight, 2019). This kind of top-down mentoring is usually ineffective because it disempowers the mentee, and often fails to recognise the complexity of classroom environments (Knight, 2009).

The program has also focused supporting teachers and school leaders to learn its core concepts – instructional leadership, student-centred learning, feedback and peer learning. It is unclear at present whether teachers and school leaders have developed sufficient mastery of the program and confidence to adapt innovations to ALMA's core concepts to their particular school or cluster context.

Additionally, although professional learning interventions usually strive for high-fidelity implementation, a too rigid approach can lead to imposing a one-size-fits-all model that results in teacher imitation, rather than building teacher capacity. Instead, effective interventions should be adaptable to support teachers gradually adjust certain aspects once they have achieved initial mastery of the program, without compromising its core components (Hill et al., 2022).

Mentoring (or coaching) is a complex activity – teachers and school leaders work every day in environments that require effective responses to complex situations. Step-by-step guides have not been shown to work because of the variability and unpredictability of classrooms (Hill et al., 2022). And decision-making involves teachers' own beliefs, attitudes, values, intentions and knowledge. It is critical to remain aware that ALMA is not a simple input program that fills teachers heads with knowledge – the 'banking system' of education described by the educator and academic Paulo Freire – it is a program that involves ongoing support and innovation to equip teachers with the skills to respond to their complex classrooms.

Recommendations:

1. Continue to refine mentor component of ALMA to improve the long-term likelihood of mentoring and GTP facilitation being sustained
    a. PHD to focus on adopting approaches that support school leaders and teachers take ownership of their learning, to ensure intellectual and experiential knowledge developed through ALMA can be sustained within schools. For example:

- develop terms for a partnership arrangement between school leaders and mentors, and teachers and mentors, that outlines how mentors and mentees work together in relation to each partner's responsibilities and goals. [14]
- develop the peer mentoring component of ALMA to build the capacity of experienced teachers to adopt mentoring roles in the long-term, thereby reducing the status disparity with external mentors.

b. PHD to continue to support ALMA program revision as informed by ongoing monitoring and evaluation, allowing adaptations that may occur at cluster or municipal levels. Ongoing discussion between mentors, leaders and teachers about what works best could provide a pathway to local, contextually appropriate innovation and adaptation.

c. If inspectors continue in their mentoring roles, there is a need to differentiate between their accountability role and coaching role. Providing capacity support on effective coaching is important, as well as ensuring clear mandates.

Educational technology

Technological issues prevented respondents from actively and consistently undertaking classroom observations, monitoring and reporting requirements. These challenges included:

- Insufficient credit limiting useability
- Limited understanding of tablet application functionality
- Software updates changing useability
- Hardware faults and outdated software
- Unreliable access to electricity and internet connectivity, particularly in remote areas.

Recommendations:

1. Provide ongoing funding and technical support to ensure tablet functionality and useability as this intervention transitions towards MoEYS systems
   a. PHD to provide budget for sufficient credit to enable internet connection
   b. PHD to facilitate frequent software updates and timely repairs and provide periodic training on tablet functionality.

Leaders of Learning program

The demand on school leaders' time to undertake program activities including classroom observations, GTPs and GTLs, in addition to fulfilling their teaching obligations, is an ongoing challenge. This is a significant risk because many of the ALMA activities are reliant on school leaders, who do not have time or capacity to meet program expectations (PHD, 2020). This issue is also related to under-resourced schools and overcrowded classrooms, as school leaders are required to fill in for teachers when they are absent.

Additionally, municipal and school level leadership changes lead to institutional knowledge gaps and have reportedly created barriers for the continuation of ALMA activities. The absence of succession plans compounds this challenge by preventing the effective management of leadership transitions.

---

[14] Mentor/mentee partnership agreements should emphasise empowering school leaders and teachers to determine their professional learning priorities within the scope of the new curriculum, as retaining sense of autonomy is vital to fostering self-determination and maintaining motivation.

The 2018 internal review led to updates to refresher training for school leaders in all Phase 1-3 municipalities, addressing some sustainability concerns outlined in Interim Report 1.

Recommendations:

1. Incorporate leadership change management principles in ALMA Leaders of Learning component
    a. PHD to include change management training in the Leaders of Learning program such as succession planning, to prevent institutional knowledge gaps created by unforeseen changes at the school and municipal levels.
    b. PHD to support the expansion the Leaders of Learning program to include a wider cohort of senior teachers (beyond promising female teachers) to build capacity for senior teachers to adopt some leadership functions.
    c. MoEYS and PHD to provide Leaders of Learning inductions to newly deployed municipal and school leaders.

2. Support leaders to expand and retain ALMA knowledge at school level
    a. MoEYS to consider providing management incentives to those in trained leadership roles to encourage additional mentoring responsibilities across their clusters or municipalities.
    b. PHD to provide ongoing mentoring and training for senior teachers and leaders to address staff turnover by ensuring intellectual and experiential knowledge developed through ALMA is retained at the school level.

Equity

Ensuring inclusion of those with disabilities, from different language groups and equal participation of gender groups should be a regular part of teachers' and schools' practice. While awareness of elements of inclusive education has improved throughout the implementation of ALMA, many teachers have limited capacity to effectively support students with disabilities.

Many teachers recognise that boys and girls have equal rights to participate in school. Teachers are incorporating gender inclusive strategies in their everyday pedagogical practice. This includes encouraging boys and girls to work together in groups, and equally selecting both girls and boys to contribute to class discussions.

While the majority of teachers across the six municipalities included in this study were female, there were far fewer female school leaders. Twenty-six school leaders were male and only four were female, even though schools with a female leader was an inclusion criteria. Similarly, 76 per cent of teachers had been teaching for 11 years or more, and 21 per cent of these teachers had been teaching for over 26 years. There could be a focus on mentoring support of younger, less-experienced teachers.

Recommendations:

1. MoEYS and PHD to work together to embed gender and disability inclusive practices within the education system.
    a. Building on the existing gender and disability inclusion training, expand capacity building activities for school leaders, teachers and mentors on topics such disability identification, inclusive attitudes and values, and inclusive teaching strategies.

b. Consider supporting the certification of teachers in disability inclusive practices to support school clusters.

c. Build on community awareness campaigns to encourage parents to enrol children with disabilities into schools and support continued attendance at school.

d. Continue to invest in capacity development of female school leaders, as an important step towards improving gender equity in leadership roles.

Institutionalising interventions

Government ownership of program outcomes is a cross-cutting theme that is crucial to achieving sustainability. PHD is prioritising the integration of program activities and collaborating with MoEYS to strengthen over the long-term MoEYS' leadership and management of ALMA (2020). However a number of risks threaten this transition process including:

- To date, the delivery of ALMA has mostly been undertaken by PHD and non-government partners. While there have been financial and human resourcing contributions by MoEYS, and this has increased in recent years, ALMA still remains largely donor-funded and implemented. For example, MoEYS now funds some mentor posts, there are clearer mandates for INFORDEPE and the inspectorate as partners in the ALMA program, and the technological platform is in transition to be hosted by MoEYS (PHD, 2020).
- There have been challenges with ensuring that ALMA is consistently reflected in MoEYS' strategic plans and budgets.
- The compartmentalized nature of the MoEYS departmental structure means that ALMA is not widely recognized as an official program amongst other directorates.
- Since ALMA began, there have been multiple changes to MoEYS leadership. This has required engaging with new counterparts on the ALMA program and advocating for program continuity and MoEYS funding through evidence of program success.
- The mentoring component of ALMA being delivered independently of government has been disempowering for members of the inspectorate.
- Budget constraints limit stakeholders' capacity to undertake program activities (eg. insufficient phone credit to cover communication costs, lack of transportation prevents inspectors, school leaders and teachers from conducting school visits and attending GTPs). MoEYS funding in this area is minimal.

The exclusion of some schools and municipalities from participating in the ALMA program was also identified as a major risk to sustainability as it has led to some disquiet amongst school leaders and restricted knowledge sources for the peer learning component to only those schools invited to participate. Interim Report 2 recommended expanding program reach to include all schools and teachers within the respective municipalities and throughout the country, and a 2018 internal review recommended rolling out ALMA to 100 per cent of schools in municipalities (Grimes & PHD Education Sector Team, 2018). This has since commenced in Phase 5 in Lautem and in Phase 6 in Cova Lima.

The following recommendations are made noting an incremental approach may be necessary, due to a reduction in the Government of Timor-Leste education budget.

Recommendations:

1. Incorporate pedagogical mentors into the permanent structure of the MoEYS to ensure government ownership
   a. MoEYS to integrate the mentor position into the inspector role through capacity building exercises and provision of additional support, with strong consideration for existing workloads and the need for clear mandates; or
   b. PHD and MoEYS to amend mentor employment arrangements to be contracted directly to the government and sit within the inspectorate.

2. Improve the evidence-base behind ALMA to ensure MoEYS' continued confidence, support and funding of interventions through periods of leadership transition
   a. PHD to document international research behind the ALMA approaches
   b. DFAT to continue to invest in improving monitoring and evaluation of ALMA, including the capture of outcomes related to teaching quality and student learning.
   c. PHD to document and disseminate program outcomes throughout MoEYS departments.

3. Continue to work on a long-term strategy for system strengthening to integrate core elements of ALMA into national sector plans, strategies and budgets
   a. DFAT to conduct a cost analysis of ALMA interventions.
   b. DFAT to undertake a needs analysis with MoEYS to determine the current level of human and financial capacity to effectively integrate elements of ALMA into MoEYS.
   c. PHD continue working with MoEYS to align transition plan.
   d. DFAT continue to work with MoEYS and development partners on budget for 'supporting infrastructure' for ALMA interventions.

References

Adams, R., Jackson, J. and Turner, R. (2018). *Learning progressions as an inclusive solution to global education monitoring.* Melbourne: Australia Council for Educational Research.

Burns, M. (2022). *The Traps of Donor-Funded Coaching…And What To Do About Them*. Education Development Center. Retrieved from https://www.globalpartnership.org/blog/traps-donor-funded-coaching-and-what-do-about-them.

Catalpa. (n.d.). *Supporting leaders to improve school management*. https://catalpa.io/projects/eskola/

Cassity, E. & Wong, D. (2022). Insights on the challenges of limited data availability for measuring and reporting student learning outcomes. Australian Council for Educational Research. https://doi.org/10.37517/978-1-74286-677-2

Christenson, S.L., Reschly, A.L. and Wylie, C. (2012). *Handbook of Research on Student Engagement*. New York, Dordrecht, Heidelberg, London: Springer.

Education Analytics Service (2017). *PLMP Evaluation Plan.* Melbourne: Australian Council for Educational Research.

Education Analytics Service (2017). *Teacher Development Evaluation Conceptual Framework.* Melbourne: Australian Council for Educational Research.

Education Analytics Service (2019). *Teacher Development Multi-Year Study Series: Timor-Leste Interim Report 1.* Melbourne: Australian Council for Educational Research.

Education Analytics Service (2020). *Teacher Development Multi-Year Study Series: Timor-Leste Interim Report 2.* Melbourne: Australian Council for Educational Research.

Government of Timor-Leste (2015). Decree-Law No. 4/2015: Approves the national curriculum based on the first and second cycles of basic education, *Journal of the Republic, Series 1. No. 2*. Retrieved from laohamutuk.org.

Grimes, P., PHD Education Sector Team. (2018). *Internal Program Review: PHD Education Program*. Partnership for Human Development.

Hattie, J. (2015). High-impact leadership. Educational Leadership, 72(5), 36–40.

Hill, H., Papay, J., & Schwartz, N. (2022). *Dispelling the Myths: What the Research Says About Teacher Professional Learning*. The Research Partnership for Professional Learning. retrieved from https://annenberg.brown.edu/rppl/dispelling-the-myths.

Klem, A.M. and Connell, J.P. (2004). Relationships Matter: Linking teacher support to student engagement and achievement. *Journal of School Health 74*(7), 262-273*.

Knight, J. (2019, November). Why Teacher Autonomy Is Central to Coaching Success. Education Leadership, 77(3), 14-20.

La'o Hamutuk (2018). *The national curriculum for preschool and primary education*. National Curriculum for Preschool and Primary Education. Retrieved from laohamutuk.org.

Lawson, M.A. and Lawson, H.A. (2013). New conceptual frameworks for student engagement research, policy, and practice. *Review of Educational Research 83*(3), 432-479.

Ministry of Education, Youth and Sport (2017). *Education Management Information System* (EMIS). Dili: MoEYS.

Office of Development Effectiveness (2015). *Investing in Teachers*. Canberra: Australian Government.

Partnership for Human Development. (2020). *Annual Progress Report, January-December 2019*. Dili: Partnership for Human Development, Australia Timor-Leste.

Partnership for Human Development. (2021). *Six-monthly Progress Report, January-December 2021*. Dili: Partnership for Human Development, Australia Timor-Leste.

Partnership for Human Development (2021). *ALMA Program-Based Inquiry Round 1-3. Summary Report*. Dili: Partnership for Human Development, Australia Timor-Leste.

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

Waters, C. (2019). *Learn more about learning progressions.* Melbourne: Australia Council for Educational Research. Retrieved from https://www.acer.org/au/discover/article/learn-more-about-learning-progressions

World Bank (2018). *Lessons learned from an early assessment (2017) of two innovations in basic education in Timor-Leste. Final Draft. 25 January 2018*.

Annex A: Timeframe map

		2016				2017				2018				2019				2020				2021				2022				2023			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1	Liquica																																
	Manatuto																																
	Refresher/consolidation																																
Phase 2	Dili (incl Atauro)																																
	Aileu																																
	Viqueque (1 cluster Lacluta)																																
	Refresher/consolidation																																
Phase 3	Baucau																																
	Viqueque																																
	Bobonaro																																
	Refresher/consolidation																																
Phase 4	Manufahi																																
	Baucau																																
	Viqueque																																
	Refresher/consolidation																																
Phase 5	Lautem																																
	Refresher/consolidation																																
	PBI Lautem Round 1																																
	PBI Lautem Round 2																																
	PBI Lautem Round 3																																
	PBI Lautem Round 4a																																
	PBI Lautem Round 4b																																
Phase 6	Covalima*																																
Phase 7	Manatuto**																																
	Liquica																																
	Refresher/consolidation																																
Phase 8	Dili																																
	Aileu																																
	consolidation																																
School closures - COVID (varied)																																	
EGRA																																	
CBA																																	
ACER CS data collection - pilot																																	
ACER CS data collection																																	
ACER CO data collection																																	

* ALMA extended in Covalima for 6 months due to COVID-19

** Leaders of Learning launched in Manatuto in 2021, but mentoring delayed until 2022 due to COVID-19

Source: Partnership for Human Development (2019). Annual Progress Report. January-December 2019. Australia Timor-Leste: PHD

Source: Partnership for Human Development (2020). ALMA Program-Based Inquiry Round 1-3. Summary Report. Australia Timor-Leste: PHD

Source: Partnership for Human Development (2021). Timor-Leste Educational Leadership Program, PowerPoint Presentation. Australia Timor-Leste: PHD.

Source: World Bank (2018). Lessons learned from an early assessment (2017) of two innovations in basic education in Timor-Leste. Dili: World Bank.

Annex B: Detailed study design and methodology

The Study, designed in 2017, has a number of key features. Importantly, a key feature of the ALMA study is its multi-year duration, which acknowledges the complex nature of teacher development and that sustained change in teaching practice takes time. It also recognises the scale of the program investment and enables an agile and adaptive approach that is responsive to contextual affordances and limitations.

The ALMA study adopts a mixed methods approach utilising both quantitative and qualitative methods. It draws on existing and newly collected data as detailed in Table B.1. By using these two types of data, the scope is broadened as much as possible given the human and financial resourcing for the study, and reflects proportionality.

The *PLMP Evaluation Plan* and the *Teacher Development Multi-Year Studies – Conceptual Framework* provide the rationale and overall approach for this study.

Table B.1: Study data sources

Key research questions	Data sources
1. **Teaching Quality** To what extent does the ALMA program support improved teaching quality in Timor-Leste?	Case studies at school and system level (2018, 2019, 2021)
2. **Curriculum Implementation** To what extent does the ALMA program support the effective implementation of Timor-Leste's National Basic Education Curriculum?	Case studies at school and system level (2018, 2019, 2021)
3. **Student Learning** To what extent does teacher involvement in the ALMA lead to improved learning outcomes for Timor-Leste students?	Case studies at school and system level (2018, 2019, 2021) Secondary analysis of EGRA and CBA (2017) and PBI (2019, 2020)

Amended study design

The approach adopted for the Study enabled an amendment of the study design, to address unforeseen contextual challenges including:
1. Limited availability of student performance data; and
2. COVID-19 disruptions.

Limited availability of student performance data

The original study design detailed in the *PLMP Evaluation Plan* included the analysis of planned quantitative data sources. This included a national EGRA (planned for 2019) which would have contributed to research question 3 (student outcomes). However, there have been no further EGRA or CBA data collections since those conducted in 2017.

To address this data gap, supplemental classroom observation data from ALMA schools was included in the year 3 sample and analysed as part of the Final Report. The decision not to include non-ALMA schools in the sample was made in consultation with the Timor-Leste government, with respect for the government's priority of exploring breadth, range of municipalities and number of students.

COVID-19-disruptions

The Study design was further updated in 2020 to account for the global impact of COVID-19 on schools and governments, and associated border closures and travel restrictions. These factors delayed the data collection originally scheduled for May-June 2020 by just over one year, and prevented the ACER research team from accompanying the data collectors. The ACER research team conducted regular remote debriefs with in-country partners as an alternative quality assurance measure.

Additional COVID-19 questions were added to the 2021 data collection to understand the impact of COVID-19 school disruptions on teaching and learning.

Qualitative

Case study data was collected over three collection periods – in 2018, 2019 and 2021. A stated priority of MoEYS was to prioritise breadth of analysis and provide for country-wide understanding of the impact of ALMA. Hence two municipalities that implemented ALMA across phases 1 to 5 were selected each year of the study as sites for case study interviews, to explore differences in implementation by municipality, and investigate program sustainability. Stakeholder interviews, GTP observations and classroom observations were the primary data collection methods for the case studies. The method is detailed further below.

Method

In-country partnerships
The ACER team partnered with Belun, a Dili-based NGO, and the Instituto Catolico para Formacao de Professores (ICFP), a teachers' training college based in Baucau, to finalise the data collection instruments and undertake the data collection. Both in-country partners were critical to the successful collection of high-quality data.

Instrument design
Interviews and observation were the primary data collection methods for the ALMA case studies. The data collection tools were designed to address each of the overarching research questions defined in the *PLMP Evaluation Plan*.

Individual interview guides
The research team developed individualised interview guides to conduct semi-structured interviews with a range of education stakeholders including national government officials, municipal directors, superintendents, inspectors, school directors, school coordinators, adjuntos, teachers and mentors.

GTP observation instrument and group interview guide
The GTP component was identified in year one of the Study as significant element of the ALMA design. The GTP observation instrument enabled the research team to document the processes

undertaken during the GTP. The research team developed a group interview guide to further investigate teacher perspectives on this ALMA component, for years two and three of the Study.

Classroom observation instruments

Classroom observations were introduced in year 3 of the Study. The research team developed the classroom observation code book and template to record instances of different teaching practices including student-centred learning, formative assessment and inclusiveness. It also captures information related to lesson preparation, resources, classroom set up and the classroom environment.

Instrument contextualisation and translation

The ACER team worked in partnership with Belun and ICFP, to refine and translate the case study interview guides and classroom observation instruments, respectively.

Sampling

Purposeful sampling was utilised to select the case study sites based on specific criterion (phase, municipality, cluster, school), and with input from DFAT Post and the in-country research partners (Belun and ICFP).

Clusters were selected based on the inclusion of a central school covering Grades 1-9, and the number of related branch/filial schools with higher student populations. Clusters with central schools of Grade 7-9 only were excluded. Grades 1-3 and Grades 1-6 schools with small numbers of students (less than 50) were determined to likely be multi-grade and as such were excluded if larger alternative schools were available. Eskola data (literacy and numeracy, counting observations, peer learning groups, teacher observations and teacher competency) was used to assess intensity of activity, and patterns in student and teacher performance when selecting schools.

As detailed in Table B.2, two municipalities that implemented ALMA across phases 1 to 5 were selected each year of the study as sites for case study interviews, to explore differences in implementation by municipality, and investigate program sustainability. Year one of the Study also included observations of GTP sessions, to document the facilitated peer learning component of ALMA. Years two and three of study extended this to include teacher group interviews that specifically explored teachers' perspectives on participating in the GTP.

Table B.2: Case study interview and GTP observation sites (years 1-3)

Year of study	Municipality	ALMA Phase
1	Aileu (Daisoli cluster)	Phase 2
	Manufahi (Dotic cluster)	Phase 4
2	Bobonaro (Raifun Maliana cluster)	Phase 3
	Viqueque (Mundo Perdido cluster)	Phase 3
3	Lautem (Luro cluster)	Phase 5
	Liquica (Liquica Vila cluster)	Phase 1

Year three of the Study included classroom observation data of G2 and G3 Tetum literacy lessons across four municipalities, as shown in Table B.3. This enabled the triangulation of case study perception data with observations, enriching the datasets related to all three Research Questions.

Table B.3: Classroom observation sites (year 3)

Municipality	ALMA Phase	Number of schools
Aileu (Daisoli cluster)	2	4
Viqueque (Mundo Perdido cluster)	3	5
Lautem (Luro cluster)	5	4
Liquica (Liquica Vila cluster)	1	4

Scoping visits

Scoping visits to sample sites were conducted by each in-country research partner to confirm:

- Logistical details (eg. road access and travel times to schools, available accommodation for the research team and catering options for participants)
- Interview and classroom observation times
- Official communication requirements.

Field research training

In each year of the Study, ACER delivered field research training to the relevant in-country partners, to build their capacity to undertake high quality data collection. Years one and two of the Study involved in-person training. Due to travel restrictions, the year three training was conducted remotely. The field research training programs included the following topics:

- ALMA overview and background
- Case study methodology
- Roles and responsibilities
- Data collection techniques and instruments
- Mock interviews
- Classroom observations (ICFP only)
- In-school pilot and debrief (ICFP only)
- Data management
- Preparing for fieldwork (including COVID-19 safety protocols in year 3)
- Child Protection
- Research ethics.

Data collection

Case study interviews

The ACER research team worked in partnership with Belun to undertake a total of 161 interviews (refer Table B.4), with a range of education stakeholders over three years, to obtain a comprehensive understanding of the impact of ALMA at the local, municipal and national levels.

Table B.4: Interview participants (years 1-3)

Type of stakeholder	Number of respondents interviewed		
	Year 1	Year 2	Year 3
Teachers	26	39	37
School leaders	9	11	10
Mentors	3	0	4
Inspectors	2	2	6
Municipal education directors	2	2	2
Superintendents	0	0	2
MoEYS representatives	0	5	0
Total	**42**	**58**	**61**

Interviews were audio recorded in Tetun and transcribed into English, in preparation for analysis.

The Year 1 gender breakdown included one female school leader and eight males, 11 female teachers and 15 males, one female municipal education staff and three males; and, two female mentors and one male.

The Year 2 gender breakdown included no female school leader and 11 males, 26 female teachers and 13 males; and, no female municipal education staff and six males.

The Year 3 gender breakdown included three female school leaders and seven males, 27 female teachers and nine males, no female municipal education staff and 11 males; and, one female mentor and three males.

Classroom Observations

The ACER research team worked in partnership with ICFP to collect classroom observation data of G2 and G3 Tetum literacy lessons. As detailed in Table B.5, researchers conducted 69 classroom observations in 17 schools, across four municipalities. The design specified two lessons observed per teacher, but at one school only one lesson observation was completed. Short post-observation interviews were also conducted with participating teachers, to collect additional contextual information. Short interview notes were recorded by field researchers, in English.

The majority of teachers (76 per cent) had been teaching an average of 16 years, with 21 per cent of these teaching 26 years or more. The percentage per experience is as follows: 12 per cent had been teaching 5 years or less; 12 per cent had been teaching 6-10 years; 29 per cent had been teaching 11-15 years; 15 per cent had been teaching 16-20 years; 12 per cent had been teaching 21-25 years; and, 21 per cent had been teaching 26 or more years.

Table B.5: Classroom observations sites

Municipality	ALMA Phase	Number of schools	Teachers observed	Classroom observations
Aileu (Daisoli cluster)	2	4	8	15
Viqueque (Mundo Perdido cluster)	3	5	8	16
Lautem (Luro cluster)	5	4	7	14
Liquica (Liquica Vila cluster)	1	4	12	24
Total		**17**	**35**	**69**

Quality assurance

The ACER research team accompanied the Belun research team in years one and two of the Study, to provide a quality assurance and oversight role. The ACER team observed interviews and conducted daily debrief sessions with the in-country research team, to enable the identification of any challenges experienced related to the instruments, translation or interview techniques, and facilitate a reflection process to address those issues in the field. This approach proved very effective and led to amendments to the interview guides and refresher training being conducted in the field, which ensured the required data was being captured.

The ACER research team were unable to accompany the Belun field research team in year three of the Study, due to travel restrictions. As an alternative quality assurance measure, the Belun In-Country Field Coordinator role was amended to include a monitoring aspect, and the ACER team conducted remote debriefs to support this role.

The ACER team adopted a similar approach with ICFP in year three of the Study, in lieu of providing in-person support. The ICFP In-Country Coordinator role included monitoring the classroom observations, checking the completed forms, and liaising with ACER remotely throughout the field work period to seek advice and address any issues as they arose.

Data analysis

Case study interview data

The ACER team used QSR NVivo 12 Pro to conduct the analysis of the case study interview data. Data was coded aligned with themes identified in the *Conceptual Framework.*

QSR NVivo 12 Pro was selected by ACER for coding and analysis because it provides:

- An audit trail, giving greater transparency and visibility to the analysis process
- An efficient way for the team to organize the research
- A range of methods to compare and synthesise the data
- A way of testing the reliability of the analysis.

Classroom observation data

To analyse the classroom observations, the ACER team reviewed the contextual information recorded by researchers and created observation maps by theme (interactions, pedagogy, gender, inclusivity), undertaking quantitative analysis of theme activities observed across the duration of lessons. The team also reviewed records of the classroom environment. ACER developed the visual displays of the data in an attempt to understand prevalence and differences between municipalities.

Quantitative

Existing data was used to explore student learning outcomes in Timor-Leste. The quantitative data analysed for the first year of the Study included the 2017 Classroom Based Assessment (CBA) and Early Grade Reading Assessment (EGRA) data, collected as part of the DFAT-funded *Lessons learned an early assessment (2017) of two innovations in basic education in Timor-Leste* (referred to as the 2017 World Bank Study). Existing data from ALMA's Program Based Inquiry (PBI) in Lautem was an additional source that provided the following data: observations and mentor logs tracking the quality of school leaders' implementation of the ALMA program; classroom observation data that captured how teachers' were implementing the national curriculum; and literacy and numeracy tests tracking student learning outcomes.

The CBA was derived from the content of the New Curriculum and thus measures the extent to which the content of that curriculum had been mastered. For the CBA, students were assessed on basic reading, mathematics, and Tetun and Portuguese language (Grade 3 only). The EGRA was designed as 'a simple instrument that could report on the foundation levels of student learning, including assessment of the first steps students take in learning to read' (RTI International, 2015, p. 7). The six components of the EGRA used in this assessment were Letter Knowledge, Word Reading, Non-word Reading, Text Reading, Reading Fluency and Reading Comprehension.

Method

For the analysis presented in year 1 of the Study, the hierarchical structure of the data was considered. Students are nested within schools, and schools are located within municipalities. This approach assumed that students within a school are more alike than when compared with students in other schools, and that schools within a municipality are more alike than when compared with schools in other municipalities. This initial assumptions about the structure of the data was shown to be correct: the intraclass correlations (ICC) indicated that up to 39 per cent of the variation in the data could be accounted for by the structure. If the ICC were low—perhaps below 0.10, or 10 per cent—then the analysis could proceed without the need to consider the hierarchy. To conduct the analyses, the ACER team used the MIXED procedure in the Advanced Statistics option of SPSS version 24.

The results reported possibly differed from previous reports that did not account for the hierarchical structure of the data.

PBI data was available for analysis in year 3 of the Study. Data were collected in Lautem municipality over five phases of two months each from March 2019 through March 2022. Observations of school leaders and mentor logs, classroom observations and student literacy and numeracy tests were used to collect the data.

Sample design

The World Bank assessment of the ALMA innovation could be described as a quasi-experimental research design. As of 2017, the ALMA innovation had been implemented in approximately 125 schools in 5 municipalities.[15] Sixty (60) of these were randomly chosen to serve as the treatment group. With the exception of one municipality[16], an equal number of comparison schools were chosen for inclusion in the study. The final sample included 70 ALMA schools and 58 comparison or non- ALMA schools.[17]

The sampling of schools for PBI was based on purposive sampling, chosen for the purpose of the study rather than a random selection of schools. School selection criteria included consideration of the following factors: location, accessibility, whether the school had a female leader, and whether the female leader had participated in ALMA's Leaders of Learning program.

Limitations

A number of limitations were faced on this Study.

Attribution

First is the issue of attribution in a study investigating teaching quality and student learning outcomes. Attribution is easier to establish when there is a clear causal relationship between the outcome and any preceding outputs. Teaching itself is a 'noise-filled' context. There are a wide range of contextual factors that enable and constrain productive investments in teachers, teaching and education communities, for example, budgetary constraints, and political priorities within schools and the larger national context. While there may be relationships between various factors associated with student learning outcomes, direct causal relationships are difficult to determine.

Generalisability

The qualitative case studies are not intended to generalise the impact of ALMA across Timor-Leste. Case studies are intended to explore the experience of the investment by educational stakeholders in a small sample of schools, but across a multitude of variables. In this way, the case studies are intensive rather than extensive. The ability to extract this level of detail from ALMA is an important part of the overall study design.

Data availability

For Interim Report 1 the quantitative data analysed for the first year of the ALMA study included the CBA and EGRA data collected as part of 2017 World Bank Study.[18] During the scoping visit to develop the *PLMP Evaluation Plan* in 2017 a range of existing and planned data sources were identified, including a national EGRA (planned for 2019), which would have contributed to research question 3 (student outcomes). However, there have been no further EGRA or CBA data collections since those conducted in 2017.

---

[15] Manatuto, Aielu, Liquiça, Dili Remote, Atauro.

[16] In Atauro, all of the schools are PLMP schools so none could be selected as comparison schools.

[17] World Bank (2018). *Lessons learned from an early assessment (2017) of two innovations in basic education in Timor-Leste*. Final Draft (25 January 2018).

[18] World Bank (2018). *Lessons learned from an early assessment (2017) of two innovations in basic education in Timor-Leste*. Final Draft, 25 January 2018.

There were a number of other reported student learning outcomes data that were not available or deemed unsuitable for analysis at the time of reporting. These collections include:

- The 2009 EGRA was not useable as part of baseline data because the raw data provided was not clean and some of the data entry was erroneous (e.g. double entries)
- The EMBLI data was not able to be sourced
- The baseline classroom observation data from UNICEF CFS used a different methodology to classroom observation undertaken in the 2017 World Bank Study.

As a solution to this data gap, supplemental data was collected via streamlined classroom observations in four clusters of case study schools from all three years of the Study. This was analysed and reported in year 3 of the study as part of the Final Report. Observation provides evidence about the classroom environment, student and teacher interactions and student dispositions to learning. This enables triangulation of the case study data with observations, enriching this data with observations related to all three research questions – teachers' implementation of the new curriculum and pedagogies, student outcomes, and importantly sustainability of these changes.

In year 3 of the Study, the PBI datasets were made available. While this study provided insights into ongoing evaluation of leader and teacher progress as they learned from the ALMA program and students' learning outcomes, it was only focused in Lautem. Second, while both the year 3 cycle of the Study and the PBI study collected classroom observations of teachers, there was limited comparability of the instruments.

Finally, Eskola data was made available to the research team. This data provided information about the breadth and number of a range of ALMA activities by school leaders and teachers but did not give a sense of quality of an activity or intervention.

Annex C: ALMA in context – year 3 findings

Lautem (Luro cluster) and Liquica (Liquica Vila cluster)

Introduction

Lautem

Lautem is a mountainous municipality located in the far east of Timor-Leste, bordering Baucau, Viqueque, the Timor Sea and Banda Sea. Poor road conditions and limited access to electricity and telecommunications present challenges for schools, particularly in remote areas. Additionally, limited human and physical resourcing, overcrowded classes and language barriers create challenging learning environments at schools.

Lautem municipality was included in ALMA Phase 5. Phase 5 was selected because it is the first phase to be rolled out to all schools in a muncipality and provided an opportunity to investigate how ALMA has addressed sustainability issues that have emerged in earlier phases of the program. Luro cluster was preferred due to the high number of schools, including remote schools with large student populations.

Liquiça

Liquiça is a mountainous municipality located in northern Timor-Leste, bordering Dili, Aileu, Bobonaro, Ermera, and the Savu Sea. Poor road conditions and limited access to electricity and telecommunications present challenges for schools, particularly in remote areas. Additionally, limited human and physical resourcing and overcrowded classes create challenging learning environments at schools.

Liquica municipality was included in ALMA Phase 1. Phase 1 was selected because it provided an opportunity to explore the how ALMA has addressed sustainability issues following the initial phases, and how school clusters are managing the program. Liquica Vila cluster was preferred due to having remote schools with large student populations.

The findings from the Lautem and Liquica case studies are organized by key themes emerging from the overarching research question 'to what extent does this aid investment produce improved teaching quality and improved student learning?'

To what extent does the ALMA support improved teaching quality in Timor-Leste?

The following sections explore the extent that involvement in ALMA leads to improved teaching quality in Timor-Leste. The discussion is presented around five themes: teacher knowledge, teaching practice, teacher professionalism, assessment and school leadership.

Teacher knowledge

Finding 1. GTPs support teachers in improving knowledge about curriculum content, lesson planning, pedagogical activities and classroom management.

Finding 2. GTPs provide teachers with a forum to learn from each other through peer learning, sharing of ideas and reflection about practice.

Finding 3. Mentors and school leaders support teachers to build knowledge through classroom observations, feedback, and advice on specific teaching challenges, which in turn has contributed to improved teacher confidence.

Discussion

Most of the Lautem and Liquica respondents including teachers, school leaders and municipal level education stakeholders reported that ALMA has led to improved teaching knowledge, including subject matter and pedagogical methods.

GTPs

Approximately half of the interviewed Lautem teachers specified the GTP component as being particularly helpful for improving their knowledge of curriculum content, lesson planning, pedagogical approaches and classroom management. Two Lautem teachers explained:

> The objective of running the GTP, or the advantage for us, is that through the GTP we can improve the lesson plans that we are struggling with.

> So at the GTP we always share ideas about our teaching experience and experiencing doing the activities in the manual. We also share ideas about how to make sure the students like the classes and like their teacher. How to draw the student's attention and interest so that they aren't scared of us.

The GTP was viewed as a forum that facilitates peer learning, knowledge sharing and reflection, particularly between more and less experienced teachers. As detailed by one Lautem teacher:

> The GTP does help. When we hold a GTP all the teachers come together... Some have less experience, some have more. So then when we come together and sit together, we complete each other. Some people have very broad thinking and lots of experience… So here we can complete each other, share ideas, advice, give each other guidance, so then we can all follow things properly and teach our students well.

One education stakeholder and two Lautem school leaders agreed, emphasising the value of the GTPs in providing a forum for teachers to collaborate. The teaching simulations and group discussions were highlighted as being particularly helpful by multiple Lautem teachers, as reported by one:

> I work with other teachers; we always help each other when we find any difficulties. We also collaborate with the teachers from the other filial schools during the GTP, we discuss, share ideas and help each other.

Teachers in both municipalities acknowledged that GTPs were organized by mentors and school leaders and GTPs provided them with an opportunity to learn and share as peers. Key themes that emerged from teacher interviews about how GTPs support teacher knowledge include the following:

- Opportunity to share ideas and experiences with teachers from other schools and within schools
- Opportunity to learn new activities or strategies
- Practising new lessons through simulation

- Build knowledge about new subjects, such as Portuguese or maths
- Learn about assessment, lesson planning and preparation
- Learn ways to use local materials in teaching (such as sticks, stones, beans for maths)
- Feedback on improving teaching practice and classroom management
- Opportunity to ask questions of the mentor.

One challenge for effective curriculum implementation was COVID-19 school disruptions, and as a result GTPs across the country were suspended. Mentors, teachers and school leaders all mentioned that not having a GTP was a challenge in that they were unable to meet to discuss difficulties in curriculum implementation. One mentor from Liquica discussed how ALMA had adjusted to better supporting teachers through the GTPs and forming peer networks at individual schools:

> In the past, they wanted to do them all at the central school. But then after watching this, there were no results. Lots of the teachers who come down from the mountains, they spend most of the time just chatting, they weren't taking advantage of it…So then we started doing them (GTPs) at each individual school, that way they would listen to each other, the coordinator could hear things directly and could also immediately observe any results.

Lautem respondents also reported that ALMA has strengthened interschool relationships, with multiple teachers and school leaders agreeing the GTP and GTL provide forums for peer collaboration and support across schools. As one teacher reported:

> At the GTP all us teachers gather together at one place and we can complete each other. We can give each other ideas about what is happening at each of our schools.

An Adjunto also attributed improved collaboration between school leaders to the GTL:

> Yes, it helps me a lot. This GTL aims to discuss with the school coordinators about the challenges in each clustered schools, so we can find solutions together

Mentoring support

Multiple respondents including four Lautem teachers and four Liquica teachers advised that mentors have also been instrumental in improving their knowledge, through observing their classes and providing feedback, in addition to advising on specific challenges as they arise. As noted by one Liquica teacher:

> They come and observe me in the classroom and watch me teaching. Then whatever I have done that is not good, they will tell me. What I've done well, they will tell me. And anything I need to improve, they will talk to me about.

Two Lautem education stakeholders and two Liquica stakeholders agreed that mentoring has been a valuable component that has contributed to improved teaching knowledge. One Lautem stakeholder highlighted that this has also increased the confidence of teachers, particularly those who are underqualified:

> We know that not all of our teachers come from a background of education… So, pedagogically their knowledge of teaching methods and creating lesson plans, they have difficulty. But after the local mentors, after the schools got that, the support from the local mentors, they fixed some of these things… And when they go into the classroom, [they feel that] 'I know what I am going to go in and do as a teacher'.

One Inspector noted the school leader observations have also contributed to improved motivation, as teachers are reassured by this component acting as a quality assurance measure:

> Also, they can take their big book, well they say, 'this is working well. Our coordinator comes and observes us. We don't skip material anymore, we follow the order that is in the book every day.' So they are enthusiastic and happy.

One Lautem teacher specifically attributed their improved confidence in the classroom to ALMA:

> I'm also really happy with the ALMA program because through this I've been able to improve my confidence and my capacity.

Multiple Liquica respondents noted the lesson plans have been instrumental to improving teaching knowledge, and teachers' confidence and motivation for teaching. As reported by one teacher:

> Because all the activities are there. For example, I've seen there that each lesson is 50 minutes. So we have to trust that as a teacher, we have to prepare ourselves and read each activity so that we can implement it within the time. So we are confident to implement what is in the lesson plan.

Teaching practice

Finding 1. Feedback and support from ALMA mentors, school leaders and GTPs have helped teachers improve elements of their teaching practice, particularly in planning and classroom management.

Finding 2. Teachers are using a variety of student-centred activities in their daily classroom practice including the use of pair and group work and encouraging more student talk, but the use of these practices varies across municipalities.

Discussion

Multiple respondents in Lautem and Liquica attributed improvements to teaching practice to ALMA. Teachers and school leaders across both municipalities highlighted the mentoring, classroom observation and peer learning components of ALMA as particularly effective in supporting teachers to improve their practice. With a focus on student-centred teaching and learning, an emphasis of the new curriculum is on supporting teachers to use a variety of teaching approaches and resources, student group and pair work, encouraging student interaction and student talk, making local connections, and inclusion. Researchers observed these practices as part of the Study classroom observations.

Student-centred teaching and learning

Lautem teachers and school leaders highlighted improvements in student-centred learning, classroom management and implementing lesson plans in adherence to the curriculum. As reported by two school leaders:

> There have been improvements. Because the activities in the classroom are concentrated on the students, and the teachers approach the students to support them.

> Yes, they have improved. Now, they teach based on the lesson plan.

Respondents from both municipalities also observed a shift to employing student-centred methods, as reported by a Lautem mentor:

> …they were able to adapt to involve students in activities with the model of students at the centre of the learning process, not the teachers as the centre of the learning process.

Respondents in Liquica further observed that teachers speak less frequently and encourage students to speak more often, demonstrating a shift to student-centred methods, as reported by one teacher:

> The change is that the way I taught in the past, often I would do most of the talking, and there weren't many activities for the children. But since I've participated in this new school and done the training for this, then we've changed the way we teach. Now there are lots more activities for the children.

Preparation

One Lautem teacher noted the classroom observation and GTP components as being particularly helpful for improving their practice:

> I really appreciate the support from ALMA, because its existence has improved my teaching practice. I have improved by absorbing all the feedbacks, from the mentor, coordinator, and GTP. I hope that ALMA will reactivate its program, to continue support the schools.

Five school leaders and an education stakeholder reported Liquica teachers have also improved in these areas, and in particular with implementing lesson plans. Three mentors confirmed this, as reported by one:

> The presence of ALMA at the schools meant that the teacher's teaching strategies and methods have changed if we compare it to before ALMA… The difference is really in the way that they are planning lessons and implementing lessons.

Inspectors had mixed perceptions of changed teaching practice, with one inspector observing a change, but another inspector reporting there is still room for improvement in this area:

> Even though they have the lesson plans, sometimes they don't prepare properly. We can see the weaknesses through the observations. For example, in their teaching, if we are accompanying them, then a teacher might not follow what is in the plan, all the activities set out in the plan. Sometimes they will skip material.

Classroom interaction and student activity

Data from the Study classroom observations indicate that teachers are mostly employing student-centred methods but there are some differences between what teachers are doing and reporting in each municipality. Researchers were required to observe different teaching practices focused on the three foci areas of student-centred activity, classroom-based assessment and inclusiveness. This section covers aspects related to student-centred activity including:

- **Classroom interaction:** The new curriculum promotes the use of pair and group work and student talk. The researchers coded classroom interaction types used by teachers in their lessons: whole class activity, pair or group activity, and individual activity.
- **Prior knowledge and skills:** Researchers were asked to observe whether teachers made explicit reference to students' prior knowledge and/or skills, either through asking students what they

already know or promoting their recall of an earlier activity. This strategy is often helpful in introducing new lesson content in a clear and meaningful way.

- **Localisation:** Recognising the country's values, customs and traditions is also a key objective of the new curriculum. The integration of the local way of life is promoted in the curriculum through the use of local materials. Researchers observed whether explicit references were made to students' cultural heritage, local context or environment.
- **Activity types:** The new curriculum encourages teachers to use a variety of strategies to facilitate learning. As part of short interviews following classroom observations, observed teachers were asked to report the types of activities they regularly use during literacy lessons.
- **Resources used:** Researchers documented which resources were used by teachers in each observed lesson. The new curriculum encourages teachers to use a variety of resources.
- **Classroom set-up**: Researchers documented how literacy classrooms were set-up.

In Lautem, teachers were observed to use pair and group work more consistently than in Liquica (despite classroom set up limitations), but with a more limited range of activity types and resources. Table C.1 below summarises the differences observed in the above areas, between Liquica and Lautem teachers. Prevalence is indicated by the blue shading – darker blue indicates a higher proportion of teachers were observed in undertaking a practice or reported to do so.

Table C.1: Summary of findings from Study classrooms and short interviews

	Liquica	Lautem	Description
Classroom interaction All three interactions used (observed)			In Lautem, teachers were observed to use pair and group work more consistently. All seven teachers used a mix of all three interaction types, and pair or group activities in at least one lesson. In Liquica, there was greater emphasis on whole-class and individual activities. Three of the 12 observed teachers did not use pair or group activities at all. Researchers coded a much higher proportion of student activity in Liquica – 10 of 24 observed lessons involved at least 25 minutes of lots of student activity, compared to only two of the 14 lessons in Lautem. Based on experiences in the other country studies, it is challenging to achieve interobserver reliability on this element.
Pair/group activities used (observed)			
Prior knowledge and skills Explicit reference made (observed)			Nearly all teachers observed in Liquica and Lautem made explicit references to students' prior knowledge and/or skills. Often this occurred in within the first 10 minutes of a lesson.
Localisation Explicit reference made (observed)			A higher proportion of teachers in Lautem were observed to make explicit references to cultural heritage and local contexts during lessons – four of the seven teachers compared to five of the 12 teachers in Liquica. Examples of how they did this included identifying animals in the environment, referencing local food and including stories about local places. However, no teachers were observed to use local materials during the lessons in either municipality.
Local materials used (observed)			

	Liquica	Lautem	Description
Activity types 5+ activity types regularly used (reported)			Liquica teachers reported using a greater range of activities than those in Lautem with at least half mentioning at least five different activities. In Lautem, only two of the seven teachers reported at least five activities. Refer to Table C.2 below for further detail.
Use of resources 5+ resources used (observed)			Most teachers in Lautem and all in Liquica were observed to use at least five resources during the observed lessons, but the resources differed significantly with teachers in Liquica using a much broader range. Refer to Table C.3 for further detail.
Classroom set-up Grouped tables and chairs (observed)			The classroom set ups observed in Liquica were more conductive to enabling teachers to engage students in different teaching and learning activities and facilitate communication. While classrooms in both municipalities had space for whole-class activities, in Lautem no classrooms had grouped tables and chairs for students – only individual/single lined tables and chairs. Three of the seven classrooms had a dedicated reading area.
Reading area (observed)			In Liquica, nearly all classrooms (10 of 12) had grouped tables and chairs for students. Researchers reported instances of teachers arranging formations for classes. Eleven classrooms had a dedicated reading area.

As shown in Table C.2 and Table C.3, teachers in Liquica reported a greater range of activity types and were observed to use a wider variety of resources during their literacy lessons.

- In Liquica, almost all teachers referred to different interaction types, and at least half to activities such as drawing/paining, role play/drama and questions and answers. In Lautem, there was an emphasis on reading and writing activities (all teachers reported these), and very few instances of other types of activities were reported.
- In Liquica all teachers often used posters (23 of 24 lessons) and pictures (23 of 24 lessons), whereas in Lautem teachers rarely used these. Further in Liquica, most used story books (11 of 24 lessons). Five of the 12 teachers used songs, three used games and two included physical actions. In Lautem, teachers sometimes used reference books (6 of 14 lessons) and story books (5 of 14 lessons). More than half used physical actions (5 of 7 teachers) and some teachers used songs (3 of 7 teachers) and games (2 of 7 teachers).
- Insufficient teaching and learning resources were highlighted by observed teachers as a key issue in Lautem, but not in Liquica.

Table C.2: The range of activities regularly used in literacy classes, as reported by teachers in Liquica and Lautem

Activity	Liquica teachers												Lautem teachers						
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7
Practising pronunciation															X			X	
Reading text								X					X	X	X	X	X	X	X
Writing (copying, dictation)							X	X	X			X	X	X	X	X	X	X	X
Individual activity	X		X	X		X		X	X	X		X	X						
Pair/group activity	X	X	X	X	X	X	X	X	X	X		X	X						
Whole-class activity	X	X		X			X	X											
Drawing / painting		X		X	X	X	X		X			X		X		X			
Group discussion					X		X												X
Questions and answers			X		X	X	X	X				X			X				
Poetry																			
Role play, drama				X	X	X	X	X				X							
Matching / filling gap		X		X				X	X										
Re-tell activity						X													
Explanation / demonstration													X	X	X				
Experiments																			
Story-telling																	X		X
Songs																	X		X
Games																			X
Total number of activities	3	4	2	6	4	6	7	8	7	2	0	6	4	4	5	4	4	3	6

X = reported

Table C.3: The range of resources used in literacy classes, as observed by researchers in Liquica and Lautem

Resource	Liquica teachers												Lautem teachers						
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7
Teacher guide																			○○
Lesson plan	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○
Student TB	○		○		○				○				○○	○○	○				○○
Student NB	○○	○○	○○	○	○○		○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○
Decodable readers																			
Story books		○	○	○		○○	○○	○		○		○○	○○	○	○				○
Posters	○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○				○○			
Flash cards			○○													○			
Tetum dictionary																			
Pictures	○○	○○	○○	○○	○○	○○	○○	○	○○	○○	○○	○○				○			
Big blackboard	○○	○○	○○	○○	○○	○○	○○	○○	○○	○○	○	○○	○○	○○	○○	○○	○○	○○	○○
Small blackboard																			
Pointer / stick						○			○	○○						○			
Reference books													○	○○	○				○○
Newspapers / mags										○								○	
Local material																			
Games	○									○		○				○			○
Puzzles																			
Songs	○				○					○	○	○	○			○		○	
Drama or role play																			
Physical actions	○											○			○	○○	○○	○	○○
Children's shows																			
Computer																			

○ = observed

Teacher professionalism

Finding 1. ALMA has improved teachers' punctuality, and importantly, teachers' preparation as they have completed lesson plans for all classes.

Discussion

Not many case study respondents commented on perceived changes to teacher professionalism resulting from ALMA. Mentors, inspectors and education stakeholders said teachers in Liquica and Lautem have improved in terms of punctuality. Classroom observation data indicate that all teachers are investing more effort into preparing lesson plans and have complete lesson plans prior to class.

As reported by one mentor in Liquica:

> There have been changes. The changes are that now all the staff at the schools are turning up on time… They are also using the support materials that have been provided by the Ministry of Education.

Two inspectors observed similar changes to teachers in Lautem, as reported by one:

> With the ALMA program, their attendance has changed because, for example, if on one day a mentor goes to do classroom observations, the mentor will push themselves to be the first one at the school. They are punctual. So then the teachers think, 'my classroom is going to be observed by the mentor or the inspector today', then on that day straight away they organize themselves so that they arrive early.

Changes to punctuality seem to be largely due to the presence of mentors, which suggests the sustainability of this outcome may be limited to the active status of this ALMA component. For more detail, please refer to 'Sustainability' section.

Data from the Study classroom observations indicate that teachers are preparing for lessons. In both Liquica and Lautem, all 19 teachers observed were found to have a lesson plan in place for both lessons. All teachers also reported in their short interviews that to prepare for classes, they reviewed the lesson plans and gathered resources in advance. One teacher in Lautem reported they also simplify activities for students. Preparation is a focus area of I ALMA classroom observation checklist which requires mentors and school leaders to observe whether the 'teacher prepares classroom well'. That is, is aware of and understands the lesson plan in advance and has prepared the materials required.

A school leader in Lautem also observed improvements to teachers preparing for lessons:

> There are some improvements. Because the teachers prepared the materials in advance based on the lesson plan. When I and the mentors did the classroom observation, we found that the teachers had already prepared before teaching and that they taught based on the lesson plan.

Assessment

Finding 1. GTPs and ALMA mentors have supported teachers in understanding how to use assessment to monitor students' learning.

Finding 2. ALMA activities have supported teachers in using a variety of methods to assess students' learning including individual exercise, group presentations, tests and drawings or other activities, however.

Discussion

Some respondents identified ALMA components as supporting teachers to understand and administer assessments. The use of assessment practices was widely and consistently observed across the Study classroom observations in both municipalities.

Almost half of the Lautem teachers gave examples of how they evaluate student learning progress through observing individual exercises and group work, tests and examinations. Three teachers specified they assess students against the new curriculum and two teachers confirmed they try to assess students daily, but one noted time constraints as a significant challenge in achieving this:

> Sometimes the time is not sufficient to assess the students as soon as we finish teaching them, therefore we assess them on the next session. Because we only have 50 minutes for each subject.

The GTP and mentoring components of ALMA were identified as being useful for helping teachers understand how to administer assessments consistently, as reported by one Lautem teacher:

> Another thing is about filling in the assessment forms. We also look at this, sit together and make decisions about this, then we fill them in. We make sure it is the same, we don't go off and do it separately.

One education stakeholder explained how the GTP and mentoring components of ALMA help improve Liquica teachers' understanding of how to undertake standardised assessments:

> If they are coming up to filling in the students report cards, they might look at the grading levels. Do the teachers understand this or not, can they do it? So then they might organize a GTP to give the teachers some advice about this… Sometimes the teachers don't understand how to do this. They have difficulty filling out the report card. So the mentors accompany them and show them. In the end we can get standardized grading for the students.

Nineteen of 26 Liquica teachers confirmed they regularly assess student learning progress on a daily or weekly basis, at the completion of a topic, and/or at the end of the term. The methods undertaken included observing individual exercises and group presentations, tests, drawings, and examinations. Multiple teachers described how they use the 'assessment book' to record results, and grade using a three-tiered grading scale, as explained by one teacher:

> If the student can read, can write, then we can write BM (Bele Mesak – Can do it on their own)… BU means Bele Uitoan (Can do it a little bit). SB means Seidauk Bele (Can't do it Yet)… When we have to hand out the report cards, we use this system and we have to explain it to the parents.

Three Liquica teachers attributed their improved ability to administer assessments to ALMA, as explained by one:

> There is a format for the assessment. In order to see if the child can do it or can't do it, there is a small test... We can see their results. This has been a good part of ALMA, we can always see how the students are going, what they understand.

One mentor further explained how teachers have improved how they conduct and record assessment results, as a result of ALMA:

> This program gives ideas and supports teachers so they can identify which students already know how to write, how to read, how to draw. So in the past, they just looked at the class very generally. They would just pass the students. But they didn't know exactly how many students could actually do the work, and how many couldn't. Which student had good talents. But now if we ask them about this, they can check their records and say, ah yes, there are 10 students who can do this already.

Researchers also recorded examples of assessment during classroom observations. Firstly, researchers documented when teachers 'explicitly checked' for students' understanding (e.g. if teachers prompted or encouraged students to demonstrate or articulate their understandings).

- Nearly all teachers explicitly checked for students' understanding in at least one lesson (all 12 teachers in Liquica, 6 of 7 teachers in Lautem).
- Most teachers made regular checks throughout the 60-minute lesson (8 of 12 teachers in Liquica, 5 of 7 teachers in Lautem).

Secondly, researchers documented when teachers observed students practising or applying what they had learnt (e.g. if teachers moved from group to group and provided feedback, prompted or encouraged students, or recorded notes about students as they worked).

- This practice was more evident in Liquica than Lautem. All 12 Liquica teachers undertook such observations in all lessons and had multiple instances across the lessons. In Lautem, five of the seven teachers did this in both lessons, and one teacher in one lesson only. Four of the seven teachers did this regularly in both lessons.

School leadership

Finding 1. ALMA's Leaders of Learning program has contributed to improved leadership capacity including an observable shift to instructional leadership.

Finding 2. Leaders are more engaged with classrooms, and the introduction of classroom monitoring through educational technology has been an important aspect of improving teacher knowledge and practice.

Finding 3. ALMA's Leaders of Learning program has improved school leaders' understanding of student-centred approaches and support of teachers to implement these approaches in their classrooms.

ALMA support for school leadership is delivered through the Leaders of Learning Program, which is one of the core components of the ALMA program. Building capacity for school leaders and teachers is critical in supporting implementation of the national basic education curriculum and its pedagogies. An overall program goal is to help school leaders support teachers in using more student-centred approaches to deliver the curriculum with the intent to holistically improve student learning outcomes.

Since 2016, ALMA's Leaders of Learning program has been updated based on the needs of school leaders. The ALMA program has been able to adapt to school leaders' and teachers' diverse and growing needs through responsive ongoing program evaluation. Topics in the program focus on the following:

- LL1: leadership roles, implementing the new curriculum, leading teacher professional learning and improving teaching and learning
- LL2: curriculum leadership and teacher peer learning including classroom observation techniques, providing feedback to teachers and maximising learning time
- LL3A: school leadership in encouraging health, safe and supportive school environments, practices of equity and inclusion, and parent and community involvement.
- LL3B: Reviews and builds on topics presented in LL3A through sharing and discussion of ideas and practices.

In 2018 and 2019, the Leaders of Learning program was updated to include the introduction of ALL topics to be discussed through school leader sessions. This revision was based on a rapid assessment of ALMA and enable school leaders to engage and discuss on specific strategies for the topics throughout the entirety of the Leaders of Learning program. A similar program adjustment was implemented in 2020 that included further building on strategies to achieve the program's purposes. Finally, periods of refresher training for leaders in each municipality have been included as part of a 'consolidation' after the 12-month implementation stage. Regular GTP and GTL sessions encourage ongoing collaborative learning to achieve the program's purposes.[19]

Discussion

Respondents in both municipalities overwhelmingly agreed there has been an observable shift to instructional leadership resulting from ALMA. Lautem and Liquica respondents observed that ALMA has effectively supported school leaders to develop an understanding of instructional leadership and strengthened their capacity to support teachers in the classroom.

Leadership capacity

Five Lautem school leaders and three Liquica school leaders reported their level of classroom engagement has increased as a direct result of ALMA. They reported a significant improvement in school leadership capacity, as explained by a Liquica mentor:

> The changes I've seen with school leaders are that they are undertaking their roles well. They are punctual. They are now doing teacher observations by themselves. They are using the curriculum to do the observations. They also now give feedback to their teachers without our presence. They are also now running GTPs for their teachers by themselves. They are supporting their teachers to organize didactic materials in their classrooms. These have been the changes with the leaders.

A Lautem inspector further explained how school leadership capacity has improved:

> The school leaders are really active. They are active in doing their monitoring. We observe that when we go to the schools, the leaders are always carrying their tablets and using them. Then when they go into the classrooms, the teachers are teaching, and the things that ALMA has been teaching the leaders, they go and pass it onto the teachers... Their participation in

---

[19] Source: ALMA (2021). Timor-Leste Educational Leadership Program. PowerPoint presentation. Dili: Partnership in Human Development (PHD).

the material that the teachers are teaching is really good. There has been a significant change.

Almost half of the Liquica teachers interviewed confirmed the introduction of classroom monitoring by school leaders has been a valuable component of ALMA, as reported by one Liquica teacher:

> When we teach our leader always comes in, the principal comes in to check on what we are teaching. They give us some feedback on what we are doing. They give us advice.

Mentors agreed, observing that a significant aspect of their role has been to support school leaders undertake classroom monitoring, and that school leaders have shown improvements in this area, as reported by one Lautem mentor:

> Before the implementation of the ALMA program, school leaders didn't carry out classroom observations. So they didn't have good oversight/control over what their teachers were doing. They didn't know their teachers well. But when it was implemented, when they were able to carry out observations on a regular basis, then they were able to get to know their teachers.

According to one Inspector, Lautem school leaders are better able to support teachers in their schools due to an improved understanding of the curriculum and classroom practices, because of ALMA:

> The school leaders, since the ALMA program started, first of all they've improved with communication between themselves and the teachers. This is because they are now directly observing the classrooms. Second, there has been a change with their understanding of the contents in the curriculum. For example, if the teacher has trouble with something… they feel they can go and ask someone. So now the coordinator and the school leaders are helping the teachers to implement the standards that we have.

According to a Liquica mentor, these changes are largely due to the GTP and classroom observation components:

> There has been a big change in the leaders, the teachers and also the students… through ALMA's support there has been a change in those leaders because they can now do observations of the teachers by themselves and run the GTP by themselves… They look at how the teachers are teaching in the classroom, which methodology is good. So this has been the progress. The leaders now know more about how to support their teachers in the education process.

Leaders of Learning program

The Leaders of Learning program was also identified as a being instrumental in strengthening school leadership capacity to effectively support teachers in both municipalities, as reported by one Liquica education stakeholder:

> First of all, the school leaders are active. Because when they participated in the training, when this program first started and they all did the leadership training, the leaders didn't just manage their time to control the school, they also started to do things based on pedagogy, like monitoring the teachers.

School leaders said the Leaders of Learning program has built their leadership capacity, as reported by a Lautem school coordinator:

> It taught me how to monitor my teachers. When they have used the right methods, I praise them and suggest them to maintain; and I also give the advice about what they need to improve… The ALMA program has resulted in significant improvement.

One Lautem teacher confirmed the benefits of their school leaders participating in the Leaders of Learning program, specifically by sharing the knowledge acquired from the training with teachers.

Multiple school leaders in Lautem reported the Leaders of Learning program has improved their understanding of student-centred approaches, as reported by one:

> Through ALMA we learn how to serve the students with love and caring, we learn how to approach the students. It is centralised on the students, as they are the one doing more activities, and the teachers are here to support them.

Educational technology

Over half of the school leaders in each municipality highlighted the educational technology component of ALMA as a tool that enables them to effectively undertake classroom monitoring, by providing access to the required resources and facilitating information sharing. One Lautem school leader explained the multi-faceted benefits of the tablet:

> I can do classroom observation and give feedback to the teachers and can fill the observation in the form and send it to the national. I also do not need to carry a heavy book, but I can just use my tablet. When we do the GTP and GTL, we can also write our notes and save it in the tablet. Also, other teachers from other schools or from different municipality can also share their GTP and GTL experiences in the general information sections, and we can access this information by using our tablet.

Two Liquica respondents identified the tablets as being instrumental for building leadership capacity, as explained by an education stakeholder:

> Then the new thing that happened was that they started to use electronic equipment, tablets, to do monitoring… They also started noting the weakness and challenges that were coming up for the teachers…

A Liquica school leader further agreed with this sentiment and further explained:

> The benefit is that when I observe, I can accompany the teachers and immediately submit the reports. As well as see the lesson plan to see if they are following it. The implementation is good. It's fast. The approach of using the tablet is really good.

One mentor described the tablets as a useful tool to communicate and share information with school leaders, as well as monitor whether 'they (school leaders) have achieved this number of observations' during a month. Another mentor talked about how school leader training as part of the ALMA program has built school leader capacity to use tablets:

> I think while we've been supporting them, from 2016 until now, they have all learnt really well about how to use the tablets. Particularly through the GTL, which are focused just on them. There is training and there is also direct support from us at their school. Sometimes

we do observations together with them, then we have a small meeting with them to see how they are using the tablet, how they are doing the observation.

Factors that impede teaching practice

The three data collections for this Study provided opportunities to understand any factors outside of ALMA that impeded teaching practice, and therefore have the potential to influence the success of ALMA investments. There are a range of challenges which create difficult teaching and learning environments for schools in Lautem and Liquica, including:

- high workloads and competing demands
- limited teaching staff
- inadequate physical resourcing
- multi-grade classes and overcrowded classrooms.

Limited teaching staff combined with unsustainable workloads were raised as significant challenges in both Lautem and Liquica. Respondents shared that underqualified teachers struggle to meet teaching standards, and one inspector reported that school leaders experience challenges in providing the necessary support to those teachers.

Respondents also shared the challenge of teachers who have held their positions for a very long time and have not been able to adapt to new pedagogical approaches, noting age was a factor that influenced whether teachers were able to change their practice.

Additionally, resourcing and infrastructure constraints create ongoing challenges for teachers, often due to insecure buildings which leads to theft of classroom materials. Lastly, language barriers further compound teaching challenges, as students often only speak in the vernacular, particularly in rural areas of Lautem.

To what extent does the ALMA support the effective implementation of Timor-Leste's National Basic Education Curriculum?

The following sections explore the extent that involvement in ALMA supports the effective implementation of Timor-Leste's National Basic Education Curriculum. The discussion is presented around two themes: access to the curriculum and teacher support.

Access to the curriculum

Finding 1. ALMA has improved access to the curriculum, lesson plans and activities on tablets, which helps school leaders to support teachers in implementing the curriculum.

Finding 2. Tablets enable communication for leaders to share information with teachers and schools, as well as support the monitoring of teachers' implementation of lesson plans.

Discussion

A number of stakeholders discussed factors that enabled or inhibited their access to the curriculum, either through online or physical curriculum materials including lessons plans. As in 2018 and 2019, school leaders commented on the benefits of having the curriculum and lesson plans contained on

tablets they received through ALMA, which facilitates information sharing and monitoring of how the curriculum is being implemented.

Three of five school leaders in Lautem said the availability of the curriculum, lesson plans and activities on the tablets helped them support teachers in accessing the curriculum and materials. All of these school leaders said the curriculum and materials were easier – 'so portable' – to manage on tablets instead of carrying 'heavy books' as they supported teachers in implementing the curriculum. They commented that this portability helped with communication by sharing of information between teachers and with other schools. As described by one of the school leaders:

> The good thing is that there are a lot of activities saved in the tablet that we can use to teach. We can access the information and can communicate with other teachers or schools.

Respondents in Liquica expressed similar responses to those in Lautem about how ALMA had enabled access to the curriculum.

Three of five inspectors interviewed in Lautem discussed how the use of tablets by school leaders has supported teachers, especially in monitoring the implementation of the curriculum. One of these inspectors said school leaders who have a tablet with the curriculum materials can,

> …monitor the teachers, if the teachers skip something, then the leaders can tell them 'you should do it like this so it is complete'. This has been the biggest change in the leaders.

Only three of 13 teachers in Lautem commented on access to curriculum, stating that the electronic availability of lesson plans and the teaching manual was a benefit. However, not having their own tablet also limits their ready access to the curriculum. One inspector said, 'if ALMA has lots of money, then the tablets could be distributed to all the teachers so that everyone has access to it, then they don't need to get so tired carrying the big heavy book around'.

While in general teachers said the lesson plans have supported them in preparing and planning lessons, many teachers commented on the lack of access to specific curriculum resources, especially books.

One teacher and one inspector mentioned easy access to the curriculum through their android phones, but this experience was not widespread throughout Liquica.

One school leader discussed how the new curriculum and access to structured lesson plans has impacted the work of teachers:

> We know that with this new curriculum there are 3 important principles: it is centred on the student, it is democratic and also inclusive. So these three aspects demand that the teachers give lots of opportunities to students to further themselves. I think the new curriculum has really helped the teachers have a deeper understanding of what they are teaching.

Teacher support

Finding 1. Mentor support of school leaders and teachers has been a key aspect of ALMA that has enabled implementation of the curriculum by addressing challenges through observations, feedback, and GTP sessions.

Finding 2. Peer learning and school leader support helps teachers address difficulties and challenges with curriculum implementation.

Discussion

Teacher support is a critical part of ALMA. A range of stakeholders – from municipal level to school level – said ALMA had supported compliance with MoEYS through consistent curriculum implementation across schools. This included ongoing support through mentoring and instructional leadership.

MoEYS compliance

Municipal education stakeholders discussed how ALMA was a critical program within MoEYS to support deeper understanding of the new curriculum and its consistent implementation in schools. As described by one inspector in Lautem:

> I think the ALMA program is really great because it is connected to the quality of education. ALMA is, well particularly the mentors and us, it is a control mechanism so that our teachers who are spread across all the schools must work according to the standards that we have set out in the books prepared by the Ministry of Education. This is the curriculum and all the subjects, topics and materials are complete in that book. The inspectors, together with the mentors, work to control and monitor, are they following the curriculum or not.

Further, a Liquica superintendent described an objective to ALMA is to provide support:

> The positive side is that ALMA's presence has really supported things. How? Because while I've been here, the schools that have been the most difficult in terms of understanding the curriculum that the Ministry established, well with the mentor's presence they have understood this really well.

Mentor support of professional learning

Interviews with municipal level stakeholders in Lautem indicated significant support for ALMA, especially the work that mentors do in supporting teachers' professional learning. All five inspectors interviewed in Lautem specifically mentioned the ways in which mentors supported teachers and schools, including one inspector who discussed how monitoring and observations help teachers improve their work.

In addition to inspectors, the superintendent also discussed his perceptions on the work of mentors and the impact of ALMA in Lautem noting that mentors helped teachers with lesson planning and preparation. He also discussed mentor facilitation of the GTP's which support teachers in addressing difficulties and challenges with curriculum implementation.

> And then the mentors gave direct support to the one or two teachers that were having difficulties. I really support [the ALMA program] because in some schools that were having difficulties, they held special sessions in those places. And then they presented the results saying that in these places they were having difficulties with their pedagogical activities, but now they are starting to be able to.

As reported by one mentor in Liquica, if teachers do not have a copy of the exercises in a lesson plan, they help them develop alternative exercises for students. The mentor stated that the GTPs provide the opportunity to support teachers developing alternative exercises that follow the curriculum.

Teacher reflection on support

Teachers also discussed their perceptions of how ALMA has supported their capacity to implement the curriculum. A teacher described how a mentor supports them in a GTP:

> The concern is mostly in science. When the mentor comes and when we do GTP, I always tell them about this. The mentor says be patient, the teacher has to prepare these things beforehand and then come in and teach. Even if it's not much, just try and do something.

Twenty of 26 Liquica teachers and both group interviews with teachers (six in each group) attributed improvements in implementing the curriculum to the curriculum materials, mentor support, classroom observations and peer learning through the GTP component. As reported by one teacher:

> There has been a change because when the mentors observe us, regarding the curriculum plan, they always give us advice. Like you have to run these activities. It's really good for us. Then after the observation is over, we have to talk to them about it... There really has been a change. Then there is the GTP. At the end of each period we always sit together to talk about what we are going to do, and what we didn't do in the last period. The ALMA program has really made a difference for us.

Eleven of 13 teachers interviewed in Lautem discussed how mentors supported them in implementing the curriculum through GTPs, classroom observation, feedback and support of the school coordinator. For example:

> We always consult with the school coordinators and the mentor when we find difficulties to implement the new curriculum. We mostly discuss it with the school coordinator, sometimes with the mentor. We talk about the teaching methods that need to be improved, and those that need to be maintained.

Liquica teachers also often mentioned that mentors would support them together with the school coordinator either through advice about lesson planning and preparation or classroom observation and feedback. A teacher in Liquica said, 'If there are some things we don't know yet, then we'll ask each other about it. We'll go back to the mentor and they'll give us an answer'. One teacher described the mentor as a 'partner':

> We work very closely with them (the mentor), they are good partners for us. Because when they come to visit we are ready. We prepare a place for them so they can observe us in our classroom.

However, one teacher said that she had not yet worked with a mentor.

Liquica teachers also discussed observations, nothing they were helpful in implementing the curriculum and lesson plans. One teacher explained:

> When the leader and mentor come and do observations, they always call us afterwards and give us feedback, then we can improve on what we taught.

GTPs as integral to teacher support

A wide range of respondents from both municipalities spoke about the benefits of GTPs in supporting teachers to learn from each other, address challenges and support curriculum implementation.

Nineteen of 26 teachers interviewed in Liquica, as well as two group interviews with six teachers each, discussed their participation in GTPs and how GTPs supported them in implementing the curriculum. In Lautem, either mentors or GTPs were mentioned by 24 of 25 individual respondents and a teacher group interview of six, as being an important source of support for implementing the new curriculum.

Ten out of 25 respondents in Lautem including teachers, school leaders and the superintendent mentioned that GTPs were helpful in addressing challenges in curriculum implementation and learning from each other. A group interview of six teachers acknowledged the support of mentors through sharing information and advice about the new curriculum, and helping teachers address challenges during the GTPs. Teachers also discussed the importance of working together:

> When we do the GTP, we do it so that the difficulties we face at our school, we can bring them to the GTP so that our friends who already know about this can share their information with us.

The Lautem superintendent specifically said GTPs and mentors helped teachers and school coordinators address difficulties with lesson planning and preparation. Further, one inspector said:

> ALMA supports the schools through the GTP and GTL. In the orientation, it was made very clear that their role is to look at how to teach the teachers so that they can develop their own competence in teaching. So often they help with how to elaborate on the didactic material, to strengthen their lesson plans, and also there are some teachers who ask the leaders for support.

Factors that impede implementation of the new curriculum

The three Study data collections provided opportunities to understand any factors outside of ALMA that impeded implementation of the new curriculum, and therefore have the potential to influence the success of ALMA investments. Many stakeholders in Lautem and Liquica commented on the factors that impact their ability to implement the curriculum outside of ALMA including curriculum content, books and materials. A number of teachers also reported the time allocated to teach each subject in the curriculum was not enough to cover the required content. As in 2018 and 2019, some schools located in remote areas face difficulties in accessing or finding an internet connection for school leaders to use their tablets. Overall, key issues include the following:

- It is difficult to prepare to teach young children five subjects for 50 minutes a day
- Older teachers reportedly do not implement the new curriculum, while other teachers may not have resources to support them or may be teaching in multi-grade classrooms.
- School leaders may not have funds or transport to be able to visit all affiliated schools multiple times per month.
- Internet and phone access may not be available in some remote areas.
- Some classrooms have a very large number of students. For example, one teacher was teaching a Grade 2 class with 96 students.
- Students in remote areas may not understand Tetum.

To what extent does teacher involvement in the ALMA lead to improved learning outcomes for Timor-Leste students?

The following sections explore the extent that teacher involvement in ALMA leads to improved learning outcomes for Timor-Leste students. The discussion is presented around five themes: context, academic outcomes, attendance, student interest in lessons and wellbeing. There is limited availability of student performance data from national assessments, as the last multi-municipality data collection of student assessment was EGRA/EGMA 2017. This data provided a rough baseline of student learning for this study. There is student assessment data from Lautem as collected by ALMA's Program Based Inquiry (PBI) evaluation in 2021.

Qualitative data from 2018 and 2019 indicated that the incorporation of student-centred learning approaches has increased student engagement and interest in lessons. Student interest in lessons was observed by some teachers to improve some student academic outcomes. However, without some form of large-scale assessment or monitoring of student learning outcomes it is not possible to attribute student performance to the ALMA program.

Regardless, evidence about student engagement is an important indicator of student performance and completion, especially without student achievement data. There is a significant body of research in the international literature that explores the relationship between student engagement (including well-being and interest in lessons), learning and achievement. In other words, there is general consensus that student learning outcomes are holistic and combine to include students' academic performance, engagement in school and well-being.[20] [21]

Academic outcomes

Finding 1. Some teachers observed improved student academic outcomes due to curriculum support provided through ALMA activities.

Finding 2. Use of local language in some areas has been observed to improve student understanding in reading or numeracy activities.

Discussion

A number of stakeholders shared observations that their students had improved skills in reading, writing and mathematics. Teachers also perceived increased participation as a possible factor for academic improvement of students within their own classrooms. Respondents in Liquica expressed similar responses to those in Lautem about student academic outcomes and the curriculum support from ALMA.

Eight of 13 teachers interviewed in Lautem reported changes in their students learning, and most of them reported improvement. Two observations of student learning shared by teachers include the following:

---

[20] Lawson, M.A. and Lawson, H. A. (2013). New conceptual frameworks for student engagement research, policy, and practice. Review of Educational Research 83(3), 432-479.
[21] Klem, A. M. and Connell, J.P. (2004). Relationships Matter: Linking teacher support to student engagement and achievement. Journal of School Health 74(7), 262-273

> There are some changes, because we observe that the students can write, read and count. Some improvement in their literacy and numeracy skills. Because we teach based on the lesson plan.

> There are improvements. Now the students are in their final trimester, so they now can start to understand the alphabet and read the syllables. They have improved compared to the first and second trimester.

I feel really proud with the ALMA program. It's really good and has a lot of advantages. It's made the students more creative in the learning process. Teachers in Liquica reported changes in reading, writing and counting. They also noted more participation from students. Six of 26 teachers interviewed commented on change in student academic outcomes. Some of their observations include the following:

> Yes, there has been changes. Some of them now know how to read, they can write. We can give them a book with an activity and they can read it all, then write it out, and when I ask questions they can answer them.

> The ones who are active, have more learning. The ones who are passive, it is reduced.

One of the three mentors interviewed in Liquica said she had observed improvements in literacy and numeracy.

A teacher in Lautem observed improvement in learning because he uses the local language to explain lessons to students:

> There are some changes, for example, in mathematics, then students understand how to count or do calculation. But, we are in the rural areas, and the students do not understand Tetum language, they tend to speak maternal language. So we use the maternal language to explain to them.

An inspector in Lautem said that the implementation of ALMA has supported 'lots of positive understanding' in students. A mentor said that students participated in groups and described group learning meant, 'If some students were having difficulty, they could learn with students that already understood, and that were active and advanced'.

Conversely, one of the teachers said that students performed better under the older curriculum.

Teachers who were observed for the Study were also asked whether they thought their students were progressing at the level expected. Most teachers in both Liquica (10 of 12 teachers) and Lautem (5 of 7) felt students were progressing as expected against the curriculum. Two teachers in Lautem reported that student progress was slow.

Teachers in Liquica felt generally that the content of the curriculum was relevant to students' level of comprehension. Only one teacher reported that while there was improvement, some topics were difficult for students to understand.

Attendance

Finding 1. Attendance is closely linked to context, and the impact of ALMA on student attendance is inconclusive with a range of opinions from stakeholders.

Discussion

As in 2018 and 2019, the impact of ALMA on student attendance is inconclusive with different opinions from stakeholders and the impact of COVID on students, schools and families.

Very few stakeholders in Lautem said they observed a change in student attendance as a result of ALMA. Only two of three school coordinators were able to respond and both said, 'Yes, they (students) are more actively present'.

More respondents in Liquica shared perceptions of a change in student attendance as a result of ALMA. Those who responded also said that students were more active and interested in the learning process.

> Yes. Through their attendance I can see they are active. Also, personally we have to work hard and be active every day when we teach the children.

> Their attendance is good. They are active. Some of them don't come if they are sick.

Without doubt, attendance is also closely linked to context. A school leader said that offering morning tea at school attracts students.

Interest in lessons

Finding 1. ALMA support has facilitated student-centred learning through the incorporation of creative and 'fun' activities which encourage student interest in lessons.

Discussion

Stakeholders in Lautem reported that in general because of the change in teaching practice and activities in the new curriculum, students have improved learning outcomes. Stakeholders in Liquica shared similar perceptions to those in Lautem. Overall, methods learned through ALMA support has facilitated student engagement in the classroom, improved participation and interest in lessons. Again, these findings are similar to previous data collections in 2018 and 2019, where the incorporation of student-centred learning and the use of creative and 'fun' activities leads to increased student interest and participation in lessons.

Strategies used by teachers in both Lautem and Liquica include group work and an increase in the range of activities during lessons. Fourteen of 26 teachers in Liquica described strategies or activities they used in the classroom that they perceived had a positive impact on student interest in lessons. Some of these reflections include the following:

> Well their interest in lessons comes back to the teacher. The teacher is the one who needs to guide them and motivate them so they don't just play, they focus on what the teacher is sharing with them and telling them to do.

> In the past…the teacher used to do all the talking. But now, we don't do that. The teacher just speaks a little bit, and then the students do a lot of talking.

A Liquica school leader commented about group work:

> Also with working in groups. These students actually really have discussion. They ask each other questions in their group. They are also used to going up the front and presenting their results. They are learning about leadership in the groups too, because they organize

themselves and say, 'tomorrow you go up and do it, then the next day I'll do it'. So this has also been a change.

At the same time, one Liquica teacher recognized the 'downside' of group work in that students distract each other and do not pay attention. He said, 'It's not that we don't accept this method, but we accept it with its limits'.

A school leader in Lautem said that because 'there are a lot of creative and fun activities in the new curriculum, so the students are happy to learn, so they are active'. Eight of 13 teachers in Lautem said that activities and group work support the students' interest in lessons:

> There are changes. The new curriculum is centralised on the students, which encourage the participation from the students. The teacher only accompanies and guides the students.

> Yes, they are more interested to learn, because the students pay attention when I teach them. And when I give them group assignments, they do them well.

One teacher noted that giving the students more 'freedom' in the classroom is a challenge in that students do not really pay attention to her. She is less 'strict' than when she used the old curriculum.

> In Lautem, the superintendent reported that a 'strong mentor presence' has had an impact on where schools need to improve, and there has been a change in encouraging student activity in the lessons themselves.

Wellbeing

Finding 1. Through ALMA support and activities, teachers are encouraging students to work together, share and present their work in front of their classes, which is perceived to improve student wellbeing and engagement.

Finding 2. Classroom observations indicate that teachers have cooperative and supportive classroom environments which are more likely to indicate the presence of positive student attitudes and dispositions towards learning.

Discussion

One of the overall program goals of ALMA is to improve student literacy, numeracy and holistic educational outcomes, where holistic education refers to students' wellbeing, social skills, self-confidence, critical thinking and creativity (Appendix B, Interim Report 2).

In 2019 it was reported that the introduction of student-centred approaches learnt through ALMA has led to observed improvements to children's wellbeing. This is similar for 2021.

Stakeholders in Liquica shared similar perceptions to those in Lautem. In general, methods teachers have learnt through ALMA such as encouraging students to share and present their work and to speak in front of the class are perceived by stakeholders to have improved student wellbeing.

Five out of 26 teachers in Liquica, one of three school leaders and one of three mentors discussed changes to student wellbeing as a result of ALMA. These perspectives are highlighted below:

> Since the ALMA program started here, if we do a comparison of the children since the program started here, the children, even though they are young and just in Grade 1 or 2,

they are braver now…They are all happy, they are all well, because they can do things together and if I ask them a question they can answer it. (Teacher)

The changes have contributed to their wellbeing at school. They can speak up, they can present things. The teachers are teaching the students to create a nice space. (School Director)

In Lautem, four of 13 thirteen teachers and two of three school leaders said that the use of new teaching methods had improved the wellbeing of students. Teachers and school leaders described wellbeing as students being happier in class, interested in learning, and having positive interactions with teachers. The quotes below highlight teacher and school leader responses:

There are some improvements. For example, when we ask them questions, and they answer correctly, then we clap our hands and say that they have answered correctly. This will make them happy to attend the class. (Teacher)

Yes, they are more interested now. Because there are better interactions between the students and the teachers. They feel happy to learn. (School Coordinator)

Because now, we sing with the students, play some games, we clap while the students come to sing in front of the class. We have some fun while learning so the students are happy. If we just explained to them without singing, then they would have got bored. (Teacher)

Overall, stakeholders' perceptions of student wellbeing is consistent with findings in 2018 and 2019. The activities teachers and school leaders learned through ALMA have contributed to students who are observed to be happier and more confident as they engage in classroom activities.

As part of classroom observations for this Study, researchers were required to make an assessment of the classroom environment. Table C.4 below sets out examples of evidence that researchers might observe related to class environment and class interactions. Researchers were asked to select each evidence type observed, and to make an overall assessment as to whether the class was 'cooperative and supportive', 'compliant' or 'unruly'. Cooperative and supportive environments are more likely to indicate the presence of positive student attitudes and dispositions towards learning.

Table C.4: Classroom environment section of classroom observation instrument

Class is….	Evidence might include:
Cooperative and supportive of one another	o Teachers and students work together harmoniously o Classroom atmosphere is joyful o Interactions are respectful, kind and encouraging o Most activity focused on learning
Compliant	o Students do what the teacher says o Classroom atmosphere is complacent o Interactions are respectful but may not be kind or encouraging o Most activity focused on procedures and completing tasks
Unruly	o Students <u>do not</u> do what the teacher says o Classroom atmosphere is disrupted o Interactions are disrespectful o Most activity focused on managing student behaviour

Across the observed classes in Liquica and Lautem, primarily teachers were assessed as having 'cooperative and supportive' class environments.

- In Liquica, for all observed lessons, teachers were assessed as having 'cooperative and supportive' class. One lesson was assessed as both 'cooperative and supportive' and 'compliant'. However, all observed lessons involved an element of 'compliance' in that 'students do what the teacher says'.
- In Lautem, five teachers (of 7) were assessed as having 'cooperative and supportive' class environments. As in Liquica, almost all 'cooperative and supportive' lessons involved an element of 'compliance' in that 'students do what the teacher says'. Many had 'most activity focused on learning' as well as 'most activity focused on procedures and completing tasks'.
- One teacher had two 'compliant' classes, and another had one 'cooperative and supportive' and one 'compliant' classroom environment.

Factors that impede student learning outcomes

Very few stakeholders in Lautem discussed factors that impact student learning outcomes outside of ALMA. Stakeholders in Liquica reported more issues that impacted student learning outside of ALMA, notably overcrowding in classrooms and the need for parent support.

One of the three school leaders interviewed in Lautem reported that language was a factor in students not wanting to attend school or engage in the curriculum:

> Because of the language. All of us speak Makasai and Sa'ani, so it is difficult for them to speak Tetum. This makes some of them scared.

In Lautem, short interviews conducted with teachers after the classroom observations confirmed that use of language was an issue with six of seven teachers confirming this as a factor that impeded student learning. In addition, of the seven teachers interviewed, six attributed student aptitude and six attributed insufficient teaching and learning resources factors that impede student learning. Five teachers said there was in sufficient time to cover all activities in the lesson plan.

In Liquica, some teachers suggested that parent involvement in school could help improve student learning and attendance, and this finding is similar to previous data collections. During the short interviews following classroom observations, three of 12 teachers said either overcrowding or multigrade classrooms were factors that impeded student learning. Overcrowding in schools was an issue that emerged in 2018, and was also noted by teachers in Liquica.

> There are some who are interested, some who aren't. It depends on the support from their parents. If their parents support them at home, then we ask them something they can answer. But if their parents don't support, then we ask them something and they are just blank.

> If people come from the top (from Dili) then we need to tell them. We are suffering. There are too many children. If we have over 40 students in one classroom, it is incredibly challenging.

Unlike 2018 and 2019, COVID has had a major impact on student learning outcomes, which is beyond ALMA's control. Teachers in both Lautem and Liquica reported many challenges during COVID disruptions, and these will be discussed in the 'COVID-19' section.

Equity

Inclusive education addresses and responds to the diverse needs of students by increasing participation in learning and reducing exclusion from school. Ensuring inclusion of those with disabilities, from different language groups and equal participation of gender groups should be a regular part of teachers' practice.

Disability inclusion

Finding 1. It is likely that many teachers are unable to accurately identify students with specific disabilities, and at the same time many children with disabilities may not attend school.

Finding 2. ALMA has improved awareness of inclusive education, but many teachers have limited capacity to effectively support students with disabilities.

ALMA support of inclusive education policy and classroom strategies

ALMA has supported a number of training sessions to support inclusion, especially as part of the Phase 5 rollout in Lautem. This support includes the following[22]:

- Inclusive education policy and classroom strategies to support students with disabilities have been introduced through the Lautem leadership training that included 110 school leaders and female teachers.
- In collaboration with MSSI, DPOs and development partners, MoEYS with PHD support, developed the Child Function Screening tool to identify children who experience difficulties in the classroom. This tool was also tested in Liquica and Dili. In 2019, 57 trainers and data collectors selected by MoEYS received training on this tool.
- PHD, MoEYS and INFORDEPE facilitated training in Lautem for 34 school leaders, including six selected female teachers, from 10 selected schools to collect data and implement inclusive interventions at the school level. Despite varying levels of knowledge and understanding of inclusive education and the Child Functioning tools, by the end of the training, nearly 60 per cent of participants indicated that they understood the concept of inclusive education and committed to use the Child Functioning tools with the support of the local mentors.

Stakeholder experience of disability inclusion

Eight of the 11 teachers interviewed in Lautem reported they did not have any students with disabilities in their class and were unable to provide input into the extent to which ALMA has supported disability inclusion. Three inspectors confirmed that, overall, there are not many disabled students enrolled in Lautem schools. These low rates are likely due to disabled children being kept out of the school system, and teachers being unable to identify the full spectrum of disabilities amongst children who do attend school.

Of the three Lautem teachers with disabled students, two reported they have attempted to provide additional support and attention by allocating time to work individually with the student. One Lautem school leader advised the most significant change has been a shift in teachers' attitudes, as

---

[22] As reported in Program in Human Development (2019). Annual Report 2019.

they now recognise the rights of disabled children to access education. One inspector confirmed this, highlighting how ALMA has improved awareness of inclusive education:

> From the information that ALMA has provided and through the training, when a student with a disability starts to attend a school, we always make sure they are made a priority. If the student can't walk properly, then we look at how the teacher can support them so they can participate in lessons. This is a priority.

Data from the Study classroom observations provided further evidence of the extent to which teachers implement disability inclusive practices. Despite the reported presence of only one student with disability in the observed classes in Lautem, four of the seven teachers were observed to provide customised support. It could be that these observations were mostly to assist students with learning difficulties, and that teachers took a much narrower interpretation of disability.

One education stakeholder reported that although multiple teachers from most Lautem schools have participated in inclusive education training, many schools have not yet introduced inclusive practices. A mentor confirmed this, and explained that Lautem teachers continue to face significant challenges and limited capacity to effectively support students with disabilities:

> But in general, the knowledge of the majority of teachers regarding how to support students that have special needs, it is not yet maximal. It is not yet sufficient to be able to support [the students]…

Conversely, a mentor in Liquica reported that ALMA has been active in supporting inclusive teaching:

> If there is a student with a disability in a classroom, or has learning difficulties, then in the ALMA program there is an assessment point regarding this…. Through ALMA's support, if we observe that a student like this exists and the teacher is not prioritizing them or including them, then during the feedback we need to focus on this issue… through this program, the students who have a disability have been able to feel more supported, able to participate more in the learning.

Fourteen of the 26 interviewed Liquica teachers reported teaching students with disabilities, and most of these teachers demonstrated an awareness of the importance of inclusivity and had attempted to reduce barriers and provide additional targeted support to those students. Strategies described included:

- reducing physical barriers for students with sight and hearing impairments by seating them at the front of the class
- repeating instructions
- using visual aids
- adapting assignments
- ensuring their inclusion in group work
- encouraging other students to be inclusive.

Nine of the 12 observed Liquica teachers reported teaching students with disabilities. Interestingly, despite the reported presence of students with disabilities in the observed classes, only one teacher of 12 was observed to provide customised support. Liquica teachers also reported their capacity to implement inclusive practices was limited and highlighted the issue of high dropout rates of children with disabilities.

Multiple respondents from Lautem and Liquica reported that more training is needed to improve inclusive practices.

Gender

Finding 1. Most teachers recognise that boys and girls have an equal right to participate in the classroom.

Finding 2. Teachers incorporate gender inclusive strategies by supporting boys and girls to work together in groups and select both boys and girls equally to contribute to class discussions.

Most teachers in Lautem and Liquica recognised that boys and girls have an equal right to participate in the classroom. Teachers from both municipalities provided examples of how they incorporate gender inclusive strategies by supporting boys and girls to work together in groups and selecting both boys and girls to contribute to class discussions equally.

One Lautem teacher explained how they implement the gender inclusive strategy outlined in the teaching manual:

> The method is not directly from us, but everything is already in the manual. When creating groups, we should not put girls and boys separately, but we mix them together in each group. And we give them opportunity to ask questions to each other and to discuss, as this develops their skills.

Four inspectors confirmed that Lautem teachers actively encourage equal participation from boys and girls, but one education stakeholder noted some teachers still resist this practice, in particular the senior teachers.

In Liquica, teachers are also implementing gender inclusive strategies aligned with the teaching manual. Two mentors confirmed that teachers are incorporating gender inclusive strategies in the classroom as a result of ALMA, as reported by one:

> In the past they used to just call the boys up the front in the classroom. Now, with this program, they call up both the boys and the girls. In the observation list there is a point for inclusivity. There are indicators that refer to equal rights for boys and girls, equal opportunities for them to respond to questions, to ask questions, to participate in activities… The ALMA program has really changed this.

As part of classroom observations, researchers recorded when teachers selected a girl or a boy to demonstrate an idea or skill during classroom observations, for example by being called up to the board. The practice was consistent in Liquica and Lautem as all 19 teachers were observed to do this, but not across both lessons. When this practice was done extensively by teachers during lessons, the distribution between girls and boys was mostly even. However, there were three examples of teachers only selecting one gender during a lesson.

One Liquica teacher advised they also promote gender equality in the classroom by explaining equal rights to the students:

> So here, I remind the children…there is nothing that says that girls should be in charge, or boys should be in charge. But when we come to school, everyone pays attention to the teacher and boys and girls are the same.

In terms of student engagement, most respondents observed no significant difference between boys and girls, but some teachers reported that girls are more actively engaged in class compared to boys.

Language

Finding 1. Language barriers are a key challenge to teaching literacy in Lautem.

Finding 2. Teachers were observed to employ inclusive practices to support non-Tetum speakers.

Data from the Study classroom observations provided an indication of the extent to which teachers implemented inclusive practices for non-Tetum speakers.

In Lautem, students' language was reported as a key challenge to teaching literacy by six of the seven observed teachers. Three of five inspectors reported the change in the new curriculum to Tetum caused challenges to language development, with students not developing adequate skills in either Portuguese or Tetum.

Teachers in Lautem were observed to employ more inclusive practices to support non-Tetum speakers, compared with teachers in Liquica. All seven observed teachers in Lautem provided customised support to non-Tetum speakers and across both lessons. Examples of this support included: 'explains instruction of how to design map in local language'; 'translates Tetum into mother tongue', and 'supports children who found difficulty in reading, spelling, pronouncing'.

In Liquica, most teachers (nine of 12) were observed to do this, but none of these teachers reported student language as a key challenge.

System outcomes

The following sections discuss emerging evidence on system level outcomes.

Respondents in both Lautem and Liquica reported improved efficiency in monitoring and reporting processes as a major system level outcome resulting from ALMA.

Liquica

As reported by one Liquica school leader:

> The benefit is that when I observe, I can accompany the teachers and immediately submit the reports. As well as see the lesson plan to see if they are following it. The implementation is good. It's fast. The approach of using the tablet is really good.

Multiple Liquica education stakeholders observed that ongoing monitoring has also increased transparency, as reported by one mentor:

> …at the national level, they can see everyone's work. Also they can see the school leaders observation reports. In that app, the schools that are part of ALMA are in there. So we can see that at this school, during this month, they have achieved this number of observations.

One Liquica inspector further explained how this transparency has led to improved accountability across multiple levels:

> This means we know that we need to pay attention and ask, why haven't you been running the GTP? Because it is all in the tablet, I can follow it there. Also at the national level, they

can follow it…then they can ask why haven't you been doing your observations? So we know that now at the municipal level, the national level can see what we are doing. It makes us think about how we can do our work.

Lautem

Two Lautem respondents reported the use of tablets has enabled system-wide levels of access to information and improved capacity to monitor outcomes. One Lautem school leader identified the tablet as being instrumental to achieving both outcomes:

> There have been significant improvements. Through the tablet, we can access the information and can communicate with other teachers. I can do classroom observation and give feedback to the teachers and can fill the observation in the form and send it to the national…

Multiple Lautem inspectors agreed the GTL and educational technology components of ALMA have been key for standardising classroom monitoring though improving access to the curriculum and providing a forum where school leaders are expected to share their findings, which motivates them to undertake regular monitoring activities. As one inspector reported:

> …in addition to the GTL, they also ask for presentations from each coordinator. They have to present on the monitoring they've been doing of their teachers… in the classroom while doing observations, they just have to click. Then in the presentation they can show everyone in the GTL. Then they know who is doing it, who is not doing it. It motivates them to want to do it…

One Lautem municipal level education stakeholder advised their classroom knowledge has improved due to improved communication through participation in regular GTPs:

> Previously, we did not have meetings, now we have regular meetings. The subjects that we initially did not know, now the GTP has improved our knowledge about those subjects.

Sustainability

The ability of schools and education stakeholders to sustain inputs to improve teaching quality, support the implementation the new curriculum and improve student learning outcomes is a significant ongoing challenge. The following section presents respondent perspectives on the long-term viability of ALMA outcomes, and suggestions for improving sustainability.

Respondents from both Lautem and Liquica municipalities reported several risks that threaten the sustainability of ALMA. These included the separation of ALMA from government, insufficient support to sustain program components such as GTPs and classroom observations, a need for continued and expanded support, and limitations around educational technology.

Institutionalising ALMA

In terms of institutionalising ALMA, of the respondents who spoke about this, most were concerned about the mentoring component being delivered independently of the government. As reported by an inspector from Liquica:

> …the government needs to take these people [mentors] and the government needs to take responsibility. This way there will be sustainability…The mentors should become government staff so that there can be communication, administration, administrative rules can apply to them.

Another inspector from Lautem explained how the current model is disempowering for the inspectorate:

> …if possible ALMA includes the inspectors more. Like when they go and do classroom observations, and we should also be doing classroom observation, this is our work, our objective is the same, but in one sense the Ministry of Education trusts ALMA more rather than their own staff.

Multiple education stakeholders suggested addressing this issue by either integrating the mentor position into the inspector role, or amending the mentors' employment arrangements so they are contracted directly to the government and sit within the inspectorate. The common theme between these two different proposals is that **pedagogical mentors should be part of the permanent structure of the Ministry to ensure sustainability**.

However, most interviewed inspectors reported an existing need for additional support to effectively undertake their *current* role on ALMA. This demonstrates that the feasibility of successfully incorporating the mentoring role into existing inspector positions is dependent on significant consultation with and additional support for inspectors. As one inspector reported, inspectorates already need support to operate in a more cohesive way:

> …if we are going to complete each other, to work together well so the work is done properly, if possible ALMA includes the inspectors more… we recommend that inspectors throughout Timor can be put together, can be given support so that we can work together… If the Ministry doesn't have any money and won't support, then we are stuck.'

Other respondents also expressed concerns about the limited capacity of inspectors and mentors under the current ALMA model.

Another risk factor identified by a mentor was the potential impact of school leadership changes on program sustainability, which create institutional knowledge gaps:

> …sometimes we have a school leader, and then something will change and they will leave. Then a new person comes up and this is a risk. If there is no local mentor, then there is no-one to support these new people. So the whole program needs to be maintained.

GTP and classroom observation

GTPs were identified by respondents from both municipalities as a potential enabler to achieving the sustainability of ALMA. Teachers in Lautem and Liquica enjoyed participating in the GTPs when they were active and reported seeing the benefits of GTPs. While GTPs were consistently highlighted as an effective component of ALMA, **they were not active at the time of data collection in Lautem and being held irregularly in Liquica, due to the pandemic. Transport and funding are key barriers to the regularity of GTPs**.

Multiple teachers expressed their wish for GTPs to be reactivated. When GTPs are active, the major barriers to attending them included travel distance, lack of transportation, poor road conditions and

inclement weather. Additionally, Lautem respondents advised ongoing participation in GTPs was a challenge due to being scheduled on non-working days without incentives, particularly for those who travel long distances to attend.

Most of the Lautem inspectors interviewed reported their ability to undertake classroom observations and attend GTPs was restricted, particularly in remote areas, due to factors related to program design and funding. This included lack of transportation, insufficient phone credit to cover communication costs, and an expectation for inspectors to work on their days off without additional support. As one inspector reported:

> …on Saturdays, that is our day off. The inspectors need to read. But with this program, there are meetings that are allocated for Saturdays that we are supposed to go to. But often we can't go because there is no support...

Another inspector further explained the difficulties of visiting schools in remote areas:

> …we face a big challenge in doing monitoring and observations in remote areas.… We only go to the central schools. It is very difficult to go to the affiliated schools because we have no support... We have no transport, the motorbikes are in bad condition, there is no funding for petrol, so we can't go anywhere.

Continued and expanded support

Multiple respondents across both municipalities **expressed their wish for ALMA to continue program components such as mentoring and facilitation of GTPs,** as one teacher from Liquica reported:

> …we'd like to see the GTP's running again so that us teachers can learn more… so that anything that we are concerned about or unsure about we can consult with each other and with the mentors. Then we will know more and we can serve our students and this country.

Respondents also expressed their wish for the program to be implemented to all schools and teachers. As reported by one School Coordinator from Liquica:

> I think the ALMA program is really great. I think it shouldn't be just run at my school, it should be implemented throughout the whole country. I think if this could happen, then we could really increase the quality of education in the future.

Two teachers from Liquica agreed with this sentiment, further conveying their view that expanding the program would lead to improved teaching throughout the country:

> …all the municipalities throughout Timor should have this program. If that happened, then the students would also improve because it is better for us teachers.

> I think that throughout Timor they should implement this ALMA program. Then everyone will be able to achieve the dream of having good quality education in the future.

Additionally, respondents suggested continuing **training for mentors and expanding** ALMA-supported **training to include teachers** is needed to ensure program outcomes are sustainable. Mentors from both Lautem and Liquica requested ongoing training in order to better support school leaders:

> …the ALMA management needs to continue to give training to the local mentors, in order to be able to continue to capacity build our knowledge. So that we can support the leaders well.
>
> I think the way that ALMA can support mentor's work on the ground is to continue to provide capacity building for us.

Four teachers also emphasised the value of ongoing in-service training, as explained by one teacher from Liquica:

> I think the first thing is training. Training is very important for us teachers. Sometimes, like if a machete isn't sharp anymore, it needs to be sharpened. We need more knowledge and better understanding so we can share the teaching material with the students.

One Inspector suggested introducing a new component of ALMA to improve the viability of its outcomes, involving a school leader forum to enable the sharing of challenges observed in classrooms, and collaborating to identify and address common themes:

> One of my recommendations is that if possible, each term we do an assessment of the leaders, then also at the end of term the leaders can do a presentation on what they have been doing. Their teacher observations. Then we can also give them feedback. Then we can look for a solution all together… How can we provide training so the teachers can understand the contents and the topics in the lesson plans for these subjects.

Educational technology

A large number of respondents in both municipalities including school leaders and education stakeholders reported ongoing technological issues prevented them from actively undertaking classroom observations, monitoring and reporting requirements. These challenges included:

- limited understanding of tablet operations
- inadequate application functionality
- hardware faults and outdated software resulting in inspectors using their personal phones
- unreliable electricity and internet access (particularly schools in rural areas)
- insufficient credit.

Respondents also suggested that frequent software updates, ensuring timely repairs, and providing additional training on tablet functionality were key to ensuring tablets are effectively utilised.

One School Director from Lautem further suggested that all teachers would benefit from having their own Tablets to maximise their effectiveness.

COVID-19

The COVID-19 pandemic caused significant disruptions to the Timor-Leste education system, with public health measures requiring extended school closures and a shift to home learning. Schools in Lautem and Liquica entered lockdown for approximately one to three months between March to June 2020. During this time, most schools were closed throughout the entire period but some schools stayed open, or closed periodically, depending on the local case numbers.

Remote learning

In response to school closures, the government developed online/TV/radio 'study at home' programs to facilitate remote learning. However, many students were not able to access this alternative delivery mode due to a limited telecommunications infrastructure and restricted communication between teachers and parents.

Respondents from both municipalities reported that online and televised learning programs were largely inaccessible, particularly in rural areas, due to limited access to:

- electricity
- internet
- mobile reception
- television or
- radio.

As reported by one Lautem inspector:

> The Ministry of Education established lessons online. There was the radio and the television. The issue is this, not everywhere in Timor has access to electricity…The second point is that if you have an android phone, then you can access it but it's impossible for everyone to have an android... They can have a television program, but if families don't have a television? What then? If they don't have a radio? What then?

Some teachers attempted to address this issue by providing families with physical home packages for self-directed learning, but many parents were unable to assist their children due to limited availability and low literacy levels. Inspectors, school leaders, teachers and mentors in both municipalities reported the following challenges:

- Contacting parents and students to monitor their self-directed learning activities was difficult due to limited connectivity and transportation, especially in rural areas.
- Limited connectivity deepened the impact on the same families who were least likely to be able to access to the government's 'study at home' program.
- There were limited strategies and no clear guidelines from MoEYS for teachers and principals on how to sustain teaching practices during school closures.
- GTPs and mentoring sessions were suspended when schools were closed, but pre-existing peer networks established through the GTP component of ALMA became an important support for teachers during disruptions, as it facilitated communication and information sharing.

Ultimately, curriculum expectations were not able to be met due to the significant disruptions to teaching during school closures.

Resumption of in-person classes

Upon resuming in-person classes with an alternating class schedule, teachers and students continued to experience significant challenges. These included:

- reduced teaching hours for students without a modified curriculum
- the need to revisit previous lessons and provide remedial support to students who had not undertaken learning activities during lockdowns
- ongoing student absences

- a decline in student engagement.

As reported by one Liquica teacher:

> The impact for us has been that when the students were reactivated, when they came back…We were doing one week on and one week off which impacted on the teachers because the lessons weren't enough... Also, the students all weren't really engaged... The ALMA program was good. We made the students sit in groups. But now they aren't used to that anymore. Now we have to make them sit separately. There have been lots of impacts. Also, a child comes to school today, then comes back again tomorrow but they have forgotten everything.

A mentor, a teacher and a school coordinator all said that COVID-19 had negatively impacted student attendance with many students staying home. A mentor from Liquica said, 'Before the pandemic started, the students were really engaged and had good attendance at school. But after this virus came, it has traumatized people'.

In some cases, teachers said that because they could only teach half of the students in their classroom at one time, students are in school for only two weeks per month. Another teacher reported that students forget what they have studied after not attending school for a long time.

Some Lautem schools held Saturday catch-up classes to provide additional support to students when schools re-opened, in response to the challenges experienced. The peer networks established through the GTP continued to play an important role for teachers, as it facilitated information sharing for approaching difficulties in the classroom. While teachers were able to support each other through existing networks, they received variable support from school leaders, mentors, and inspectors.

Case study respondents in both municipalities reported they received some support from the government when resuming in-person teaching, focused on health and safety such as provision of personal protection equipment, safety training for school staff and evaluation of school reopening plans. Mentors, inspectors, and school leaders reported attempts to support teachers focused on sharing information to mitigate health risks from COVID-19, rather than pedagogical support.