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EdTech in Timor-Leste:
A Rapid Scan

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About this document

About EdTech Hub

EdTech Hub is a global research partnership. Our goal is to empower people by giving them the evidence they need to make decisions about technology in education. Our evidence library is a repository of our latest research, findings, and wider literature on EdTech.

This publication has been produced by EdTech Hub as part of the ASEAN-UK Supporting the Advancement of Girls' Education (SAGE) Programme. The ASEAN-UK SAGE programme aims to enhance foundational learning opportunities for all by breaking down barriers that hinder the educational achievements of girls and marginalised learners. The programme is in partnership with the Southeast Asian Ministers of Education Office, the British Council, the Australian Council for Educational Research, and EdTech Hub.

Contents

Tables

Abbreviations and acronyms

ACER	Australian Council for Educational Research
ALMA	Apoiu Lideransa liuhosi Mentoria no Aprendizajen
ASEAN	Association of Southeast Asian Nations
ADB	Asian Development Bank
EAPRO	UNICEF East Asia and Pacific Regional Office
EMIS	Education management information system
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
ICT	Information Communication Technology
ILO	International Labour Organization
ITU	International Telecommunication Union
MoE	Ministry of Education
MoEYS	Ministry of Education Youth and Sport
MoH	Ministry of Health
MoPF	Ministry of Planning and Finance
MTC	Ministry of Transport and Communications
OOSCY	Out-of-school children and Youth
RACHEL	Remote Area Community Hotspots for Education and Learning
SDPP	School Dropout Prevention Pilot
SEAMEO-VOCTECH	Southeast Asian Ministers of Education Organization's Regional Centre for Vocational and Technical Education and Training
SEA-PLM	Southeast Asia Primary Learning Metric
TVET	Technical and vocational education and training
UIS	UNESCO Institute for Statistics
UNCDF	United Nations Capital Development Fund
UNSDF	United Nations Sustainable Development Framework

1. About this scan

EdTech Hub country scans explore factors that enable and hinder the use of technology in education. This includes policies, government leadership, private-sector partnerships, and digital infrastructure for education. The scans are intended to be comprehensive but are by no means exhaustive; nonetheless, we hope they will serve as a useful starting point for more in-depth discussions about opportunities and barriers in EdTech in specific countries and, in this case, Timor-Leste.

This report was originally written in February 2024. It is based primarily on desk research, with quality assurance provided by a country expert at the Australian Council for Educational Research. Given how rapidly the educational technology landscape is evolving, EdTech Hub plans to provide periodic updates. Table 1 below, provides a summary of the status of EdTech in Timor-Leste.

Table 1. *Overview of EdTech in Timor-Leste*

Policies	■ *Timor-Leste Strategic Development Plan 2011–2030* (↑Democratic Republic of Timor-Leste, 2011) ■ *Program of the 9th Constitutional Government* (↑Government of Timor-Leste, no date b) ■ *Roadmap for Achieving the Sustainable Development Goals (SDGs)* (↑United Nations Sustainable Development Framework (UNSDF), 2017) ■ *Sustainable Development Cooperation Framework 2021–2025* (↑UNDP, 2021) ■ *National Education Strategic Plan* (↑Ministry of Education (MoE), 2011) ■ *National Strategic Plan for Digital Development and Information and Communication Technology (Timor 2032)* (↑Government of Timor-Leste, 2023)
Infrastructure	■ In 2018, 96% of the population was reported to be covered by mobile-cellular networks. The high cost of data is a notable barrier to accessing the internet through both mobile and broadband networks. ■ 100% of the population is reported to have access to electricity. This is true for both urban and rural settings. ■ 84.3% of the population reported owning a mobile phone, with high ownership levels in both urban (96.1%) and rural (80.5%) settings. Adolescent girls and women are less likely to own a mobile device than adolescent boys and men. ■ As of 2016, only 10.9% of the population reported owning a computer. There is a notable difference in computer ownership across rural and urban settings, with 32.8% of households in urban settings owning computers compared to 4.0% in rural areas. ■ Radio and television ownership is relatively low across the country at 24.5% and 40.2% respectively.

Partners and initiatives	■ Over the years, various entities, including the government, development partners, and private stakeholders, have collectively contributed to the development of the EdTech ecosystem in Timor-Leste. Consequently, the country is currently home to several active EdTech initiatives, as illustrated in Section 7 on EdTech stakeholders and initiatives.
Out-of-school children and youth (OOSCY)	■ The percentage of OOSCY increases at higher levels of education. This is true for both male and female students, but especially for male students. ■ Parents reported that the primary reasons for their children's dropout were economic and academic. Parental attitudes to education were a third reported reason. ■ To better support and provide for OOSCY, the Timor-Leste government has broadly established two key pathways for re-engagement. The first is the establishment of foundational courses as part of its new vocational training system. The second pathway is through a national equivalency programme.
Girls' education	■ Girls in Timor-Leste are reported to have higher access to education and outperform their male counterparts. Their enrolment surpasses that of boys, and they are also reported to be less likely to drop out of school than their male peers. ■ However, gender inequality remains high in other aspects of girls' and women's lives. Women's participation in the workforce remains lower than their male peers, possibly due to firmly held social norms on gender roles that place expectations on young women to marry and start a family. The median age for women to marry is 21.7 years, and 35% of women are married before age 20. ■ Additionally, gender-based violence is prevalent throughout the country, with 59% of women experiencing violence in their lifetime.

2. Country overview

The Democratic Republic of Timor-Leste (referred to henceforth as Timor-Leste) is a lower-middle-income country[1] in Southeast Asia and an island nation. As of 2023, the country currently has Observer Status[2] in the Association of Southeast Asian Nations (ASEAN)[3] and a roadmap to full membership (⇡ASEAN Secretariat, 2023). After over 25 years of conflict and occupation, Timor-Leste regained its independence and became a sovereign state in May 2002 (⇡World Bank, 2022b). The country is made up of 13 municipalities and 67 districts. The country's people are of Papua, Malayan, and Polynesian descent (⇡Britannica, 2024). The country's two official languages are Portuguese and Tetum, while Bahasa Indonesia and English function as languages of operation. Notably, despite being one of the two official languages, Portuguese is only spoken by a small minority of the population (⇡Britannica, 2024).

As of 2022, the country reported a population of 1,340,434 of whom 678,087 (50.6%) were male and 662,347 (49.4%) were female, illustrating a nearly even gender split (⇡Government of Timor-Leste, 2022). According to the 2022 census, 492,752 people, making up 36.8% of the population, were reported to be living in urban areas. The remaining 847,682 people, or 63.2% of the population, were reported to be settled in rural areas. The most urbanised municipality is Dili, with 95.8% of its residents residing in urban settings. All other municipalities are predominantly rural (⇡Government of Timor-Leste, 2022).

2.1. Socio-economic development

As of 2023, Timor-Leste has a Gross Domestic Product per capita of USD 1,490 and an annual real Gross Domestic Product growth rate of 3.1% (⇡International Monetary Fund, 2023). The economy is primarily driven by the service sector, which accounts for 59.1% of total employment in the country. The agriculture and industry sectors account for only 26.9% and 13.5% of the economy respectively (⇡Government of Timor-Leste, 2022). The country is reported to have a small and nascent private sector (⇡Government of Timor-Leste, 2022). A key economic challenge is the lack of economic diversification stemming from the country's keen reliance on the country's sovereign wealth fund, also known as the Petroleum Fund,

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[1] As per the World Bank's categorisation of countries by income in 2024. See https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html. Retrieved 9 May 2024.
[2] With Observer Status, Timor-Leste is allowed to participate in all ASEAN meetings, including summit plenaries.
[3] ASEAN member states: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

which has been primarily fuelled by oil revenues (↑Triwibowo & Miranda, 2016).

Timor-Leste has one of the youngest populations in the world, with roughly 42% of the population under 18 and 57% under 25 (↑UNICEF, 2022a). This is coupled with a consistently growing labour force (↑UNICEF, 2022a). As illustrated in Table 2, in 2022, Timor-Leste had approximately 809,300 people of working age, amounting to 62.9% of the total population. Over the same period, the country reported a labour force of approximately 247,000 people, 39.7% of whom were women and 60.3% men (↑Government of Timor-Leste, 2022). Having such a large young population presents opportunities for significant economic and social development (↑UNICEF, 2022a). The unemployment rate in 2022 was 5.1% (↑Government of Timor-Leste, 2022). When disaggregated by sex, this figure was 4.6% for men and 5.9% for women (↑Government of Timor-Leste, 2022). Notably, informal employment accounted for 77.3% of all employment in the country, with 80.4% of working women and 75.3% of working men engaged in the informal sector (↑Government of Timor-Leste, 2022).

Table 2. *Sampling of demographic data*

Indicator	Population (%)	Men (%)	Women (%)
Labour force	30.5	60.3	39.7
Unemployment rate	5.1	4.6	5.9
Engagement in informal employment	77.3	75.3	80.4

More than 45% of people in Timor-Leste live in poverty, with 26% of the population reportedly facing acute food insecurity (↑World Food Programme, 2024). Additionally, Timor-Leste has one of the highest rates of stunting in Southeast Asia, with almost one in two children reported to be stunted (↑World Food Programme, 2024). The island ranks 140 out of 191 countries and territories on the 2022 Human Development Index (↑UNDP, 2022).

Climate change, multidimensional poverty, and lack of access to high-quality services are key development challenges in Timor-Leste (↑UNDP, 2020). Multidimensional poverty[4] in Timor-Leste is the highest in

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[4] Multidimensional poverty is measured along three dimensions — monetary poverty, education, and basic infrastructure services, and is used to present a comprehensive and dynamic understanding of poverty in particular contexts (World Bank, 2023).

Southeast Asia at 48.3% (↑UNDP, 2022), and the country is the 15th most vulnerable to climate-induced disasters (↑UNDP, 2020).

2.2. Strategies for socio-economic development

The Timor-Leste Strategic Development Plan 2011–2030 aims to transition from a low-income to an upper-middle-income country by 2030 (↑Democratic Republic of Timor-Leste, 2011). In order to do this, the plan focuses heavily on education, healthcare, infrastructure, and private-sector development. To operationalise the strategic development plan, the government has five-year development plans, also referred to as Programs of the Constitutional Government. The country is currently following the Program of the 9th Constitutional Government (↑Government of Timor-Leste, no date b). The country has also adopted the 2030 Agenda for Sustainable Development, approved a Roadmap for Achieving the Sustainable Development Goals (↑Government of Timor-Leste, no date c) and prepared the Sustainable Development Cooperation Framework 2021–2025 (↑UNSDF, 2017).

2.3. Political system overview

Timor-Leste is a Semi-Presidential Republic, the only one of its kind in Southeast Asia. The Head of State is the President, elected by popular vote for a five-year term. Any citizen of Timor-Leste who meets set criteria is eligible to be a presidential candidate. As Head of State, the President presides over the Council of State and the Superior Council of Defense and Security (↑Government of Timor-Leste, no date a).

Following legislative elections, the president appoints the leader of the majority party as prime minister, who is elected through a parliamentary election cycle, which runs every five years (↑Government of Timor-Leste, no date a). The Head of the Government is the Prime Minister (↑Government of Timor-Leste, no date a).

In 2022, Timor-Leste held its fifth presidential election, and parliamentary elections took place in 2023. The current President of Timor-Leste is José Manuel Ramos-Horta, and the ruling Prime Minister is Xanana Gusmão, who served two prior terms as Prime Minister in 2007 and 2012 (he stepped down before completing his second term in 2015) (↑Government of Timor-Leste, no date a).

- Presidential Elections
    - Last held: April 2022
    - Frequency: Every five years

- Next round: April 2027

■ Parliamentary Elections

- Last held: May 2023

- Frequency: Every five years

- Next round: May 2028

2.4. Implications for education

When considering the implementation of education strategies and initiatives, it is important to note that the Timor-Leste Government is the executive body of the state and is responsible for developing and implementing the Programs of the Constitutional Government for the five-year term. Importantly, each election presents changes in the minister of education, key advisors, and senior staff. Therefore, when introducing or implementing educational programmes and initiatives, it is crucial to consider government election timelines as well as the government's priorities.

3. Education system overview

3.1. Schooling structure

The Timor-Leste schooling structure consists of six years of primary education, followed by three years of pre-secondary education.[5] These nine years of schooling are compulsory and free. Following pre-secondary education, children can enrol in upper secondary school. Upper secondary school lasts for three years, and there are two streams: general and vocational. Following completion of general secondary education, learners may attend university. Learners on the vocational track also follow three years of education; however, vocational students may enter the workforce after the completion of any particular year (↑UNESCO & SEAMEO VOCTECH, 2020).[6]

3.2. Education statistics

Since achieving independence, Timor-Leste has rebuilt its school infrastructure and increased the number of teachers (see Tables 3 and 4). However, as outlined in later sections, these areas require further investment and improvement to support the country's *Education Sector Plan* goals (↑MoE, 2011).

Table 3. *Data on the number of schools and education institutions in 2021 as per the MoE's education management information system (EMIS)* (↑MoE, 2021)

Type of school/education institution[7]	Number in 2021
Pre-school	445
Basic education schools[8]	1284
Secondary schools (general)	109
Secondary schools (technical)	60
Higher education institutions	15[9]

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[5] The MoE refers to the three years after primary school as pre-secondary. Other documents by international organisations use the terms 'lower secondary' or 'Cycle 3 of basic education'.
[6] SEAMEO-VOCTECH is the Southeast Asian Ministers of Education Organization's Regional Centre for Vocational and Technical Education and Training.
[7] Includes public-and privately owned schools/educational institutions.
[8] Includes primary and pre-secondary schools (Grades 1–9).
[9] According to data referenced in ↑Ximenes (2021).

Table 4. *Number of teachers in 2021 as reported by the MoE's EMIS (⬆MoE, 2021)*

Education level	Number of teachers
Pre-school	757
Basic education[10]	11370
Upper secondary school	2711

Girls are enrolled at higher rates than boys at all levels of education. Boys are also more likely to drop out of school. Table 5 provides additional education data details.

Table 5. *Education data as reported by the MoE's EMIS (⬆MoE, 2021)*

Education level	Details	Net enrolment rate (%) 2021	Repetition rate (%) 2020	Dropout rate (%) 2020
Pre-primary education	**Total**	**24.78**	*Not applicable*	*Not applicable*
	Male	23.63	*Not applicable*	*Not applicable*
	Female	26.03	*Not applicable*	*Not applicable*
Primary education	**Total**	**87.20**	**7.45**	**3.86**
	Male	82.98	8.70	4.32
	Female	91.90	6.12	3.37
Pre-secondary education	**Total**	**58.77**	**0.85**	**2.66**
	Male	51.07	1.22	3.20
	Female	67.32	0.49	2.15
Secondary School	**Total**	**48.76**	**0.35**	**4.16**
	Male	41.60	0.48	4.61
	Female	56.50	0.24	3.75

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[10] Includes teachers in primary and pre-secondary levels (Grades 1–9).

3.3. Education challenges

Timor-Leste faces significant challenges in achieving the goals laid out in its *National Education Strategic Plan 2020–2030*. One major issue is the high rates of repetition, particularly in the early grades — 20.2% and 29.3% of children are overage in primary and pre-secondary, respectively (↑UNESCO Institute for Statistics (UIS), 2020). Despite changes to the curriculum and the introduction of new initiatives such as prohibiting Grade 1 repetition, almost a quarter of students who completed Grade 1 were informed that they would need to repeat the year of schooling (↑World Bank, 2022a).

The high rate of grade repetition reflects the quality of education children in Timor-Leste receive. A full understanding of students' learning outcomes is largely unknown. To date, Timor-Leste has not participated in any large-scale international learning assessments. However, the country will join the Southeast Asia Primary Learning Metrics (SEA-PLM) in 2024.

There is some evidence that learning outcomes are poor. In 2017, the World Bank evaluated the newly implemented basic curriculum and teacher training programme early. It found that a significant number of the 900 children assessed scored zero in one, more, or all of the skills tested on the exam using Early Grade Reading Assessment (EGRA) instruments. This deficiency in basic skills is further reflected in poor exam scores at higher grade levels. For example, the 2020–2024 *Education Sector Plan* reported that only 12% of schools had over 50% of students who passed the national exam given to Grade 9 students at the end of their basic education (↑World Bank, 2022a).

Low levels of basic skills could be partly due to Timor-Leste's language diversity and language of instruction (↑World Bank, 2022a). The country's official languages are Tetum and Portuguese, but there are 26 local languages. Ninety-two per cent of the population can speak, write, or read in Tetum, compared to 61% in Portuguese and 62% in Bahasa Indonesia (↑Klinken & Lucas, 2021). A new curriculum introduced in 2015 uses Tetum, instead of Portuguese, as the primary language of instruction for primary school. However, a recent law passed in April 2023 calls for the use of Portuguese at all levels of education. The change has implications not only for young children, who likely have a different mother tongue, but also for teachers. In 2019, 79% of teachers were rated as having an elementary level of language ability in Portuguese[11] (↑World Bank, 2022a).

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[11] Additional information about the teachers who participated in the Portuguese language ability assessment was not provided. However, the World Bank document describes the assessment as "systematic" and "comprehensive" (13,232 teachers were assessed).

As Section 4 on OOSCY covers in more detail, Timor-Leste has many school-aged children who are not enrolled in school. Males are more likely than females to be out of school at all levels of education.

Infrastructure also poses a significant challenge to education in Timor-Leste. The country requires substantial investment in building more schools to address the growing school-age population and demand, as well as updating existing structures.

The lack of schools and classrooms means that schools often operate multiple shifts per day, reducing the number of classroom instruction hours students can receive. Existing schools lack important facilities, in particular those which support inclusive environments for girls and children with disabilities. The five-year Basic Education Strengthening and Transformation project, which was announced in 2020, committed over half of its funding towards new and upgraded buildings and facilities (↑World Bank, 2020). At the secondary level, schools often do not have specialised equipment or information and communications technology (ICT) infrastructure to implement technical and vocational education.

Teaching quality is considered another barrier to achieving the country's education goals. With the introduction of new curricula, teachers need support with implementing learner-centred practices, particularly since these teaching methods depart from the methods many teachers grew up with and are accustomed to. The *National Education Strategic Plan's* goal is to ensure that students gain 21st-century skills, which requires teachers to expand their knowledge and develop their capabilities. To address these challenges, the government has implemented various programmes and policies to improve teacher quality. For example, ALMA,[12] a project supported by the Australian government, aims to enhance the skills and knowledge of teachers through peer professional learning groups and mentorship. Despite these efforts, however, more still needs to be done to train teachers in new methodologies in Timor-Leste.

3.4. Education progress

Timor-Leste has made significant progress in its education sector in recent years. Its most notable achievement has been increasing primary and pre-secondary enrolment and eliminating the gap between girls' and boys' enrolment. Whereas the 2016 Timor-Leste Demographic and Health Survey shows higher levels of education and literacy for men compared to women in the older age groups, the trend is reversed among younger age groups (↑Ministry of Planning and Finance & Ministry of Health (MoPF &MoH),

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[12] '*Apoiu Lideransa liuhosi Mentoria no Aprendizajen',* which translates as 'Leadership Mentorship and Learning Support'.

2018). Net enrolment in primary schools increased from 80.8% (↑General Directorate of Statistics et al., 2017) to 87.2% (↑UNICEF, 2022b) between 2015 and 2021. At the pre-secondary level, the 2015 census reported that 44.2% of all school-age children were enrolled; in 2021, the net enrolment rate was 58.8% (↑UNICEF, 2022b). Secondary education enrolment has also seen rapid growth, indicating increased demand for education beyond the compulsory nine years. Between 2015 and 2018, secondary school enrolment surpassed projections set for 2025 (↑World Bank, 2022a).

The MoE has developed and implemented a new curriculum for Grades 1 to 6 and is reforming the curriculum for Grades 7 to 9 (↑World Bank, 2022a). The new curriculum prioritises localised content, promotes student-centred learning, and introduces scripted lesson plans designed to support teachers' use of participatory teaching methods.

3.5. Education priorities, policies, and strategies

The *National Education Strategic Plan* 2011–2030 provides Timor-Leste's vision for its future of education. It was adopted in 2011 and updated in the *National Education Strategic Plan* 2020–2030. Table 6 provides further details on key education-related policies, strategies, and frameworks.

Table 6. *Education-related policies, strategies, and frameworks*

Policy document	Details
National Education Strategic Plan 2011–2030 (↑MoE, 2011)	**Description** The country's *National Education Strategic Plan* provides Timor-Leste's vision for the future of education. The plan lists ten priorities organised in two parts: seven focusing on education system reform and the remaining three focusing on management reform. *Implementation period: 2011–2030*

	Key objectives
	
	■ Education Reform
	This section of the plan sets goals to reform education at all levels, including recurrent education.[13] It also has goals to:
	
	   ■ Improve the quality of education.
	   ■ Ensure equal access by all Timorese to all areas of education.
	
	■ Reform education management and administration systems, including improving the general management of the school system, human resource reform, and organisational improvement. The reforms aim to:
	
	   – Decentralise education services.
	   – Create regional inspection services and define the role of the school inspector.
	   – Overhaul teacher training policy and career progression.
	   – Improve the quality of management and administration in the ministry of education.

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[13] Recurrent education is a component of lifelong education that is geared towards helping learners rejoin the formal education system after a break.

Policy document	Details
National Technical and Vocational Education and Training (TVET) Plan 2011–2030 (⬆UNESCO & SEAMEO VOCTECH, 2020)	**Description** This document was developed in alignment with the *Timor-Leste Strategic Development Plan 2011–2030*. It lists goals, objectives, and indicators for TVET in Timor-Leste in the short (2011–2015), medium (2016–2020), and long term (2021–2030). The plan is geared towards developing skilled TVET graduates who can actively contribute to the development of a robust economy. *Implementation period: 2011–2030*
	Key objectives ■ Development of necessary regulatory documents and standards: 　– The plan calls for the development of strategies and policies to facilitate targeted strengthening of the TVET ecosystem. 　– The plan also mandates the development of standards for skills development based on demand data and labour-market needs. ■ Implementation of the development plan: 　– The plan highlights various activities and indicators such as the delivery of training, development of training centres and so on, to ensure successful achievement of goals outlined in the plan.
Inclusive Education Policy (⬆Government of Timor-Leste, 2017)	**Description** The policy establishes the rights of all Timorese to good quality education, regardless of ethnicity, language, religion, sex, age, and socio-economic level. It identifies several objections and associated actions to achieve inclusion and equity in education. *Adopted in 2017*
	Key objectives ■ Strengthening formal education: 　– The plan aims to increase education enrolment and retention rates, particularly for the most marginalised learners. ■ Providing alternative education channels: 　– The plan also highlights the importance of developing and offering non-formal and alternative education opportunities that are equivalent to basic education.

4. Out-of-school children and youth

4.1. Data on out-of-school children and youth (OOSCY)

Although the number of OOSCY began to increase in 2017, there has been significant progress towards increasing enrolment and decreasing the number of OOSCY over the past ten years (↑Government of Timor-Leste & UNICEF, 2021). As shown in Table 7, the most recent data from UIS indicates that the percentage of both out-of-school male and female students increases at higher levels of education, particularly for males.

Table 7. *Education data as reported by ↑UIS (2020)*

Education level/age	Details	Out-of-school rate (2020) %
Primary school age	**Total**	**5.04**
	Male	8.26
	Female	1.58
Pre-secondary school age	**Total**	**12.91**
	Male	16.93
	Female	8.61
Secondary school age	**Total**	**26.25**
	Male	30.08
	Female	22.14

4.2. Reasons for dropout

The School Dropout Prevention Pilot (SDPP) project, administered in Timor-Leste from 2010 to 2015, conducted a situational analysis of the factors and conditions that affect dropout. At the time of the study, the project found that the highest rate of dropout occurred in Grades 4 and 5 (↑Shin et al., 2011).

The reasons families and students gave for dropping out were predominantly economic and academic. Although school fees were abolished in 2006, families must pay for books, uniforms, and other school supplies. Twenty per cent of families in the 2014 Survey of Living Standards cited costs as a reason why children had dropped out of school (⬆Government of Timor-Leste & UNICEF, 2021). Children were also needed to provide income for families through labour or by performing chores at home. Fifteen per cent of respondents to the aforementioned survey cited the need to work as a reason for dropping out. Even when children do not drop out of school, families' needs for children to help either through agricultural work or other activities is apparent in the statistic indicating that 12.4% of children are both working and going to school (⬆Bureau of International Labor Affairs, 2022).

As discussed in Section 3.3 on education challenges, educational quality in Timor-Leste is low and grade repetition is common. According to data from the SDPP, a high percentage of parents of at-risk students and dropouts reported their child had not mastered basic skills in reading and maths. Needing to repeat multiple grades or failing multiple classes may discourage learners from continuing their education (⬆World Bank, 2022a).

The third commonly cited reason for dropout is families' and students' attitudes towards education. Although the SDPP analysis reported that the majority of at-risk students and dropouts had positive attitudes towards education and both students and families had high aspirational goals, other surveys have reported students' and households' lack of interest in education. For example, the 2016 Child Labour Survey found that 6.6% of households surveyed cited not considering education valuable as a reason for never sending their child to school. "Not interested in school" was the response given by 13.1% (⬆Government of Timor-Leste & UNICEF, 2021).

Students with disabilities are at greater risk of dropping out; however, there is limited data on OOSCY with disabilities. The 2022 Census estimates that 1.4% of the total population over five years had one or more disabilities. These are defined as having difficulties with walking, seeing, hearing, cognition, self-care, and communication (⬆Timor-Leste National Institute of Statistics, 2023). A study conducted by Belun, one of the largest NGOs in Timor-Leste, and the UN notes that census data may undercount people with disabilities. Reasons for undercounting include participants being unwilling to identify themselves, the census not including all forms of disabilities, and participants and enumerators not having sufficient understanding of disabilities (⬆UN Timor-Leste & Belun, 2018).

In 2017, the government adopted the Inclusive Education Policy in line with the *National Education Strategic Plan* goal to ensure that 75% of socially marginalised groups have the same opportunities, rights, and services as mainstream society. The policy calls for several reforms, such as the inclusion of children with disabilities in mainstream classrooms, the development of accessible materials, and actions to ensure pregnant girls and children in extreme poverty and/or remote locations can attend school. Despite the policy, there have been few concrete actions to enact changes (⇡World Bank, 2022a).

Regarding children with disabilities, ⇡UN Timor-Leste & Belun (2018) estimates that only about 44% of youth with disabilities have ever attended school, whereas 87% of their peers without disabilities were reported to have been enrolled in school. Of those who do attend school, the report states that two-thirds of youth with disabilities drop out of school by the time they reach secondary school. The reasons given for dropping out are lack of infrastructure and necessary teacher skills. Examples of the lack of suitable resources include a lack of materials in Braille or lack of teachers with a knowledge of sign language for teaching students with sight or hearing disabilities, respectively. Family attitudes, including a belief that it is unimportant for students with disabilities to go to school, also contributed to reasons for dropping out.

4.3. Education re-entry pathways

To better support and provide for OOSCY, the Timor-Leste government has broadly established two key pathways for re-engagement. The first is the establishment of foundational courses as part of its new TVET training system. These courses provide various skills, including basic literacy and numeracy skills, as well as 'soft' skills such as leadership and life skills. These foundational courses are meant to serve as a bridge to the formal TVET sector. The new system also envisions the development of skills assessments to help those with existing experience within a field gain recognised qualifications (⇡UNESCO & SEAMEO VOCTECH, 2020).

The second pathway is through a national equivalency programme. The World Bank funded the Second Chance at Education programme, which supported the creation of a national equivalency programme in 2010 (World Bank, 2018). The project also established community learning centres where youth and adults could attend to learn basic literacy and numeracy skills as well as vocational skills. After the project, the government took over the programme and the *Education Sector Plan* included plans to expand its reach (⇡UNESCO & SEAMEO VOCTECH, 2020).

In addition to these pathways, there are initiatives in Timor-Leste which aim to prevent dropout or provide training to support skills development for young Timorese (Table 8). While the government has collaborated with international partners on the HATUTAN[14] programme, other programmes are social enterprises.

4.4. Non-formal education opportunities

Table 8. *Initiatives to prevent dropout and support OOSCY*

Initiative	Partners	Description
HATUTAN *(Hahán ne'ebé Atu fó Tulun ho Nutrisaun no Edukasaun/Food to Support Nutrition and Education)*	International partners: CARE International, Mercy Corps, WaterAid Government partners: Ministry of Education, Youth and Sport	The HATUTAN programme, implemented between 2019 and 2023, aimed to improve literacy, learning, health, and nutrition for children and adults in Timor-Leste. Its activities included supporting the government's school feeding programme. A midline evaluation of HATUTAN found that dropout rates in the treatment schools for Grades 1–6 had decreased, while dropout rates increased in comparison schools (↑CARE International, 2021).
Science of Life Systems[15] *(Rebranded as AHHA Education)*	Self-funded social enterprise	The AHHA NGO has established 54 community centres across the country. It offers two-year full-time courses in English, computer literacy, and personal development (↑UNESCO & SEAMEO VOCTECH, 2020).
InfoTimor[16]	xpand Foundation, Australia	InfoTimor is a not-for-profit enterprise that aims to build capacity among Timorese youth by providing ICT skills, training, and employment. It has established five Technology Learning Centres across the country.
Emrez Diakis[17]	Self-funded social enterprise	Emrez Diakis aims to empower Timorese people through various activities. The organisation provides training modules in gender equality, basic numeracy and finance, and entrepreneurship skills.

[14] HATUTAN stands for *Hahán ne'ebé Atu fó Tulun ho Nutrisaun no Edukasaun, which translates as Food to Support Nutrition and Education. It is a five-year initiative between the Government of Timor-Leste and development partners to build a partnership between schools and their communities to improve literacy, learning, health and nutrition for children and adults in Timor-Leste.*
[15] See https://www.ahhaeducation.org/home-timor-leste/. Retrieved 6 May 2024.
[16] See https://technology.tl/what-we-do./. Retrieved 6 May 2024.
[17] See https://www.empreza-diak.com/. Retrieved 6 May 2024.

5. Girls' education

5.1. Girls' education enrolment and attainment

Timor-Leste has made significant progress towards gender parity in education. In the 2015 census, the ratio of males to females attending school was 109:100; in the most recent 2022 census, the trend reversed, and more girls were reported as attending school at the primary level (⇡Timor-Leste National Institute of Statistics, 2023). Table 5 above illustrates how girls' enrolment surpasses that of boys and how they are less likely to drop out of school. Although both boys and girls had low learning outcomes in the World Bank 2017 early evaluation,[18] on average, girls performed better than boys (⇡Asian Development Bank (ADB), 2014). However, as noted in Section 3.3 on education challenges, the full picture of learning in Timor-Leste is still unknown as it has not yet participated in any large-scale international learning assessments.

5.2. Girls' employment data

While gender parity in education has improved, gender inequality remains high in other aspects of girls' and women's lives. Women's participation in the workforce remains lower than their male peers. The 2021 International Labour Organization (ILO) Labour Force Survey indicated that 36.9% of men were employed, compared to 24.2% of women (⇡Government of Timor-Leste, 2022). Unemployment was especially high among young people aged 15 to 24 years, with young women more disadvantaged. Women were more likely to be working in agriculture (compared to industry) and self- or informally employed (compared to wage employment). The ILO report notes that the gap in employment type indicates "stark gender inequalities to the detriment of women in accessing more secure and stable employment" (⇡Government of Timor-Leste, 2022: p. 3). Gender also appears to influence boys' and girls' choice of study at the secondary level, where women tend to enrol in administration, tourism, and hospitality fields, "suggesting gender segregation in the type of vocational training pursued" (⇡ADB, 2016: p. 2).

5.3. Girls' access to digital technology

There is scant data on girls' access to digital technology in Timor-Leste. While women do use the internet, they were reported to have less access

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[18] See Section 3.3 for a description of this evaluation.

to digital devices like mobile phones than men (↑MoPF & MoH, 2018), and female youth aged 15 to 24 are 4.8% less likely to own a mobile device, compared to male youth of the same age in the same household (↑UNICEF East Asia and Pacific Regional Office (EAPRO), 2023). Furthermore, rural women are the least likely to have used the internet; 11% of rural women reported using the internet in the past 12 months, compared to 46% of women in urban areas.

When ICT education is available, there are efforts to make learning inclusive for girls. UNICEF's report on girls' digital literacy in Southeast Asia notes that key stakeholders did not see a difference in ICT education opportunities for girls compared to boys. Furthermore, teachers surveyed from Timor-Leste did not perceive differences between girls' and boys' ability to gain digital skills (↑EAPRO, 2023). However, those interviewed commented on girls' lack of confidence in the area and concerns that gender stereotypes prevented them from pursuing STEM fields. The report also notes that teaching was largely gender-blind, potentially ignoring the challenges girls face when using technology.

5.4. Gender norms and cultural considerations

Timor-Leste society is influenced by gender norms. A 2021 study on social norms in the country found "strongly held gender-based roles and expectations" among focus group participants, in which men were expected to be providers for women and families while women took care of household needs (↑Robinson & Kiefel-Johnson, 2021). Gender-based violence is prevalent throughout the country, with 59% of women experiencing violence in their lifetime[19] (↑The Asia Foundation, 2016). Moreover, both men and women have high rates of agreement with one or more justifications for wife-beating. Notably, there has been a significant decline in the percentage of men who condone wife-beating, from 81% in 2009 to 2010 to 53% in 2016, but the rate remains high (↑MoPF & MoH, 2018).

5.5. Enablers and barriers to girls' education

A possible contributor to young women's lower participation in post-secondary education is due to expectations to marry and start a family. The median age for women to marry is 21.7 years, and 35% of women are married before the age of 20 (↑MoPF & MoH, 2018). The

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[19] Other sources such as the Demographic Health Survey find fewer instances of violence. However, the Asia Foundation report states that the higher rate "should not be interpreted as indicative of a major rise in the rates for Timor-Leste, rather that the rates are actually higher than previous estimates"(↑The Asia Foundation, 2016: p. 5).

prevalence of teenage pregnancy is 7% among women aged 15 to 19 according to the Demographic Health Survey 2016 survey and is unchanged compared to earlier surveys (↑MoPF & MoH, 2018). While pregnancy or marriage was not a common reason families attributed to girls' dropout, other studies, which focused on teenage pregnancy, found that having a child inevitably led to school dropout, and usually marriage (↑Cummins, 2017). Timor-Leste does not have policies which ensure girls can continue to study while pregnant, and girls may be forced to leave school if their condition is known (↑Bureau of International Labor Affairs, 2022). Furthermore, ↑Cummins (2017) finds that early marriage was not a positive outcome for families, who expressed a desire for their daughter to finish school.

6. The ICT ecosystem

6.1. ICT infrastructure and connectivity

Timor-Leste Network Readiness ranks 134 out of 143 countries in the 2015 World Economic Forum network readiness index (↑UNDP, 2018). The International Telecommunication Union (ITU) reports high network coverage in Timor-Leste as of 2022, with 96% of the population covered by mobile-cellular networks (↑ITU, no date).[20] Mobile cellular subscriptions are similarly high, with 110 per 100 inhabitants with mobile cellular subscriptions[21] (↑ESCAP, 2019).

Table 9. *Internet and electricity access in Timor-Leste as a percentage of the population*

Indicator	Population in Timor-Leste %
Network coverage[22]	
Population covered by a mobile-cellular network (2022)	96%
Population covered by at least a 3G mobile network (2022)	96%
Population covered by at least a 4G mobile network (2022)	45%
Access to internet at home[23]	
Households with internet access at home	NA
Access to electricity at home[24, 25]	
Households with access to electricity (2021)	100%
Households with access to electricity, urban (2021)	100%
Households with access to electricity, rural (2021)	100%

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[20] When cited in reports, 2018 is the most recent data when published.

[21] Some people have multiple mobile-cellular subscriptions.

[22] These are statistics published on the Digital Development Dashboard from the ↑ITU (no date), accessed February 2023.

[23] These are statistics published on the Digital Development Dashboard from the ↑ITU (no date), accessed February 2023.

[24] Data is as per World Bank Open Data (↑ no date).

[25] Electrification has been a priority for Timor-Leste's infrastructure development since the country achieved full independence in 2002, with universal access a 2030 target of Timor-Leste's Strategic Development Plan. However, research suggests that the 100% figure is an overestimate of true access (↑Heynen et al., 2024).

Mobile phone ownership is high while computer ownership is low, with a large divide between urban and rural households (see Table 10) (⬆MoPF & MoH, 2018[8]).[26] Additionally, 66% of women own a mobile phone compared to 77% of men, with younger women more likely to own a phone than older women (⬆MoPF & MoH, 2018).

Table 10. *Device ownership in Timor-Leste* (⬆MoPF & MoH, 2018)

Device	Households owning device %	Urban households owning device %	Rural households owning device %
Radio	24.5%	33.6%	21.6%
Television	40.2%	79.9%	27.8%
Mobile phone	84.3%	96.1%	80.5%
Computer	10.9%	32.8%	4.0%

On the whole, internet penetration in Timor-Leste is lower than the rest of Southeast Asia (⬆We are Social, 2022). The ITU estimates that as of 2022, 41% of the population uses the internet (⬆Economic and Social Commission for Asia and the Pacific (ESCAP), 2019), with 52% of adults confirming that they have used the internet (⬆United Nations Capital Development Fund (UNCDF), 2023). This percentage is lower for women than for men (49% of women and 56% of men), and large gaps are noted between rural and urban areas (⬆UNCDF, 2023). Rural women in the report were the least likely to have used the internet (37%) compared to 63% of urban women who had. By contrast, 44% of rural men used a computer, compared to 70% of urban men.

6.2. Barriers

The cost of ICT remains one of the key barriers to successful utilisation of EdTech in Timor-Leste. The cost of mobile and broadband services is high, at USD 7.00 for a 2 GB mobile broadband basket and USD 49.00 for a fixed broadband basket (⬆ITU, 2023). Timorese youth reported spending between USD 15 to USD 20 a month on data (⬆The Asia Foundation, 2022). Fifty-four per cent of respondents in the Digital Financial Literacy study cited cost as an obstacle to regular internet use (⬆ESCAP, 2019). Mobile cellular prices are also high compared to the Asia-Pacific region (⬆ESCAP, 2019) (see Table 11).

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[26] Statistics on computer and internet usage vary depending on the source.

Table 11. *ICT prices as a percentage of national GNI in Timor-Leste, Vietnam, and Singapore*[27]

ICT Prices	Timor-Leste	Vietnam	Singapore
Fixed broadband basket as a % of GNI per capita (2022)	30.3%	3.5%	0.8%
Mobile data and voice basket (high consumption) as a % of GNI per capita (2022)	18.6%	2.9%	0.3%
Mobile data and voice basket (low consumption) as a % of GNI per capita (2022)	9.4%	1.9%	0.3%
Mobile cellular basket as a % of GNI per capita (2022)	7.4%	1.8%	0.3%
Mobile broadband basket as a % of GNI per capita (2022)	4.3%	0.5%	0.2%

Another barrier is the level of ICT skills and digital literacy among the Timor-Leste population. Timorese adults are more likely to have engaged in less complex digital activities (e.g., setting up alarms, saving an image) and much less likely to have completed more complex digital tasks (e.g., using formulas in spreadsheets, writing code) (↑UNCDF, 2023). Among those who have used the internet, 68% reported having used the internet for educational purposes (↑UNCDF, 2023).

Across genders, men and women report engaging in digital activities in relatively equal numbers; however, significant gaps were noted between women in rural areas and other groups (↑UNCDF, 2023).

6.3. EdTech in schools

In education, schools often lack the necessary infrastructure, such as the devices required to support learning, particularly in rural areas (↑EAPRO, 2023; ↑Lucas & Santos, 2015; ↑UNESCO, 2023). When schools do have equipment, they may not have the capacity to maintain or fix resources, such as computers, when they break down (↑EAPRO, 2023). Additionally,

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[27] These are statistics published on the Digital Development Dashboard from the ↑ITU (no date), with the latest update in July 2023.

internet connections are low, expensive, and do not reach rural areas (↑UNESCO, 2023).

Beyond infrastructure, male and female students lack overall digital skills, with girls demonstrating a lack of self-confidence even if their skill level is comparable to that of boys (↑EAPRO, 2023).

ICT was recently added to the national curriculum; however, digital awareness by teachers is low (↑EAPRO, 2023). Within the curriculum, multimedia skills are taught in secondary and vocational schools, but are primarily focused on basic skills (e.g., how to use a computer) rather than on digital skills (↑UNESCO, 2023). Content is also an issue, with limited educational content available in local languages (↑UNESCO, 2023). Between 2019 and 2021, the 'Leveraging ICT to Improve Education and Skills in Timor-Leste' project was conducted in the Special Administrative Region of Timor-Leste known as Oecusse. It aimed to improve education quality, provide ICT infrastructure, and increase students' financial and environmental awareness. The programme reached primary and secondary school students, teaching basic computer skills and setting up mobile computer labs for students. It also trained teachers and government staff, as well as provided ICT manuals in multiple languages (↑UNDP, no date). The project was scaled through 'ICT Skills and Knowledge for Youth in Timor-Leste' — a UNDP funded project, and ran through 2023.

Parents and caregivers are not generally in a position to provide a home environment that supports their children's digital education. They themselves struggle with low levels of digital literacy and face difficulties managing their children's online activity and safety (↑EAPRO, 2023). Additionally, teachers do not have sufficient training in ICT or digital skills and thus, are also unable to adequately support students' digital education (↑EAPRO, 2023; ↑Lucas & Santos, 2015; ↑UNESCO, 2023). This is perhaps unsurprising given that the Timorese population as a whole has a low digitalisation score, with a mean of 5.42 out of a possible 18 points, as measured by the following aspects of digital literacy: access to devices, participation in a selection of digital and online activities, and adherence to safety measures aimed at protecting personal information stored on devices or used online (↑UNCDF, 2023).

7. Key EdTech stakeholders and initiatives

7.1. Key EdTech stakeholders

Over the years, various stakeholders across Timor-Leste have worked to develop the EdTech ecosystem in Timor-Leste (see Table 12 below for further details). This has been undertaken through the development of necessary policies and regulatory documents, as well as the implementation of resulting programmes and initiatives. However, it is essential to consider the policy environment along with activities and initiatives taking place on the ground.

Table 12. *EdTech stakeholders in Timor-Leste*

Ministry / Agency	Role
Ministry of Transport and Communications (MTC)	▪ The MTC is committed to providing access to affordable and high-speed internet, ensuring that students and professionals have access to digital devices and that the country works towards becoming a tech-enabled society. These are the goals of the MTC set out in the Timor-Leste 2020 targets of the *National Strategic Development Plan 2011–2023* (⬆Democratic Republic of Timor-Leste, 2011). ▪ Additionally, the MTC National Policy for ICT 2017–2019 positions the ministry to facilitate the use of ICT across all sectors through the creation of a well-integrated and safe ICT ecosystem. There is a keen focus on developing the necessary regulations and building human capacity to leverage ICT properly for effective management.
Ministry of Education (MoE)	▪ As per the MoE's *National Education Strategic Plan 2011–2023*, the ministry recognises the importance of using data for effective education management (⬆MoE, 2011). As such, the MoE maintains the national EMIS[28] and shares the data publicly to ensure data-based decision-making and administration by all stakeholders. ▪ Additionally, the National Policy for ICT 2017– 2019 recommends that the MoE collaborate with private-sector players to develop ICT skills and content.
National agency for information technology and communication Timor	▪ Timor-Leste's national ICT agency spearheaded the development of the *National Strategic Plan for Digital Development and Information and Communication Technology* also referred to as *Timor 2023* and is the primary implementing body of the policy (⬆Government of Timor-Leste, 2023). ▪ *Timor 2023* is a ten-year strategic plan that emphasises the use of impactful technology to enhance the country's human and economic development.
Ministry of Education's National Curriculum Unity	▪ MoE's National Curriculum Unity works to create audiovisual materials that support teachers with teaching and learning efforts (⬆UNICEF & Ministry of Education, 2020).

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[28] https://www.moe.gov.tl/emis/dados-estatistico. Retrieved 6 May 2024.

Partnership for Human Development (PHD)	■ A partnership between the Australian and Timor-Leste Governments introduced EdTech as part of the ALMA programme to support the people of Timor-Leste in building and sustaining healthy, educated, and prosperous individuals and communities (↑ACER, 2021).
Non-governmental agencies and development partners	■ Several EdTech initiatives have received support from development partners and other funders such as UNICEF, Global Partnership for Education, ChildFund, and the Asia Foundation (↑UNESCO, 2023).
Private sector partners	■ Examples include Microsoft and telecommunications providers Timor Telecom, Telkomcel, Telemor Timor-Leste (↑UNESCO, 2023).

7.2. Existing EdTech initiatives

In recent years, there has been a growing emphasis on digital education in Timor-Leste. Various entities, including the government, development partners, and private stakeholders, have collectively contributed to the development of the EdTech ecosystem in Timor-Leste. Consequently, the country is currently home to several active EdTech initiatives, as illustrated in Table 13, which provides a sampling[29] of ongoing initiatives in the nation.

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[29] Initiatives were included based on searchability on public web sources and demonstrated use of technology or focus of developing technology skills.

Table 13. *EdTech initiatives and implementing partners in Timor-Leste*

Initiative	Type of EdTech used	Implementing partners	Details
Eskola Ba Uma[30] (School Goes Home) **Access:** Free **Focus on marginalised learners:** Children with disabilities are provided with audio and tactile resources, while children from minority backgrounds receive materials in their native language. Hard copy versions are available for children without access to television or radio.	Digital learning platform including a mobile app, television, radio, electronic books, and UNICEF's Learning Passport[31]	MoE, UNICEF[32]	Eskola Ba Uma is the national curriculum programme launched in 2020 as a response to the Covid-19 pandemic to support students learning at home. In 2021, the MoEYS and UNICEF began transitioning the platform for blended teaching and learning in classrooms.
ICT Skills and Knowledge for Youth in Timor-Leste (iSKY-TL)[33] **Access:** Free **Focus on marginalised learners:** Oecusse, located in the western part of Timor, has a high rate of multidimensional poverty (↑Jendrissek, 2021).	Computer labs	UNDP, with support from the MoE and UN-India Development Partnership Fund	The pilot ICT education project iSKY-TL was implemented across 23 schools in Oecusse. It provided access to in-house computer, robotic, and mobile computer labs, and taught basic computer skills.

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[30] https://www.unicef.org/timorleste/stories/eskola-ba-uma-initiative-helps-children-continue-learning-timor-leste. Retrieved 6 May 2024.
[31] https://timorleste.learningpassport.org/. Retrieved 6 May 2024.
[32] Funded by UNICEF internal funds, Government of Japan, Ministry of Education, and Global Partnership for Education. Partnerships with Microsoft, Timor Telecom, Telkomcel and Telemor Timor-Leste.
[33] https://www.undp.org/timor-leste/projects/ict-skills-and-knowledge-youth-timor-leste-isky-tl. Retrieved 6 May 2024.

Initiative	Type of EdTech used	Implementing partners	Details
ALMA[34] (*Apoiu Lideransa liuhosi Mentoria no Aprendizajen* / Leadership Mentorship and Learning Support) **Access:** Free **Focus on marginalised learners:** N/A	Tablet-based teacher development programme	Timor-Leste Partnership for Human Development (PHD)	ALMA, formerly known as Timor-Leste's Professional Learning and Mentoring Program (PLMP), aims to enhance teacher training by promoting ongoing professional development (through peer learning groups and mentoring), strengthening school leadership, and observing teacher performance. The initiative provides school leaders and educators with tablets equipped with specially designed apps for collecting, storing, and submitting classroom observation data.
Matenek[35] **Access:** Free **Focus on marginalised learners:** N/A	Mobile app	Catalpa[36] — an NGO rooted in the use of design thinking to impact international development, MoE, Australian Aid	Matenek is a mobile tech project that supports teachers with lesson plans, professional development content, and reminders for classroom preparation.

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https://www.dfat.gov.au/publications/development/education-analytics-service-eas-teacher-development-multi-year-study-series-timor-leste-interim-report-2. Retrieved 6 May 2024.
[35] https://catalpa.io/projects/matenek-improving-teaching/. Retrieved 6 May 2024.
[36] See https://catalpa.io/. Retrieved 19 June 2024.

Initiative	Type of EdTech used	Implementing partners	Details
Spark digital library[37] and **classroom kit**[38] **Access:** Free **Focus on marginalised learners:** N/A	Mobile app, website, portable digital library in a box	Library For All, funded by Australian Aid and ChildFund	Spark is a digital library that can be downloaded through a mobile app or a portable 'digital library in a box'. It currently holds more than 100 books in Tetum that have been approved by the MoEYS.
Let's Read[39] **Access:** Free **Focus on marginalised learners:** The Asia Foundation collaborates with the MoE to translate and print free children's books in Tetum to reach the most remote communities.	Mobile app, website	The Asia Foundation	The Let's Read Digital Library in Timor-Leste offers an offline and online programme to ensure access to thousands of books. Collaborating with Timor Telecom, the initiative allows all customers to access the digital library on their cell phones for free, without consuming their data.

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[37] https://libraryforall.org/case-study/digital-library-improving-literacy-in-timor-leste/. Retrieved 6 May 2024.
[38] https://www.unicef.org/timorleste/media/3621/file/Erine%20Childfund.pdf. Retrieved 6 May 2024.
[39] See https://www.letsreadasia.org/. Retrieved 6 May 2024.

Initiative	Type of EdTech used	Implementing partners	Details
Storybooks Timor-Leste[40] **Access:** Free **Focus on marginalised learners:** Books are translated to the most widely spoken languages of Timor-Leste (↑Storybooks Timor-Leste, no date), in addition to Tetum and Portuguese. The programme supports children in retaining their mother tongue while learning an official language, and the audio stories help beginner readers connect speech with text.	Website	Global Storybooks, University of British Columbia, funded by Education without Borders, the Peter Wall Institute,[41] and Mitacs[42]—a Canada-based research partnership for innovation.	Storybooks Timor-Leste is a freely accessible educational tool that encourages literacy and language acquisition in households, schools, and local communities. As part of the Global Storybooks[43] initiative, it provides 40 stories from the African Storybook, available in both text and audio formats.

[40] See https://global-asp.github.io/storybooks-timorleste/. Retrieved 6 May 2024.
[41] See https://pwias.ubc.ca/. Retrieved 19 June 2024.
[42] See https://www.mitacs.ca/en. Retrieved 19 June 2024
[43] See https://globalstorybooks.net/. Retrieved 19 June 2024

Initiative	Type of EdTech used	Implementing partners	Details
Research Unit for Multilingualism and Cross-Cultural Communication Readers[44] **Access:** Free **Focus on marginalised learners:** Readers are produced in Baikenu, Fataluku, Galolen, and Waima'a in addition to Tetum and Portuguese.	Website	Melbourne University	The Research Unit for Multilingualism and Cross-Cultural Communication Readers creates free downloadable early readers in various local languages as part of a key early literacy initiative in Timor-Leste.
RACHEL[45] (Remote Area Community Hotspots for Education and Learning) **Access:** Paid for **Focus on marginalised learners:** Build for remote communities with a lack of internet access	Portable, battery-powered device	World Possible	The RACHEL device functions as a portable repository for hundreds of digital copies of learning sites. It establishes wireless connections with laptops, tablets, or smartphones, offering internet-independent access to educational content.
Cakap[46] **Access:** Paid for **Focus on marginalised learners:** N/A	Mobile app, website	Telkomcel	Cakap is an upskilling platform designed to provide quality education to help students master skills and reduce inequalities. Cakap partners with Telkomcel, a mobile communications provider, to provide its educational programmes in East Timor.

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[44]

https://arts.unimelb.edu.au/research-unit-for-multilingualism-and-cross-cultural-communication/resources/east-timorese#readers-in-tetun. Retrieved 6 May 2024.
[45] https://worldpossible.org/. Retrieved 6 May 2024.
[46] https://cakap.com/. Retrieved 6 May 2024.

Initiative	Type of EdTech used	Implementing partners	Details
Lafaek Magazine[47] **Access:** Free **Focus on marginalised learners:** N/A	Website	Care International, Timor-Leste government, New Zealand government	Lafaek is a digital magazine with activities for early learners (pre-school to Grade 4).
Konta Istória Iha Mambae[48] **Access:** Free **Focus on marginalised learners:** Available in Mambae and Tetum	Website	Xanana Gusmão Reading Room, State Government of Victoria	The website hosts a collection of digital stories that are available to download for free.

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[47] https://www.lafaek.tl/category/download-revista/lk/. Retrieved 6 May 2024.
[48] https://www.xananagusmaoreadingroom.com/wp-content/uploads/2021/05/Konta-Istoria-iha-Lian-Mambae.pdf. Retrieved 6 May 2024.

8. Looking forward

Quality of education appears to be a key challenge that the education system in Timor-Leste is facing, as evident through the high levels of grade repetition and low academic performance across all grade levels. The challenge has persisted despite the development and implementation of a new curriculum for primary education and education reforms for secondary education. Infrastructure and teaching quality are considered possible barriers to enhanced quality of education. There is, however, an opportunity to leverage technology to support teacher professional development and explore ways to provide distance learning opportunities — in particular, through mobile phones, which are highly accessible in Timor-Leste. Likewise, this also presents the opportunity to explore how technology can be used to support remedial education and work to curb issues of grade repetition. However, it is important to note that reported digital literacies of both students and teachers are low, and both groups need adequate scaffolding in order to ensure successful uptake of technology for enhanced teaching and learning in Timor-Leste.

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