



# SEA-PLM 2024

## Main Regional Report

Children's learning in 6  
Southeast Asian countries

### 1st Edition





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# Foreword

Education is a fundamental right of every child.

It is also the foundation upon which children and societies build their future. In Southeast Asia, ensuring that every child acquires strong foundational skills in reading and mathematics by the end of primary school is not only a matter of equity; it is also a prerequisite for sustainable development, especially in the face of uncertainties and crisis. These skills enable children to learn, thrive, and contribute meaningfully to resilient communities, economies, and societies.

The Southeast Asia Primary Learning Metrics (SEA-PLM) is a regional learning assessment and capacity building programme designed by and for Southeast Asian countries to improve learning outcomes for students in basic education. The programme provides countries with robust, internationally comparable data on learning outcomes and builds national and regional capacity to analyse and use the data, while remaining rooted in the region's unique contexts and priorities. Since its inception, SEA-PLM has served as a catalyst for dialogue, policy reform, and collaboration among governments, development partners, and education stakeholders. The 2024 SEA-PLM cycle builds on the foundations laid in the 2019 cycle and offers a timely opportunity to reflect on progress and challenges in the aftermath of unprecedented global disruptions and external shocks.

The 2024 assessment was implemented across six countries—Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, and Viet Nam—representing diverse education systems and contexts. It provides insights into how children's learning has evolved over the past five years, how systems have responded to shocks such as the COVID-19 pandemic and climate disasters, and what reforms have been introduced to strengthen resilience and equity.

The findings highlight progress in areas of foundational learning, while also identifying areas for urgent attention and action. While some countries have made notable gains, particularly in mathematics, foundational learning gaps remain significant. Nearly half of Grade 5 students in the region still do not meet the minimum proficiency level in reading, and one in ten struggles with even the most basic skills. Disparities persist along socioeconomic lines, gender, and language of instruction, underscoring the urgent need for targeted interventions and systemic reforms.

SEA-PLM 2024 also highlights the resilience and innovation demonstrated by education systems in the face of adversity. Countries have expanded early childhood education, strengthened curriculum reforms, enhanced teaching and learning pedagogy, implemented remedial programs, and accelerated digital transformation. Yet, these efforts must be sustained and scaled to ensure that every girl and boy - no matter who he is, no matter where she lives - has an equal opportunity to learn.

Looking ahead, the vision for SEA-PLM is clear: that countries make measurable progress toward equitable and quality foundational learning by 2030. This requires continued investment in early learning, fair resource allocation, effective pedagogy and assessment, effective and high-quality teacher professional development systems, alongside strong accountability mechanisms that link financing to learning outcomes. SEA-PLM will remain a regional public good and trusted partner in this journey, providing data, tools, and a platform for regional collaboration.

We extend our gratitude to the ministries of education, national teams, school leaders, teachers, parents, and students who made this assessment possible, as well as to our partners and donors for their unwavering support.

Let us act on the new data and ensure that every child, everywhere in Southeast Asia, is learning and thriving.



Datuk Dr Habibah Adbul Rahim  
Director of SEAMEO Secretariat



Ms June Kunugi  
Regional Director, UNICEF EAPRO

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The successful accomplishment of the SEA-PLM 2024 cycle was only possible through the strong collaboration with the Ministries of Education in the SEA-PLM participating countries, and the commitment of all Southeast Asian countries to foundational learning. Special thanks are given to the SEA-PLM national teams of Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, and Viet Nam, led by the SEA-PLM High Officials, National Project Managers, and National Technical Team Members, and the UNICEF Country Office Education colleagues in the six countries providing invaluable technical and financial support.

SEA-PLM would not have been possible without the unwavering support of our key regional and global partners. The ASEAN Secretariat - Education Youth and Sports Division provided steadfast leadership and coordination throughout the engagement, resource mobilization, and regional collaboration in the programme. The Republic of Korea (ROK) through the ASEAN-Korea Cooperation Fund (AKCF), also played a critical role in supporting the commencement, preparation, and implementation of the 2024 main survey, including the generation and preliminary analysis of the 2024 regional datasets. Korean expertise was utilized through the Korea Institute for Curriculum and Evaluation (KICE) and the Korean Education Development Institute (KEDI) in providing capacity-building programmes to SEA-PLM participating countries.

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The SEA-PLM Regional Secretariat extends its appreciation and thanks to all Ministry officials, partners, experts, collaborators, school leaders, teachers, parents, and students who have been part of the SEA-PLM 2024 cycle. This regional report is a true testament to the spirit of collaboration and cooperation to improve learning for the children of the region.



# Introduction

The Southeast Asia Primary Learning Metrics (SEA-PLM) is a regional, large-scale learning assessment and capacity-building programme, aimed at generating comparable data on Grade 5 students' foundational learning outcomes. It was launched by the Southeast Asia Ministers of Education Organization (SEAMEO) Secretariat and the UNICEF East Asia and Pacific Regional Office (UNICEF EAPRO) to improve regional capacity to measure learning outcomes, use data, and advance regional peer exchange on foundational learning. Launched formally in 2014, the first cycle of SEA-PLM, the 2019 cycle, included six countries: Cambodia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, and Viet Nam. The ensuing SEA-PLM 2019 Main Regional Report and subsequent secondary reports have been widely used to advance foundational learning policies and practices in the region.

The successful completion of this current cycle, the 2024 cycle, has demonstrated the successful integration of SEA-PLM into regional and national accountability mechanisms on foundational learning and the continued commitment of Ministries of Education and an increased number of partners to advance learning for all children in Southeast Asia.

The 2024 Main Regional Report provides a comprehensive picture of the reading and mathematics proficiencies of Grade 5 students in the same six participating countries. The learning data is complemented by student, teacher, and school-level questionnaires; the 2024 cycle also introduced system-level questionnaires designed to capture the basic education contexts, policies, and programmes that describe the foundational learning systems across the participating countries. The report presents not only the learning levels in 2024, but also seeks to examine how learning trajectories have changed since 2019. Where do we see improvements? Where are children still being left behind? This 2024 report draws attention to some of the continued barriers and lasting inequalities observed in the region, particularly for the most disadvantaged populations, amidst polycrisis and ongoing external shocks facing education systems.

We hope that this regional report, complemented by upcoming national reports developed and released by respective Ministries of Education and future thematic secondary reports, will provide meaningful insights into the learning outcomes of children at the end of primary education in Southeast Asia. The data can confirm priorities, support resource allocation, and identify areas for policy, curriculum and teacher training reforms, amongst other things. SEA-PLM seeks to drive evidence-based decision-making and support the identification and implementation of the most cost-effective policies and practices, especially in an increasingly resource-constrained and volatile global environment.

The SEAMEO Secretariat and UNICEF will continue to support Ministries of Education in their efforts in advancing foundational learning, ensuring that each child is able to enjoy their fundamental right to a quality education. We invite more countries and partners to join in these efforts.

**The SEA-PLM Regional Secretariat is co-managed by the SEAMEO Secretariat and UNICEF EAPRO**

# Executive summary

## Chapter 1: Primary Education in Southeast Asia – Contexts, Challenges and Systemic Insights

SEA-PLM is a regional assessment and capacity-building programme, now in its second cycle, covering Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, and Viet Nam. Since 2019, the region has faced major shocks: COVID-19, climate change, demographic shifts, declining education budgets, political instabilities, and rapid digital transformation, including the emergence of AI. Understanding the extent and impacts of the ongoing polycrisis is critical to interpreting how post-COVID disruptions have shaped learning outcomes across the region.

Education is the fundamental right of every child. Governments across the region have implemented, in varying degrees and capacities, different policies, programmes, and reforms to address persistent challenges in achieving equitable access and quality, with continued disparities in resources, learning outcomes, and system resilience. Major policy reforms have been introduced since 2019, including learning recovery, digital initiatives, climate adaptation, curriculum changes, and the implementation of remedial and catch-up programs.

## Chapter 2: Design, Methodology, and Implementation Features

SEA-PLM is underpinned by a rigorous methodology informed by best practices and standards adopted from the international large-scale assessment (ILSA) community. The 2024 survey was conducted in six countries, targeting a representative sample of Grade 5 students in each country. Instruments included reading and mathematics tests, and contextual questionnaires for students, teachers, school leaders, and parents. The survey was administered in the official national languages of instruction, with careful adaptation to local contexts and rigorous quality assurance of translated materials. Data collection was staggered to align with national school calendars. Despite challenges such as declining enrolment and COVID-19 disruptions, high participation rates and robust sampling were achieved, ensuring reliable, comparable results across countries and cycles.

## Chapter 3: Children’s Proficiency in Reading and Mathematics

The SEA-PLM 2024 results confirm the continued learning crisis in the region. While regional averages in reading showed little or no progress, there was modest improvement in mathematics. SEA-PLM proficiency scales allow for nuanced reporting of student achievement and a deep insight into who is learning and who is not.

In 2024, SEA-PLM changed its benchmark against the Sustainable Development Goal indicator on learning at the end of primary education, adopting Band 5 as the new cut-off point (a change from Band 6 in 2019) within the SEA-PLM proficiency scales in reading and mathematics. Only one in two students (53 per cent) reached this minimum proficiency level in reading; two in three (67 per cent) reached it in mathematics, an improvement from 2019 (from 47 per cent and 56 per cent respectively).

However, looking beyond minimum levels at national curriculum expectations, the highest proficiency levels (Band 6+) were reached by 36 per cent in reading, and 52 per cent in mathematics. Simultaneously, 15 per cent of students remain at very low proficiency in reading; 9 per cent in mathematics. The wide distribution across proficiency bands points to systemic issues in equity, access, and quality of recovery from post-pandemic disruptions and other external shocks. These gaps highlight persistent challenges in foundational learning.

## Chapter 4: Equity and Learning Opportunities in Primary Education

Learning outcomes are shaped by numerous different factors, ranging from student backgrounds and behaviours to teachers' capacity and empowerment, to the actual learning environment in schools. SEA-PLM 2024 shows that despite overall improvements in access to primary education, persistent inequities continue to influence children's learning trajectories by the end of Grade 5.

At the student level, socioeconomic status (SES) remains the strongest predictor of achievement, with gaps equivalent to up to two years of schooling. Systemic barriers continue to lead to different learning trajectories for boys and girls, resulting in persistent gender gaps: girls outperform boys in reading, while mathematics differences are smaller and sometimes reversed. The results highlight the importance of language alignment between home and school, with closer alignment linked to higher learning outcomes, especially in reading.

Teachers remain central to the improvement of foundational learning. There is an improvement in teacher qualifications, but variations in pre-service education, specialization, and exposure to in-service training can be observed. Teacher preparedness is still limited in several countries. Many teachers reported that many students struggle with lack of basic skills, further complicating management of classroom learning.

When considering the learning environment itself, school factors—urban/rural location, public/private status, class size, resource availability, and teacher qualifications—further shape outcomes. School directors report that bullying, violence, and resource shortages remain prevalent, affecting well-being and achievement. While SEA-PLM is not able to comment conclusively on the impact of COVID-19 closures on learning outcomes, the length of school closure alone does not seem to have had a major impact on students' scores.

## Chapter 5: Key insights from SEA-PLM 2024 to guide future actions

SEA-PLM provides the region with critical insights into the current status of learning in the region. Ten key insights and policy considerations were drawn from the data, to be complemented and further developed.

1. Only half of the children meet minimum proficiency levels in reading; in mathematics, one third achieve this level. There is an urgent need to increase investment in foundational learning, prioritizing the most disadvantaged learners and schools.
2. A degree of stability in learning outcomes has been achieved despite significant external shocks since 2019. Future-looking action and continued investment in building system resilience will be needed to prepare students and schools to face diverse shocks.
3. The pace of improvement among students at the very low proficiency levels remains slow. Targeted strategies and accelerated support for the lowest performers will be needed to close the gap in learning outcomes.
4. Education systems continue to demonstrate barriers to learning that differentially affect students, resulting in different learning trajectories for boys and girls across the region and within countries. Greater efforts in building inclusive and gender-responsive systems will be needed to support all learners to reach their full potential.
5. Inequalities in learning outcomes continue to be driven by the socioeconomic status (SES) of the children. Greater efforts will be needed to address socioeconomic inequities and to understand the multiple factors shaping and impeding learning.

6. Early learning opportunities and school resources significantly boost student performance, but unequal access, driven by socioeconomic differences, limit these benefits. Investing in equity-focused interventions, such as quality ECE, teacher support and learning environments, will be needed to narrow achievement gaps.

7. Language alignment boosts learning and students generally perform better when their home language matches the test language. Aligning language policies with language needs will support children in their learning journeys.

8. Teacher qualifications have improved, but persistent gaps in teacher preparedness continue to be observed. There is a need to further focus on strengthening teacher capacity beyond qualifications, with a focus on differentiated learning, inclusive pedagogy, and the use of information and communication technology (ICT).

9. The region is witnessing declining investment in education and a closing demographic window of opportunity. Education systems will need to increase equality and efficiency to ensure continued national development.

10. The use of data for evidence-based decision-making is still nascent. Further focus on monitoring progress and understanding and scaling up what works will strengthen data-driven policymaking and ensure the efficacy of investments.

### **Looking ahead into 2029 and beyond**

SEA-PLM's goal is that by 2030, countries in the region make measurable progress towards equitable foundational learning, narrowing equity gaps, ensuring that every child has a fair chance to learn.

The region has made considerable investment in foundational learning, and progress is starting to be visible. This will need to be sustained for the next generations of learners.

SEA-PLM 2029 represents not just the next cycle of assessment but also a chance to reimagine the role of data in driving educational transformation across Southeast Asia. The journey from 2019 to 2024 has shown that commitments at the policy level must be matched by effective implementation, a stronger equity focus, and the deeper use of evidence.

In this vision, SEA-PLM is not only an assessment but also a regional driver of change, strengthening evidence use, advancing accountability, and uniting Southeast Asian countries around a shared commitment: that no child in the region should be denied the chance to learn, thrive, and contribute to their society.

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# Chapter 1

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## Primary education in Southeast Asia: Contexts, Challenges and Systemic Insights

# Chapter 1 Primary education in Southeast Asia: Contexts, challenges and systemic insights

## 1.1 Introduction

Education is the fundamental right of every child. It is a right recognized in international treaties such as the Convention on the Rights of the Child, which all Southeast Asian nations are signatories to. Yet millions of children globally, and in Southeast Asia, continue to experience exclusion from learning.

Foundational literacy<sup>1</sup> skills are critical to children’s development. They form the basis for all future learning, supporting children not only to succeed in later years in school but also to contribute meaningfully to national, economic and social growth and development. Foundational skills help prepare children for a rapidly evolving and changing world, giving them greater resilience and skills to deal with uncertainties and emerging challenges, while also taking advantage of opportunities.

These basic skills are generally acquired in primary education; once children have ‘learned to read’, they can ‘read to learn’ and move on to more complex tasks and challenging academic subjects. Yet many countries have limited mechanisms for understanding and tracking learning outcomes in a rigorous, internationally comparable manner. Even fewer meaningfully use the data from assessments to shape national policy and teaching and learning practices.

In 2019, six Southeast Asian countries (Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines and Viet Nam) conducted the first round of a new regional assessment, the Southeast Asia Primary Learning Metrics (SEA-PLM). This represented a strong commitment to accountability for learning outcomes, particularly at the end of primary education, and established a contextualized, regionally owned and led, international large-scale assessment.

In 2024, the SEA-PLM survey was administered for the second time, with the full participation of the same six countries<sup>2</sup>, attesting to the consolidation, sustainability and acceptance of SEA-PLM as a regional and international large-scale assessment. SEA-PLM has been cited in both national and regional education plans, and countries implementing SEA-PLM are able to report to the UNESCO Institute for Statistics (UIS) on progress towards Sustainable Development Goal (SDG) 4.1.1b, which tracks learning outcomes in reading and mathematics at the end of primary education. SEA-PLM has become an established part of the assessment landscape of Southeast Asia. This report presents the main conclusions of the 2024 cycle, highlighting trends, identifying continued challenges, and examining inequities and inequalities in access to quality learning opportunities.

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<sup>1</sup> In reading, writing and mathematics.

<sup>2</sup> A seventh country, Timor-Leste, also participated in the Main Survey data collection. See below for full disclaimer

Figure 1.1: Map of SEA-PLM 2024 participating countries



*Box 1.1: What is SEA-PLM?*

SEA-PLM is a regional learning assessment and capacity-building programme designed by and for Southeast Asian countries to improve equitable learning outcomes for students in basic education. It applies international methods, processes and quality assurance mechanisms to ensure a credible measure of learning outcomes and context.

Conducted every five years, the SEA-PLM survey collects children’s, parents’, teachers’ and school leaders’ responses through paper-pencil tests and questionnaires, conducted with a sample of children that is representative of the school population enrolled in Grade 5 in each country. By linking this information to the learning domains of literacy and numeracy, SEA-PLM generates valuable insights into variations and inequalities in children’s learning performance, as well as key factors influencing learning and achievement. The use of proficiency scales in each learning domain further enables a common reference point for comparing performance both across and within countries, as well as over time.

SEA-PLM contributes to advancing policy reforms and strengthening teaching and learning effectiveness, with the goal of transforming learning in schools and expanding countries’ capacity to deliver meaningful learning opportunities for both current and future generations of students. Through its surveys, SEA-PLM provides a regular and nuanced flow of information that can highlight successes and identify areas for improvement, thereby guiding evidence-based policy adjustments. Continuous monitoring of students’ learning progress across the entire performance distribution remains essential for Southeast Asia, to sustain and accelerate improvements in education.

## SEA-PLM: A catalyst to monitor equity issues and improve learning

Despite ongoing challenges and constraints, national governments and stakeholders across Southeast Asia remain firmly committed to advancing sustainable learning for all children. This commitment is evident in national policies, education sector plans, and alignment with international goals and targets such as the Sustainable Development Goals and Education for All. Governments and ministries of education articulate their national visions and objectives through short- and long-term education strategies that address key priorities, including school management, teacher development, and equitable resource allocation to strengthen learning outcomes and system resilience.

In the short term, inclusive strategies help to compensate for the gap in education services and access, ensuring that all children have an equal chance to meet learning goals by the end of primary education and beyond. Such customized options include programmes to address school readiness, curriculum catch-up, zero dropout and informal learning. These programmes can increase learning opportunities for the most disadvantaged groups.

In the longer term, large-scale assessments and surveys, including SEA-PLM, are designed to monitor and assist education sector transformation, review the impact of systemic issues, and inform changes across the education system and schools. Since 2019, SEA-PLM results, evidence and further analysis have deepened understanding of what low proficiency in literacy and numeracy really means and how it affects children across participating countries. At the same time, SEA-PLM offers high-quality learning metrics and standards to assess how Grade 5 cohorts perform in relation to national education priorities and international targets such as SDG 4.1.1a and 4.1.1b. SEA-PLM 2019 results have acted as a catalyst for many national and regional reflections and changes in policy and practice, building the community of practice and strengthening the evidence-based culture.

Building long-term, sustainable foundational learning and skills for all generations therefore first requires short-term investments and adjustments to meet different challenges and approach intermediate standards and goals. The SEA-PLM survey and other analytical tools enable investigation into factors that may affect learning outcomes across different socioeconomic groups, locations, genders and other variables, as well as across time. SEA-PLM surveys are designed mainly to monitor short-term changes in learning outcomes for all students, track progress and highlight bottlenecks; over time, they also enable a longer-term, comprehensive and comparative picture of system transformation and ministry ability to address identified gaps and challenges.

Beyond the SEA-PLM surveys, the SEA-PLM programme supports policy reform and implementation. Collaboration with countries helps review teaching and learning effectiveness in reference to national goals and standards in schools. Short-term changes set the path for future cohorts and lead to progressive shifts across the basic education continuum. Such changes might affect resources and practices first before affecting learning outcomes and producing long-term gains for a system and community.

Large-scale assessments have shown that consistent investment in defining and supporting the most at-risk learners and schools is crucial to shifting the bottom of the learning distribution and educating more children to higher levels of skills and knowledge (OECD, 2016). Some countries have targeted specific groups of teachers, schools, students, and even grades, subjects and skills in a curriculum to become top short-term priorities for intervention.

Even if most of the participating countries are close to achieving universal access to primary education, structural challenges remain in reducing access disparities between children, increasing achievement for all, improving transition and achievement in secondary education, and providing at least one year of free preschool education for all children.

To assist all short- and long-term investments and efforts, ministries of education, and governments more generally, need to put into place adequate monitoring and evaluation systems; learning assessments, such as SEA-PLM, form an integral part of such mechanisms when tracking and understanding investments and efforts in education. Integrating data from various sources – individual and school, regional, group and system-wide indicators, and other forms of evidence – will give decision-makers the tools and information needed to develop appropriate policy responses in a timely manner. As with other regions, Southeast Asian countries should continue to build synchronized national assessment and monitoring policies, and to develop tools and mechanisms that enable practitioners and decision-makers to support better inclusive learning for all children.

### **Looking back: SEA-PLM 2019 results**

The first round of the regional assessment set a benchmark for the participating countries, highlighting equity challenges and identifying gaps in ensuring that all children in the region acquire foundational literacy and numeracy skills. With SEA-PLM 2019, six Southeast Asian countries (Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines and Viet Nam) committed to understanding their children’s learning outcomes at the end (or near end) of primary education.

Data from the SEA-PLM 2019 survey revealed that in some Southeast Asian countries a significant proportion of Grade 5 students struggled to learn fundamental skills by the end of primary education, with up to 75 per cent of children experiencing low learning trajectories that emerge early and accumulate over time. Children struggled with reading and understanding the meaning of vocabulary, sentences and short texts in the language of instruction throughout the primary grades. Similarly, a significant proportion of students had not developed foundational mathematical skills by Grade 5, particularly in areas such as number sense, basic operations and problem-solving. The lack of these foundational literacy and numeracy skills hinders progress in later grades. A very low proficiency reader at the end of primary education is nearly three to four years behind highly proficient readers in the region (about 90 points of difference on the SEA-PLM scale). Without timely intervention, this concerning trend persists; learners who fall behind early in their education often struggle to catch up and typically remain low proficiency readers.

Data from SEA-PLM and other sources, when analysed globally in 2019 before COVID-19 hit, highlighted that an estimated 35 per cent of children (including out-of-school children) in Southeast Asia, East Asia and the Pacific could not read a simple text with comprehension by age 10. This level of learning poverty translated to economic losses of US\$4.7 trillion in the region, the highest impact globally (World Bank et al., 2022). It was estimated in 2022 that the learning poverty levels had risen to 45 per cent in the region, with even more significant implications for both students and education systems.

SEA-PLM 2019 highlighted the equity challenges across education systems. Analysis of learning outcomes revealed that certain students were more likely to be low-performing readers than their peers: students from lower socioeconomic backgrounds, students from rural settings, students who do not speak the language of instruction at home, students who repeated a grade, and students without preschool experience. Similarly, girls’ learning outcomes were on average higher than those of boys across all countries in the different domains, indicating differences in the learning needs and trajectories of boys and girls. Other secondary research similarly shed light on teachers, school leadership and school environments, in an effort to identify what might have an impact on learning.

## The SEA-PLM 2024 cycle: Participation and process

Seven countries joined the SEA-PLM 2024 cycle: Cambodia, Lao PDR, Malaysia, Myanmar, the Philippines, Timor-Leste<sup>3</sup> and Viet Nam, marking five years since the inaugural study in 2019 (SEA-PLM 2019). Brunei Darussalam, Indonesia, Singapore and Thailand participate as Honorary Member Countries, continuing to contribute their expertise and perspectives in SEA-PLM's technical and governance meetings.

Throughout the 2024 cycle, SEA-PLM convened regular regional workshops and meetings with national teams to coordinate implementation, refine survey methodologies, and develop new tools in collaboration with international experts. Beyond technical coordination, high-level steering committee meetings and policy conferences brought together education policymakers, development partners and the SEA-PLM Regional Secretariat to exchange insights on reforms, indicators and strategies for using learning data to strengthen education systems. These gatherings serve as platforms for reviewing and exchanging insights on key policies, indicators and initiatives to use and communicate data, all of which are essential for enhancing the basic education system. Through collaborative efforts and peer learning, a sense of regional ownership is cultivated, which is critical for the success of the initiative.

**Important disclaimer:** The Minister of Education of Timor-Leste informed the SEA-PLM Regional Secretariat that Timor-Leste concluded it is best not to include Timor-Leste in the SEA-PLM 2024 Main Regional Report for internal reasons in late November 2025. In adherence with the SEA-PLM technical standards, this exclusion removes all of Timor-Leste's data from the public domain; it will not be made publicly available and will not be used for reporting, research, or other purposes by any parties. The SEA-PLM Regional Secretariat will not endorse or recognize any references to the collected SEA-PLM 2024 data in Timor-Leste.

## From 2019 to 2024: Challenges shaping primary education in Southeast Asia

Despite strong progress in getting children to school in Southeast Asia, the 2019 SEA-PLM results referenced above showed that over half of students enrolled in Grade 5 (aged 10–12 years), despite five years of education, had not acquired the minimum expected competencies by the end of primary education. The increasing recognition and understanding of the learning crisis sparked action across the region, inspiring innovation and progress while exposing systemic challenges.

Since 2019, Southeast Asian education systems have been affected by different national, regional and global forces. These have included changes in employability and labour market demands, climate change, political crises, financial instability, growing digital and technological innovation and reach, and shifting demographics. In response to these challenges and opportunities, education systems have had to explore innovative opportunities to advance learning, particularly in responding to COVID-19 and developing solutions to the polycrisis. Challenges still persist, especially in ensuring equitable quality learning opportunities for the most at-risk learners and disadvantaged schools.

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<sup>3</sup> See disclaimed regarding Timor-Leste's results

SEA-PLM 2024 enables participating countries to take stock of progress, understand remaining bottlenecks and consider how well education systems have been able to address emerging challenges and take advantage of new opportunities. For the six participating countries, the 2019 results serve as a pre-COVID-19 baseline, against which the 2024 results can be compared.

While this section does not prescribe solutions for addressing these crises and constraints, it seeks to understand how these external shocks have shaped – and continue to shape – the context within which learning outcomes must be understood. Crises related to climate change, demographic transitions, economic pressures and political conflicts directly influence children’s opportunities to acquire foundational skills, and often deepen existing disparities. Rapid digital advances offer new opportunities and some solutions, while also bringing new challenges that must be managed.

The results of the SEA-PLM 2024 cycle presented in this report need to be considered and interpreted against this evolving backdrop. They shed some light on continued and emerging inequalities and provide insights into how well systems have mitigated challenges. Contextualizing the results accordingly will support education ministries and stakeholders to develop and implement responses that account for the constantly evolving context and interlinked nature of these factors.

### **The lasting impacts of the COVID-19 pandemic**

As the 2019 cycle was concluding, the COVID-19 pandemic led governments globally to close schools to limit the spread and impact of the virus. Ministries of education implemented various mitigating measures to ensure learning continuity, including technology for distance learning, home-learning packages, and remote or small-group tutoring. Post-pandemic, remedial education and catch-up classes became the norm for a few years as education systems sought to limit any learning loss and re-establish the normal academic cycles. The SEA-PLM 2024 results offer some insights into how these strategies may have worked in Southeast Asia and the long-term impact of both the pandemic and the mitigating measures on school environments and learning.

The majority (or the entirety) of the national cohort tested in each of the SEA-PLM 2024 participating countries were in Grade 1 or 2 in the 2020–2021 academic year when the pandemic hit. They would have experienced at least some degree of the school closures and the limited access to education in the very first years of their education journey. It is likely that the COVID-19 pandemic and the associated school closures negatively affected the school life expectancy and the students’ exposure to the curriculum while in Grades 1 to 5, along with their expectations and attitudes towards education, despite the mitigating measures introduced by education systems.

SEA-PLM 2024’s survey design, piloting and main data collection were not affected or delayed by the COVID-19 pandemic. SEA-PLM 2024’s field and main survey data collection were conducted similarly to the 2019 cycle (see Chapter 2).

Box 1.2: COVID-19 and school closures

The COVID-19 pandemic had a severe impact on access to education between 2020 and 2022, with frequent and long-lasting school closures causing widespread disruption to schools, teaching and learning both in Southeast Asia and globally. Responses across and within countries differed, with varying periods of school closures, reopening timings and protocols, and teaching and learning alternatives. This challenging environment affected students' pathways regarding enrolment, age, retention, repetition, engagement and exposure to the curriculum.

Figure 1.2 summarizes the number of weeks that schools were partially or fully closed between quarter 1, 2020 and quarter 1, 2022 across Southeast Asia, as documented by Southeast Asian countries in the UNESCO National Education Responses survey on COVID-19 school closures.

Figure 1.2: Duration of school closures during COVID-19 (Q1 2020 to Q1 2022)



Source: UNESCO Institute for Statistics. (2022). *Global monitoring of school closures caused by COVID-19*. <https://covid19.uis.unesco.org/global-monitoring-school-closures-covid19/country-dashboard/>

Some Southeast Asian countries (Cambodia, Malaysia, Myanmar and the Philippines) were among the top twenty countries globally, with the longest school closure periods, closing schools for more than 40 weeks.<sup>4</sup>

<sup>4</sup> Globally, schools closed for an average of 22 weeks during the pandemic, equivalent to two-thirds of an academic year when localised school closures are considered (UNESCO Institute for Statistics, 2022).

## Climate change

Climate change exerts a profound and multifaceted impact on education systems across Southeast Asia. Climate events prevent and interrupt learning: an estimated 31 million children in the SEA-PLM participating countries<sup>5</sup> experienced disruptions to their education from climate-related events in 2024 alone (UNICEF EAPRO, 2025). The greatest impacts are often on the most vulnerable children, especially those living in remote, rural or low-lying coastal areas.

The consequences of these disruptions are far-reaching: they damage school infrastructure, destroy teaching and learning materials and resources, interrupt instructional time, and heighten risks of dropout among vulnerable populations. Climate-induced disasters such as floods, typhoons, storms, heatwaves, pollution and droughts affect the physical safety and psychological well-being of learners and teachers. Schools often serve as emergency shelters during disasters, further delaying the resumption of regular classes.

In the SEA-PLM participating countries, Cambodia, the Philippines and Viet Nam are among the most affected by climate-related education disruptions. In Cambodia, in response to heatwaves in April 2024, school days were reduced to two hours, greatly limiting learning time. In the Philippines, a third of in-person classroom days were lost in 2024 due to climate-induced school closures and non-teaching events. Also in 2024, across Lao PDR, Myanmar, Thailand and Viet Nam, Typhoon Yagi disrupted education for an estimated 1.3 million students, damaging or destroying schools and related infrastructure, displacing families and disrupting essential protection and stability mechanisms for children (UNICEF EAPRO, 2024). These events also undermine the protective function of education, cutting children off from essential services such as school meals, healthcare and psychosocial support.

In response, governments across the region are increasingly prioritizing climate resilience as an integral component in education sector planning. Ministries of education, often in coordination with national disaster management agencies and local stakeholders, are investing in climate-resilient school infrastructure, early warning systems, and emergency preparedness training for students, teachers and school leaders. Education systems are incorporating environmental and climate-resilient education into their primary education curriculum to equip students with the knowledge and skills to understand, adapt to and mitigate the effects of climate change.

## Demographic shifts

Many countries in Southeast Asia are experiencing demographic transitions that are reshaping education systems, labour markets and broader socioeconomic landscapes. The increasing age of populations in some countries places additional pressure on younger populations and has wide-ranging implications for human capital development, fiscal sustainability and the future structure of education systems.

Across the SEA-PLM countries, while the overall population is projected to continue growing for a few more decades, population growth rates are starting to slow down, the demographic window of opportunity is starting to close, and by 2075, the population size will be on the decline. Simultaneously, the structure of the population is changing; in many countries, the population of children aged 0–18 years is already declining, while the proportion of adults living longer and retiring is starting to rise. By 2075, estimates indicate that the proportion of people under the age of 18 years will have fallen to 20 per cent of the total population, from the current 32 per cent, across the SEA-PLM countries.

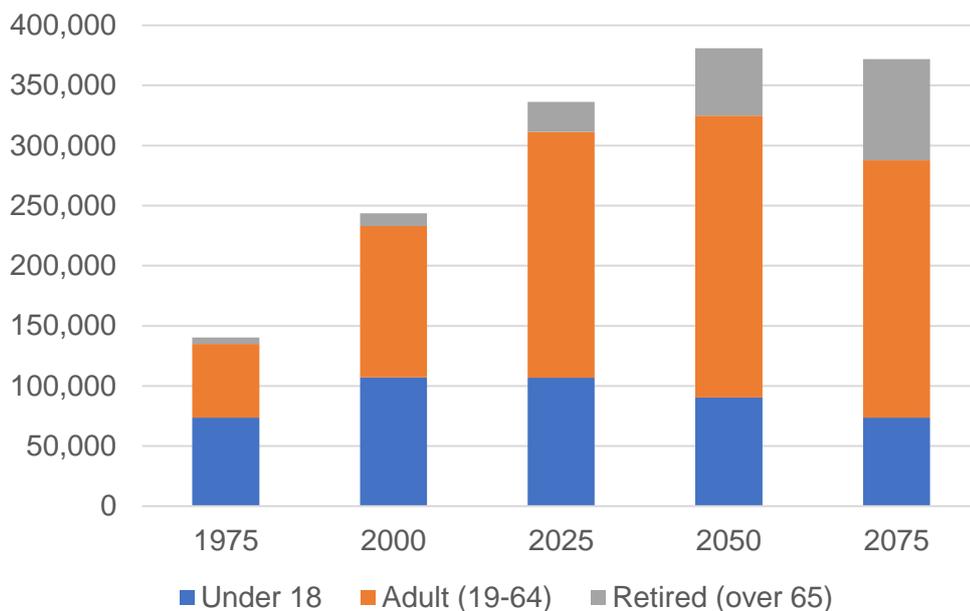
These demographic shifts have implications for education: declining birth rates signal a gradual but steady decline in the number of children entering primary school each year, which will require governments to reassess

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<sup>5</sup> Cambodia, Lao PDR, Myanmar, the Philippines and Viet Nam (no data available for TMalaysia).

the distribution and use of education resources, with potentially significant implications for access in less populated and more remote areas (UN DESA, 2024). Rural–urban migration will shift dynamics between country and city, requiring innovation and the exploration of different learning modalities. With fewer children and a smaller working-age population, improvement in living standards and economic growth will increasingly have to come from efficiency gains in the education system (equal access to quality learning) and productivity gains. Exclusion from learning weakens not only individual prospects but also the long-term vitality and resilience of the regional economy.

**Figure 1.3: Projected population: 1975–2075 (in thousands)**



Source: UN Population Division. *World population prospects 2024*. (Accessed November 2025). The data represent the actual population to 2024 and UN projections to 2075.

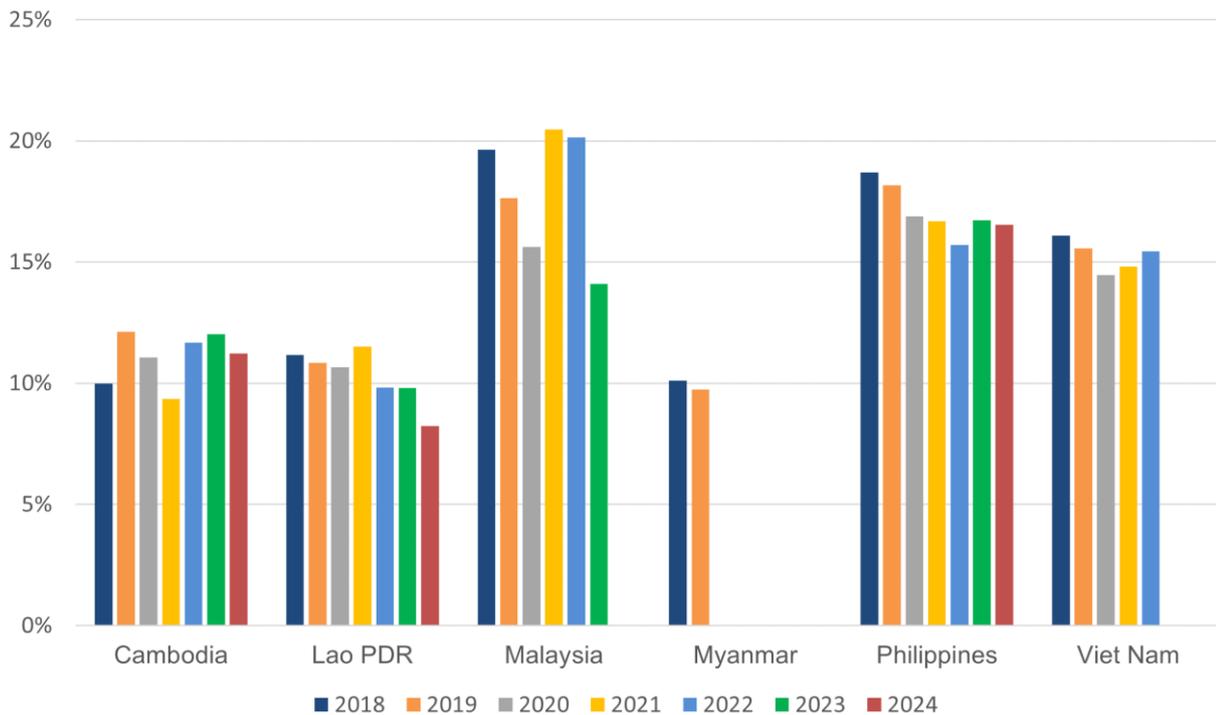
An ageing population will also require governments to spend more on the elderly, with fewer resources available for children’s services (even as the tax burden on the working population increases).

### Education financing

Funding available for education has continued to decline amid competing priorities across social sectors and broader government demands. Among the SEA-PLM participating countries, only Malaysia and the Philippines allocated more than 15 per cent of their national budgets to education in 2024. Overall, the regional trend in education spending has been downwards. While domestic resources are declining, global aid to education is also predicted to shrink, with a projected fall of 25 per cent by 2027 (UNESCO, 2025).

This tightening fiscal environment places greater pressure on existing resources and the need to use them more efficiently and equitably, even as systems continue to face shortages in teachers, learning materials and essential infrastructure.

**Figure 1.4: Government budget allocations in education as a percentage of the total government budget, Southeast Asian countries, 2018 to latest available**



Source: UNESCO Institute for Statistics (UIS), UIS calculations, accessed 25 November 2025.

## Digital technology

The adoption of digital technology is changing education and learning in Southeast Asia. Access to digital technologies has increased tenfold from 2010, with over 90 per cent of the population connected to the internet (OECD, 2023). However, this connectivity is far from uniform, with disparities both within and between countries. The proportion of students with internet access at home ranges from only 16 per cent in Cambodia to 98 per cent in Singapore. Increasingly, employers are expecting employees to have digital skills and understanding, implying a significant shift in the skills children and young people need to learn (World Economic Forum, 2025).

As part of their post-pandemic recovery strategies and in response to the growing need for digital skills by employers, many countries have prioritized digital transformation in education to enhance learning continuity, build teacher capacity and enhance system resilience. Rapid digital transformation has been one of the emerging issues in the region, as reflected in the Southeast Asian Ministers of Education Organization (SEAMEO)’s ‘Strategic Plan 2021–2030’, ASEAN’s ‘Digital Masterplan 2025’ and ASEAN’s ‘Consolidated Strategy for the Fourth Industrial Revolution’ (UNESCO, 2023). ASEAN’s ‘Declaration on the Digital Transformation of Educational Systems in ASEAN’ states the joint commitment of the ASEAN members to a “strategic and holistic coordinated approach to enable inclusive and accelerated digital transformation” (ASEAN, 2022). It outlines key principles for digital transformation, including increased teacher capacity, appropriate digital pedagogies and assessments, quality digital learning resources, and the need to ensure the privacy and safety of children and young people online.

The digital landscape is also shifting and being shaped by the rapid evolution of artificial intelligence (AI). AI is transforming how people live, work and learn; this brings both opportunities and risks to children and to

education systems. AI can provide opportunities through adaptable and personalized learning tools; it can provide significant insights by leveraging data; and it increases accessibility. At the same time, risks to children include concerns about privacy, safety and security; a potential rise in inequalities and exclusions; and cognitive and psychological implications, many of which are not yet well understood (UNICEF, n.d.). Most education systems are still limited in their use of AI, for teaching or learning, and rely on more traditional forms of technology. Regionally, ASEAN has issued the 'ASEAN Guide on AI Governance and Ethics', endorsed in 2024, to promote regional collaboration and coordination. Education systems are taking note of the need to ensure children and young people gain the skills needed to take on jobs that do not even exist yet.

Ministries of education have begun embedding digital literacy and 21st century skills into curriculum reforms to prepare students for a rapidly evolving digital society and to meet the needs and expectations of employers, including the need for skills to use and understand AI (including ethical issues). These actions reflect a broader recognition that technology can play a pivotal role in bridging learning gaps and supporting personalized instruction.

Several countries have developed or adopted national platforms to promote open and accessible online learning. Indonesia, the Philippines and Viet Nam have engaged with major massive open online course (MOOC) providers to expand opportunities for distance and lifelong learning. Meanwhile, Malaysia and Singapore have invested in comprehensive digital content repositories and learning management systems to support blended and hybrid learning models in schools. These initiatives underscore the region's growing commitment to leveraging technology for education delivery, teacher training and skills development, while also highlighting the need for continued efforts to ensure equitable access, safety, quality assurance and sustainability in digital education ecosystems.

Despite these advancements, however, countries continue to face structural and capacity-related challenges in achieving equitable and effective digital integration. Mobile and internet connectivity may have grown rapidly, but access remains highly unequal, especially when access is considered by socioeconomic status or location (rural–urban divide), posing significant barriers to inclusive digital learning. This gap might further be widened regarding those able to benefit from AI and the systems and services it enables, even in primary years. Many education systems also struggle to ensure that digital initiatives align with pedagogical goals and address inequalities rather than widen them. Efforts to educate children and adults about how to stay online are still nascent and will need to be further advanced to prevent abuse and misinformation. The ASEAN ICT Forum on Child Online Protection emphasized the need to ensure children are protected from online abuses, to adopt digital literacy and age-appropriate designs for platforms, and to promote public-private partnerships to build child-safe digital infrastructure and standardize guidelines (The Policy Edge, 2025).

## 1.2 Education systems and reforms

Across Southeast Asia, governments continue to prioritize reforms aimed at strengthening foundational learning and improving the quality and equity of education systems. Over the last five years, education systems have introduced changes such as expanding access to early learning, enhancing teacher development, and updating curriculum and assessment frameworks. Several countries have transitioned towards competency-based curricula and reformed approaches to monitoring learning outcomes, to ensure better alignment between classroom instruction and national education goals. Efforts are also being directed towards improving resource allocation mechanisms and governance structures through the establishment of school standards and other accountability mechanisms.

Despite these developments, countries continue to face challenges in implementing reforms at scale and ensuring sustainability. Key issues include challenges in ensuring quality education nationwide, capacity constraints in teacher deployment and training, the uneven speed of reform and revision, and the limited use of evidence or data to guide policy decisions. The translation of policy reforms and objectives to effective classroom practice is often unclear or not evident, often due to administrative bottlenecks. With limited capacity to monitor changes and uptake across the country, it is often up to individual schools to implement reforms and curricula within the classroom, with varying success depending on school directors' capacity and ability to support these efforts.

To comprehensively capture these systemic changes and track reforms, the SEA-PLM 2024 cycle introduced system-level questionnaires, a new tool that gathers information on the education policies, reforms and institutional arrangements that influence learning outcomes in the participating countries. The questionnaires provide context and support the development of country-specific insights and thematic papers that are crucial for interpreting assessment results and other dimensions of system and school mechanisms and practices within the broader policy environment. They support the identification of emerging trends, facilitate cross-country comparisons and, following the closing and subsequent reopening of schools because of COVID-19, offer some insights into the effectiveness of learning continuity interventions. By systematically documenting policy changes and reform efforts, the questionnaires track the relationship between system-level decisions and student learning outcomes, offering evidence to inform future policy directions.

### *Box 1.3: SEA-PLM system-level questionnaire (SLQ)*

The SEA-PLM programme introduced the system-level questionnaire for the 2024 cycle in recognition of the many complex factors that shape learning outcomes. It aims to capture information about education system structures, policies and practices.

The SLQ is filled out by ministries of education, with support from the SEA-PLM Technical Experts Network in some countries. The questionnaire has been administered in modules:

Module 1: Basic education structure and population

Module 2: Curriculum and quality assurance

Module 3: Teacher policy and workforce

A further module on education financing is expected in 2026. The information from the SLQ complements SEA-PLM data, offering insights into how systems are evolving to respond to learning needs.

While the SEA-PLM 2024 participating countries exhibit many common elements in their education systems, there are important differences in how education, specifically primary or basic education, is provided. The data presented in this section are drawn from the SEA-PLM 2024 system-level questionnaires, highlighting some of the particularities of the different education systems.

## **Structure and organization of primary education**

The prescribed structure and length of the primary school cycle vary across the six countries.<sup>6</sup> In all countries, children aged 6 to 10 years are expected to be enrolled in education, starting Grade 1 at the age of 6 and attaining Grade 5 by the age of 10. However, three countries (Lao PDR, Myanmar and Viet Nam) follow a five-year primary cycle while the remaining three countries (Cambodia, Malaysia, and the Philippines) implement a six-year cycle. Lao PDR is currently undertaking reforms to extend primary education to include Grade 6. The Philippines is the only country where pre-primary education is included as part of the compulsory education cycle, whereas in Cambodia, education is not compulsory at any level.<sup>7</sup>

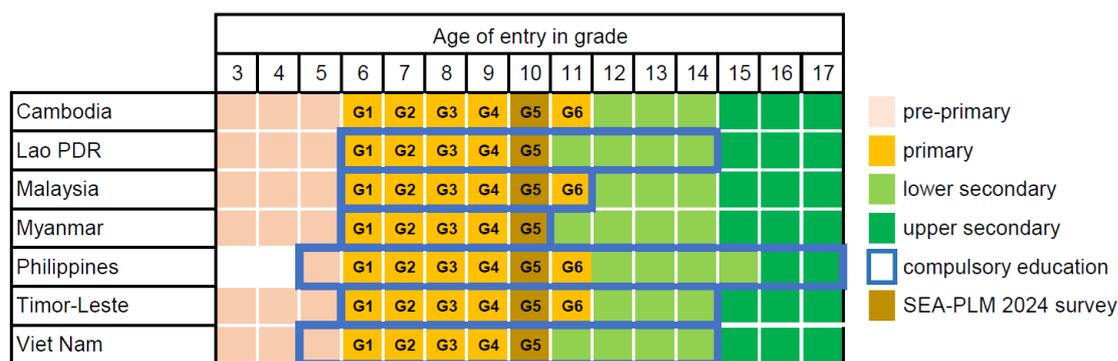
It is important to note that beyond the officially prescribed hours, days and years of schooling, learning also occurs through informal and supplementary pathways that may not be captured in the surveys. Countries have varying policies and practices regarding this type of additional tutoring and after-school learning; some of these pathways may only be available to students from specific backgrounds or locations, often contributing to inequalities in access and quality (ADB, 2012).

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<sup>6</sup> Note that the responses in Module 3: Teachers have not yet been completed and analysed. Teacher-related insights are provided in Chapter 4, based on the responses of Grade 5 class teachers during the main survey. Similarly, further data will be sought on education financing.

<sup>7</sup> In all countries, the SEA-PLM survey targets the Grade 5 population, regardless of age or prior educational experience. The three SEA-PLM countries with a five-year primary cycle were assessed at the end of primary education. Countries with a six-year primary cycle were assessed one year before the completion of primary education.

Figure 1.5: Organization of prescribed structure of education, compulsory or otherwise, 2024



Source: Ministries of education as reported through the SEA-PLM system-level questionnaire and authors’ calculations.

Note: In Cambodia, education is not compulsory. Myanmar recently reformed its education system, starting at age 6 for Grade 1 instead of age 5. The majority of SEA-PLM 2024 students in Grade 5 are 10 years old, having started Grade 1 at the age of 6. They were in Grades 1 and 2 in 2020–2021, when schools were periodically, partially or completely closed due to COVID-19. In the Philippines, key stage one includes kindergarten before primary Grade 1 (mandatory for age 5). In Viet Nam, the basic education stage includes nine years of general education (Grades 1 to 9) before career orientation education (three years, Grades 10 to 12).

### Preschool experience

Pre-primary school life expectancy across SEA-PLM countries demonstrates steady progress between 2019 and 2024 (despite enrolment challenges during the COVID-19 period). The only exception is in Lao PDR, where the percentage of children enrolled in pre-primary in 2024 had declined since 2019. The generally positive progress across the countries suggests that consistent efforts have been made in expanding access to education for children before official entry into Grade 1 – through both increased supply and increased demand. The quality of this preschool education is still largely unknown, owing to the lack of quality assessments and data on school readiness and teaching and learning practices in pre-primary.<sup>8</sup>

Table 1.1: Pre-primary rates

	Net enrolment rate at pre-primary level (% of children of pre-primary school age)		
	2014	2019	2024
Cambodia	13.6	24.5	35.2
Lao PDR	32.5	47.6	37.3
Malaysia	77.6	77.6	78.0
Myanmar	n/a	8.4	n/a
Philippines	68.7	72.4	73.9
Viet Nam	74.9	84.2	93.9

Source: Ministries of education as officially reported by countries in UNESCO-UIS database.

Note: All data are reported for the reference or the most recent year in last three-year period. Above three years, data are reported as not available (n/a).

<sup>8</sup> The children enrolled in Grade 5 during the SEA-PLM 2024 survey would have been in pre-primary education around 2019. The figures reported here therefore represent the situation (supply and demand) of pre-primary five years prior to the administration of the 2024 SEA-PLM cycle.

## Out-of-school experience

As SEA-PLM measures the learning of children in school, the learning levels and situation of children out of school are not captured. The proportion of children outside formal education systems is an important consideration, attesting to the ability of the system to support individual learners. A higher proportion of out-of-school children can also affect learning outcomes measured over time, as students who struggle to learn (for various reasons) are the ones most likely to be excluded. Therefore, changes in the size and composition of the out-of-school population should be carefully considered when interpreting SEA-PLM results and assessing the representativeness of the Grade 5 population.

The proportion of children of primary age recorded as being out of school has remained relatively steady since 2019, representing nearly one in ten children across the majority of the countries (the exception being Viet Nam, with the lowest reported percentage). In Lao PDR, the proportion of out-of-school children has increased in the last decade, requiring further examination of possible causes and bottlenecks. A 2024 scoping study found that almost 12 million children in Southeast Asia are out of school; 6.7 million of these children are in the six SEA-PLM countries. This translates to 3.8 per cent of the primary school-age population estimated to be not in school. In most countries (with the exception of the Philippines), a greater proportion of girls are out of school at the primary school age compared with boys (EdTech Hub & SEAMEO Secretariat, 2024).

**Table 1.2: Out-of-school rates**

	Out-of-school rate at primary education (% of children of primary school age)		
	2014	2019	2024
Cambodia	8.7	9.3	7.8
Lao PDR	4.0	6.7	10.3
Malaysia	7.0	10.9	9.1
Myanmar	n/a	n/a	n/a
Philippines	9.9	9.1	10.5
Viet Nam	0.3	2.2	1.7

Source: Ministries of education as officially reported by countries in UNESCO-UIS database.

Note: All data are reported for the reference or the most recent year in last three-year period. Above three years, data are reported as not available (n/a).

## Languages

Southeast Asia has the largest diversity of languages in the world, with over 1,200 languages spoken across 11 countries. This poses challenges for countries as they determine their language of instruction policies, practices and preferences. Language policies in primary education reflect the countries’ strategies to balance national identity (national languages), cultural heritage (local languages) and aspirations for global competitiveness (generally English).<sup>9</sup>

The language of instruction has a proven impact on learning outcomes. It is estimated that 37 per cent of children in Southeast Asia are currently learning in a language they do not fully understand (UNESCO, 2016). SEA-PLM 2019 results strongly indicated that children who said they most often spoke the language of instruction at home had, on average, higher scores than their peers from other language backgrounds.

Different mechanisms and modalities can be employed to support children from different linguistic backgrounds. In some countries, pre-primary and primary schools can provide an option for mother-tongue based multilingual education (MTB-MLE). These programmes generally follow an early-exit model where children progressively learn more in the official language of instruction, transitioning entirely to the official language of instruction before the end of primary education. By Grade 5, children in all participating countries have transitioned (as applicable) to the country’s main language(s) of instruction for reading, writing and mathematics.

In Malaysia and the Philippines, more than one language can be used as the language of instruction (depending on local criteria). Correspondingly, there are expectations that students will be proficient in more than one language by the end of primary education, often not only in reading but across the curriculum domains. However, these language standards and targets are not always clearly documented or prescribed, resulting in different practices across and between schools and manifesting in differences in learning outcomes.

<sup>9</sup> Each participating country specified its test language(s) for SEA-PLM 2024, based on the official national language policy at Grade 5.

In addition to national languages, foreign languages are embedded into national curricula as one of the main subject areas. In some countries, children are expected to start learning a foreign language as early as Grade . Curricula generally prescribe around 100–150 hours a year for learning a foreign language. Proficiency targets for foreign languages, where prescribed, are generally lower than those for the national language(s).

**Figure 1.6: Main official first language of instruction in reading and mathematics in primary education, 2024**

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Cambodia	Khmer					
Lao PDR	Lao					
Malaysia	Chinese or Malay or Tamil according to school type, plus Malay if Chinese or Tamil, plus English for all					
Myanmar	Myanmar					
Philippines	Mother tongue			Filipino and English for reading, English for maths only		
Viet Nam	Vietnamese					

Source: Ministries of education as reported through the SEA-PLM system-level questionnaire and authors’ calculations.

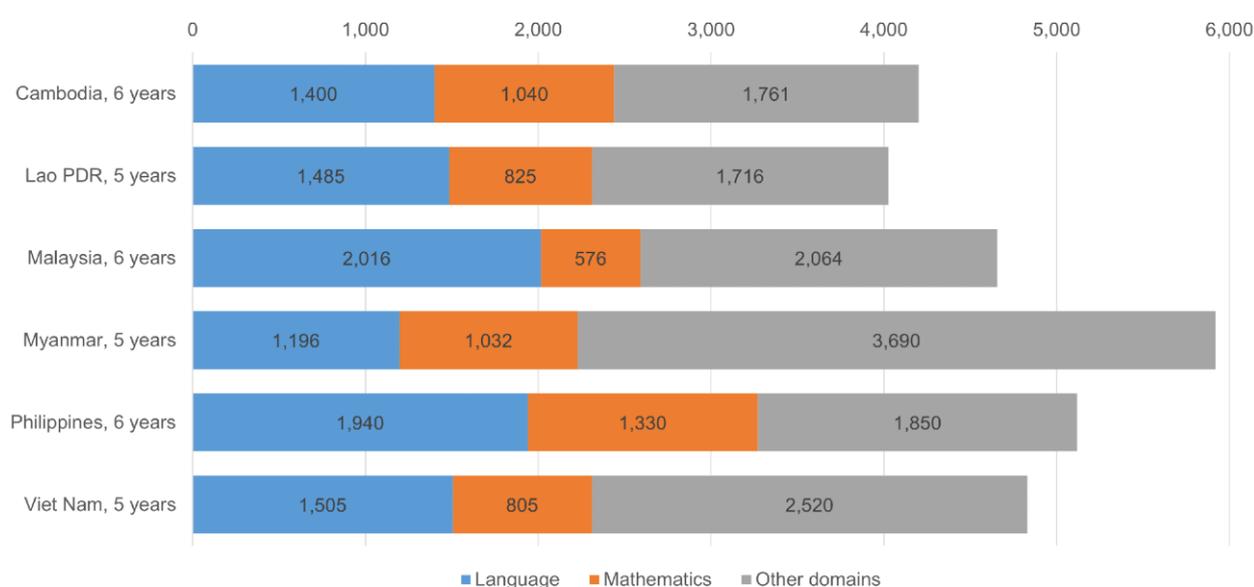
Note: Languages are presented in alphabetical order, not by order of preference or any stance. Language policy is applied to all mainstream public and private schools, except in specific cases agreed with ministries. Special schools such as inclusive schools or international schools may deliver an alternative curriculum in alternative language(s). In Cambodia, the Multilingual Education programme operates in specific schools for indigenous learners. In Malaysia, schools use Malay as the main medium of instruction, except in vernacular schools (where Chinese or Tamil language is the main medium of instruction). All schools have an intensive English-language and Malay-language curriculum, with the expectation that all children transition to Malay by secondary school. In the Philippines, the mother-tongue based multilingual education (MTB-MLE) programme provisioned for the use of mother tongue (one of the 18 stated national languages according to sub-regional division) as the primary medium of instruction in early years. This provision was suspended in 2024, making Filipino and English the primary languages of instruction from the early years, while the mother tongue serves only as an auxiliary medium.

## Prescribed instruction time

The SEA-PLM system-level questionnaire captures the intended prescribed instruction time over the years to assess learning time in primary education. The time varies widely across the participating countries, from just over 4,000 hours in Lao PDR to almost 6,000 in Myanmar. This includes hours for language, mathematics and other key domains taught in primary education. Deeper examination of the use of these hours indicates heavier concentration on basic language skills (learning to read) in early years, shifting to more challenging concepts and subjects in upper primary (reading to learn).

The ministries of education decide how to balance curriculum subjects, ensuring sufficient breadth and depth in the selected areas of study. These decisions in turn determine resource allocation and inform policies and practices relating to teaching and learning materials, teacher training and teacher allocation, among other matters.

**Figure 1.7: Prescribed instruction time in primary education for language, mathematics and other domains, total number of hours, 2024**



Source: Ministries of education as reported through the SEA-PLM system-level questionnaire and authors' calculation.

## 1.3 Education initiatives since 2019

Since 2019, Southeast Asian countries have been navigating a rapidly evolving landscape shaped by the dual need to recover learning losses and accelerate learning. The disruption caused by the COVID-19 pandemic has both exposed and exacerbated pre-existing learning gaps, while also accelerating innovation and reform across various dimensions of teaching and learning. The following sections highlight five major areas of focus: learning recovery strategies, digital transformation, climate response and resilience, curriculum reforms and remedial initiatives. The discussion draws upon the information collected from the SEA-PLM 2024 system-level questionnaires, complemented by further information provided by participating ministries of education. It is not meant as a comprehensive review of all changes and reforms implemented over the past five years but rather is intended as an overview of the changing context and some of the system-level factors affecting learning outcomes.

### Learning recovery strategies

Many countries extended or established formal learning recovery plans or frameworks in response to the challenges posed by the extended COVID-19 school closures, many of which were exacerbated or prolonged by climate events, as described earlier. Lao PDR's Education COVID-19 Response Plan, the Philippines' adoption of the National Learning Recovery Program, and Viet Nam's Directive No. 800/CT-BGDDT integrate multiple levels of interventions, from national policy guidance to localized school and community engagement.

Another significant response was the adoption of flexible and alternative learning modalities, and the use of alternative learning platforms and materials. Cambodia developed home-learning packages for Grade 1 and 2 students. Malaysia issued 'Guidelines on the Implementation of Teaching and Learning', advocating for hybrid approaches. Myanmar reduced its curriculum and emphasized self-study and home-based learning. Cambodia, Lao PDR, the Philippines, and Viet Nam expanded the use of self-learning modules, digital learning platforms (including the Learning Passport), and television- and radio-based instruction to ensure equitable access and continuity of learning, especially for students in remote and underserved areas. Many of these initiatives continued once schools reopened.

### Digital transformation

The COVID-19 pandemic significantly accelerated the adoption of digital and technology-based learning solutions across education systems. During school closures, both teachers and students at the primary level gained broader exposure to digital teaching and learning platforms and tools. Post-pandemic, education systems have continued to build on these gains, further fuelled by rapid advances in connectivity, edtech innovations, and the global digital transformation (including expectations for digital skills in the labour market, as described earlier).

In Cambodia, policy and strategies on information and communication technology (ICT) in education have become more evident. ICT is now a compulsory subject in teacher-training programmes, and students are increasingly given opportunities to build their computer literacy skills. Students and teachers can access materials on the Primary Learning Platform provided by the Ministry of Education, Youth and Sport (MoEYS).

In Lao PDR, the digital transformation is guided by a 10-year ICT plan focused on improving digital access, skills, learning quality and online safety. During the pandemic, the Ministry of Education and Sports developed and launched the Khang Panya Lao ('wisdom warehouse') platform to facilitate blended and remote learning; this has continued to be expanded and strengthened. The strategy includes a detailed, costed five-year action plan for procuring devices, training teachers and creating culturally relevant digital content.

Malaysia's digital education landscape is anchored in its Digital Education Policy, which aims to create a digitally fluent and globally competitive generation. The policy emphasizes improved digital skills, enhanced infrastructure and 'infostructure', and multi-sector partnerships across all education levels. In 2019, the ministry launched the Digital Educational Learning Initiative Malaysia as a centralized platform to support teaching and learning and to integrate emerging technologies such as AI tools and digital learning pathways.

In Myanmar, the Ministry of Education has developed the 'Strategy of Digital Education for All', which consists of seven objectives to enhance and leverage digital education initiatives. As part of this effort, the development of implementation plans will be prioritized in the upcoming ICT master plan.

In the Philippines, DepEd Order No. 13 s. 2025 led to the establishment of the Center for Artificial Intelligence Research, marking a major step in institutionalizing AI-enabled learning solutions within the public education system. This initiative is complemented by the ETUlay Tutorial programme, which provides free, real-time online academic support to students. The Digital Rise programme focuses on capacity-building for learners and teachers in the use of technology. The Department of Education also issued revised guidelines on the implementation of its computerization programme.

In Viet Nam, the 'Digital Transformation Strategy in the Education and Training Sector to 2025, with Orientation to 2030' (Decision No. 131/QĐ-TTg) outlines plans to leverage technology to enhance teaching, learning and education management while contributing to broader national digital goals. The strategy has accelerated the use of digital platforms in daily educational activities and improved governance through data-driven systems like the Education Sector Database. Additionally, most eligible administrative procedures have been fully digitalized, and education institutions are regularly assessed using digital transformation indicators issued by the Ministry of Education and Training.

## **Climate response and resilience**

Climate change has increasingly become a critical agenda item for education systems, prompting ministries of education to integrate climate response and resilience into school policies, curricula and infrastructure. Schools are responding by integrating disaster preparedness into education frameworks and other school readiness standards and expectations. These efforts reflect a shift from reactive measures to proactive planning, emphasizing the importance of safeguarding learning amid rising climate risks.

The climate crisis is affecting education systems in Southeast Asia in diverse ways, with countries responding through a range of targeted initiatives. In Cambodia, MoEYS is increasingly integrating climate change and education in emergencies into school development plans – for example, the Local Life Skills curriculum encourages project- and problem-based learning approaches. Lao PDR integrated climate resilience into its primary curriculum and infrastructure planning as part of its 2021 National Strategy on Climate Change. Malaysia has developed a disaster risk reduction learning module in partnership with UNICEF and the Southeast Asia Disaster Prevention Research Initiative (SEADPRI-UKM) to build school-community preparedness. Myanmar maintains learning continuity during flooding by using temporary classrooms and providing psychosocial support. In the Philippines, disruptive typhoons and extreme heat have prompted the revision of

class suspension guidelines, while Viet Nam has implemented a comprehensive ‘Action Plan on Climate Change Response and Green Growth (2021–2030)’, which promotes disaster-safe schools and climate education.

Collectively, these initiatives illustrate a growing regional commitment to strengthening educational resilience amid climate challenges. While approaches vary – from curriculum integration and school-level adaptation to formalized emergency protocols – all reflect an urgent effort to safeguard learning continuity.

## Curriculum reforms

The COVID-19 pandemic prompted many shifts in education curricula, both as a direct response to the pandemic and as a means to integrate and reflect on lessons learned during school closures (including the use of digital technology, discussed above). Some countries streamlined learning objectives in response to school disruptions during the COVID-19 pandemic (e.g., the Philippines’ Most Essential Learning Competencies), while others provided flexibility for curriculum delivery (e.g., Myanmar’s ‘National Response and Recovery Plan for the Education Sector’).

Over the past decade, many Southeast Asian countries have redesigned and updated curricula and implemented reforms, with both distinct and similar initiatives observed across the SEA-PLM 2024 participating countries. Cambodia has continued its regular cycles of national curriculum reform. Lao PDR, Malaysia, Myanmar and Viet Nam began rolling out curriculum reforms even before 2019 with the expectation of full implementation across the basic education system in the 2023–2024 academic year. The Philippines stands out for having launched a new curriculum in 2024 (MATATAG), a result of its comprehensive review of the K–12 basic education programme.

Across the region, curriculum reviews have increasingly shifted from knowledge-based towards competency-based frameworks. These frameworks emphasize the importance and application of 21st century skills (e.g., Cambodia’s curriculum framework of general education and technical education, the Philippines’ 2024 MATATAG curriculum, and Viet Nam’s 2018 general education curriculum), holistic student development (e.g., Malaysia’s 2017 standard curriculum for primary schools), and student-centred pedagogy (e.g., Lao PDR’s 2018 primary curriculum framework and Myanmar’s K–12 curriculum system). In parallel, countries have adjusted their curriculum reforms to prioritize the most essential competencies and de-emphasized other learning domains to provide further curriculum flexibility at local levels. Ministries have also laid out more guidance and instruction to deliver remediation programmes outside regular school hours.

All countries reported – to different degrees and scales – progressively empowering primary schools and decentralizing accountability, leveraging local resources and planning, and transferring quality assurance and performance monitoring responsibilities to local communities. While national policies generally provide frameworks to support learners in difficult circumstances, specific measures vary by country.

## Remedial initiatives

In Cambodia, MoEYS, together with numerous development partners, has progressively developed and rolled out the Early Grade Learning programme, providing strong leadership and vision to guide implementation. Early Grade Learning uses structured pedagogy principles and provides continued monitoring and mentoring to teachers.

Lao PDR, with development partner support, has introduced targeted catch-up programmes, such as the Spoken Lao programme for students from linguistic minority backgrounds, and promoted the use of digital tools like the Eduten platform for foundational learning. The Eduten platform is based on personalized, gamified learning and empowers teachers with real-time data to tailor instruction.

In Malaysia, the ministry implemented the Primary School Literacy and Numeracy Programme (PLaN) under Initiative #24, which encompasses all primary schools through the Kem Perkasa PLaN initiative. Through this programme, the ministry provides mechanisms such as the PLaN performance dialogue sessions, aimed at identifying issues for students who have not yet achieved the minimum proficiency level and determining effective intervention measures.

In Myanmar, schools manage catch-up initiatives, with guidance from the ministry, using resource materials such as guidebooks and teaching manuals. These resources provide practical strategies for promoting students' reading fluency and enhancing students' mathematical skills at the primary level, as well as developing competency-based items for classroom assessments. The Myanmar Learning Passport also includes reading materials in multiple different languages.

In the Philippines, the Department of Education has institutionalized the remedial programme through the passing of Republic Act No. 12028. The Academic Recovery and Accessible Learning programme provides learning interventions, such as tutoring and access to digital resources, for students who are struggling academically.

In Viet Nam, a dedicated support and tutoring programme for underperforming students aims to ensure that all students meet the minimum competency standards and to reduce the proportion of students with low academic performance, particularly those from disadvantaged backgrounds, ethnic minorities and rural areas. Key activities include after-school remedial classes, individualized tutoring based on students' competencies, and diagnostic assessments to identify specific support needs.

These policies demonstrate the commitment of ministries of education to support foundational learning through remedial, catch-up and alternative learning modalities, including digital and edtech platforms. The quality, reach and effectiveness of many of these interventions are not yet known; many initiatives rely on local school, director and teacher capacity to implement them effectively, sometimes with minimal resources, guidance or training. However, they offer important contextual information on how ministries are addressing the learning crisis and may provide insights into the results of the 2024 SEA-PLM cycle.



# Chapter 2

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## Design, Methodology and Implementation Features

## Chapter 2 Design, methodology and implementation features

### 2.1 Introduction

The SEA-PLM surveys aim to achieve the breadth and rigour of a large-scale international survey, and at the same time address the unique needs and contexts of countries in the Southeast Asia region. Surveys are conducted every five years on a sample of children representative of the school population enrolled in Grade 5 in each country.

Instruments and procedures used in SEA-PLM focus on delivering valid and reliable data on children's proficiency through the SEA-PLM reading and mathematics paper-pencil tests, while reporting on the education context and participants' attitudes through questionnaires. The background questionnaires collect extensive information about children, classrooms, teachers, schools, head teachers, parents and communities. This information helps to ascertain variations and inequity in children's background and learning environment, and to link the characteristics of children, schools and households to the learning performance of children and schools.

The ministries of education oversee the preparation and implementation of the survey in schools in compliance with the regional technical standards and methods. Each country operates independently under a national management and funding system to conduct the SEA-PLM survey.

SEA-PLM 2024 maintained the robust foundation established in the first survey, administered in 2019, using trend items, similar data-collection procedures and similar analysis methods. The participating countries and experts collaborated for two years in the inception phase of SEA-PLM 2024 to revise original tests and contextual questionnaires in each language. Existing and new assessment questions underwent extensive trial testing to ensure they covered the agreed regional definitions of domain content, were appropriately targeted to children's abilities, and were culturally suitable for children and testing languages in the Southeast Asia region.

SEA-PLM adhered to rigorous quality standards at all times, performing quality assurance on tests, questionnaires, survey procedures and the data analysis. The tools were standardized across all countries; standardized procedures and ways of working were maintained for the entire assessment process, all the way to the delivery of the final databases, scales and indicators. This approach ensured that results could be compared across countries and different test languages. The model also offered opportunities for countries to add options – for example, oversampling, additional contextual questions and extra languages.

This new cycle, conducted five years after SEA-PLM 2019, serves as a solid landmark for observing the long-term impacts of structural reform and external shocks on the basic education system. Psychometric analysis of the reading and mathematics domains, reported in item-by-item national and regional psychometric reports and the 2019–2024 regional equating analysis, has confirmed the high validity of time-trend comparisons of the reading and mathematics domains and proficiency scales between 2019 and 2024<sup>10</sup>.

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<sup>10</sup> This psychometric analysis and further methodology outcomes are available in dedicated technical chapters, separate from this regional report.

## 2.2 Survey period

In all participating countries, children are assessed towards the end of the academic year, ensuring they have benefited from five full years of primary schooling, in addition to any pre-primary education and other learning experiences both inside and outside the classroom. SEA-PLM 2019 tested Grade 5 students at the end of the 2018–2019 school year. For the SEA-PLM 2024 round, students were assessed in Grade 5 classes towards the end of the 2023–2024 school year.

Given that academic calendars differ across Southeast Asian countries, data collection was conducted in two phases: from April to May 2024 for the first group of countries, and from August to November 2024 for the remaining group. This staggered approach to data collection was carefully designed to align with each country’s school calendar, ensuring that students had received comparable exposure to their national Grade 5 curriculum by the time of the assessment.

*Table 2.1: SEA-PLM 2024 main survey operation period by country, sorted by date*

Country	Main survey data-collection period	School year period
Batch 1 – Viet Nam	22–27 April 2024	September 2023 to May 2024
Batch 1 – Philippines	22 April – 10 May 2024	August 2023 to June 2024
Batch 1 – Lao PDR	13–17 May 2024	September 2023 to July 2024
Batch 2 – Cambodia	22–24 August 2024	December 2023 to September 2024
Batch 2 – Timor-Leste <sup>^</sup>	30 September – 6 November 2024	January 2024 to November 2024
Batch 2 – Malaysia	7 October – 7 November 2024	January 2024 to November 2024
Batch 2 – Myanmar	29 November – 02 December 2024	June 2024 to March 2025

<sup>^</sup>The Minister of Education of Timor-Leste informed the SEA-PLM Regional Secretariat that Timor-Leste concluded it is best not to include Timor-Leste in the SEA-PLM 2024 Main Regional Report for internal reasons in late November 2025. In adherence with the SEA-PLM technical standards, this exclusion removes all of Timor-Leste’s data from the public domain; it will not be made publicly available and will not be used for reporting, research, or other purposes by any parties. The SEA-PLM Regional Secretariat will not endorse or recognize any references to the collected SEA-PLM 2024 data in Timor-Leste.

## 2.3 Survey languages

Tests and questionnaires were administered in the official language(s) of instruction in Grade 5, as determined by each country. Each participating country specified its test language(s) for SEA-PLM 2024, based on its official national language policy. Table 2.2 displays the testing language applied in the main sample and the secondary sample (where applicable) during the main data collection. The public national datasets made available by countries for official release and use in the Main Regional Report only cover students, data and results observed in each country in the main survey sample, administered in the selected main survey language. The secondary datasets will not be published by the Regional Secretariat; their use remains at the discretion of national teams.

**Table 2.2: SEA-PLM 2024 testing languages by country, main survey sample and secondary sample**

Country	Main survey sample for international reporting	Secondary sample for national reporting only
Cambodia	Khmer	Khmer, in a sample of schools offering multilingual education in northeastern Cambodia
Lao PDR	Lao	n/a
Malaysia	Chinese, Malay, Tamil and English	n/a
Myanmar	Myanmar	n/a
Philippines	English	Filipino, administered to students in a second Grade 5 class in approximately 25% of the main survey schools
Timor-Leste <sup>^</sup>	Tetum	Portuguese, administered to students in a second Grade 5 class in approximately 25% of the main survey schools
Viet Nam	Vietnamese	n/a

<sup>^</sup>The Minister of Education of Timor-Leste informed the SEA-PLM Regional Secretariat that Timor-Leste concluded it is best not to include Timor-Leste in the SEA-PLM 2024 Main Regional Report for internal reasons in late November 2025. In adherence with the SEA-PLM technical standards, this exclusion removes all of Timor-Leste’s data from the public domain; it will not be made publicly available and will not be used for reporting, research, or other purposes by any parties. The SEA-PLM Regional Secretariat will not endorse or recognize any references to the collected SEA-PLM 2024 data in Timor-Leste.

## 2.4 Grade 5 national cohort definition and coverage

Each country defined its Grade 5 main target population based on official data made available by its ministry, resulting in SEA-PLM 2024 samples that represent the Grade 5 student cohort enrolled in schools at the time of the data collection. The size and composition of these cohorts differ to some extent from the SEA-PLM 2019 cycle, with changes ranging from minor to substantial. These differences may be attributed to a decline in school enrolment in the aftermath of COVID-19, a decline in birth rate, or other unforeseen challenges, such as security-related disruptions in certain countries.

Across participating countries, the variations in student populations between the two cycles ranged from a slight decrease of 1 per cent to more notable shifts, such as a 59 per cent decline or a 29 per cent increase in enrolment figures (see Table 2.3 and note). Readers are invited to carefully consider those changes to ensure a comprehensive understanding of their impact on education systems and the SEA-PLM findings.

**Table 2.3: SEA-PLM 2019 and 2024 Grade 5 population coverage**

Country and year	Total enrolled Grade 5 population in schools at the time of the definition of the 2024 target population	Variation in total enrolled Grade 5 population compared with previous cycle at the time of the definition of the 2024 target population	SEA-PLM Grade 5 target population coverage at the time of the definition of the 2024 target population	Excluded population rate in SEA-PLM Grade 5 target definition at the time of the definition of the 2024 target population	2024 SEA-PLM Grade 5 age average as collected through SEA-PLM 2024 main survey
Cambodia 2019	332,677	-	99.98%	0.02%	11.6
Cambodia 2024	329,217	-1.0%	99.65%	0.35%	11.4
Lao PDR 2019	149,030	-	99.15%	0.85%	11.2
Lao PDR 2024	135,551	-9.0%	98.78%	1.22%	11.1
Malaysia 2019	450,674	-	99.60%	0.40%	11.2
Malaysia 2024	453,895	0.7%	98.78%	1.22%	11.3
Myanmar 2019	948,589		95.40%	4.60%	10.6
Myanmar 2024	388,944	-59.0%	96.24%	3.76%	12.3
Philippines 2019	2,429,869	-	95.34%	4.66%	11.2
Philippines 2024	2,352,218	-3.2%	97.11%	2.89%	11.4
Timor-Leste 2019	n/a	-	n/a	n/a	n/a
Timor-Leste 2024 <sup>^</sup>	33,491	n/a	94.64%	5.36%	11.7
Viet Nam 2019	1,391,981	-	99.81%	0.19%	11.1
Viet Nam 2024	1,792,460	28.8%	99.97%	0.03%	10.8

Note: In some countries, total enrolled Grade 5 population reflects the most accurate and representative data of the national school registration rates for the 2023–24 school academic year some weeks after the main survey data collection. For those countries, total enrolled Grade 5 population was still provisional during the definition of the target population, some weeks prior to the main survey data collection. In other countries, total enrolled Grade 5 population reflects data made available by countries during the preparation of the samples.

<sup>^</sup>The Minister of Education of Timor-Leste informed the SEA-PLM Regional Secretariat that Timor-Leste concluded it is best not to include Timor-Leste in the SEA-PLM 2024 Main Regional Report for internal reasons in late November 2025. In adherence with the SEA-PLM technical standards, this exclusion removes all of Timor-Leste’s data from the public domain; it will not be made publicly available and will not be used for reporting, research, or other purposes by any parties. The SEA-PLM Regional Secretariat will not endorse or recognize any references to the collected SEA-PLM 2024 data in Timor-Leste.

In Myanmar, challenges in accessing primary schools in 2024 have led to a significant change in the Grade 5 eligible population compared with 2019.<sup>11</sup> Caution is required when interpreting and comparing Myanmar 2024

<sup>11</sup> In 2019, the national sample of Myanmar was drawn from 866,200 Grade 5 students and 36,600 primary schools. In 2024, the Grade 5 defined student target population in Myanmar covered approximately 403,584 students and 17,044

estimates due to significant changes observed in the composition of the school population between the SEA-PLM 2019 and 2024 surveys.<sup>12</sup>

However, despite changes in enrolment rates in the eligible student population, the representative nature of the student and school samples drawn for SEA-PLM 2024 was still maintained. Changes in enrolment rates may be driven by changes in birth rates and therefore changes in the population structure, rather than increasing out-of-school populations. Nevertheless, such changes in the population of reference should be considered when interpreting trends and variations within a given country and between countries.

## National samples and participation rates

Each country designed its own national survey sample criteria to report data representative of the Grade 5 main target population. The standard design for the school sample calls for a student yield of 4,000, by sampling (a minimum of) 150 schools and selecting 27 students per school. Schools are selected with probability proportional to their size. Each country determined its sampling features and sub-national options based on standard guidelines and the cost-effectiveness of decisions. Table 2.4 presents key exhibits from the main sample population targeted during the main survey.

**Table 2.4: SEA-PLM 2024 Grade 5 national sample target population**

Country	Target school sample drawn from the national sample	Target student sample drawn from the national sample
Cambodia	195	6,690
Lao PDR	208	4,517
Malaysia	197	6,035
Myanmar	157	4,501
Philippines	162	5,364
Timor-Leste <sup>^</sup>	171	5,063
Viet Nam	153	6,053

Note: In most countries, total student enrolment determined by countries at the time of the sampling selection was based on school administrative data from the previous academic year or school projection registration. Only a few countries have real-time individual student tracking systems to expedite this process. In all countries, the 2024–2025 Grade 5 student enrolment population may have changed since the time that the eligible population was defined, and clarification is under way to establish the magnitude of this change. Some countries included sampling options in a second language to test sub-sample populations. These national-level decisions are not captured in this table and are not reported in national estimates as part of the main

<sup>^</sup>The Minister of Education of Timor-Leste informed the SEA-PLM Regional Secretariat that Timor-Leste concluded it is best not to include Timor-Leste in the SEA-PLM 2024 Main Regional Report for internal reasons in late November 2025. In adherence with the SEA-PLM technical standards, this exclusion removes all of Timor-Leste’s data from the public domain; it will not be made publicly available and will not be used for reporting, research, or other purposes by any parties. The SEA-PLM Regional Secretariat will not endorse or recognize any references to the collected SEA-PLM 2024 data in Timor-Leste.population. That data will be reported separately at the discretion of the respective ministry of education.

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primary schools, based on 2024 registration rates referenced by the country prior to the SEA-PLM 2024 data collection. Four administrative regions were entirely excluded compared with 2019.

<sup>12</sup> The SEA-PLM Secretariat includes this disclaimer under each publicly published table and graphic of results.

SEA-PLM used a two-stage sampling process to randomly select the participating schools and students. It was designed to achieve a sample in which all Grade 5 children from the population had the same chance of inclusion:

- i. Schools were selected following a systematic procedure with selection probability proportional to the number of enrolled Grade 5 children from the target population. A minimum of 150 schools were sampled from each participating country.
- ii. One Grade 5 class was selected at random within each sampled school. All children of the selected class were sampled.

The Australian Council for Educational Research (ACER), one of the contracted technical collaborators in SEA-PLM, facilitated the random selection of participating schools and students based on these common established procedures in compliance with the SEA-PLM regional technical standards on sampling.

After the data collection, children’s and schools’ effective rates of participation were reported against sampling targets to evaluate the reliability of national estimates. As reported in Table 2.5, all countries showed school response rates above 90 per cent, therefore exceeding the minimum 85 per cent rate, set out in the SEA-PLM regional standards and procedures, determined necessary to report reliable national estimates. The results presented in Table 2.5 are proper estimates of the 2024 Grade 5 national cohort as referenced by countries.

**Table 2.5: SEA-PLM 2024 Grade 5 participation rates and population recorded in final datasets**

Country	Weighted school response rate – sampled schools only	Weighted school response rate – sampled and substitute schools	Weighted student response rate	Weighted overall response rate – sampled schools only	Weighted overall response rate – sampled and substitute schools	Number of participating schools	Number of participating students
Cambodia	100.0%	100.0%	99.1%	99.1%	99.1%	195	6,574
Lao PDR	99.7%	100.0%	92.8%	92.6%	92.8%	206	4,167
Malaysia	90.8%	98.2%	97.3%	88.3%	95.5%	158	4,379
Myanmar	100.0%	100.0%	97.9%	97.9%	97.9%	192	5,842
Philippines	96.7%	97.3%	96.8%	93.6%	94.2%	156	5,070
Timor-Leste <sup>^</sup>	99.5%	99.5%	94.4%	93.9%	93.9%	169	4,650
Viet Nam	100.0%	100.0%	99.7%	99.7%	99.7%	152	5,980

<sup>^</sup>The Minister of Education of Timor-Leste informed the SEA-PLM Regional Secretariat that Timor-Leste concluded it is best not to include Timor-Leste in the SEA-PLM 2024 Main Regional Report for internal reasons in late November 2025. In adherence with the SEA-PLM technical standards, this exclusion removes all of Timor-Leste’s data from the public domain; it will not be made publicly available and will not be used for reporting, research, or other purposes by any parties. The SEA-PLM Regional Secretariat will not endorse or recognize any references to the collected SEA-PLM 2024 data in Timor-Leste.population. That data will be reported separately at the discretion of the respective ministry of education.



# Chapter 3

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## Children's proficiency in reading and mathematics

## Chapter 3 Children’s proficiency in reading and mathematics

### 3.1 Introduction

Understanding what children know and can do is fundamental to creating sound policy that supports and drives improvements in educational systems and outcomes. This knowledge is gathered by measuring learning outcomes and then using the results to understand challenges, identify children’s skills, and ensure that those who have fallen behind are sufficiently and appropriately supported. Large-scale assessments, such as SEA-PLM, provide a regular system health check to give policymakers and education stakeholders important information about how to further improve access, quality and equity in their education systems.

One of the key foundational skills children need, and should be acquiring through education, is literacy. Literacy (in reading, writing and mathematics) is central to children’s ability to achieve their personal goals and to contribute meaningfully to the social and economic goals of their country and the region. The SEA-PLM programme also uses the term ‘literacy’ in a wider sense, to encompass the application of knowledge and understanding in everyday life. It is therefore more than the acquisition of these competencies and their application in a school environment.

The SEA-PLM assessment framework defines reading literacy as “understanding, using and responding to written texts in order to meet personal, societal, economic and civic needs” (UNICEF & SEAMEO, 2019, p. 21). The definition focuses specifically on written texts and emphasizes the interactions of readers with them. More information on reading literacy, as defined in SEA-PLM 2024, is presented in the updated assessment framework (UNICEF & SEAMEO, 2024b).

The SEA-PLM assessment framework defines mathematical literacy as “a person’s capacity, given a problem in a context that is of interest or importance to them, to translate the problem into a suitable mathematical formulation, to apply mathematical knowledge and skills to find a solution, and to interpret the mathematical results in relation to the context and to review the merits or limitations of those results” (UNICEF & SEAMEO, 2019, p. 13). More information on mathematical literacy is presented in the updated assessment framework (UNICEF & SEAMEO, 2024b).

This report focuses on reading literacy and mathematical literacy, with results for writing literacy due to be released in 2026.

#### *Box 3.1: Thirty years of global trends in international large-scale assessments*

Since the 1990s, global trends in international large-scale assessments (ILSAs) – international surveys conducted every three to five years at key stages of the learning continuum – have shown that some countries have experienced consistent long-term patterns, either steadily improving or declining in performance over the past three decades, while others have demonstrated alternating periods of progress and setbacks.

Among countries that have achieved sustained gains in reading and/or mathematics, there are many similarities in how they have succeeded. For example, these countries have progressively reduced the number of low-performing students or limited the number of very low-performing learners over the years by broadening and investing in equitable access to quality learning from the early years of schooling, maintaining high enrolment over the grades, and continuously advancing their curricula

towards higher standards and competencies. Over decades, in those countries, a consistently greater proportion of students reach basic to intermediate proficiency in reading and mathematics.

While SEA-PLM is only in its second cycle of implementation, with the first cycle conducted in 2019, patterns and trends are already beginning to emerge. However, changes between the two cycles should be interpreted as short-term shifts, offering an early indication of progress or continued and emerging challenges across the region. It is important to highlight that the Grade 5 students who participated in the 2024 cycle represent a unique cohort, one whose foundational years of schooling were disrupted by the COVID-19 pandemic. Their performance thus reflects not only underlying education system trends but also the extent to which countries were able to implement mitigating measures, and how well they have sustained their learning recovery initiatives in the aftermath of the pandemic and other educational disruptions.

## 3.2 SEA-PLM 2024 testing

### Proficiency scales

In comparative large-scale assessments, skills and proficiencies are measured through specific proficiency scales. SEA-PLM developed its own proficiency scales in 2019 in reading literacy, writing literacy and mathematical literacy to report student performance. These proficiency scales were developed through a rigorous audit of various national curricula and grounded in the expertise of curriculum and psychometric specialists. As a result, they are valid over time and across countries, meeting high technical standards. Since these scales have remained consistent between the 2019 and 2024 cycles, the SEA-PLM results can reliably show where students are flourishing, where they are at risk of falling behind, and what learning outcomes have improved or declined over time. These comparisons can be made both within and between countries.

Each SEA-PLM proficiency scale is divided into bands, with descriptions of the distinct skills and knowledge expected at that band level. This division enables insights into what children can do and, critically, the areas where they have not yet mastered the expected skills.

Understanding proficiency scales, and the changes in the proportion and profiles of children within them, can enable the development of policies and pedagogies to support children – both those who are excelling and those who are falling behind. Children in the highest bands of the scales for reading and mathematics are likely to have mastered the fundamental skills expected by the end of primary school. These children are also more likely to engage well with other Grade 5 curriculum content, including the development of 21st century skills and higher-order thinking skills.

Children who are just short of meeting the expected level for Grade 5 have mastered the basics but have not been able to reach the levels of reading and mathematics prescribed by the national curriculum. These children, with the right support, are likely to acquire the necessary skills to successfully transition to lower secondary, but they are at increased risk of falling behind and dropping out.

Children in the lowest bands, on the other hand, demonstrate only emerging reading and mathematical skills, with limited ability to engage with more complex texts or mathematical tasks, highlighting learning gaps and the need for more targeted support. These children are essentially learning at a Grade 2 or 3 level, even after five years of primary education.

### Box 3.2: Reading the proficiency scales

For a child to be considered proficient in a given band, they must correctly answer at least half of the questions associated with that band. A child at the lower end of the band answers around 50 per cent of the associated questions correctly, while a child at the upper end can correctly answer close to 70 per cent of the questions. In practice, this means that children in a given band can reliably answer most questions in their proficiency band and in the lower bands but face increasing difficulty with questions from higher bands. For instance, a child in Band 3 can correctly answer most questions from Bands 1, 2 and 3 but is likely to correctly answer fewer than half of the questions in Band 4.

All sampled Grade 5 students in a given country are distributed across the different proficiency bands, with each student placed at a single level according to their demonstrated performance. It is important to note that bands are domain-specific and cannot be directly compared (e.g., between reading and mathematics). The bands were established empirically by grouping test items according to their difficulty and contents.

The results from SEA-PLM 2024 for reading and mathematics are fully comparable with the 2019 results; the descriptions of each proficiency band and the expected competencies remain unchanged.

The SEA-PLM detailed proficiency scales are accessible in Figure 3.1 and Figure 3.2.

This report not only presents the 2024 results in each country but also compares them to the 2019 results (see section 3.3). The comparison helps to identify trends and patterns, including in children's competencies against the proficiency scales.

The SEA-PLM proficiency scales also enable participating countries to report against the global Sustainable Development Goals (SDGs) for the end of primary school for reading and mathematics, including by gender (SDG 4.1.1b).<sup>13</sup> The alignment between the SEA-PLM proficiency scales and the SDG minimum proficiency levels has been established through rigorous procedures to ensure fair comparability with benchmarks established by other large-scale assessments. See section 3.7 for more information and results on the SDGs.

## Reading proficiency scale

The SEA-PLM reading proficiency scale (Figure 3.1) consists of five proficiency bands, ranging from Band 2 and below to Band 6 and above. Each band describes what children are able to do at that level in reading.

In the lowest band (Band 2 and below), children can identify basic relationships between words and their meanings in the tested language of instruction. They demonstrate emerging reading skills. By Band 4, children can understand simple texts and make reasonable interpretations of the information presented, based on explicitly stated information. At the highest band (Band 6 and above), children can comprehend texts with familiar structures, manage competing information, and grasp implicit details in the tested language. Children at Band 5 and above are considered to meet the SDG for the end of primary (4.1.1b).

Figure 3.1 also presents the regional average and the regional range, which shows the highest and lowest proportion of children observed in each band across all six SEA-PLM 2024 participating countries. Associated scale score cut points are reported for each of the bands.

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<sup>13</sup> The SDGs do not refer to writing literacy.

**Figure 3.1: Reading proficiency scale, including the percentage of children in each band across the six participating countries – SEA-PLM 2024**

Band and % of students in 2024	Main description of what students can typically do
<p><b>Band 6 and above</b> 317 points and above</p> <p>Regional average: 36% of students Regional range: 4% to 66% of students</p>	<p><b>Understand texts with familiar structures and manage competing information</b></p> <p>Children are able to understand texts with familiar structures and manage competing information when locating ideas and details. They are able to find multiple pieces of related information in texts with familiar structures and make connections between details and ideas to draw inferences. They are able to use clues and explicit information to support inferences even when there is competing information. They are also able to identify the most likely reasons for events and the reactions of characters in narratives, where that information is only implied in the text.</p>
<p><b>Band 5</b> 304 to less than 317 points</p> <p>Regional average: 17% of students Regional range: 7% to 24% of students</p>	<p><b>Make connections to understand key ideas</b></p> <p>Children are able to connect pieces of related information across sections of texts, including tables and diagrams, enabling them to understand key ideas. The context and ideas in the texts that they can access may not be wholly familiar to the student. They can recognize phrases and sentences that convey the same meaning and make simple inferences when there is some competing information. They can identify the purpose of prominent textual features in short, familiar texts and can use textual features to aid them in locating information.</p>
<p><b>Band 4</b> 289 to less than 304 points</p> <p>Regional average: 17% of students Regional range: 10% to 24% of students</p>	<p><b>Understand simple texts</b></p> <p>Children can understand simple texts that contain some ideas and information that are partly outside of their personal experience. Children can locate different, short expressions that have the same meaning and use textual features to locate information in tables and other familiar text types. They can connect prominent information across adjacent sentences. They can make simple inferences when obvious clues are provided, in a range of simple texts of different types. Children are able to make plausible interpretations of information in a text and can identify the purpose of familiar text types. In matching words to an image, they are able to choose between words that have similar but distinct meanings, and they can identify longer sentences that describe an image.</p>
<p><b>Band 3</b> 274 to less than 289 points</p> <p>Regional average: 15% of students Regional range: 3% to 26% of students</p>	<p><b>Read a range of everyday texts fluently and begin to engage with their meaning</b></p> <p>Children are able to read a range of everyday texts, such as simple narratives and personal opinions, and begin to engage with their meaning. They are able to locate prominent details in everyday texts, as well as connect related information where it is obvious and there is minimal competing information. They are typically able to make simple inferences from prominent information.</p>
<p><b>Band 2 and below</b> less than 274 points</p> <p>Regional average: 15% of students Regional range: 1% to 48% of students</p>	<p><b>Identify relationships between words and their meanings</b></p> <p>There were only a few items in SEA-PLM 2024 below Band 3, so it is not possible to create a general description of what children below Band 3 know and can do in reading. However, the items that were included indicate that children in Band 2, and possibly below Band 2, are typically able to match 1 of 4 given words to an illustration of a familiar object, place or symbol, where the task is simple, direct and repetitive. This demonstrates that children below Band 3 are able to identify the meaning of some words.</p>

Note: *Regional average*: the average of the six countries for 2024, weighted by the student average. *Regional range*: performance across the countries, showing the lowest proportion of children and the highest proportion of children in each band. Statistical standard errors appear in a table reported in Annex 3.

The percentages of children from each participating country estimated to be in each band of the reading proficiency scale in 2019 and 2024 are shown in Figure 3.3.

## Mathematical proficiency scale

The SEA-PLM mathematical proficiency scale (Figure 3.2) consists of eight proficiency bands, ranging from Band 2 and below to Band 9 and above. Each band describes what children are able to do at that level in mathematics.

In the lowest band (Band 2 and below), children have difficulty understanding place value, scales of measurement and ordering two-digit numbers. Students at this level demonstrate emerging mathematical skills. A mid-level mathematical learner (Bands 3, 4 and 5) begins to solve arithmetic problems more fluently, and apply number properties and units of measurement. A more proficient learner (Band 6 and above) can perform more mathematical operations (including with fractions), interpret tables and graphs, apply fractions and percentages, and analyse data representations. Children at Band 5 and above are considered to meet the SDG for the end of primary (4.1.1b).

Figure 3.2 also presents the regional average and the regional range, which shows the highest and lowest proportion of children observed in each band across all six SEA-PLM 2024 participating countries. Associated scale score cut points are reported for each of the bands.

**Figure 3.2: Mathematical proficiency scale, including the percentage of children in each band across the six participating countries – SEA-PLM 2024**

Band and % of students in 2024	Main description of what students can typically do
<p><b>Band 9 and above</b> 347 points and above</p> <p>Regional average: 11% of students Regional range: 1% to 30% of students</p>	<p>There were too few items in SEA-PLM 2024 to comprehensively describe what children operating above Band 8 can do. However, the items that were included indicate that children in Band 9 and above can reason about triangles to find an unknown side length using information about the perimeter, and they can solve problems using frequency distributions.</p>
<p><b>Band 8</b> 334 to less than 347 points</p> <p>Regional average: 11% of students Regional range: 2% to 24% of students</p>	<p><b>Think multiplicatively and convert between units</b> Children can solve problems by adding fractions with the same denominator and by dividing a decimal number by a 1-digit number. They can continue a pattern involving decimals. They can convert from fractions of hours to minutes, and they can calculate the difference between lengths involving metric conversion. They can solve problems using many-to-one pictographs.</p>
<p><b>Band 7</b> 321 to less than 334 points</p> <p>Regional average: 14% of students Regional range: 5% to 21% of students</p>	<p><b>Apply fractions and percentages and analyse data representations</b> Children can calculate a percentage and a simple fraction of a number. They can identify the rotation of a design by half a turn. Children can find the missing value in a table using a given total and calculate a missing percentage value on a pie chart.</p>
<p><b>Band 6</b> 308 to less than 321 points</p> <p>Regional average: 15% of students Regional range: 10% to 23% of students</p>	<p><b>Perform mathematical operations, including with fractions, and interpret tables and graphs</b> Children can convert a fraction in tenths to its decimal equivalent. They have a firm grasp of place value and rounding in numbers up to 5 digits. They can solve problems involving measuring devices requiring conversion of metric units of length and capacity. They can calculate the mass of objects using a balance. Children can add 30 minutes to a given time. They can visualize 3-dimensional objects from 2-dimensional representations and interpret a simple map using directional language. They can interpret a frequency table and a line graph showing growth over time.</p>
<p><b>Band 5</b> 295 to less than 308 points</p> <p>Regional average: 16% of students Regional range: 7% to 22% of students</p>	<p><b>Fluently solve arithmetic problems</b> Children can add 4-digit numbers and subtract 2-digit numbers in context, and they can identify a 5-digit number given in words. They can continue simple counting and shape patterns. They can model scenarios with multiplication and division. They understand the process of taking half of a quantity. Children can interpolate capacity from a marked cylinder and can compare angles to a right angle. They can estimate the mass of an object. They can read numbers from a table and sum them. They understand the structure of a bar graph showing amounts over time.</p>

<p><b>Band 4</b> 282 to less than 295 points</p> <p>Regional average: 13% of students Regional range: 3% to 21% of students</p>	<p><b>Apply number properties and units of measurement</b> Children can find half of a 1-digit even number and understand place value in 5-digit numbers. They can solve a problem involving capacity that does not involve conversion of units. They can apply their knowledge of the number of minutes in an hour. They can read a value from a bar graph.</p>
<p><b>Band 3</b> 269 to less than 282 points</p> <p>Regional average: 10% of students Regional range: 1% to 19% of students</p>	<p><b>Understand place value and scales of measurement</b> Children can order 2-digit numbers. They can read length and mass measurements from scales requiring some interpolation. They can recognize simple shapes and compare angles. They can interpret a simple bar graph.</p>
<p><b>Band 2 and below</b> less than 269 points</p> <p>Regional average: 9% of students Regional range: 1% to 30% of students</p>	<p>There were too few items in SEA-PLM 2024 to describe what children operating below Band 3 can do. Some children might be able to add single-digit numbers together; others might only be able to count a small collection of objects or recognize numbers.</p>

Note: *Regional average*: the average of the six countries for 2024, weighted by the student average. *Regional range*: performance across the countries, showing the lowest proportion of children and the highest proportion of children in each band. Statistical standard errors appear in a table reported in Annex 3.

The percentages of children from each participating country estimated to be in each band of the mathematical proficiency scale in 2019 and 2024 are shown in Figure 3.4.

## Test items

The SEA-PLM test items were developed in close consultation with the participating ministries of education to ensure contextual relevance, technical rigour, and regional and national ownership. New items were developed for the 2024 cycle, adding to the existing bank of items and supporting the continued expansion of a high-quality regional item bank. The statistical properties of each item are systematically recorded and analysed, both at the country and regional levels, to maintain comparability across versions and assessment cycles.

The tests are kept secure before, during and after the assessments. However, to ensure that ministries of education and education stakeholders (including curriculum developers, teacher trainers, training institutions, researchers and academics) are able to identify areas for improvement, the SEA-PLM programme released a selection of reading and mathematical items from the 2019 cycle in the SEA-PLM compendium (UNICEF & SEAMEO, 2024a). The items are representative of the SEA-PLM test framework regardless of the test cycle. The compendium describes each item in detail and provides suggestions for educators about how to develop students' understanding of the concepts and skills required to respond correctly to the items. Common misunderstandings and errors are also discussed in view of how students performed on each item under test conditions.

Tools such as the compendium help stakeholders to reflect on the performance of students in Southeast Asia, to explore linkages between curriculum content and teaching methodologies, and to investigate ways to measure and increase students' understanding of these concepts.

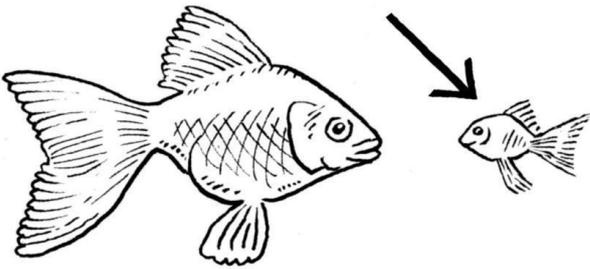
The following boxes provide examples of the easiest and medium-difficulty reading and mathematical tasks. Selected results extracted from either the 2024 or 2019 dataset are also included to assist understanding of the level of student performance. The results show the lowest and highest performance rates observed in the

participating countries by reporting the percentage of students answering the example items correctly. For example, in Box 3.3, while 96 per cent of students answered the item correctly in one participating country, only 75 per cent answered it correctly in another country. This demonstrates a wide range of abilities across the countries.

Test items are presented in the English version for reference. Items were administered in the language/s chosen by each ministry of education for their context and according to their language of instruction policies.

*Box 3.3: Example of one of the easiest reading items*

**Which word?** R15Y044T01



old  
new  
dirty  
small

**Item details**

Text type	Word match
Item intent	Selects a word that matches an image
Skill Assessed	Recognize
Difficulty	Very easy
Item format	Multiple choice
Response key	D
Range of correct responses observed in SEA-PLM 2024 <sup>14</sup>	75% to 96%  In one country, 75% of students responded correctly (the lowest percentage observed in the 2024 round); in another, 96% responded correctly (the highest percentage observed in the 2024 cycle).

<sup>14</sup> Results are unweighted and rounded to the nearest whole number.

Box 3.4: Example of a medium-difficulty reading item

### Chai's new car

Chai's father gave him a toy car for his birthday. It was beautiful with lots of colours and flashing lights. Chai loved how shiny it looked but he liked it even more because it made his friends jealous.

This was the first time he had something that all his friends wanted to play with but he didn't let anyone else touch it, not even his best friend Tong. He tied a piece of string to it and pulled it around behind him. He started running to see how fast he could make the car go. As he ran, the car hit a stone and turned over. Two of the wheels came off.



He kept trying to fix the car but the wheels refused to stay on. He couldn't believe his bad luck. He started to cry. Just then, he felt a hand on his shoulder. It was Tong. Chai couldn't take it anymore.

"What do you want Tong? Just leave me alone, okay?"

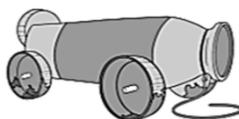
But Tong's reply surprised him.

"I'm sorry your car broke. Why don't we make our own cars? I have seen my brother do it. They won't be as good as the one you had but at least we will be able to play with them together."

Chai was quite ashamed. All he said was, "How?"

"Come, I'll show you. All we need are some plastic bottles and some sticks."

Even though it didn't look as good as the car his father had bought him, he had a lot more fun with his new toy car.



What did Tong suggest that they could do? R15Y011T05

- A. fix Chai's car
- B. buy new cars
- C. build new cars
- D. play a different game

#### Item details

Text type	Narrative
Item intent	Identifies the reason for a character's reaction in a narrative text
Skill Assessed	Interpret
Difficulty	Medium
Item format	Multiple choice
Response key	C
Range of correct responses observed in SEA-PLM 2019 <sup>15</sup>	34% to 90%  In one country, 34% of students responded correctly (the lowest percentage observed in the 2019 round); in another, 90% responded correctly (the highest percentage observed in the 2019 cycle).

<sup>15</sup> Results are unweighted and rounded to the nearest whole number.

Box 3.5: Example of one of the easiest mathematical items

M22A03

**1) Simple addition**

$2 + 3 = \dots$

- 4
- 5
- 6
- 23

**Item details**

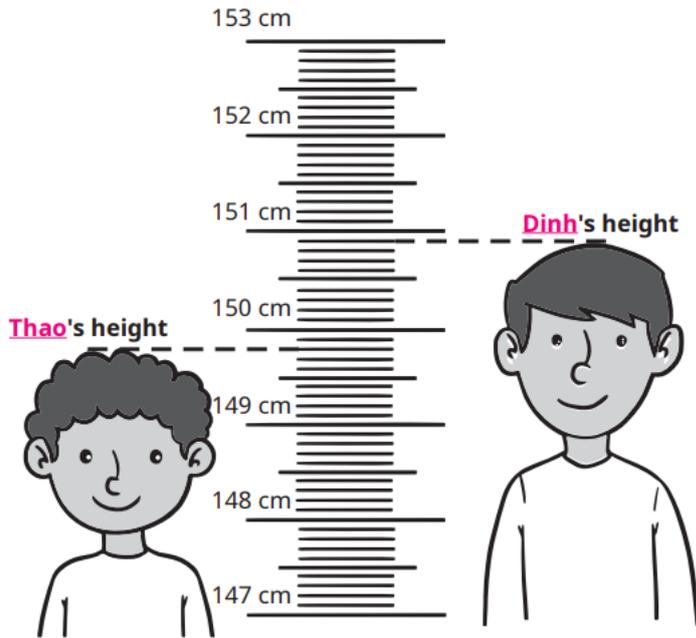
Description	Complete a 1-digit addition represented using mathematical symbols plus and equals
Content strand	Number and algebra
Process	Apply
Difficulty	Easy
Item format	Multiple choice
Response key	B
Range of correct responses observed in SEA-PLM 2024 <sup>16</sup>	92% to 98%  In one country, 92% of students responded correctly (the lowest percentage observed in the 2024 round); in another, 98% responded correctly (the highest percentage observed in the 2024 cycle).

<sup>16</sup> Results are unweighted and rounded to the nearest whole number.

Box 3.6: Example of a medium-difficulty mathematical item

**Height difference**

This chart shows how tall Dinh and Thao are.  
The numbers show height in centimetres (cm).



M15Y156T01

How much taller is Dinh than Thao?

- A. 7 mm
- B. 9 mm
- C. 10 mm
- D. 11 mm

**Item details**

Description	Finds the difference between lengths on a centimetre scale with millimetre markings
Content strand	Measurement and geometry
Process	Apply
Difficulty	Medium
Item format	Multiple choice
Response key	D
Range of correct responses observed in SEA-PLM 2019 <sup>17</sup>	42% to 79%  In one country, 42% of students responded correctly (the lowest percentage observed in the 2019 round); in another, 79% responded correctly (the highest percentage observed in the 2019 cycle).

### 3.3 Proficiency in 2024, compared with 2019

Children’s proficiency in reading and mathematics varies greatly both across and within the six SEA-PLM 2024 countries. In some countries, the majority of children reach the higher proficiency bands, while in other countries significant proportions remain in Bands 2 and 3. Progress between SEA-PLM 2019 and 2024, the two latest rounds of assessment, is therefore mixed, with some countries demonstrating progress, others showing limited gains, and some slightly declining.

#### *Box 3.7: Technical note: Reading the differences over time across the proficiency scales*

To illustrate potential progress in learning and equity in a given country, the 2024 Grade 5 cohort results are presented and compared with the 2019 cohort. Statistical uncertainty inherent in large-scale studies on representative samples produces variation in mean scores and percentages; therefore, results that do not change significantly between two rounds of testing qualify as ‘non-significant’ differences and should not be interpreted as showing either progress or decline. The significance level is preset to the 5 per cent threshold, meaning differences observed between two given estimates would be observed in 95 per cent of the cases if the test was administered several times in multiple national samples with similar characteristics. In the figures and tables, these changes in estimates (increases or decreases) are underlined, bolded, or denoted with arrows or darker colours; non-significant differences are also labelled and indicated.

The significance test is critical to meaningful interpretation: while the sample means may appear different (in absolute terms and visuals), the uncertainty in national estimates means that these differences do not reflect an actual difference in corresponding Grade 5 student cohorts if the significance test is not conducted and the significance criteria met. In that case, the differences observed are considered not robust enough to be generalized across the entire Grade 5 population.

To ease interpretation, this report also suggests criteria to review the magnitude of the significant changes observed over time between the Grade 5 cohort tested in 2024 and the Grade 5 cohort assessed in 2019 (five-year period):

- **stable**: no significant change in value
- **small** (below or equal to 5 points) to **modest** (6 to 10 points): improvement or drop in results equal to or below 10 points
- **medium** (11 to 15 points) to **large** (above 15 points): improvement or drop in results over 10 points.

Across a single proficiency scale, each country’s Grade 5 cohort has a singular pattern of performance and change over time owing to variation in learning experiences and opportunities across its school population, as well as changes in education and society. The direction of the change, as well as its magnitude and significance, needs to be interpreted with care.

This report also refers to low and high proficiencies. Students in Band 2 for both reading and mathematics are considered as demonstrating very low proficiency; the report refers to students in Band 6 and above as meeting the highest proficiencies measured by the SEA-PLM scales. These are competencies expected by the national curricula of the participating countries for children after five years of primary education.

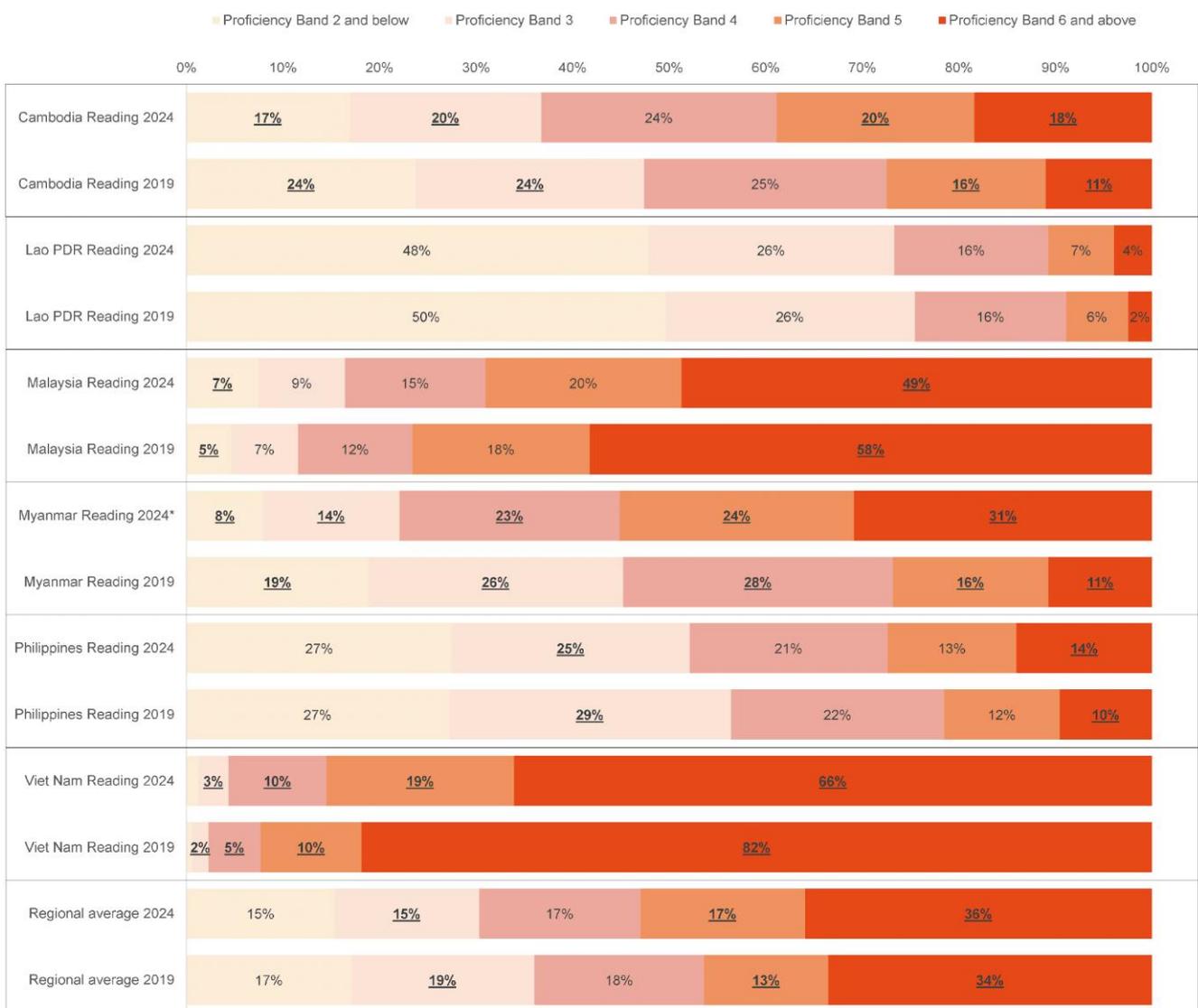
<sup>17</sup> Results are unweighted and rounded to the nearest whole number.

The percentages of children from each participating country estimated to be in each band of the proficiency scale in 2019 and 2024 are shown in Figure 3.3 for reading and Figure 3.4 for mathematics. Countries are presented in alphabetical order. Proficiency bands where statistically significant changes in percentage are observed between 2019 and 2024 are underlined and indicated in bold in the 2024 bars. Percentages under 2 per cent are not indicated.

Full tables of estimates, statistical standard errors and differences per country are available in Annex 3.

## Reading literacy, from 2019 to 2024

**Figure 3.3: Percentage of Grade 5 children in each reading proficiency band, by country and survey year**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Proficiency bands where statistically significant changes in percentage are observed between 2019 and 2024 are underlined and indicated in bold in the 2019 and 2024 bars. Percentages under 2 per cent are not indicated. The regional average represents the mean percentage of the six countries for 2024, weighted by the student average.

Some countries had a significant proportion of students in the highest proficiency bands, while others had a significant proportion of students in the lowest bands. This illustrates the huge disparities in reading proficiency both across and within the six participating countries. Children who do not meet the reading proficiency expected for Grade 5 will struggle to complete their primary education and/or to transition into secondary school.

On average across the region, there was a slight positive shift in reading literacy among students completing primary education in 2024. While the regional average point score had not changed since 2019, there was a small reduction in the number of Grade 5 students in the two lowest bands compared with 2019 (30 per cent versus 36 per cent). These are the students who are considered emerging readers in the language of instruction. Similarly, more students from the Grade 5 national cohorts achieved higher (Bands 5 and 6) levels of reading competencies than in 2019.

This trend hides a wide variety of performance between and within the countries.

Two countries (Cambodia and Myanmar<sup>18</sup>) showed significant improvement compared with 2019 in the percentage of 2024 Grade 5 students who achieved higher levels of proficiency in reading, with reduced numbers of students demonstrating lower reading skills. Two countries (Lao PDR and the Philippines) demonstrated no significant change across the proficiency levels of Grade 5 children between the 2019 and 2024 cohorts. Two countries (Malaysia and Viet Nam) experienced a decline in performance.

In Cambodia, a larger proportion of children in 2024 performed in the middle or high-level bands than in 2019, with fewer children in the lower bands. This shift across the bands to the higher levels indicates that more children had mastered the expected foundational reading skills. This shift was observed across the bands, indicating that the measures put in place benefit the lowest-performing learners alongside the higher-performing ones.

In Lao PDR and the Philippines, the shift in performance across the bands was negligible. Roughly the same proportion of children in 2024 as in 2019 performed in each band, with a slight (non-significant in Lao PDR) shift towards the higher ends. This indicates that similar proportions of children met expectations or fell behind expected proficiencies at the end of Grade 5 as in 2019. In the Philippines, the proportion of students in the higher bands increased while the proportion in the lowest bands remained unchanged, indicating a wider dispersion of scores and suggesting increased inequality in learning opportunities.

In Malaysia and Viet Nam, an increase was observed in the proportion of children in 2024 in the lowest bands, with a corresponding decrease in the proportion of children in the highest bands. In Malaysia, almost one in three performed in Bands 2 to 4 (compared with around one in four in 2019). In Viet Nam, the figures were 15 per cent and 8 per cent, respectively. The pattern of change was slightly different in the two countries: in Malaysia, there were fewer children in the top bands, with an increase in the lowest band; in Viet Nam there was a shift downwards across the bands (except the extreme lowest band), indicating a performance decline across the spectrum.

In Myanmar,<sup>19</sup> in the 2024 SEA-PLM cycle, over half (55 per cent) of the students reached the two highest bands, while 22 per cent of students still demonstrated proficiency in the lowest two bands.

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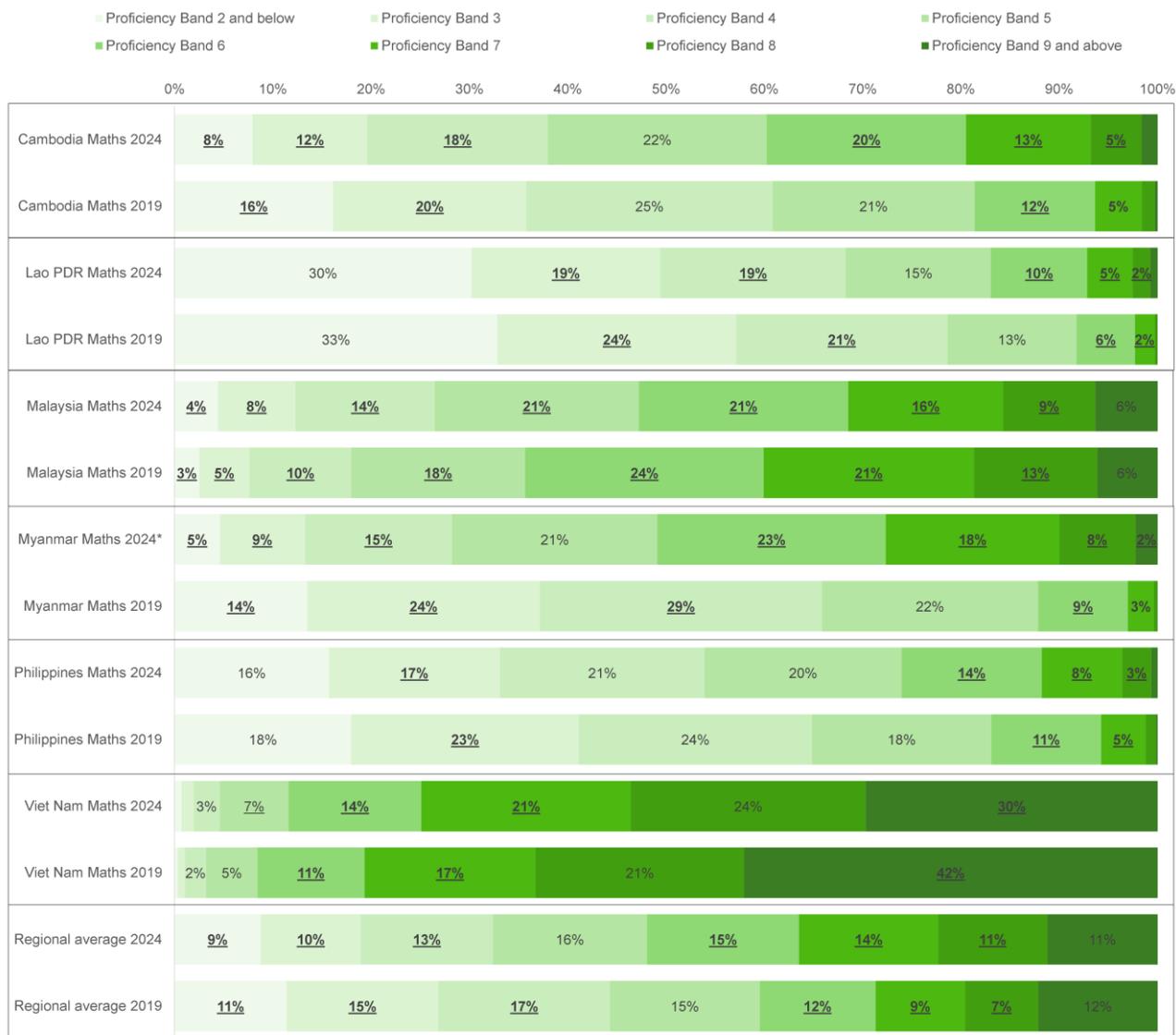
<sup>18</sup> Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

<sup>19</sup> See previous note about Myanmar estimates.

Across all countries, 10 per cent to 26 per cent of Grade 5 students were in Band 4 in 2024. These children are still progressing towards mastering the highest proficiency skills tested by the SEA-PLM programme. They have developed a solid foundation in mathematical skills, although they require further dedicated support to develop higher-order competencies.

## Mathematical literacy, from 2019 to 2024

Figure 3.4: Percentage of Grade 5 children in each mathematics proficiency band, by country and survey year



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Proficiency bands where statistically significant changes in percentage are observed between 2019 and 2024 are underlined and indicated in bold in the 2019 and 2024 bars. Percentages under 2 per cent are not indicated. The regional average represents the mean percentage of the six countries for 2024, weighted by the student average.

Some countries had a relatively high proportion of students in the highest proficiency bands, while others had a large share of students in the lowest bands. This situation illustrates the substantial disparities in mathematics both across and within the six participating countries.

On average across the region, there was a positive shift in mathematical literacy among students completing primary education in 2024, with a small reduction in the number of Grade 5 students demonstrating issues with emerging mathematical skills in their language of instruction compared with 2019. In many countries in 2024, more students from the Grade 5 national cohorts achieved higher levels of mathematical competencies than in 2019. As in reading, this trend hides a wide variety of performance between and within the countries.

Two countries (Cambodia and Myanmar<sup>20</sup>) showed significant improvement compared with 2019 in the percentage of 2024 Grade 5 students who achieved higher levels of proficiency in mathematics, with reduced numbers of students demonstrating lower mathematical skills. In two countries (Lao PDR and the Philippines) the average performance increased, with almost no change in the proportion of low performers between the 2019 and 2024 cohorts. Two countries (Malaysia and Viet Nam) experienced a decline in performance.

In Cambodia, the shift across the bands was clear, with fewer Grade 5 students in 2024 in the lowest bands and more students in the highest bands compared with 2019. The shift towards higher competencies was fairly equitably spread across the proficiency bands, suggesting that students across the spectrum were able to benefit from learning opportunities.

In Lao PDR and the Philippines, the proportion of children in the extreme lowest band in 2024 remained the same as in 2019, indicating persistent challenges in gaining mathematical literacy among certain groups of children. The shift towards higher proficiencies, without a corresponding decrease in the bottom, indicates growing inequality in access to quality learning opportunities.

In Malaysia and Viet Nam, as for reading literacy, the proportion of students in the highest bands declined in 2024 compared with 2019. In Malaysia, the proportion of students in the lowest bands increased while the proportion of students in the highest bands decreased; in Viet Nam, the shift was mainly in the middle, with more students in the middle bands in 2024 compared with 2019, and fewer reaching the very highest bands.

In Myanmar,<sup>21</sup> in the 2024 SEA-PLM cycle, the majority (72 per cent) of students demonstrated proficiency at Band 5 or above, while 5 per cent remained in Band 2 and a further 9 per cent achieved in Band 3.

Across all countries, 3 per cent to 21 per cent of Grade 5 students were in Band 4 in 2024, showing steady progress towards mastering the highest proficiency skills tested in SEA-PLM. While they demonstrated a solid grasp of fundamental mathematical skills, they still need targeted support to strengthen higher-order competencies.

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<sup>20</sup> Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

<sup>21</sup> See previous note about Myanmar estimates.

### 3.4 Very low proficiency

Very low proficiency students in the region struggle to respond correctly to the most basic skills and knowledge tested in the SEA-PLM 2024 reading and mathematical tests (equivalent to Band 2 and below on both scales). Those competencies are expected to be mastered by all children at Grade 1 or 2 in the main language of instruction and are referenced in each prescribed national curriculum for those grades. Students at this level demonstrate emerging reading and mathematical skills, and require dedicated support and remediation to ensure they continue in primary school and successfully transition to lower secondary education.

In reading, students in Band 2 and below are considered ‘emergent readers’: they have begun to engage with words and sentences as expected in the first years of primary education. They can generally identify relationships between words and their meanings in the language of instruction; this level includes tasks like matching one of four given words to an illustration of a familiar object, place or symbol. In mathematics, children at this level have difficulty understanding place value, understanding scales of measurement, and ordering two-digit numbers. Their mathematical literacy is at the early emerging stages.

In the following figures, statistically significant<sup>22</sup> percentage changes observed between 2019 and 2024 are underlined and indicated in bold. Percentages under 1 per cent are not indicated. Full tables of estimates and differences per country are available in Annex 3.

#### Reading: Very low proficiency Grade 5 students

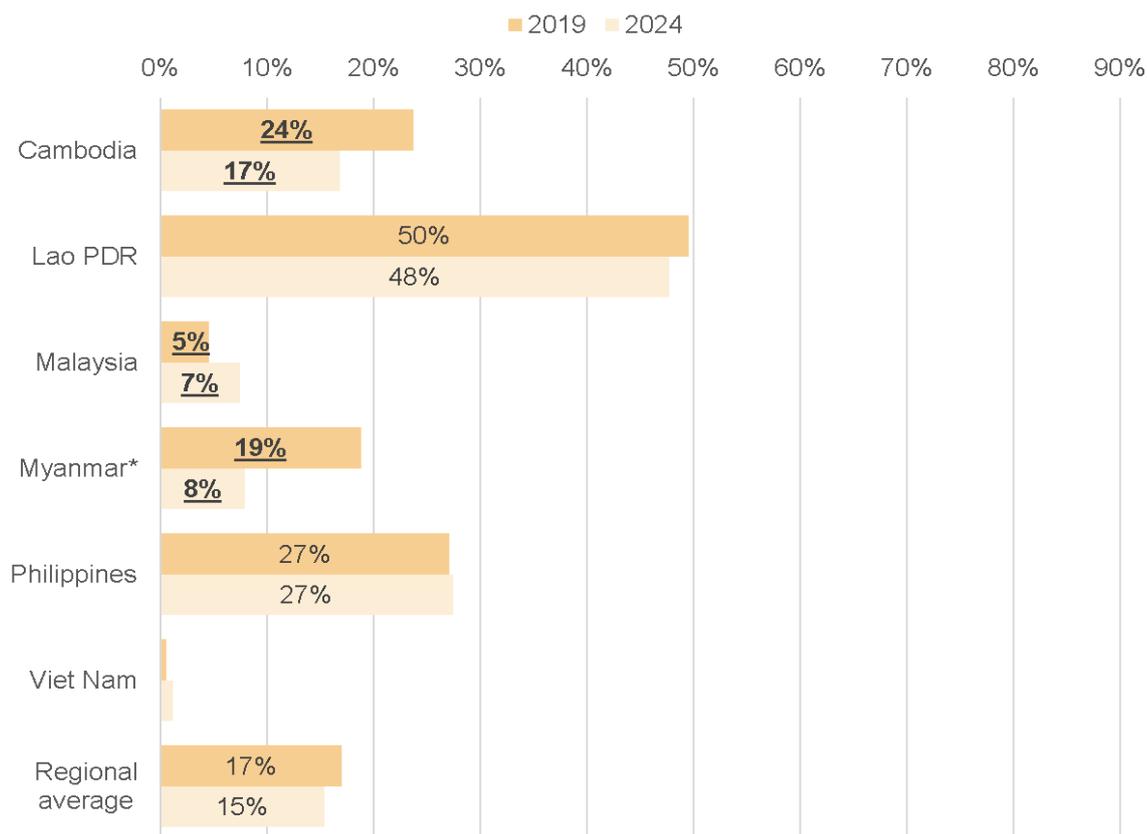
Across the region in 2024, 15 per cent of Grade 5 students demonstrated very low proficiency in reading. This situation is consistent with the trend observed in 2019, where 17 per cent of children demonstrated very low proficiency in reading. That is, no significant statistical changes were observed in the very low proficiency regional average between 2019 and 2024.

As observed in 2019, in 2024 there was a large variation across the countries in levels of very low proficiency readers, ranging from 1 per cent to 48 per cent of children enrolled in Grade 5 (a similar range, from 1 per cent to 50 per cent, was observed in 2019). Children in Band 2 and below account for a large proportion of the nearly 60 per cent of children across the region who do not meet the highest proficiencies and the level expected by the end of primary.

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<sup>22</sup> Within 5 per cent confidence threshold.

Figure 3.5: Percentage of Grade 5 children considered to have very low proficiency in reading, and change over time



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Statistically significant percentage changes observed between 2019 and 2024 are underlined and indicated in bold in the 2019 and 2024 bars. Percentages under 1 per cent are not indicated. Mean differences are not statistically significant in Lao PDR, the Philippines, Viet Nam, and the regional average, between 2019 and 2024. All figures are presented using rounded values.

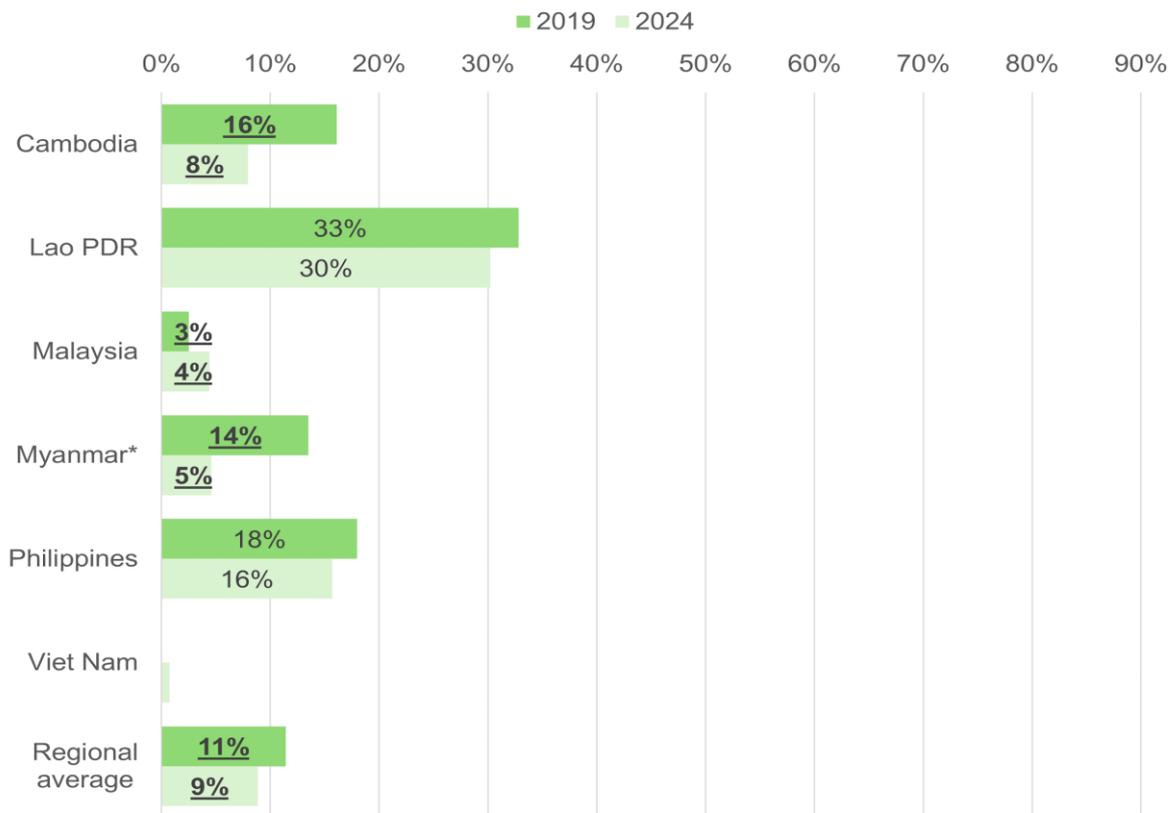
Some countries showed a modest decrease (7 percentage points in Cambodia) in the number of very low proficiency readers in 2024 compared with 2019. In Malaysia, there was a small increase (3 percentage points) in the number of very low proficiency readers. Stable numbers of very low proficiency readers were observed in Lao PDR, the Philippines and Viet Nam. The proportion of children in Band 2 and below on average across the region has not changed.

### Mathematics: Very low proficiency Grade 5 students

Across the region in 2024, 9 per cent of Grade 5 students demonstrated very low proficiency in mathematics. A slight decrease was observed across the region overall, from 11 per cent in 2019.

As observed in 2019, in 2024 there was a large variation across the countries in levels of very low proficiency students in mathematics, ranging from 1 per cent to 30 per cent of children enrolled in Grade 5 (0 per cent to 33 per cent in 2019).

**Figure 3.6: Percentage of Grade 5 children considered to have very low proficiency in mathematics, and change over time**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Statistically significant percentage changes observed between 2019 and 2024 are underlined and indicated in bold in the 2019 and 2024 bars. Percentages under 1 per cent are not indicated. Mean differences are not statistically significant in Lao PDR, the Philippines and Viet Nam, between 2019 and 2024. All figures are presented using rounded values.

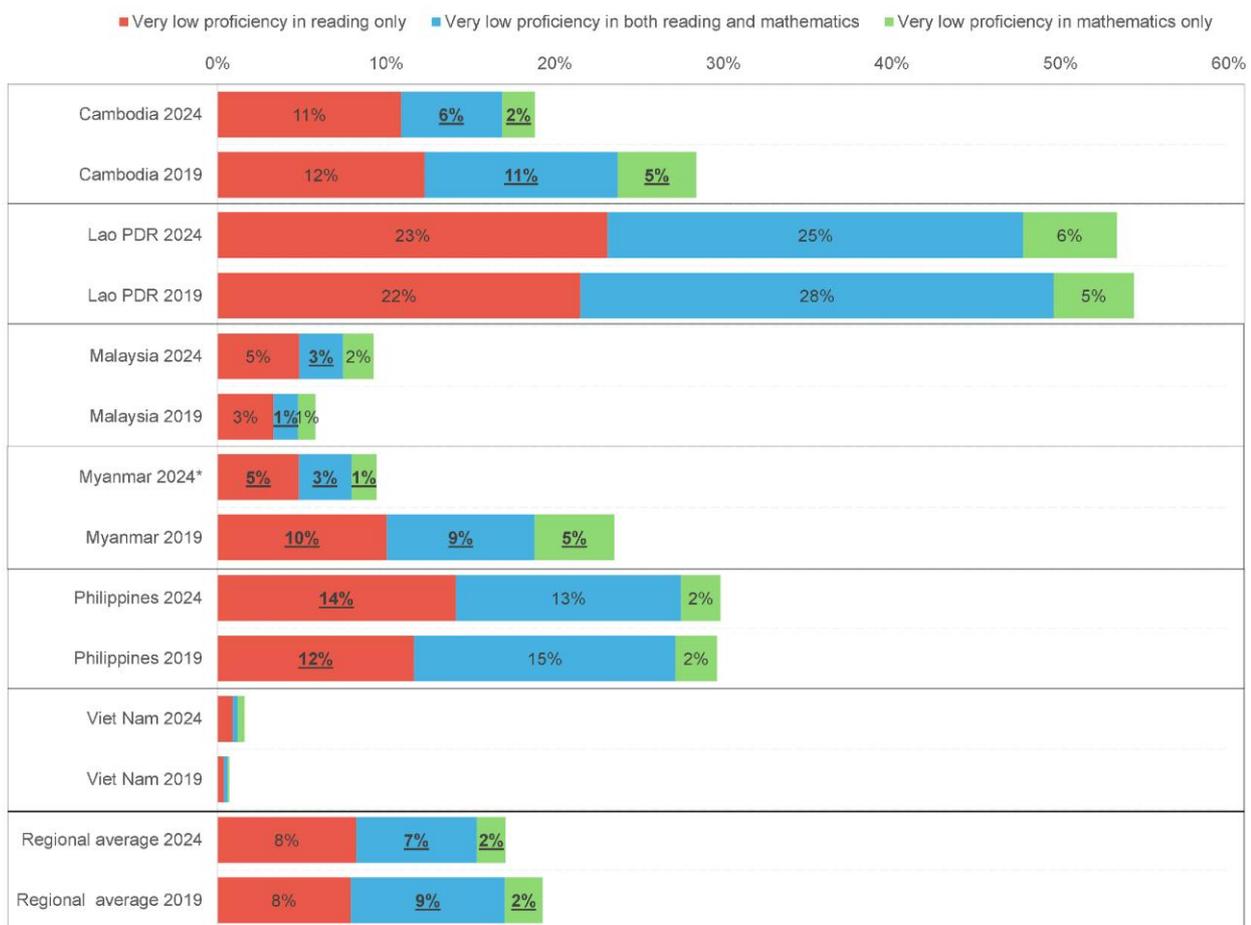
Cambodia showed a modest decrease (8 percentage points) in the number of very low proficiency learners in mathematics in 2024 compared with 2019. The proportion of students in the lowest bands in the 2024 cycle was low at 5 per cent. In Malaysia, there was a small increase (2 percentage points) in the number of very low proficiency learners in mathematics. Stable numbers of very low proficiency learners in mathematics were observed in Lao PDR, the Philippines and Viet Nam. Changes observed compared with 2019 were not all statistically significant. The regional average decreased from 11 per cent to 9 per cent.

### Reading and mathematics: Very low proficiency Grade 5 students

Students can face compounding challenges in their learning and may struggle more with certain subjects than others. As the reading and mathematical domains are separate, with distinct proficiency descriptions for each domain and band, they are not directly comparable. However, students at the very bottom bands in each domain can be identified as struggling with the core skills that need to be mastered in primary grades.

SEA-PLM data can support investigations into whether students demonstrated very low proficiency in both reading and mathematics simultaneously. Figure 3.7 shows the percentage of children demonstrating very low proficiency in reading only, in mathematics only, or in both domains for 2019 and 2024.

**Figure 3.7: Percentage of Grade 5 children considered to have very low proficiency in reading only, mathematics only, or in both subjects together, and change over time**



\*

Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Statistically significant percentage changes observed between 2019 and 2024 are underlined and indicated in bold in the 2019 and 2024 bars. Percentages under 1 per cent are not indicated. For example, in Cambodia, the change in the proportion of students demonstrating low proficiency in reading did not change; however, there was a statistically significant decline in the proportion of students who have low proficiency in mathematics or in both mathematics and reading. All figures are presented using rounded values.

Across the countries in 2024, the percentage of students demonstrating very low proficiency in both reading and mathematics ranged from less than 1 per cent to 25 per cent. In all countries, fewer students demonstrated challenges with mathematics only; the majority either had very low proficiency in both reading and mathematics, or only in reading. On average across the region, around 2 per cent were in Band 2 and below in mathematics only, 8 per cent in reading only, and 7 per cent in both reading and mathematics. This analysis underscores the challenges inherent in learning for certain groups of students.

It is very likely that out-of-school children, not covered in the SEA-PLM studies, may also have very low proficiency in both subjects, increasing the number of children in the primary school age range who are considered to have very low reading and mathematical proficiency.

### 3.5 High proficiency

Highly proficient students in the region achieved, and in some cases exceeded, the most complex skills and knowledge tested in the SEA-PLM 2024 reading and mathematics tests (equivalent to Band 6 and above in both

domains). Those competencies are expected to be mastered by all children at the end of primary education in the main language of instruction and are referenced in each prescribed national curriculum. Highly proficient students are exceeding in other skill areas tested in the SEA-PLM 2024 test (below Band 6), expected across primary grades.

In reading, for example, highly proficient students can understand texts with familiar structures and manage competing information when locating ideas and details. In mathematics, highly proficient students can perform mathematical operations (including with fractions), interpret tables and graphs, apply fractions and percentages, and analyse data representations.

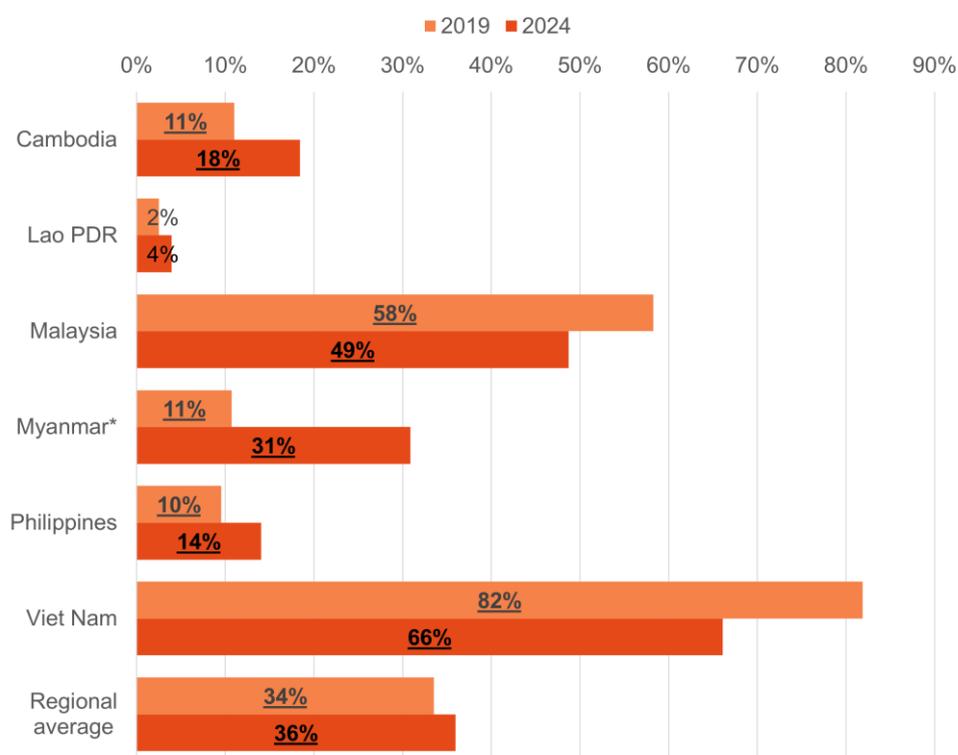
Students demonstrating high proficiency in reading and mathematics are all exceeding the SDGs for the end of primary (referenced at Band 5).

### Reading: High proficiency Grade 5 students

Students demonstrating reading proficiency at Band 6 and above read to understand and use implicit information from various text types to reflect on new ideas and opinions. Across the region, 36 per cent of students demonstrated these proficiencies, indicating their readiness to move from primary to secondary education.

There remained a large variation in the proportion of students meeting these proficiencies across the region, ranging from 4 per cent to 66 per cent. A similarly large variation was observed in 2019 (from 2 per cent to 82 per cent).

*Figure 3.8: Percentage of Grade 5 children considered to have high proficiency in reading (Band 6 and above), and change over time*



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Statistically significant percentage changes observed between 2019 and 2024 are underlined and indicated in bold in the 2019

and 2024 bars. Percentages under 1 per cent are not indicated. Mean differences are not statistically significant in Lao PDR and for the regional average between 2019 and 2024. All figures are presented using rounded values.

Compared with 2019, some countries showed a small increase in the proportion of high proficiency readers (3 percentage points in the Philippines, 5 percentage points in Cambodia). In other countries there was a small (3 percentage points in Malaysia) to modest (8 percentage points in Viet Nam) decrease in the number of high proficiency readers. Stable results were observed in Lao PDR; changes observed are not statistically significant compared with 2019.

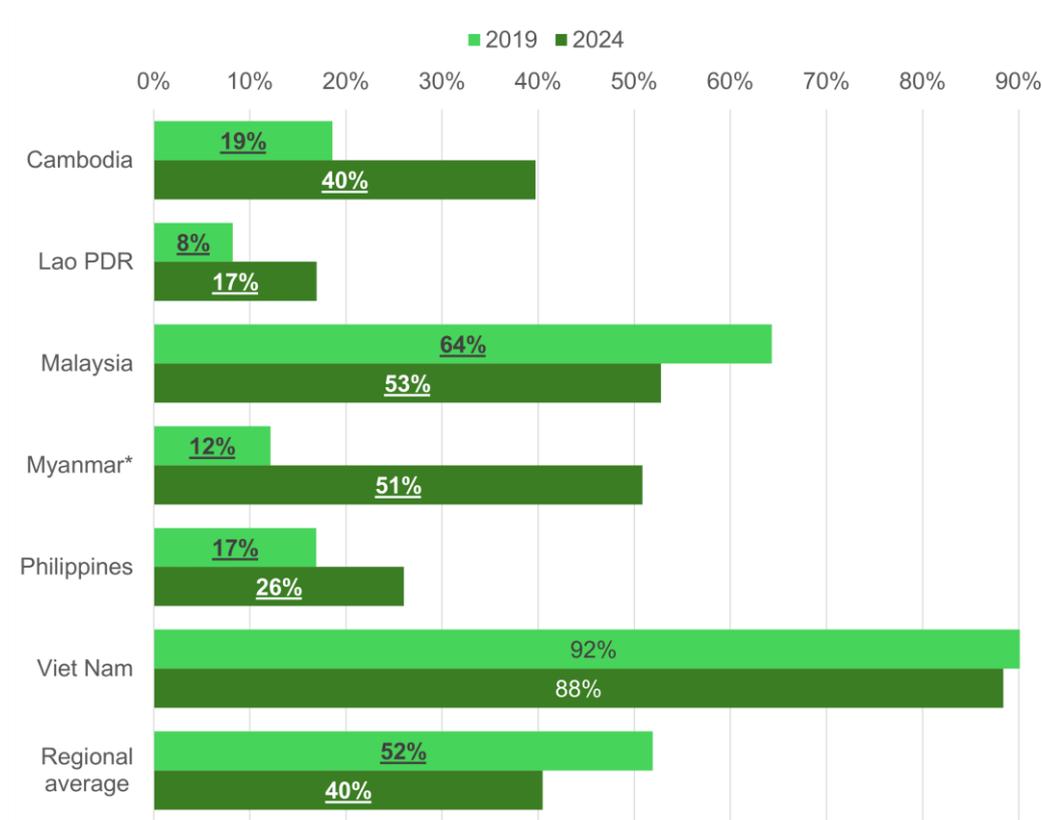
### **Mathematics: High proficiency Grade 5 students**

Students demonstrating mathematical proficiency at Band 6 and above can perform mathematical operations (including with fractions), interpret tables and graphs, apply fractions and percentages, and analyse data representations. Across the region, 52 per cent of students demonstrated these proficiencies, indicating their readiness to move from primary to secondary education. This is a large increase from 40 per cent in Band 6 and above in 2019.

The competencies captured by Bands 6 and above are expected to be mastered by all children at the end of primary education in the main language of instruction and are referenced in each prescribed national curriculum.

There remained a large variation in the proportion of students meeting these proficiencies across the region, ranging from 17 per cent to 88 per cent. A similarly large variation was observed in 2019 (from 8 per cent to 92 per cent).

**Figure 3.9: Percentage of Grade 5 children considered to have high proficiency in mathematics (Band 6 and above), and change over time**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Statistically significant percentage changes observed between 2019 and 2024 are underlined and indicated in bold in the 2019 and 2024 bars. Percentages under 1 per cent are not indicated. Mean differences are not statistically significant in Viet Nam between 2019 and 2024. Label values are only reported for SEA-PLM 2024. All figures are presented using rounded values.

Compared with 2019, some countries showed a modest (9 percentage points in Lao PDR, 9 percentage points in the Philippines) to very large (21 percentage points in Cambodia) increase in high proficiency mathematics students. In other countries, there was a small (2 percentage points in Viet Nam) to medium (12 percentage points in Malaysia) decrease in the number of high proficiency mathematics students.

### 3.6 National averages in 2024, compared with 2019

National averages serve as an important proxy for evaluating national performance in SEA-PLM surveys. This indicator complements the other proficiency level indicators reported above. However, this particular statistic is limited and does not have the ability to consider equity issues or provide deeper insights into shifts in performance.

Table 3.1 and Table 3.2 report the 2024 national average scores for each country in reading and mathematics. For each country, where applicable, the 2019 average score is also included. In reading and mathematics, a change of 13 to 15 points can be interpreted as a shift of one full proficiency level, corresponding to one band on the SEA-PLM proficiency scale.

**Table 3.1: Reading national average scores, 2019 and 2024, showing changes**

Country	2019		2024		Difference 2024 vs 2019		Significance of change
	Score	SE	Score	SE	Score	SE	
Cambodia	290.1	0.82	296.4	0.69	<b>6.3</b>	(5.85)	▲
Lao PDR	275.1	0.78	276.2	0.84	1.1	(1.00)	•
Malaysia	318.9	1.14	313.6	1.13	<b>-5.3</b>	(3.31)	▼
Myanmar*	291.7	0.78	305.3	0.71	<b>13.6</b>	(12.89)	▲
Philippines	287.7	0.91	289.5	1.01	1.8	(1.31)	•
Viet Nam	336.5	0.88	323.5	0.63	<b>-13.0</b>	(11.95)	▼

\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Differences are reported by scale points

( ) Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

▼ Denotes a significant decrease from 2019

• Denotes no significant change from 2019

Note: All differences have been statistically tested at the 95% confidence level. Only statistically significant changes are reported; when no significant change is observed, the country is noted as having a similar national average across the two cycles. Statistically significant differences are highlighted in bold.

**Table 3.2: Mathematics national average scores, 2019 and 2024, showing changes**

Country	2019		2024		Difference 2024 vs 2019		Significance of change
	Score	SE	Score	SE	Score	SE	
Cambodia	289.4	0.82	301.5	0.78	<b>12.0</b>	(1.13)	▲
Lao PDR	278.6	0.82	282.7	0.92	<b>4.1</b>	(1.23)	▲
Malaysia	314.7	1.08	309.9	1.22	<b>-4.8</b>	(1.64)	▼
Myanmar*	287.9	0.61	307.2	0.77	<b>19.2</b>	(0.99)	▲
Philippines	287.9	0.84	292.8	0.93	<b>4.9</b>	(1.25)	▲
Viet Nam	341.4	1.04	334.6	0.9	<b>-6.8</b>	(1.37)	▼

\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Differences are reported by scale points

() Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

▼ Denotes a significant decrease from 2019

• Denotes no significant change from 2019

Note: All differences have been statistically tested at the 95% confidence level. Only statistically significant changes are reported; when no significant change is observed, the country is noted as having a similar national average across the two cycles. Statistically significant differences are highlighted in bold.

### 3.7 SEA-PLM reading and mathematics alignment with the SDGs

SEA-PLM surveys are internationally recognized as a source of learning outcomes data to report against Sustainable Development Goal (SDG) indicators in reading and mathematics. SDG 4.1.1b tracks the proportion of children achieving minimum proficiency in reading and mathematics by the end of primary education (by sex); with SEA-PLM 2024, six countries in Southeast Asia are now starting to have trend data on this indicator.

In 2020, the SEA-PLM programme adopted proficiency Band 6 and above for both reading and mathematics domains as the SDG 4.1.1b benchmark for minimum proficiency by the end of primary education. This benchmark was based on the qualitative alignment of the SDG definition with the new SEA-PLM proficiency bands descriptors.

At that time, domain experts in charge of developing the SEA-PLM proficiency scales matched the content of the final proficiency bands with the definitions of SDG 4.1.1b to select the most appropriate band corresponding to the international definition (UNICEF & SEAMEO, 2020, pp. 36, 45 and 57).

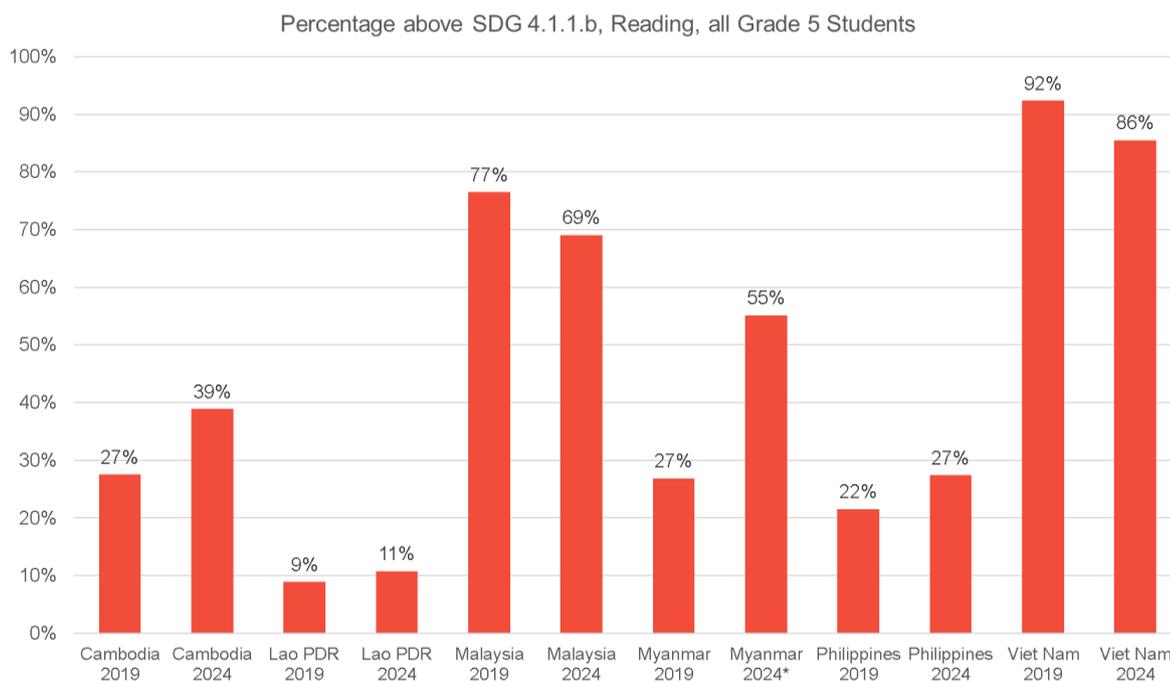
Since then, further investigation with additional items analysis and new empirical methods from SEA-PLM 2019 and 2024 suggest that the original benchmarks may have been too stringent compared with the global standards as set by the Global Alliance to Monitor Learning (GAML) and as observed in other regions worldwide, prompting a reconsideration for the 2024 cycle.

New estimates and references presented in the figures below offer a more balanced and globally aligned approach. A new cut-score has been set, drawing upon evidence from a pair-wise comparison, establishing not only a qualitative indicator of the correct band for the SDGs but also a quantitative, precise score. Based on this,

the SEA-PLM Secretariat, in consultation with the participating countries, have agreed to benchmark SDG 4.1.1b against the lowest boundary of Band 5, for both reading and mathematics. This process has been discussed with the UNESCO Institute for Statistics (UIS) and communicated to other stakeholders.

To ensure the correct reporting of changes over time, the following charts have recomputed the proportion of students meeting SDG 4.1.1b in 2019 (at Band 5) and in 2024 (at Band 5). Regionally, 53 per cent of children meet the benchmark in reading (up from 46 per cent in 2019); in mathematics, 68 per cent meet the benchmark (up from 56 per cent in 2019).

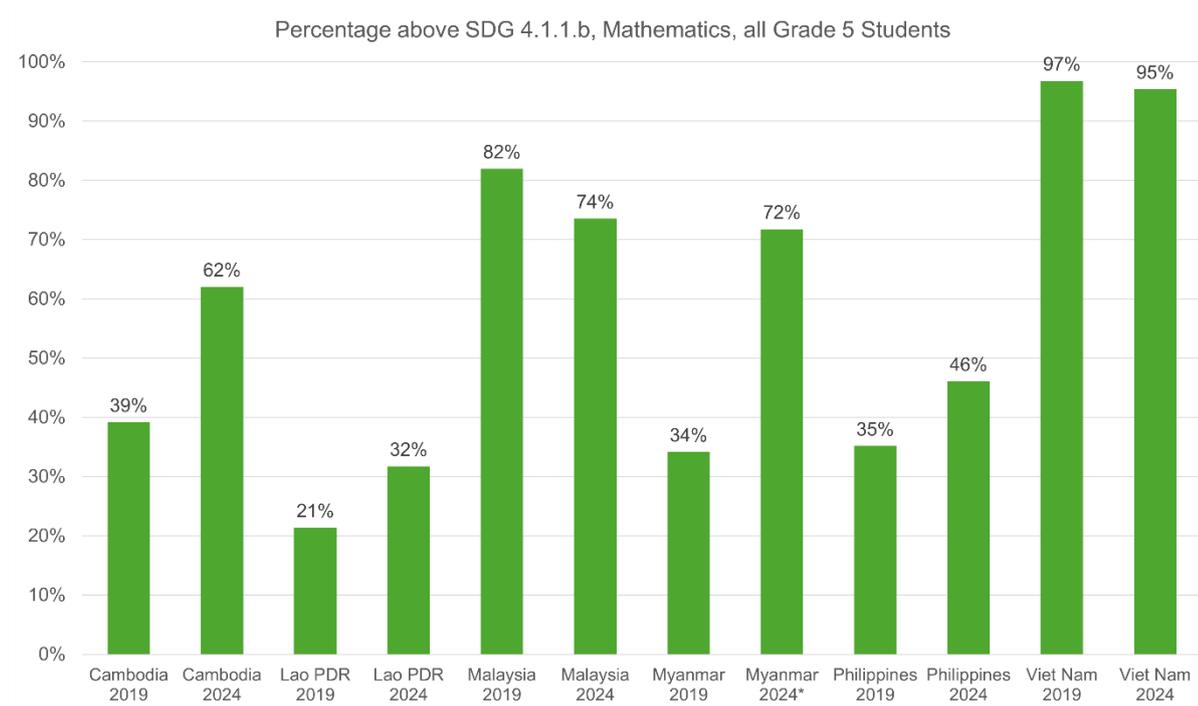
**Figure 3.10: 2024 and 2019 percentage of Grade 5 students performing at or above SDG 4.1.1b 'end of primary' in reading**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys. All figures are presented using rounded values.

Note: Not all differences have been statistically tested at the 95% confidence level. These values will be reported in an upcoming secondary research piece on SEA-PLM and the SDGs.

**Figure 3.11: 2024 and 2019 percentage of Grade 5 students performing at or above SDG 4.1.1b 'end of primary' in mathematics**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Not all differences have been statistically tested at the 95% confidence level. These values will be reported in an upcoming secondary research piece on SEA-PLM and the SDGs. All figures are presented using rounded values.



# Chapter 4

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## Equity and learning opportunities in primary education

# Chapter 4 Equity and learning opportunities in primary education

## 4.1 Introduction

Governments and ministries of education are committed to ensuring equitable access to quality learning opportunities. However, as Chapter 3 demonstrates, children’s learning trajectories and learning outcomes by the end of Grade 5 vary greatly both between and within countries.

Education policy and the local community both shape learning and school conditions as well as student and teacher experiences and attitudes. Alongside environmental and individual circumstances, these factors can support or hinder learning progression and need to be carefully understood and considered when shaping policy and practice, to ensure they support equity and reduce disparities.

The SEA-PLM datasets contain rich data on student, school and teacher characteristics that help to unpack some of the causes and factors behind these differences.<sup>23</sup> These student factors include socioeconomic status, gender, linguistic background and pre-primary experience. School factors include location (rural/urban, status (public/private) and resourcing (e.g. textbook availability). Teacher factors include training and qualifications. Understanding how such factors may contribute to inequalities in learning and learning opportunities supports sound policymaking and efforts to counter social inequalities.

The variables presented below have been identified as key factors driving inequalities and disparities in learning; many were also unpacked in the *SEA-PLM 2019 Main Regional Report* and secondary analysis. Many of these are characteristics and variables of common interest to the participating countries. Across the region, similar sub-populations show variance in performance, indicating that despite individual characteristics in each country and education system, they may face similar challenges in providing equitable, quality education.

The chapter also compares findings from the 2019 and 2024 cycles to highlight key changes in teaching and learning resources, teaching practices and school environments. Comparing the learning outcomes and the potential factors between the two cycles supports a deeper understanding of how children learn and what structural or contextual barriers and enablers affect their educational journey. Optimizing resources and learning opportunities for students’ needs is critical in all educational systems, particularly to build solid foundational skills in language and mathematics.

While this section provides a broad overview, it does not cover all dimensions of inclusivity and fairness in education policy. As with the 2019 datasets, further secondary analysis is recommended and planned to delve deeper into specific areas of educational policy and practices. More nuanced and context-specific analyses may be required to reflect the realities of primary schools and sub-groups within countries and to identify the most appropriate and effective interventions. Additional regional secondary reports will be released by the SEA-PLM Regional Secretariat to deepen this analysis; further regional and national research is also expected to be completed by interested stakeholders. Country-specific snapshots for key variables will also be available for further contextualization.

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<sup>23</sup> Responses reflect the experiences, perceptions and attitudes of respondents and may deviate from official or administrative data published by Ministries of Education.

The discussion begins by examining the effects on learning achievement of key student characteristics:

- socioeconomic status
- academic resilience
- gender
- preschool education
- grade repetition
- age
- speaking the language of instruction at home

It then goes on to discuss significant school and teacher characteristics.

This chapter provides nuanced information to unpack how student, teacher and school characteristics correlate with different levels of performance on the SEA-PLM test in each participating country regardless of their overall system performance. These background factors are an important dimension of fully understanding the inequities and disparities within and across the participating countries. The role of systems and schools in providing quality learning experiences for all children is crucial for children's success in basic education.

## **4.2 Student characteristics**

### **Socioeconomic status**

SEA-PLM 2019 findings indicated the strong explanatory power of children's socioeconomic context and home environment. Students from higher socioeconomic status (SES) backgrounds tend to achieve higher proficiencies than their peers from lower SES groups. This finding generally holds true in national, regional and international assessments. The SEA-PLM 2024 results likewise demonstrate the strong impact of the family's SES on learning outcomes. Family SES also often counters or elevates the impact of other factors contributing to learning outcomes, including gender, age, prior educational experience and language.

SES is a construct that combines occupational, educational and wealth influences, based on responses by the parents of the Grade 5 students (see Box 4.1).

#### *Box 4.1: SEA-PLM SES index*

The SEA-PLM 2024 study developed a socioeconomic status (SES) index based on information provided by both students and parents, to capture the relationship between children's socioeconomic status and their learning performance in reading, writing<sup>24</sup> and mathematical literacy. Students' national SES index scores (generated in each country and study cycle) are not directly comparable between years and countries, but the SES index in each country creates enough variation between student socioeconomic attributes to create four subgroups of students, from the least to greatest SES advantage. Statistical measures are applied to divide the SES index in each country into four equal parts, each representing 25 per cent of Grade 5 students.

The average performance in reading and mathematics estimated for each of those four groups can therefore be compared between countries and study cycles. This chapter presents the results by the lowest and highest SES groups, including separately for girls and boys.

As in other comparative large-scale assessments, SES in SEA-PLM is defined as a construct combining educational, occupational and wealth influences (Hauser, 1994). The SEA-PLM 2024 SES index was computed for each child by combining individual responses from the parent questionnaire about parental education, parental occupation and home possessions. The higher scores on this index correspond to greater resources available to the family. The technical methodology chapter (Chapter 2) provides more details on the construction of the index.

SEA-PLM 2024 data show that there is a positive (moderate to strong) correlation between the national SES index as measured through the SEA-PLM survey and Grade 5 student performance. This correlation is found for both reading (ranging from 0.28 in Cambodia to 0.56 in the Philippines) and mathematics (ranging from 0.34 in Lao PDR and 0.36 in Cambodia to 0.48 in the Philippines).<sup>25</sup> This statistical, linear relationship is observed between students' SES and reading or mathematics performance in all countries. Tables in Annex 4 report the exact correlation and linear relationship observed in 2024 for each country in reading and mathematics.

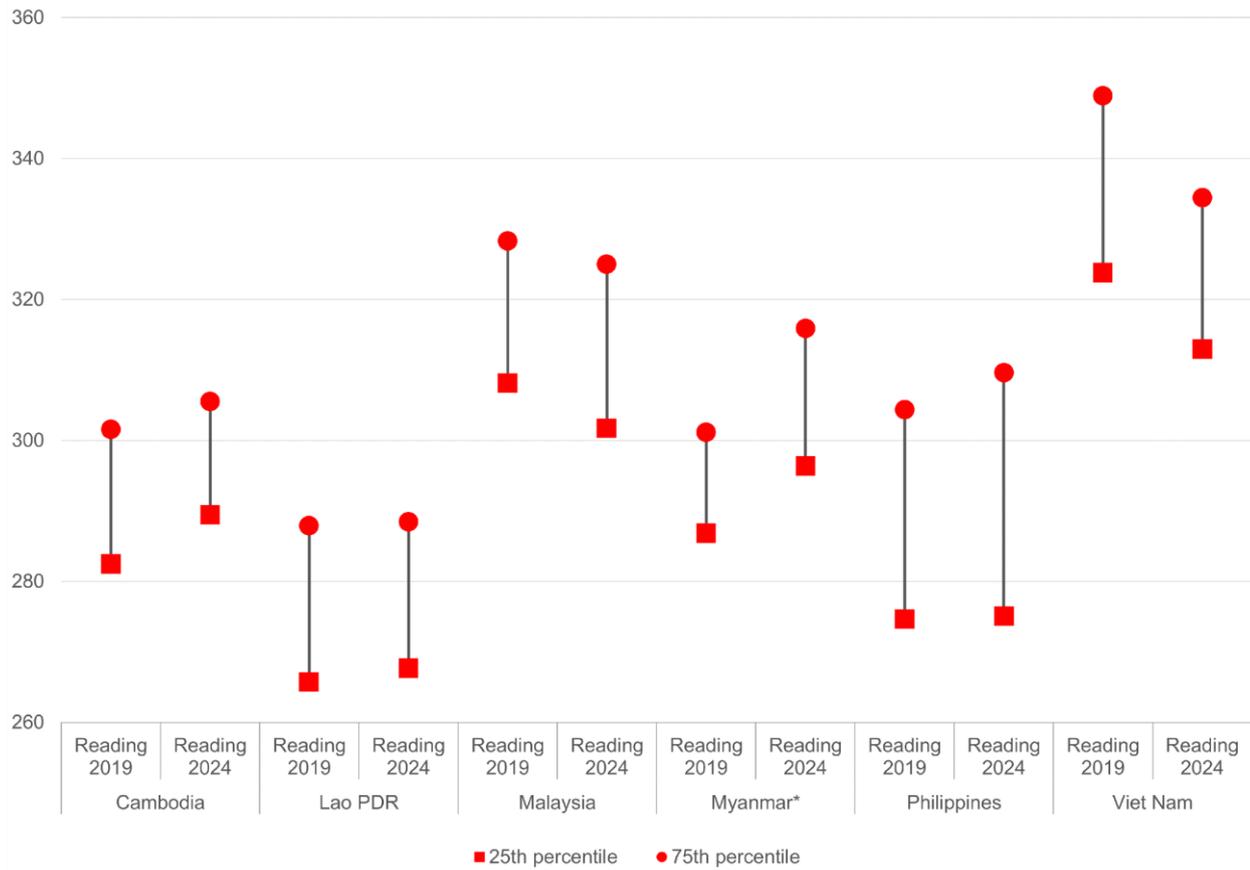
In some countries, such as Viet Nam, the influence of socioeconomic home background appears to be strong for the low-performing children but weaker for the high-performing children. In other participating countries, the correlation between home background and learning outcomes remains fairly stable across all learner profiles, suggesting that the impact of socioeconomic background is consistent regardless of students' performance levels.

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<sup>24</sup> A separate report will be released on the writing.

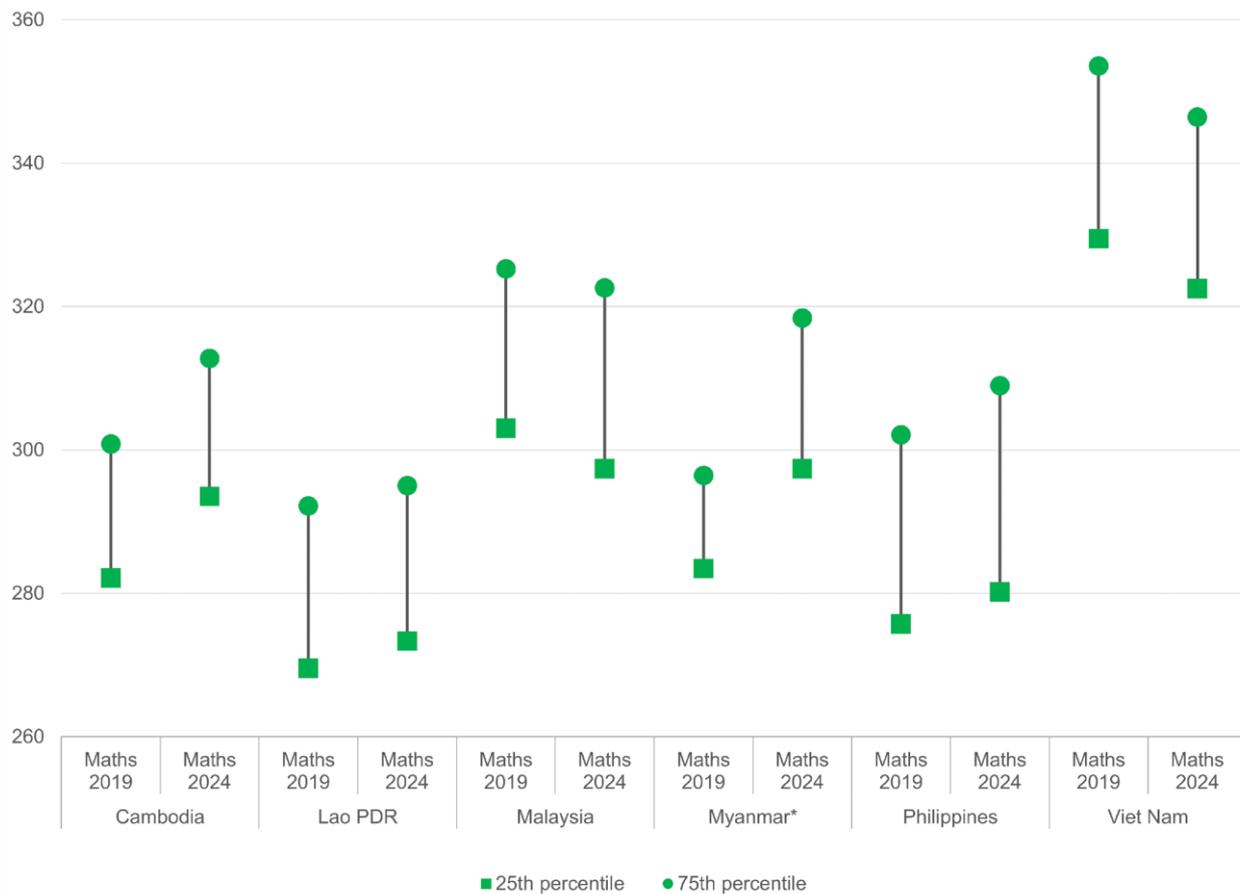
<sup>25</sup> The closer the value is to 1, the stronger the explanatory relationship is (the relationship increases/decreases at a constant rate).

**Figure 4.1: Differences in average reading by lowest and higher socioeconomic status, by country and survey**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

**Figure 4.2: Differences in average mathematics by lowest and higher socioeconomic status, by country and survey**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Figure 4.1 and Figure 4.2 demonstrate the general pattern of increasing achievement from lower to higher SES index, in both 2019 and 2024. In all countries, students belonging to the bottom SES quartile had, on average, the lowest levels of achievement in both reading and mathematics compared with students belonging to the upper SES quartile. This pattern is consistent across reading and mathematics. The magnitude of the difference between the group averages ranges from 14 (Myanmar) to 34 (Philippines) scale points. It can be estimated that year of education is roughly equivalent to a year of education; hence in some countries, the difference in learning outcomes between socioeconomic groups represents a difference of two years of learning.

The extent of the performance gap between students from wealthier and poorer households reflects, to a large degree, the capacity of education systems and communities to mitigate the effects of broader societal inequalities. The greater the disparity in achievement between these groups, the more critical it becomes for systems to ensure that learning environments, school resources and early interventions effectively counteract the disadvantages associated with socioeconomic challenges. Addressing these inequities is essential for ensuring that all children, regardless of their family background, can achieve foundational learning by the end of primary education and continue to progress through the education system.

The greater the difference between the learning results of children with more family resources and the learning results of children with fewer family resources, the more that all education stakeholders, from the ministry to schools and the community, will need to find mechanisms and support systems to reduce the effect of societal inequalities in learning from birth to the end of primary education and beyond.

When comparing the effect of SES in 2019 and 2024, differences remain high and constant across the majority of countries (regardless of the overall level of achievement observed in the country). In the Philippines, however, small changes are evident in the learning performance gap between the lowest and highest SES group in reading: compared with 2019, the gap between the SES quartiles has widened over time (by 2 scale points). A similar increasing gap is noticed in Myanmar in both reading and mathematics. Table 4.1 and Table 4.2 show the differences between the highest and lowest SES groups in 2019 and 2024 for each domain; an increase in the gap implies a growing inequality between the highest and lowest SES groups.

**Table 4.1: Differences in average reading by lowest and highest socioeconomic status, by country and survey**

Reading						
Country	2024 difference (Q4) - (Q1)		2019 difference (Q4) - (Q1)		Difference 2024 vs 2019	Significance of change
Cambodia	16.1	(1.30)	19.1	(1.58)	-3.0 (2.05)	•
Lao PDR	20.8	(1.82)	22.2	(1.75)	-1.4 (2.52)	•
Malaysia	23.3	(1.80)	20.2	(1.46)	3.1 (2.32)	•
Myanmar	19.5	(1.21)	14.4	(1.40)	<b>5.2</b> (1.85)	▲
Philippines	34.5	(1.56)	29.7	(1.65)	<b>4.8</b> (2.27)	▲
Vietnam	21.5	(1.06)	25.1	(1.80)	-3.6 (2.09)	•

\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Differences are reported by scale points

() Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

▼ Denotes a significant decrease from 2019

• Denotes no significant change from 2019

**Table 4.2: Differences in average mathematics by lowest and highest socioeconomic status, by country and survey**

Mathematics						
Country	2024 difference (Q4) - (Q1)		2019 difference (Q4) - (Q1)		Difference 2024 vs 2019	Significance of change
Cambodia	19.3	(1.33)	19.1	(1.58)	0.6 (2.14)	•
Lao PDR	21.7	(2.11)	22.2	(1.75)	-1.0 (2.77)	•
Malaysia	25.2	(1.88)	20.2	(1.46)	3.0 (2.37)	•
Myanmar	21.1	(1.39)	14.4	(1.40)	<b>8.1</b> (1.87)	▲
Philippines	28.8	(1.54)	29.7	(1.65)	2.4 (2.17)	•
Vietnam	23.9	(1.57)	25.1	(1.80)	-0.2 (2.62)	•

\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Differences are reported by scale points

() Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

▼ Denotes a significant decrease from 2019

• Denotes no significant change from 2019

Socioeconomic conditions significantly influence learning progress in basic education for many students – a real obstacle to building a fair learning system for all children. Inevitably, this fact raises the broader question of how primary education systems and individual practices can compensate for the role of SES on learning trajectories.

Across countries, students’ home SES explains a meaningful share of disparities in student achievement. In reading, the SES accounts for between 8 per cent (Cambodia) and 31 per cent (the Philippines) of the variance. For mathematics, the proportion of variance explained ranges from 11 per cent (Lao PDR) to 23 per cent (the Philippines) (see Annex 4).

## Academic resilience

The correlation between SES and learning outcomes is moderate to strong in most countries, and SES remains one of the strongest predictors of differences in learning outcomes between children. However, there are students in each country who counter this trend. This demonstrates that coming from a lower SES background does not equal low learning outcomes, and nor is being from the highest SES a guarantee of higher outcomes. These students are referred to as positively academically resilient (from the lowest SES backgrounds but demonstrating the highest performance observed in the country) and negatively academically resilient (from the highest SES backgrounds but demonstrating the lowest learning outcomes observed in the country).

Positive and negative academic resilience are observed in each country. Increasing the number of positively resilient and reducing the number of negatively resilient students over time demonstrates improved system performance and a more equitable system. Such trends indicate that interventions and policies are contributing to reducing the impact of SES on learning performance and supporting each child to have an equal chance at a quality education.

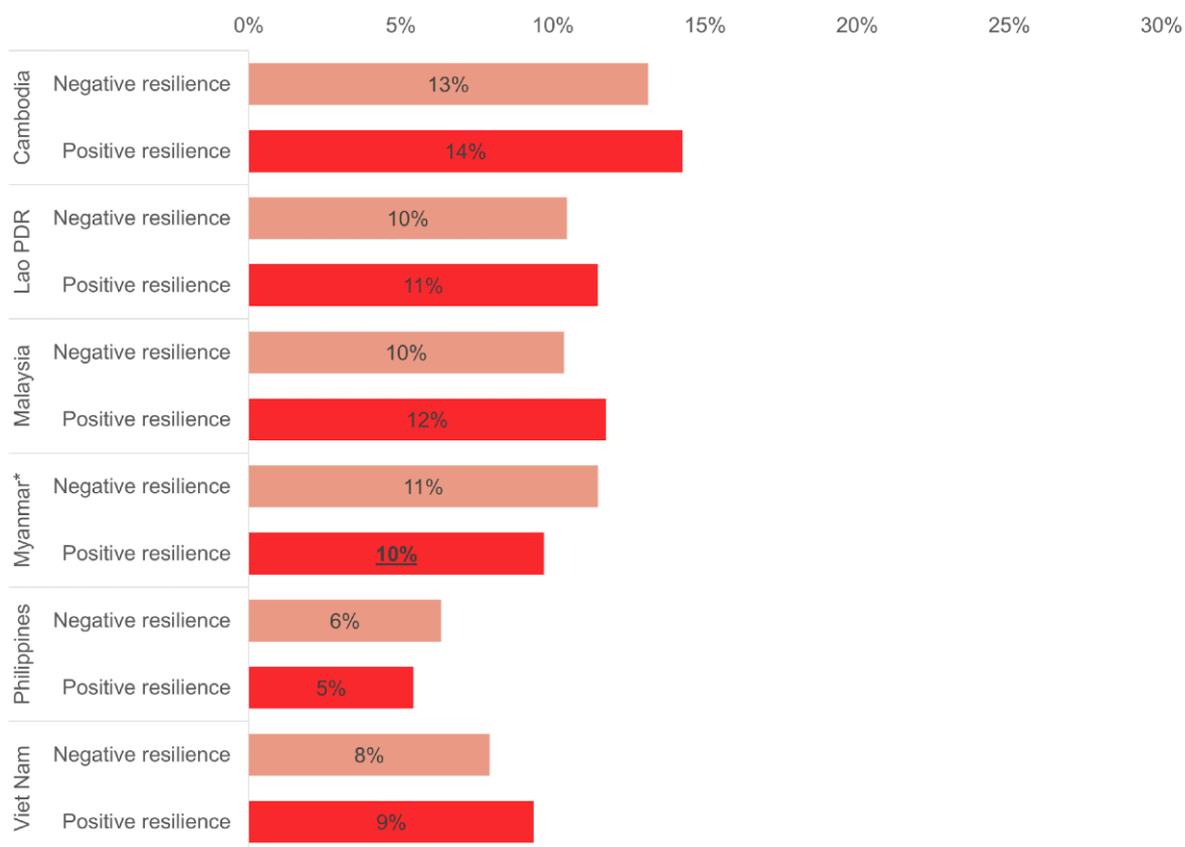
*Box 4.2: Definition of academic resilience*

Positively academically resilient children are defined in this report as children who fall within the bottom national SES quartile and score in the top quartile of SEA-PLM reading or mathematics scores. In other words, in each country, they are the children who are among the 25 per cent most socioeconomically disadvantaged who also achieve a reading or mathematics score within the top 25 per cent of scores in their country.

Positive academic resilience in countries could cover students who, despite being in the highest level of national scores, do not achieve the expected level of proficiency by the end of primary education. (See Chapter 3 for the distribution of proficiency scales in each country.)

Negatively academically resilient children are defined in this report as children who fall within the highest national SES quartile and score in the bottom quartile of SEA-PLM reading or mathematics scores. In other words, in each country, they are the children who are among the 25 per cent most socioeconomically advantaged who also achieve a reading or mathematics score within the lowest 25 per cent of scores in their country.

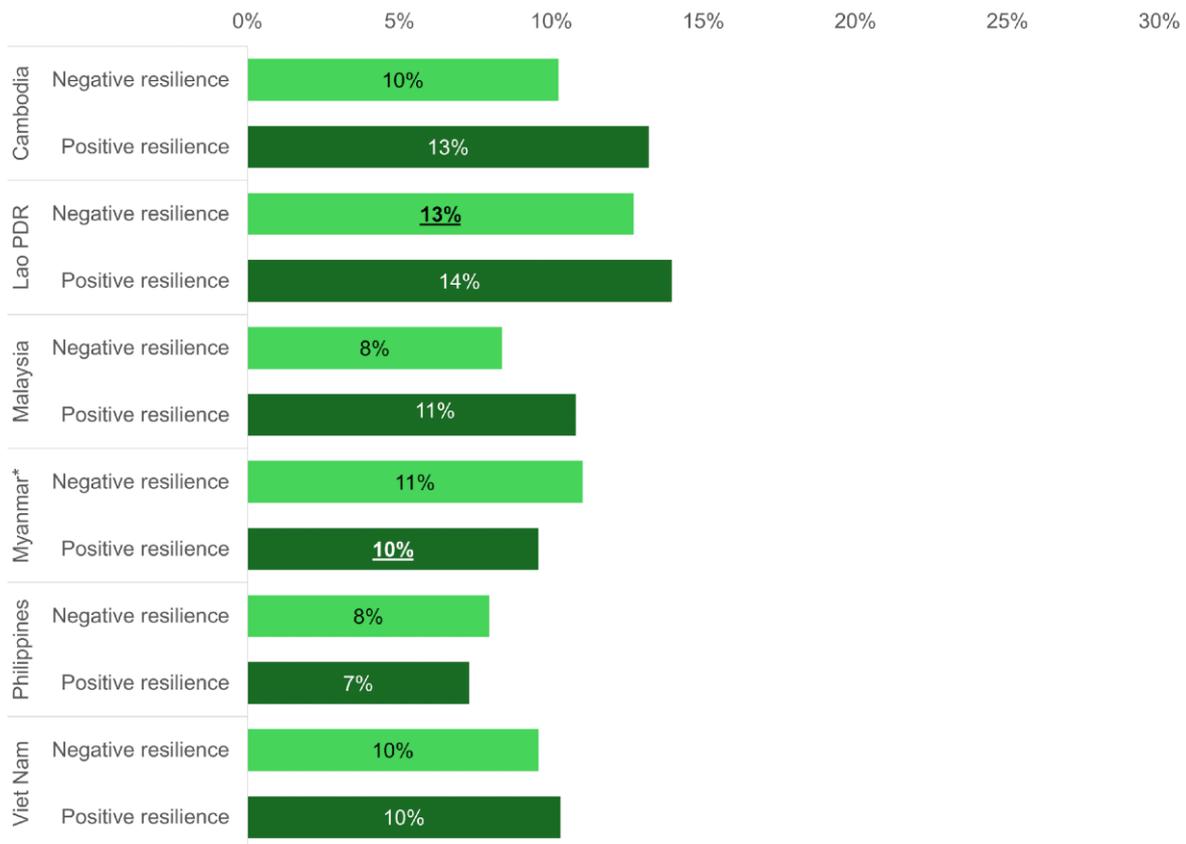
**Figure 4.3: Positive and negative academic resilience, by country: reading**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Values are only reported for SEA-PLM 2024. Labels with significant differences from 2019 are underlined and bolded. All figures are presented using rounded values.

**Figure 4.4: Positive and negative academic resilience, by country: mathematics**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Values are only reported for SEA-PLM 2024. Labels with significant differences from 2019 are underlined and bolded. All figures are presented using rounded values.

In 2024 (and 2019), a small to modest range of students showed positive academic resilience in reading and mathematics (in every country within the SEA-PLM survey, regardless of the average level of proficiency achieved in the country), overcoming less advantaged backgrounds to meet higher levels of proficiency. On the other hand, a non-negligible percentage of children from advantaged backgrounds were struggling with learning. No significant statistical changes are observed across the countries when compared with 2019, except in Myanmar with a slight reduction (-3 per cent) in positively resilient students in both reading and mathematics, and in Lao PDR, with a small percentage more (+2 per cent) negatively resilient students in mathematics only.

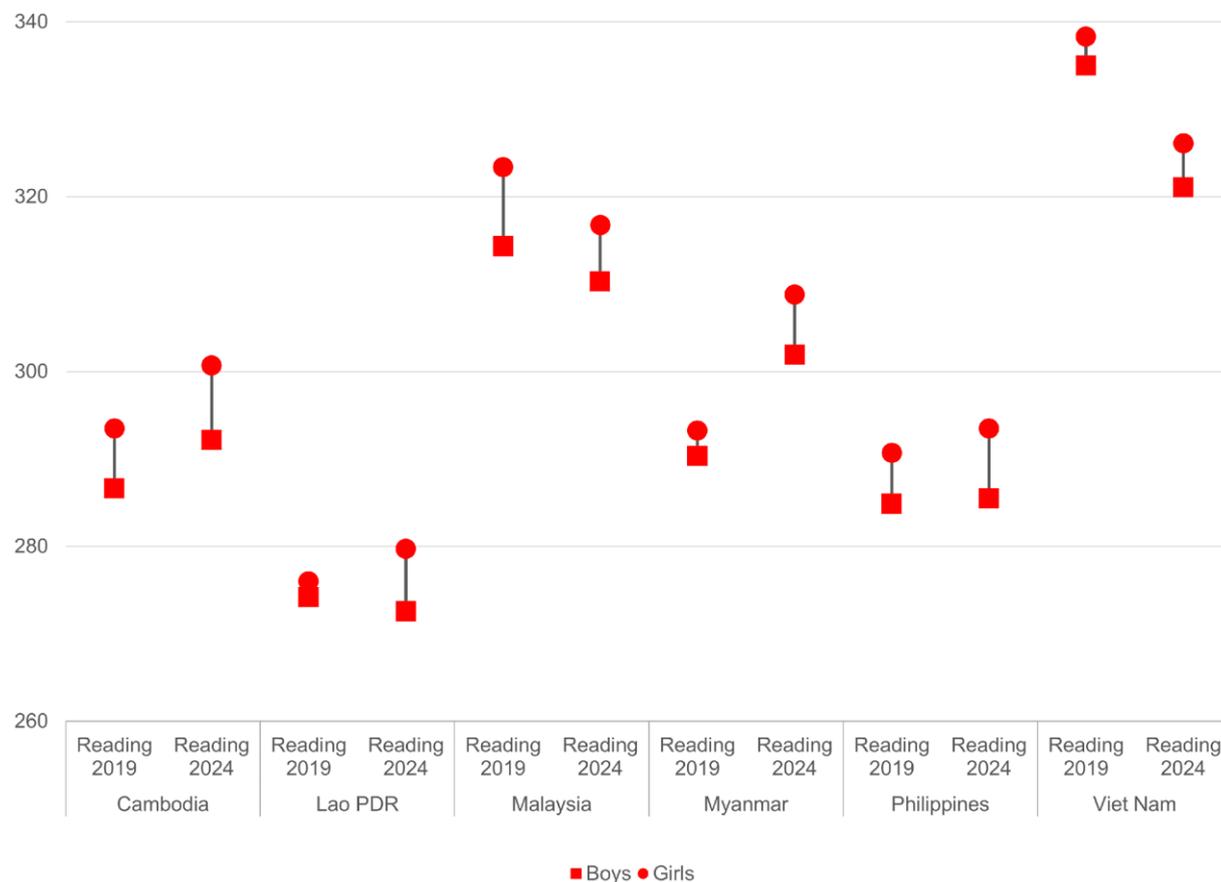
A higher percentage of positively academically resilient children indicates more equitable systems, or systems with mechanisms that effectively support students from more disadvantaged backgrounds. Across the participating countries, the Philippines had the lowest proportion of students classified as either positively or negatively academically resilient (in English testing language).

## Gender

Across the six participating countries, girls' and boys' enrolment in primary education is fairly equitable and this is reflected in the equal participation rates of boys and girls in the SEA-PLM 2024 surveys. However, despite this indication of fairly equal access to learning opportunities, there are notable differences in the learning outcomes by the end of primary education.

SEA-PLM 2024 data show that girls outperformed boys on average in most of the SEA-PLM 2024 participating countries and learning domains. This pattern holds across the reading and mathematics averages, as reported in Figure 4.5 and Figure 4.6. Furthermore, girls’ learning performance substantially exceeded boys’ learning performance as cognitive tasks became more complex, as captured by the higher bands of the SEA-PLM proficiency scale.

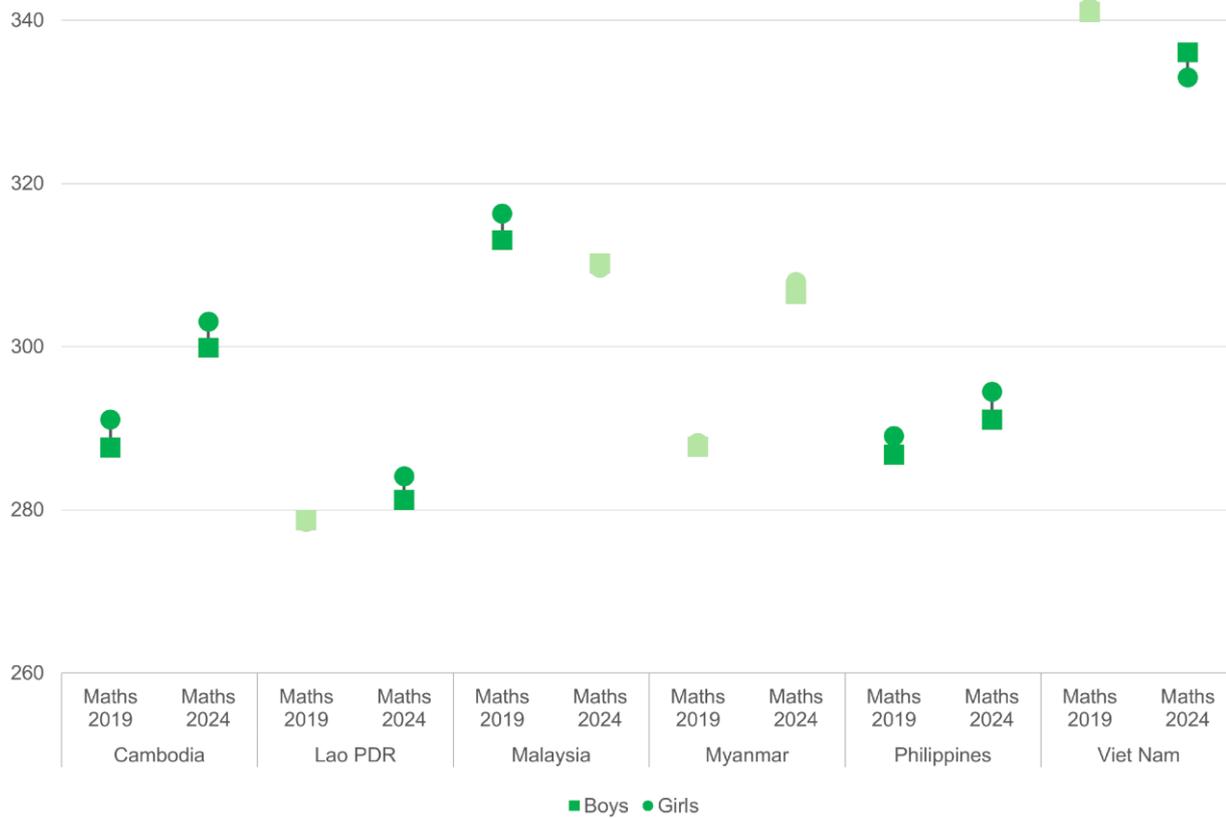
**Figure 4.5: Differences in average reading by gender, country and survey cycle**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Like in 2019, on average, girls showed greater average performance than boys (ranging from 4 to 9 scale points) in reading, a pattern that was evident and significant in all six SEA-PLM 2024 countries (see Figure 4.5). In several countries, this difference between boys and girls has widened (Lao PDR, the Philippines and Viet Nam); in others, it has narrowed (Malaysia) or remained stable (Cambodia). There is a sizeable, significant gap between boys’ and girls’ reading proficiency in Myanmar in 2024.

**Figure 4.6: Differences in average mathematics by gender, country and survey cycle**



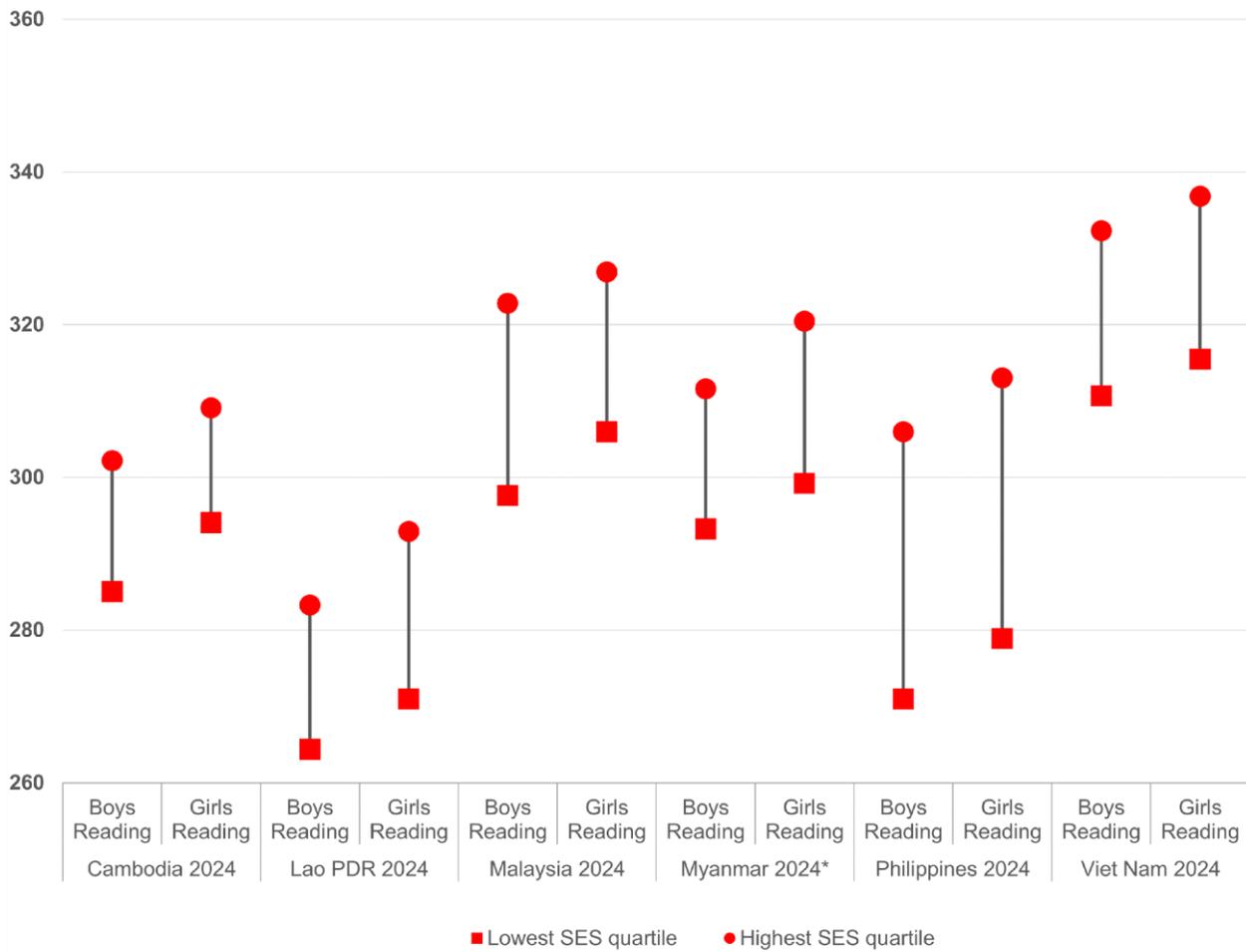
\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

In mathematics in 2024, the differences between boys’ and girls’ performance are more mixed (see Figure 4.6). While girls and boys showed similar performance in Malaysia and Myanmar, girls outperformed boys in Cambodia, Lao PDR and the Philippines. There are also changes in patterns: in Lao PDR and Viet Nam in 2019, there was no significant difference between boys’ and girls’ performance; but in 2024, girls outperformed boys in Lao PDR, and boys outperformed girls in Viet Nam (the only case across the region and both domains where the boys’ average score was higher than the girls’). On the other hand, in Malaysia, while a difference was observed in mathematics in 2019, it was no longer observed in 2024.

When socioeconomic backgrounds are considered, further insights are gained into who is and is not learning and how SES interacts with gender. Figure 4.7 captures the differences in the reading domain between the lowest and highest national SES quartiles for boys and for girls in 2019 and 2024. Figure 4.8 presents the same analysis for mathematics.

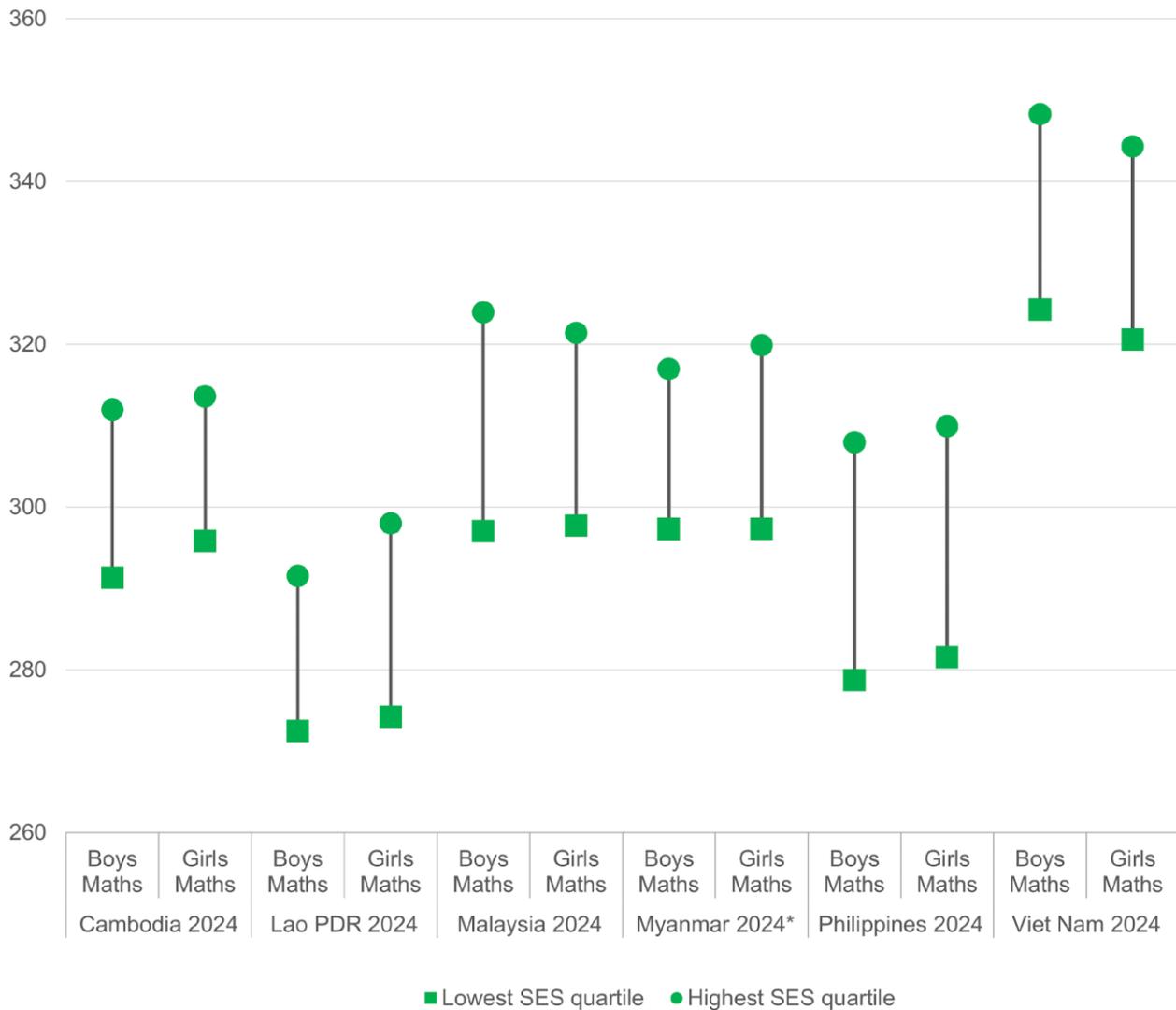
**Figure 4.7: Differences in 2024 average reading by boys and girls, by lowest and highest SES group and country**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

In reading, consistently across the region, girls from the highest SES have the highest levels of performance, and boys from the lowest SES have the lowest scores. In Cambodia and Malaysia, the gap between girls from the highest and lowest SES is smaller than the same gap for boys in the two countries. The magnitude of the difference has not changed in any country from the 2019 cycle, underlining the persistence of the impacts of SES and gender.

**Figure 4.8: Differences in 2024 average mathematics by boys and girls, by lowest and highest SES group and country**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

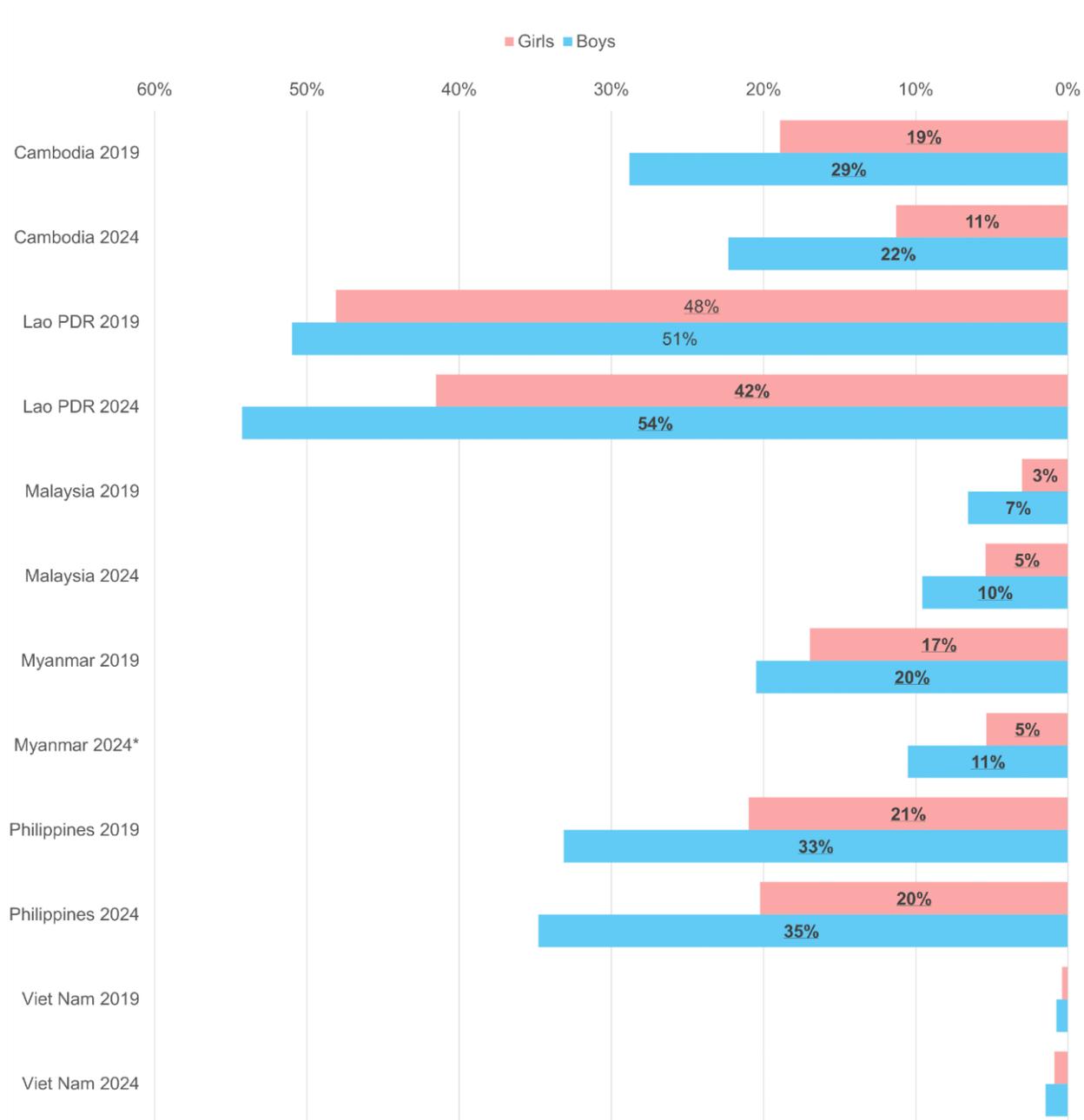
In mathematics, there is more variance in the learning outcomes of boys and girls when considering their SES background. In Malaysia and Viet Nam, boys from the highest SES had the highest average scores, while boys from the lowest SES in Malaysia and girls from the lowest SES in Viet Nam had the lowest average performance. Since 2019, while overall achievement levels may have shifted, the relative gender and SES gaps have remained stable, suggesting persistent structural and contextual influences on learning outcomes.

Further detailed information is available in Annex 4: average performances by SES quartile, and differences between boys and girls within and between quartiles and over time, in national snapshots, full tables of results and comparison between 2019 and 2024.

Similar insights are observed across the SEA-PLM proficiency bands, notably in reading, with low-performing boys outnumbering low-performing girls, and high-performing girls outnumbering high-performing boys (this

was true in all countries except for performance in mathematics in Viet Nam). In Malaysia and Viet Nam, where the national average score declined, there were more girls and boys in the lowest performing bands in 2024 than in 2019; in the Philippines, there was also an increase in the proportion of boys in the lowest bands in 2024 when compared with 2019. Boys' and girls' performance and differences across the SEA-PLM proficiency bands are reported in Annex 4.

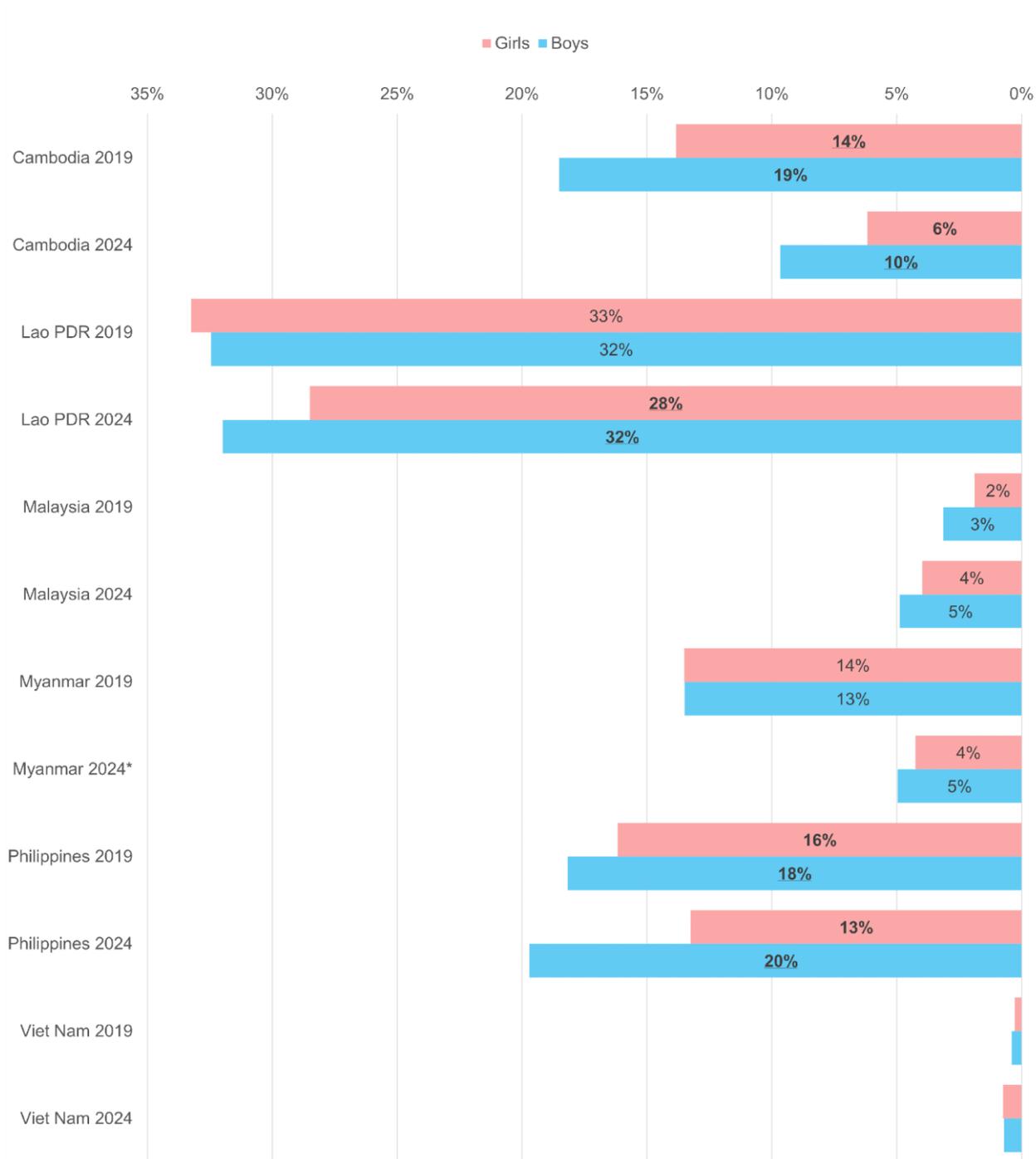
**Figure 4.9: Very low proficiency by country, gender and SEA-PLM cycle: reading**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences between boys and girls are underlined and bolded for each survey. All figures are presented using rounded values.

Figure 4.10: Very low proficiency by country, gender and SEA-PLM cycle: mathematics



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences between boys and girls are underlined and bolded for each survey. All figures are presented using rounded values.

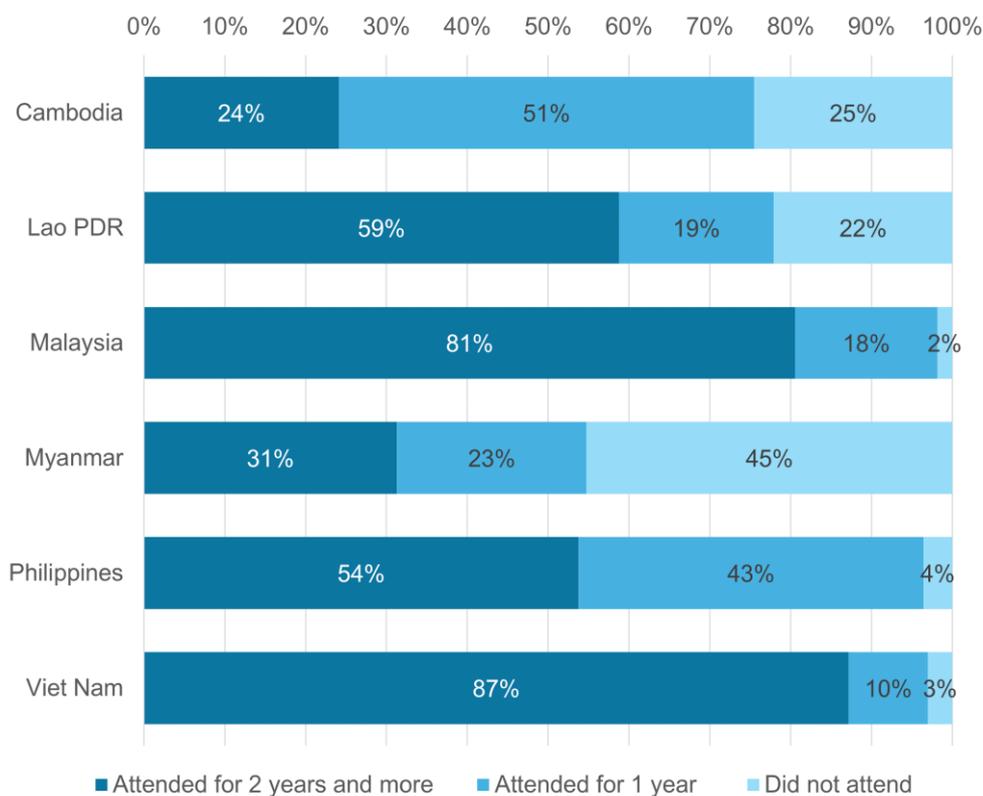
## Preschool attendance

Global evidence strongly supports the positive impact of early childhood education (ECE) on developmental outcomes and academic and socio-emotional learning. This impact has been demonstrated in multiple different assessments and studies.

The 2019 SEA-PLM results demonstrated that the positive impacts of ECE were still evident after five years of primary education, with students who had attended ECE achieving higher scores on average than those without ECE experience (regardless of the length of ECE experience). SEA-PLM data cannot comment on the quality of the ECE, which undoubtedly has an impact on individual children’s learning outcomes and school readiness.

In SEA-PLM 2024, parents of participating children were asked about their child’s preschool attendance. They were asked to indicate the length of their child’s preschool experience before entering Grade 1: none, one year, or two years or more. This is captured in Figure 4.11. Figure 4.12 captures the overall percentage of children who have attended preschool, compared with 2019.

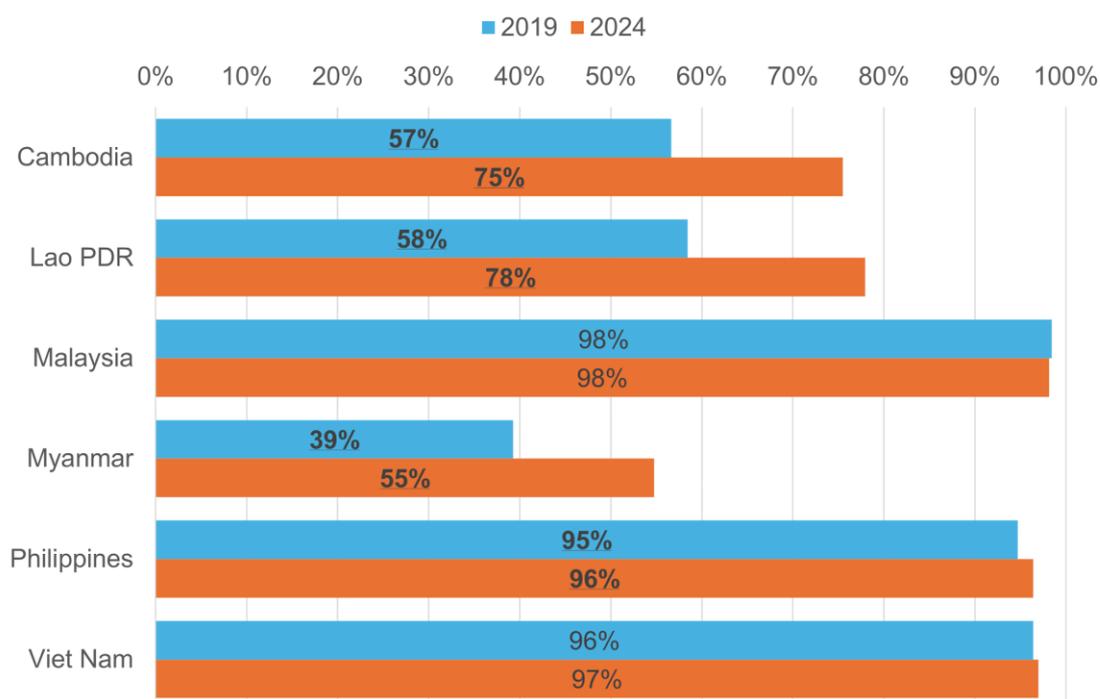
**Figure 4.11: Percentage of Grade 5 students by length of attending preschool education, 2024**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Results are rounded to the nearest whole number, so some totals may appear inconsistent.

**Figure 4.12: Percentage of Grade 5 students who attended preschool education, and changes between 2019 and 2024**

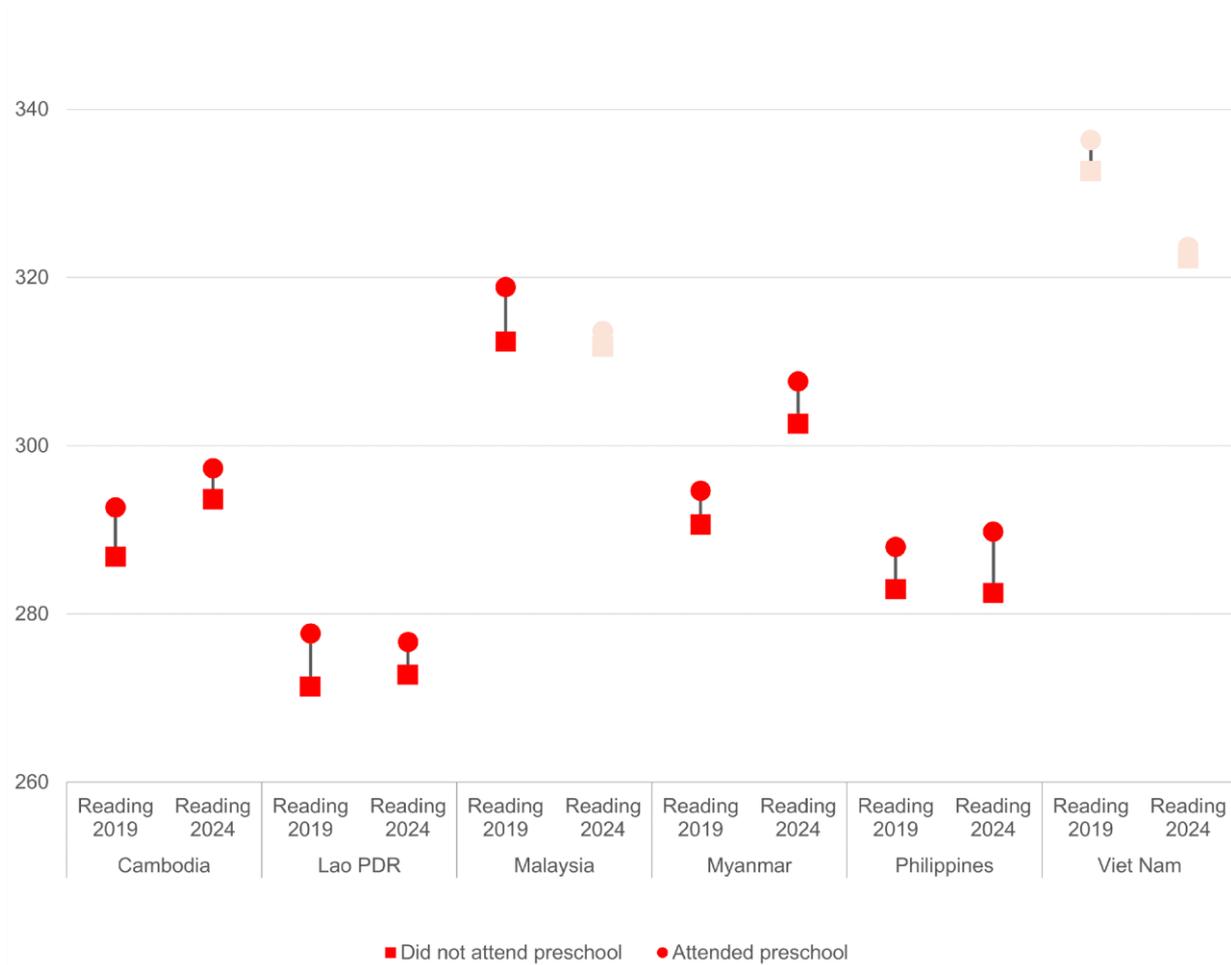


\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

In almost all countries, a greater proportion of the 2024 Grade 5 cohort had benefited from at least some form of preschool (55 per cent to 98 per cent across the participating countries) compared with 2019 (41 per cent to 98 per cent across the participating countries). This increased access to ECE may be due to increased supply or increased demand. It should be remembered that the children in Grade 5 in 2024 were in preschool five to six years ago; the survey therefore captures access to preschool at that time, when policies may have differed from what is in place for preschool-age children today.

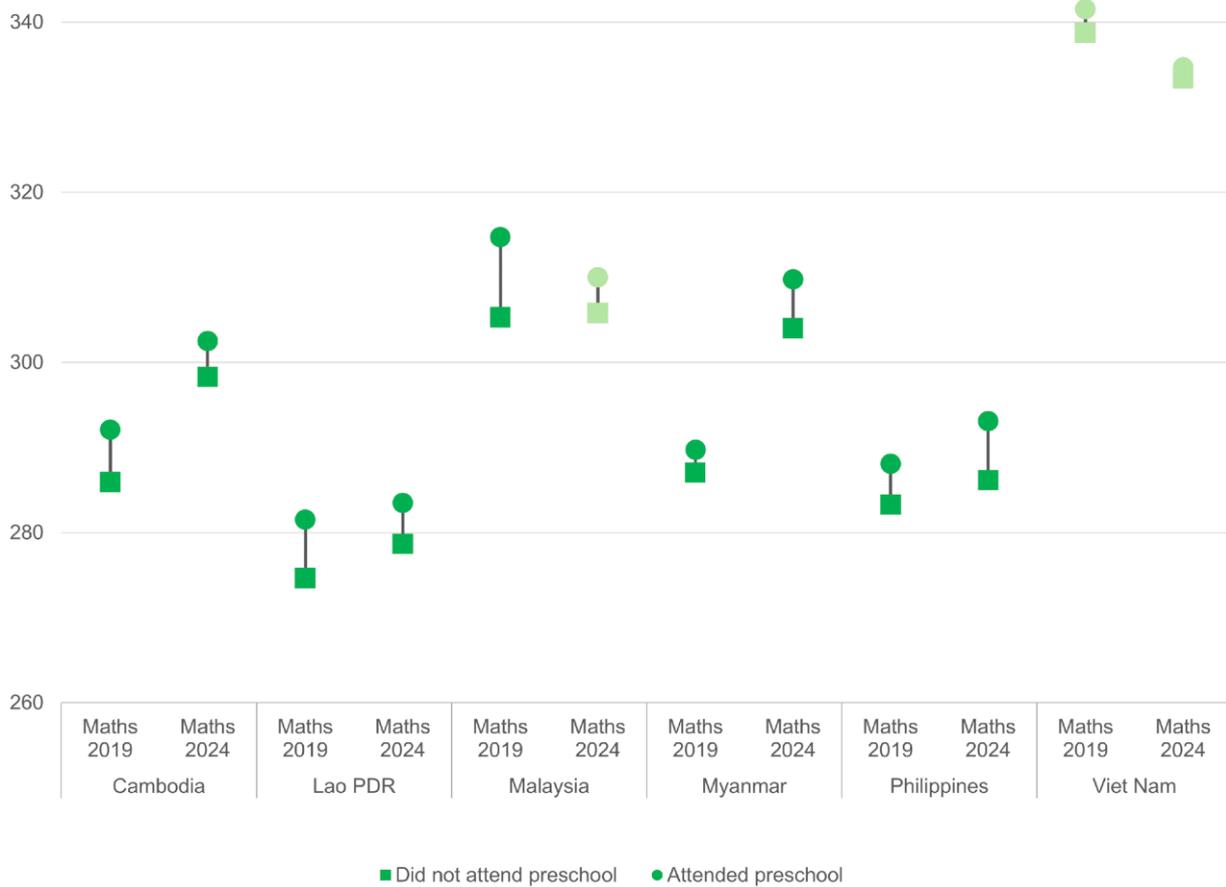
**Figure 4.13: Differences in average reading score by preschool attendance, country and survey cycle**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

**Figure 4.14: Differences in average mathematics score by preschool attendance, country and survey cycle**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

SEA-PLM 2024 data show that in the majority of countries, students who had attended preschool achieved better learning in reading and mathematics by the end of primary education. Score gains ranged from small (from 2 scale points) to medium (up to 12 scale points), almost equivalent to a shift of one full proficiency level on the SEA-PLM proficiency scale, depending on the country and subject.

While not presented here, analysis of the variance of preschool length was also conducted. In Cambodia, Malaysia, the Philippines and Viet Nam, children with more than two years or more year of preschool education had higher reading scores on average than those with only one year, with differences ranging from 4 to 6 scale points. Further, in many countries, the advantages of having participated in any length of preschool, in terms of learning achievements by the end of primary school, can reduce and disappear when socioeconomic differences among families are considered.

It is necessary to delve more into preschool services and practices to understand better whether students have had the same opportunities to participate in quality preschool education, and whether existing programmes are of adequate quality to boost reading and mathematics outcomes. In some contexts, early childhood services

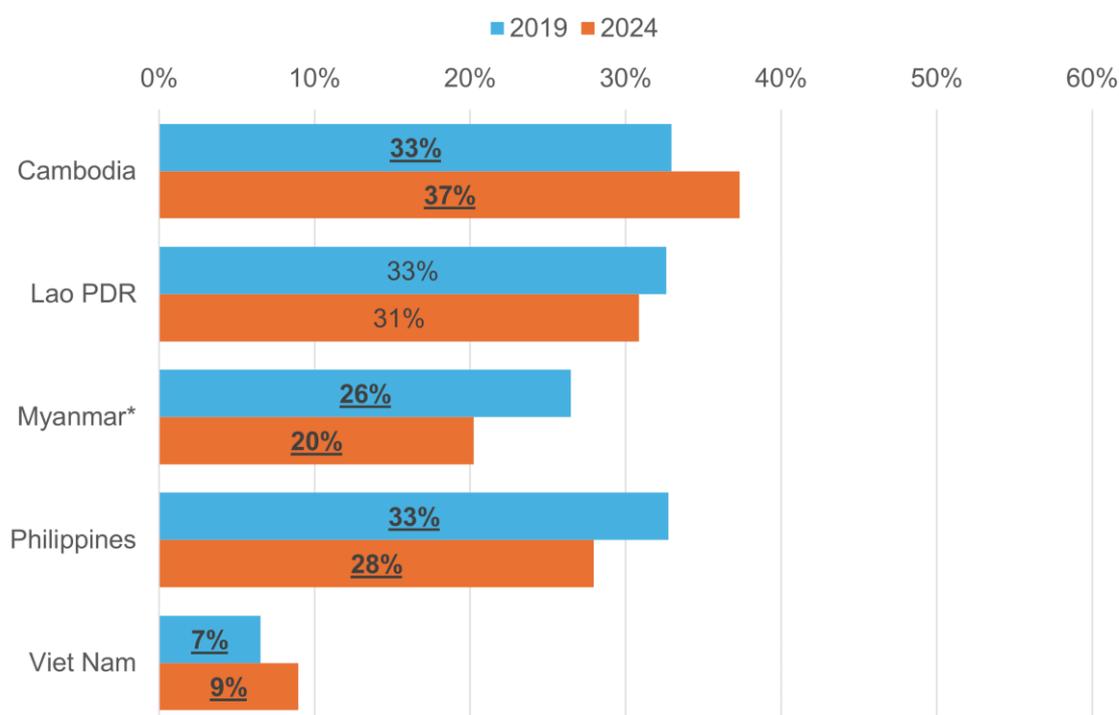
can be delivered in languages that are not the language of instruction for reading and mathematics by the end of primary education (or the language of the SEA-PLM test, as determined by ministries of education).

## Grade repetition

In many studies, grade repetition is systematically associated with lower learning outcomes, with students who repeat a grade likely never to attain the level of students who do not repeat.

Official grade repetition policies vary by country. While Malaysia has adopted a policy of automatic progression, the rest promote children based on their learning performance. Decisions about grade repetition can also often be made by the school and parents.

**Figure 4.15: Percentage of Grade 5 students by grade repetition, and changes between 2019 and 2024**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. Data are based on student responses; the data may differ from administrative data of repetition rates. All figures are presented using rounded values.

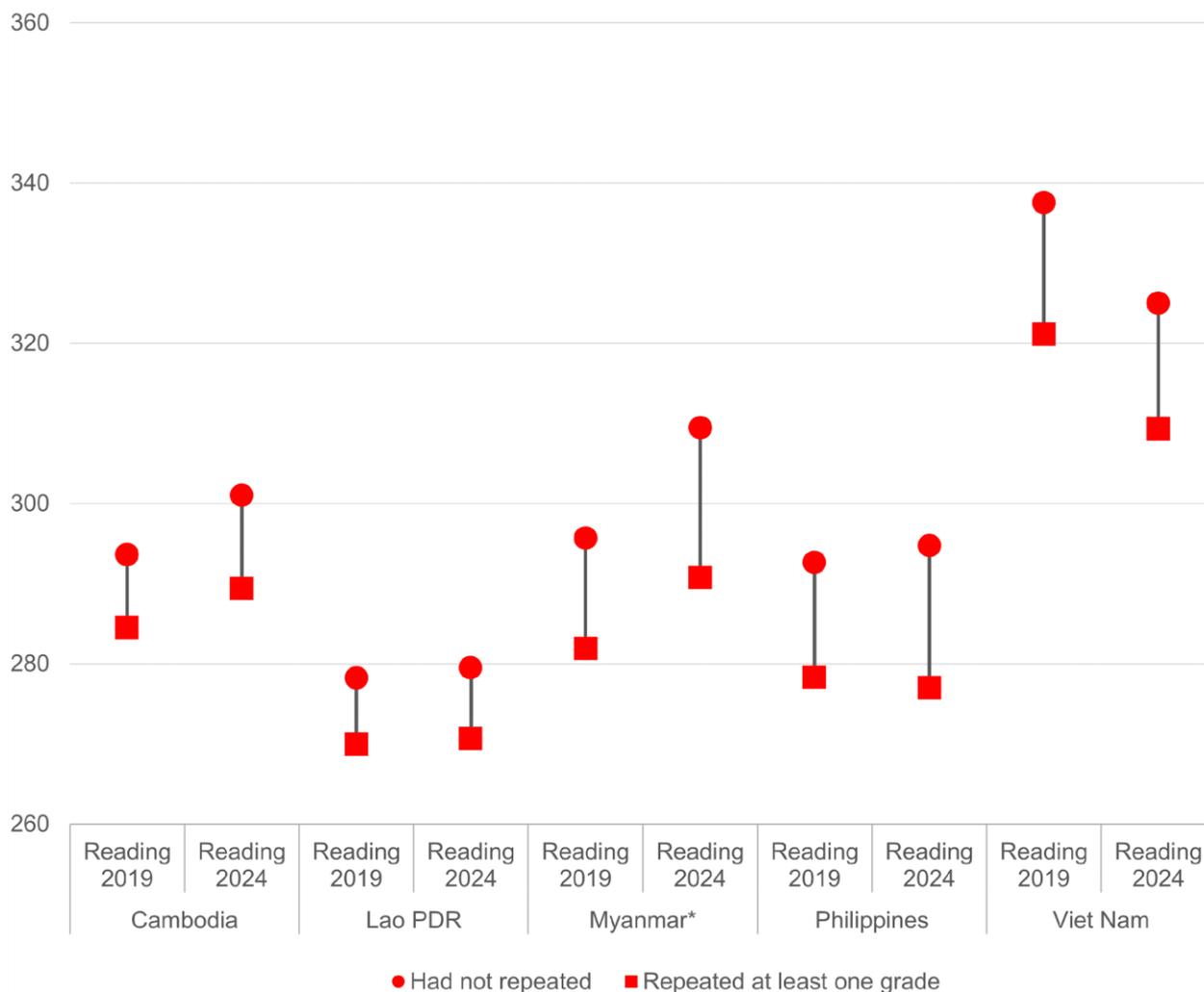
In the region, the percentage of Grade 5 students who reported having repeated at least one grade<sup>26</sup> during their primary school journey ranged from 9 per cent in Viet Nam to 37 per cent in Cambodia (see Figure 4.15). Malaysia operates a no-repetition policy and hence is not included. Except for Lao PDR, where the 2024 average repetition rate remained consistent with the figures reported in 2019, all countries showed significant differences compared with 2019, with increases observed in Cambodia and Viet Nam. In all countries except Viet Nam, the repetition rate as reported by students remains high at over 20 per cent.

The impact on learning outcomes of repeating at least one grade is significant, as shown in Figure 4.16 and Figure 4.17. SEA-PLM 2024 data demonstrate that students who had previously repeated a grade were more likely, on average, to have lower levels of achievement in both reading and mathematics compared with

<sup>26</sup> Responses reflect the experience, perception and attitudes of respondents and may deviate from official data published by Ministries of Education.

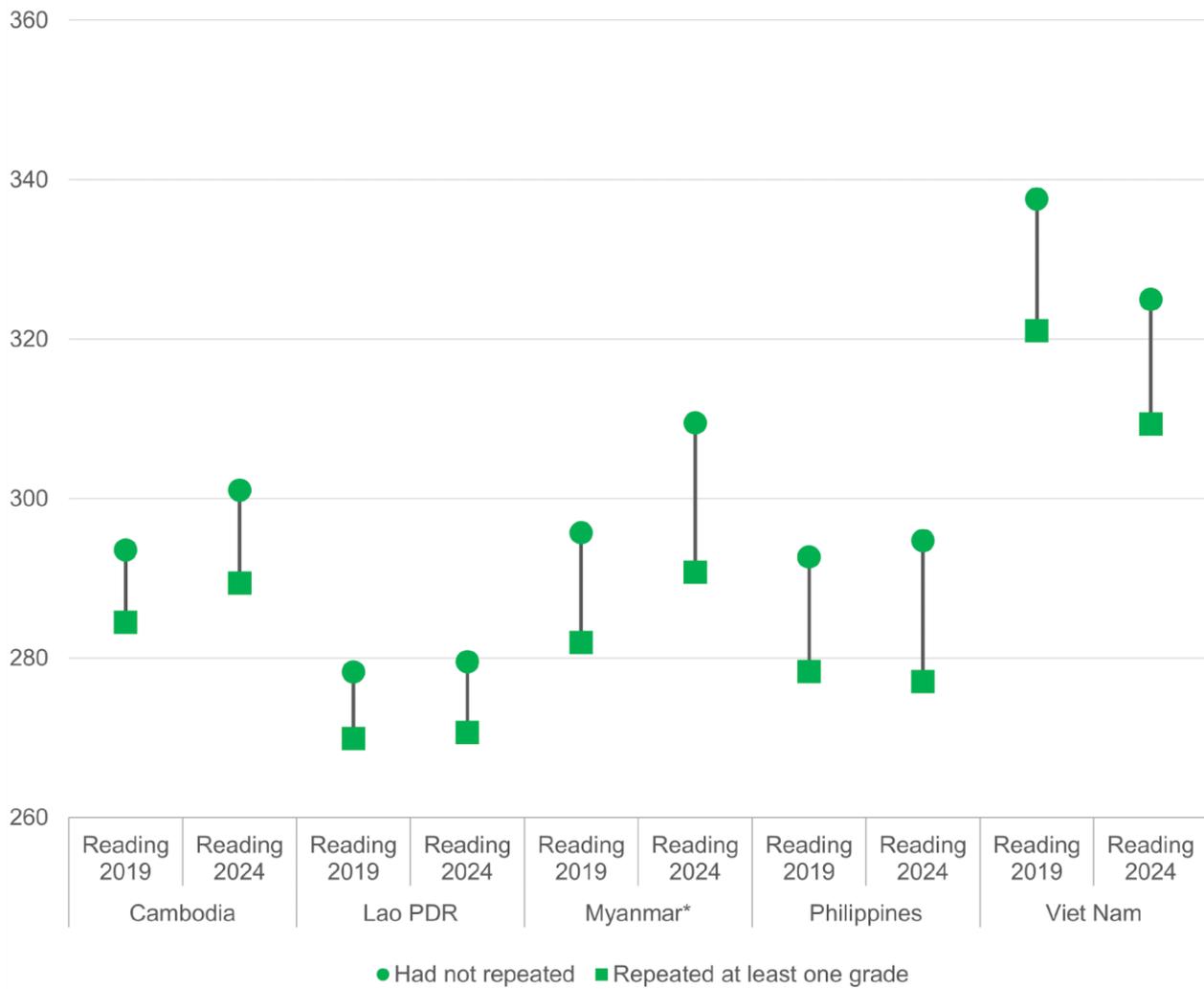
students who had not repeated a grade. Across both domains and all participating countries, the score differences ranged from 8 to 19 scale points in 2019 and 2024, indicating up to one year’s worth of education in some cases.

**Figure 4.16: Differences in average reading scores by grade repetition rates, country and survey cycle**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

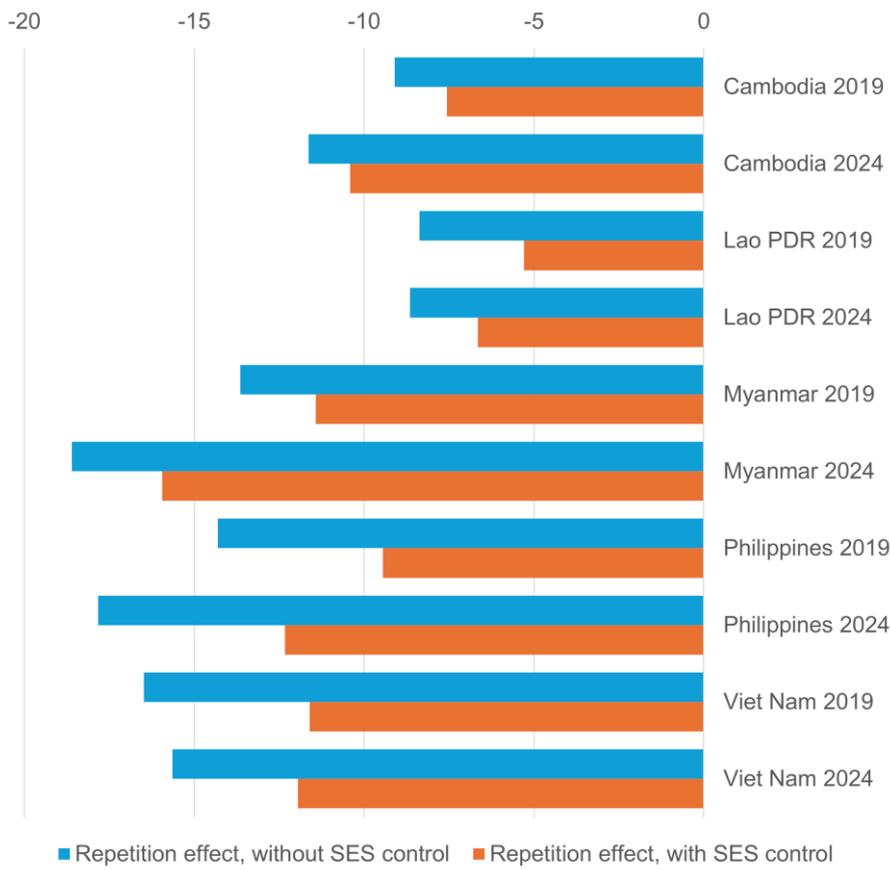
**Figure 4.17: Differences in average mathematics scores by grade repetition rates, country and survey cycle**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

The disadvantage of repeating remains even when socioeconomic differences among students are accounted for, as shown in Figure 4.18. Regardless of socioeconomic background, students who had repeated a grade remained behind students who had not repeated a grade, according to their own reporting.

**Figure 4.18: Differences in average reading scores by repetition status, country, survey cycle and SES control**



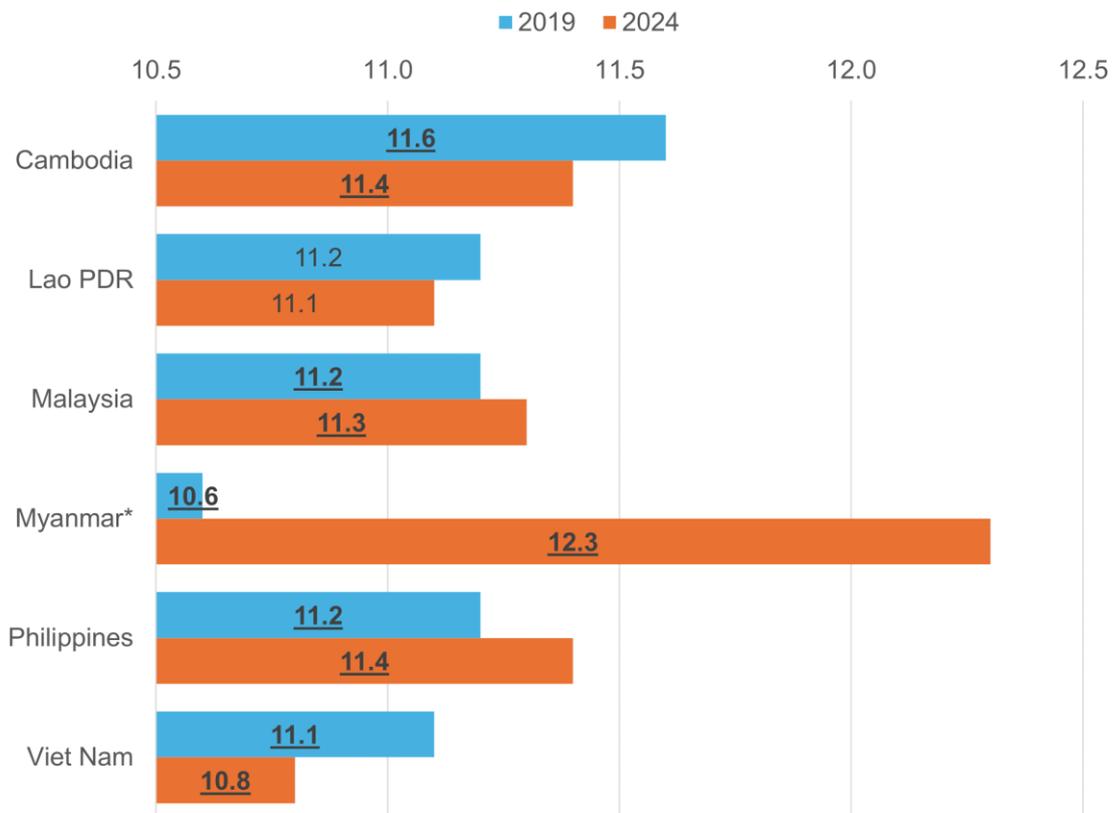
\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: A bar to the left of the Y-axis indicates that students who have repeated at least one grade have lower point scores (as measured by the length of the bar) versus those who have not. Controlling to SES neutralizes the impact of wealth; the closer the bars are, the less of an impact SES has.

## Age

The SEA-PLM student questionnaire captured the 2024 Grade 5 student cohort age at the date of the main data collection, based on information provided by teachers and students. Figure 4.19 presents the mean age and differences compared with 2019 in each country. The majority of SEA-PLM 2024 students in Grade 5 were 10 years old, having started Grade 1 at the age of 6.

**Figure 4.19: Grade 5 students' average age, changes between 2019 and 2024**

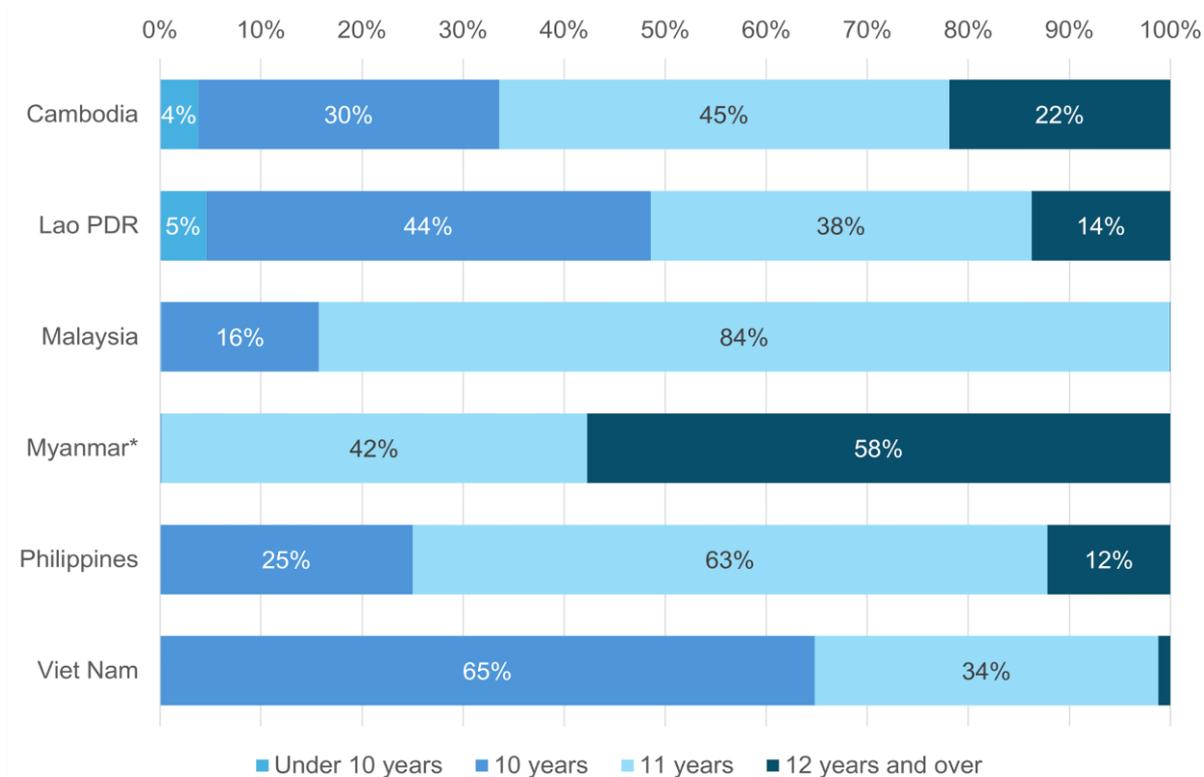


\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

On average, the Grade 5 cohort in 2024 was slightly older than the Grade 5 cohort in 2019, which may speak to challenges experienced during COVID-19 and limited access to education in the lower primary years. It should also be noted that in Myanmar, changes to the age of entry from 2019 to 2024 may account for the significant change observed between 2019 (10.6 years) and 2024 (12.3 years); children are now expected to start Grade 1 at the age of 6 rather than at the age of 5. In other countries, the mean age reported by the different cycle cohorts may be significantly different, but they remain within the expected age range of students in Grade 5 in each country.

**Figure 4.20: Percentage of 2024 Grade 5 students by age group**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Results are rounded to the nearest whole number, so some totals may appear inconsistent.

In the majority of countries, the age difference may be considerable between the younger and older students enrolled in Grade 5 classes, with students under the age of 10 in the same classroom as students above the age of 12. In Malaysia and Viet Nam, almost all the students were either 10 or 11 years old. The differences between and within countries illustrate not just differences between official and effective ages of entry but also different grade repetition practices (when the policy is effective – see ‘Grade Repetition’ section).

Multiple regression models were used to predict student performance in reading and mathematics, using age, grade repetition and SES as predictor variables. In three out of the six countries where repetition practice was effective, older age was not correlated with poorer learning performance, but grade repetition was.

In 2024 in Malaysia, similar to what was observed in 2019, older students tended to achieve significantly higher scores in reading and mathematics, when grade repetition and socioeconomic status are held constant. For Viet Nam and Cambodia, in 2024, older students tended to achieve significantly higher scores in mathematics only (see Annex 4).

## Language of instruction

Around 37 per cent of children in Southeast Asia learn in a language they do not fully understand (UNESCO, 2016). Studies and research have shown that without adequate mitigating policies and measures, students who do not speak the language of instruction at home have poorer learning outcomes than those who do. Evidence also shows that when children are first taught in a language that they speak and understand well, they learn more, are better placed to learn other languages, are more likely to stay in school, and enjoy a school experience appropriate to their culture and local circumstances (World Bank, 2021).

SEA-PLM surveys ask students about the language they most often speak at home. This information was mapped against the language of the test. In most countries, the language of the test was the main language of instruction (or one of the main languages of instruction), which students are expected to master fully by the end of primary education. The table below reports the test languages for SEA-PLM 2024, as decided by each respective ministry of education. More information regarding the official prescribed language of instruction across the primary grades is provided in Chapter 1, Figure 1.6.

**Table 4.3: SEA-PLM 2024 testing languages**

Country	SEA-PLM 2024 test language
Cambodia	Khmer
Lao PDR	Lao
Malaysia	Chinese, Malay, Tamil or English
Myanmar	Myanmar
Philippines	English
Viet Nam	Vietnamese

Note: Languages are reported by alphabetical order in each country.

In Malaysia, students took the test in the official language of the primary school they attended, so this language was considered the main language of instruction for these children. SEA-PLM 2024 participating countries that also took part in the SEA-PLM 2019 study applied the same test language in all cases. Secondary sub-samples were taken in different languages in the Philippines.<sup>27</sup>

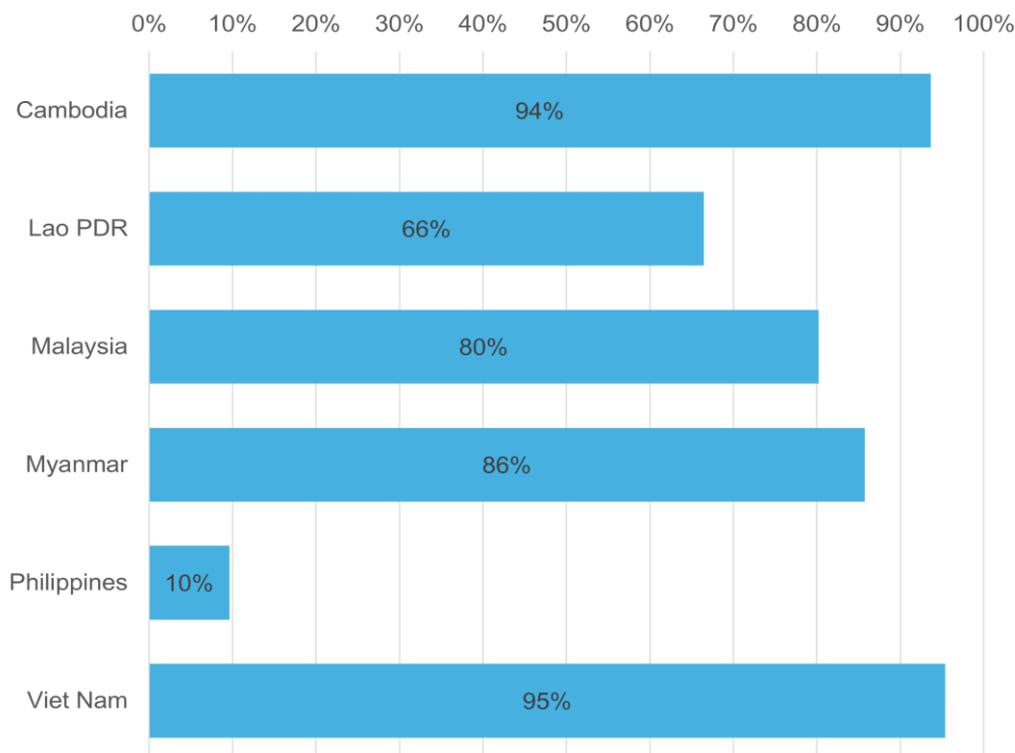
For students who reported most often speaking a different language at home (compared with the language of the test), the language reported was one of the other national languages suggested in each national questionnaire. This detailed information is not provided here.

As in 2019, in Cambodia and Viet Nam more than 90 per cent of children reported speaking the language of the test at home, compared with less than 10 per cent of children in the Philippines and approximately 60 per cent to 80 per cent in the remaining countries. In some countries, more students from the 2024 Grade 5 cohorts declared speaking the main language of instruction (or one of the main languages of instruction) at home compared with 2019.

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<sup>27</sup> More languages could have been applied nationally during the SEA-PLM 2024 main survey data collection than are analysed here. These include reading in Filipino in the Philippines. These secondary sub-samples are not included in this report and are available from respective ministries of education at their discretion.

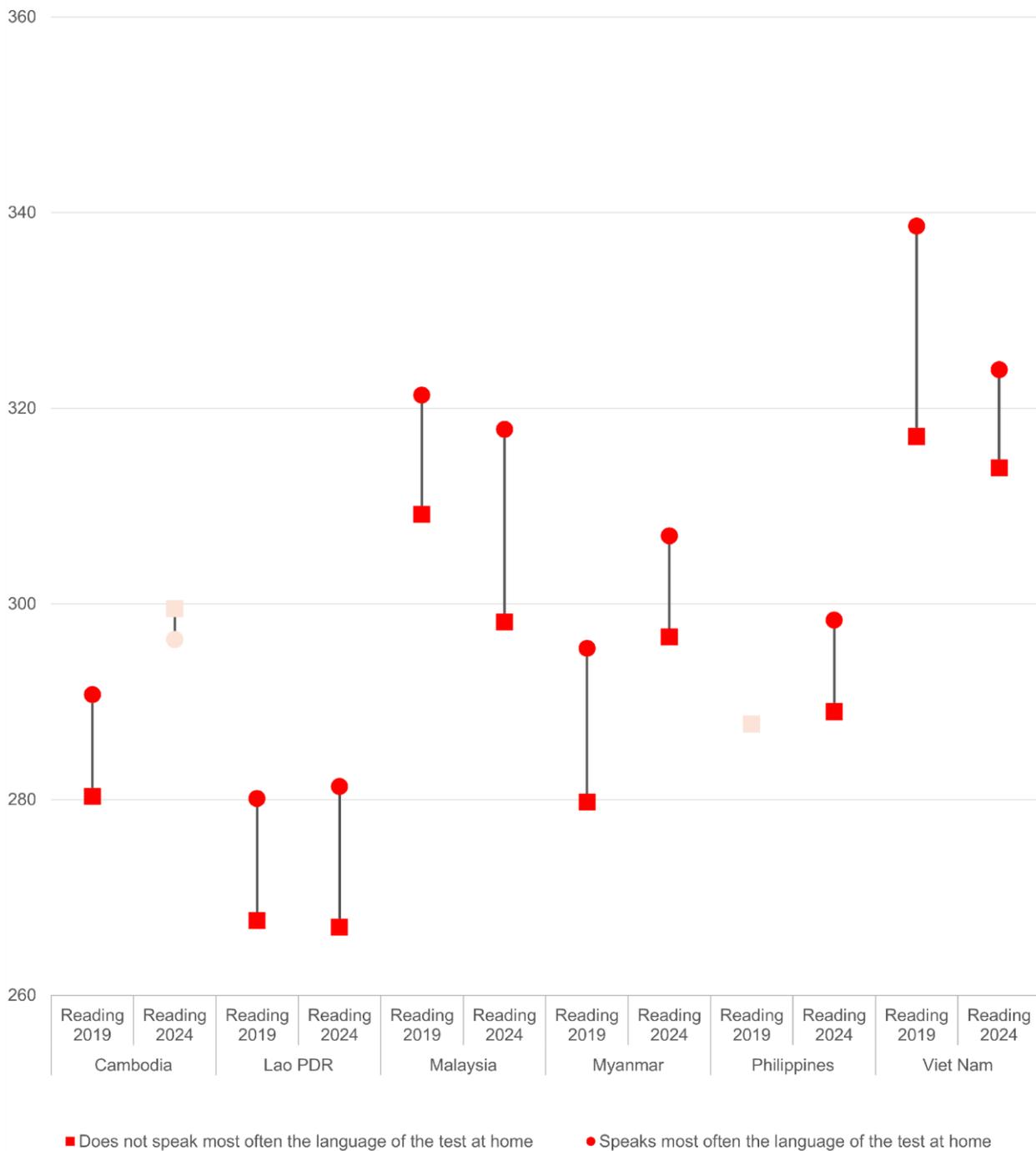
**Figure 4.21: Percentage of Grade 5 students reporting that language of testing is the most spoken language at home**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys. All figures are presented using rounded values.

As observed in 2019, across the majority of countries, on average in both domains, children who reported that the language of instruction was the same as the language spoken at home outperformed children who spoke a different language at home, with scores increasing by about 5 to 20 scale points in reading and mathematics. These results, reported in Figure 4.22 and Figure 4.23, must be interpreted in each national context, considering how students practise and use one or several languages in and outside school.

**Figure 4.22: Differences in average reading scores by language practices at home versus at school, by country and survey cycle**



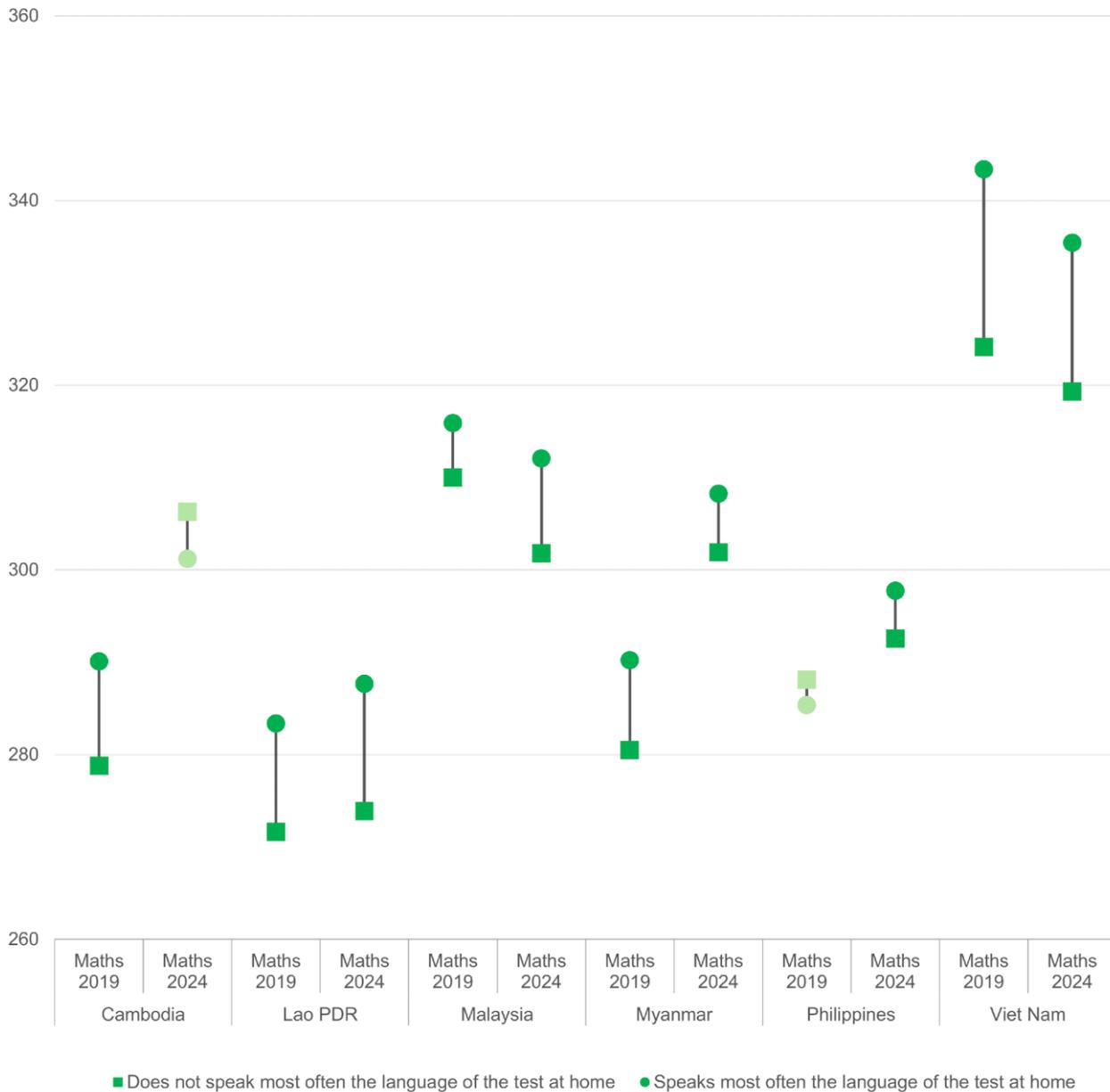
\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

In most countries, students whose main language at home was the language of instruction performed better at reading than those who spoke another language. In Cambodia, there was no significant difference between the two groups. In Malaysia the impact of language on reading scores has grown; there have been changes in language of instruction policies in Malaysia and the use of different languages in different types of schools. In the Philippines, where no difference was observed in 2019 between the two groups, in 2024 children who spoke

English at home (the language of the test) had on average higher scores than those who reported speaking a different language at home.

**Figure 4.23: Differences in average mathematics scores by language practices at home versus at school, by country and survey cycle**



\* Caution is required when interpreting and comparing estimates in Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

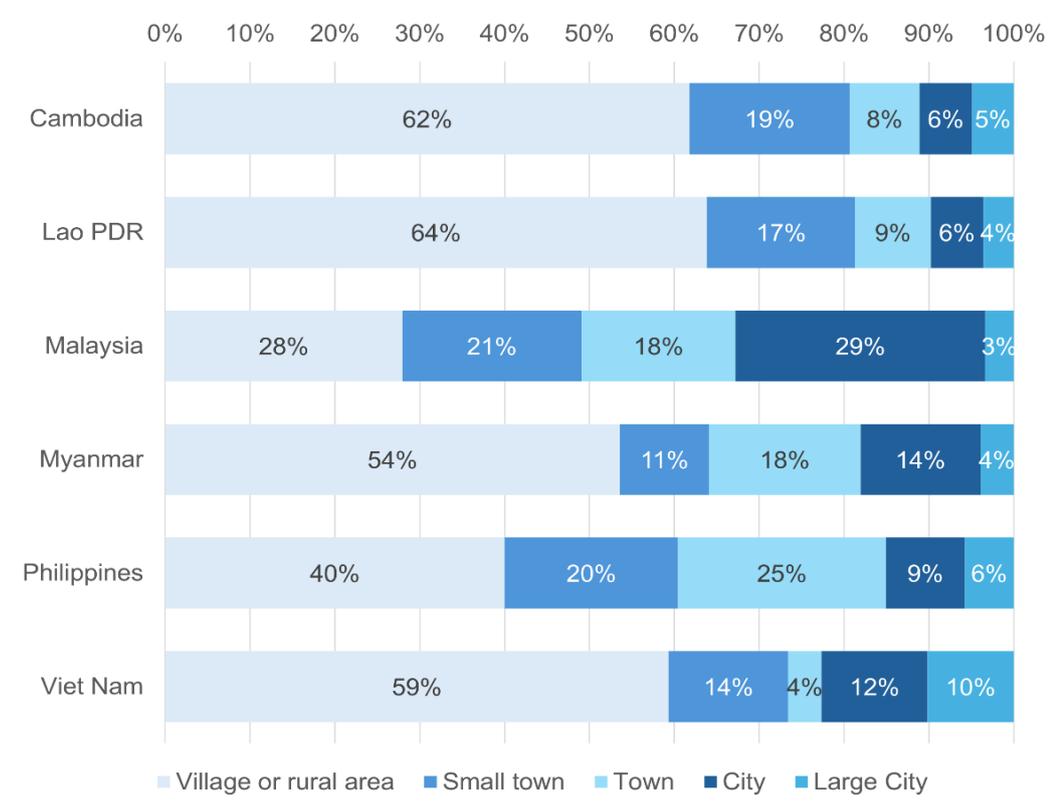
The results in mathematics show similar trends, with no difference observed in Cambodia in 2024, while the impact of language in Malaysia and the Philippines has increased.

## 4.3 School and teacher characteristics

### Rural and urban schools

As in 2019, school principals were asked to characterize the location of their school: a village or rural area (fewer than 3,000 people), a small town (3,000 to about 15,000 people), a town (15,000 to about 100,000 people), a city (100,000 to about 1,000,000 people), or a large city (over 1,000,000 people). The breakdown of this data is reported in Figure 4.24.

**Figure 4.24: Percentage of students by school locality**

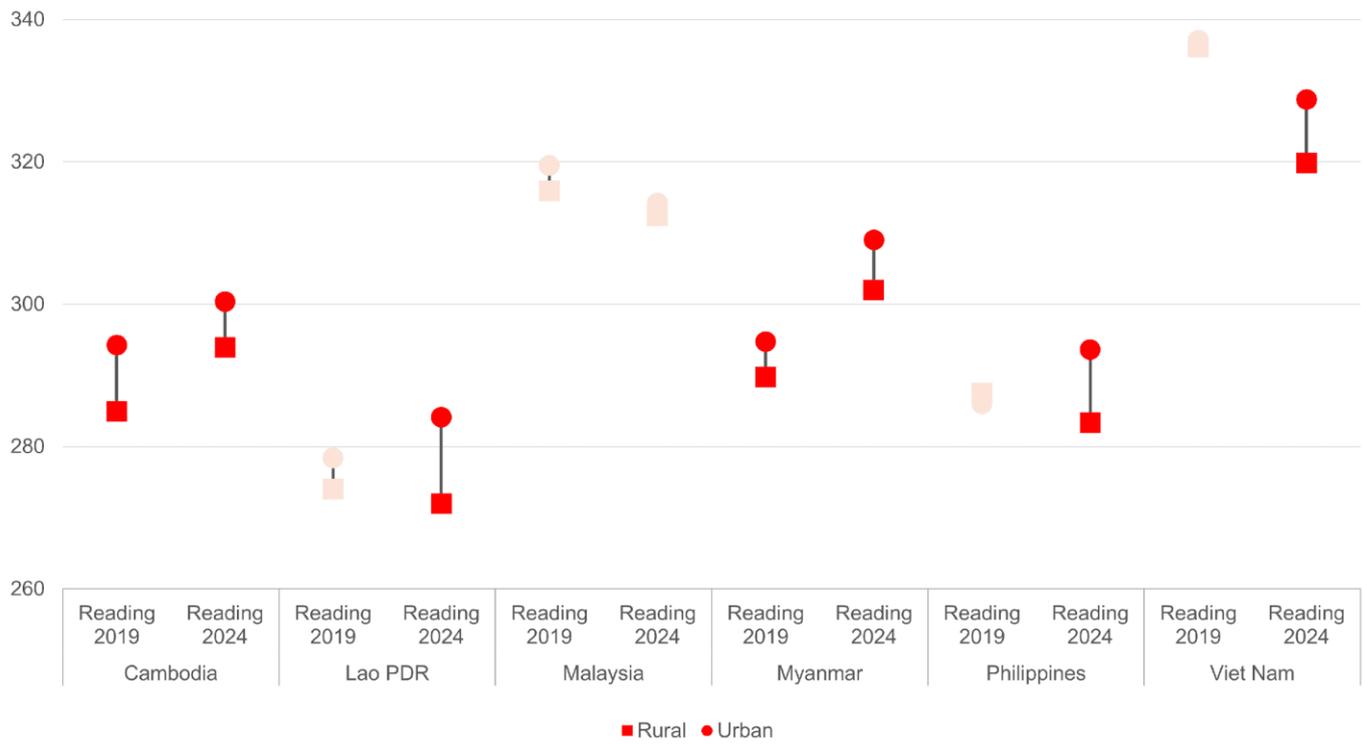


\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys. All figures are presented using rounded values.

For this report, the five choices were condensed into two: rural (which includes the ‘village’ and ‘small town’ options) and urban (which includes the other three). Figure 4.25 and Figure 4.26 present the average score difference in reading and mathematics between Grade 5 students who attended a school in a rural area compared with those attending a school in an urban setting.

In all countries (except in Malaysia for reading), students in schools in urban areas performed better in both reading and mathematics than those in rural areas. In comparison to 2019, with the exception of Cambodia, differences have widened in the majority of countries. Further analysis and exploration of rural and urban characteristics will further support understanding of these dynamics, including the potential impact of the increasing incidence of urban poverty.

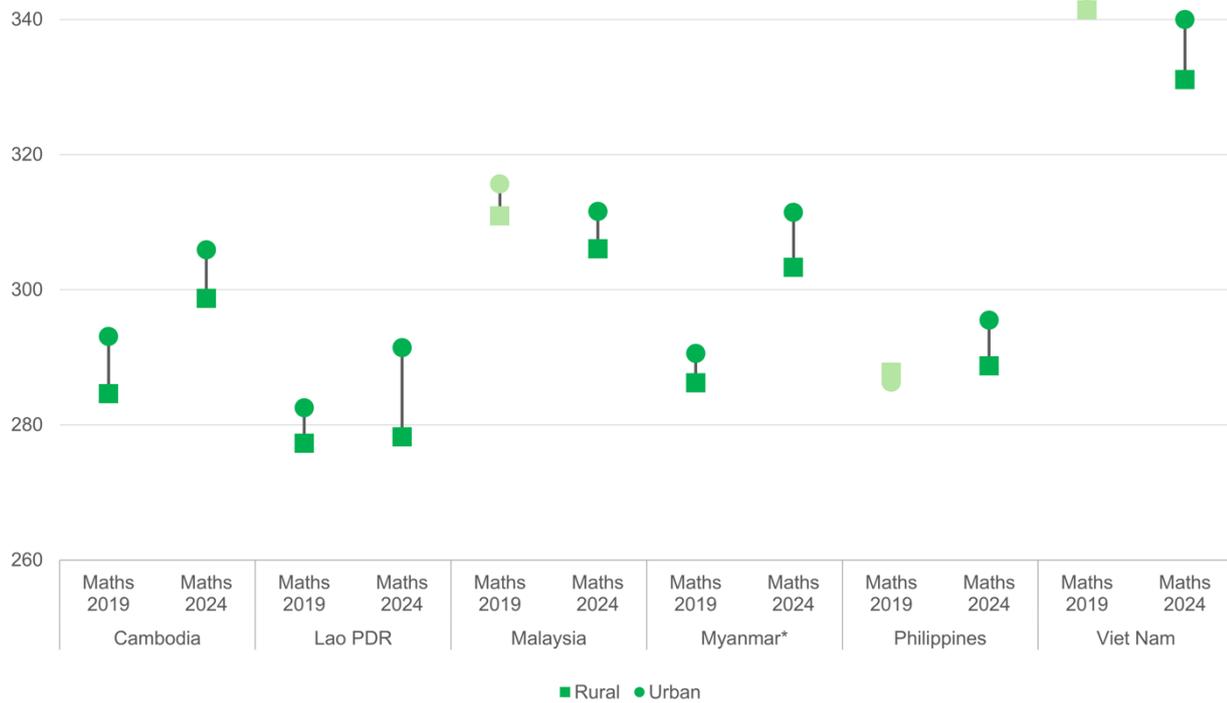
Figure 4.25: Differences in average student reading scores by rural and urban school



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

**Figure 4.26: Differences in average student mathematics scores by rural and urban school**



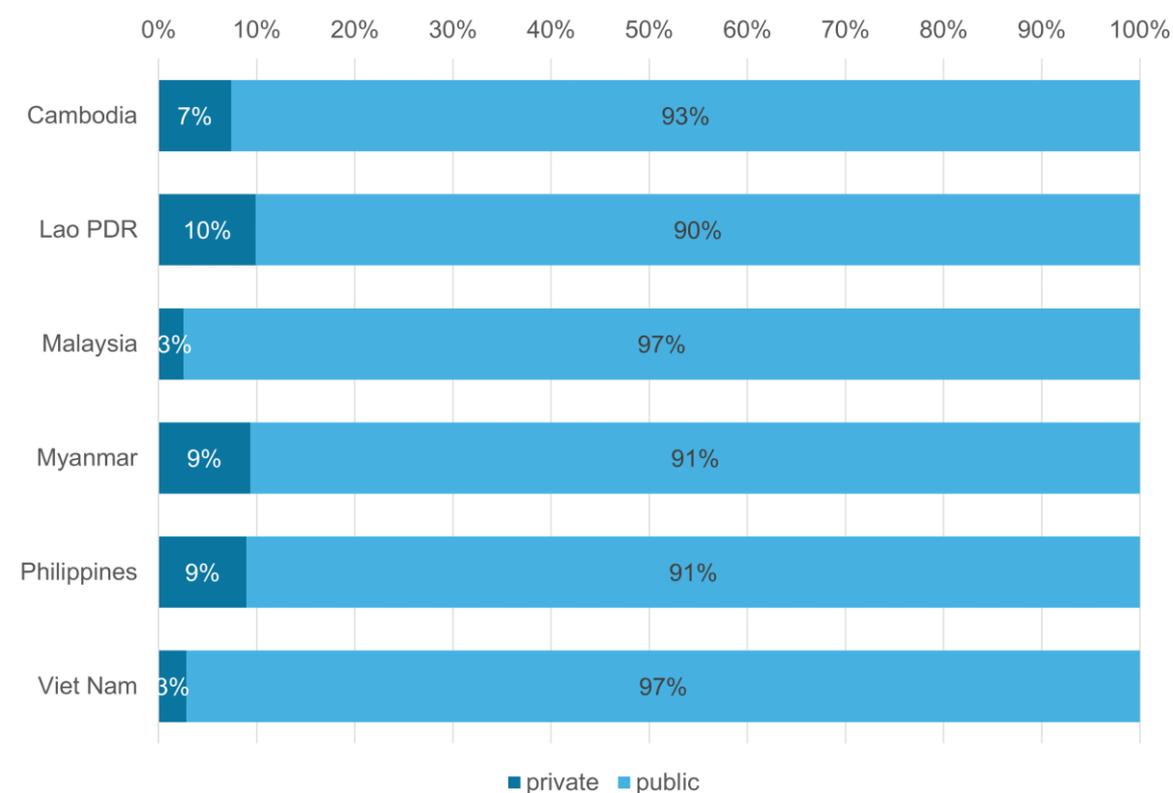
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant.

## Public and private schools

As observed in 2019, the majority of Grade 5 children attended public schools in the SEA-PLM participating countries. In all countries, over 90 per cent of students attended public schools; in Malaysia and Viet Nam, public school attendance was as high as 98 per cent in 2024. Public schools in all countries are defined as schools run by the ministry of education; the types of private schools vary across countries, but include schools run by religious groups, communities or specific interest groups that apply the same curricula as in public schools. Schools applying alternative curricula, such as international schools, are not included in the SEA-PLM Grade 5 national target population<sup>28</sup>

**Figure 4.27: Percentage of children attending public or private school**



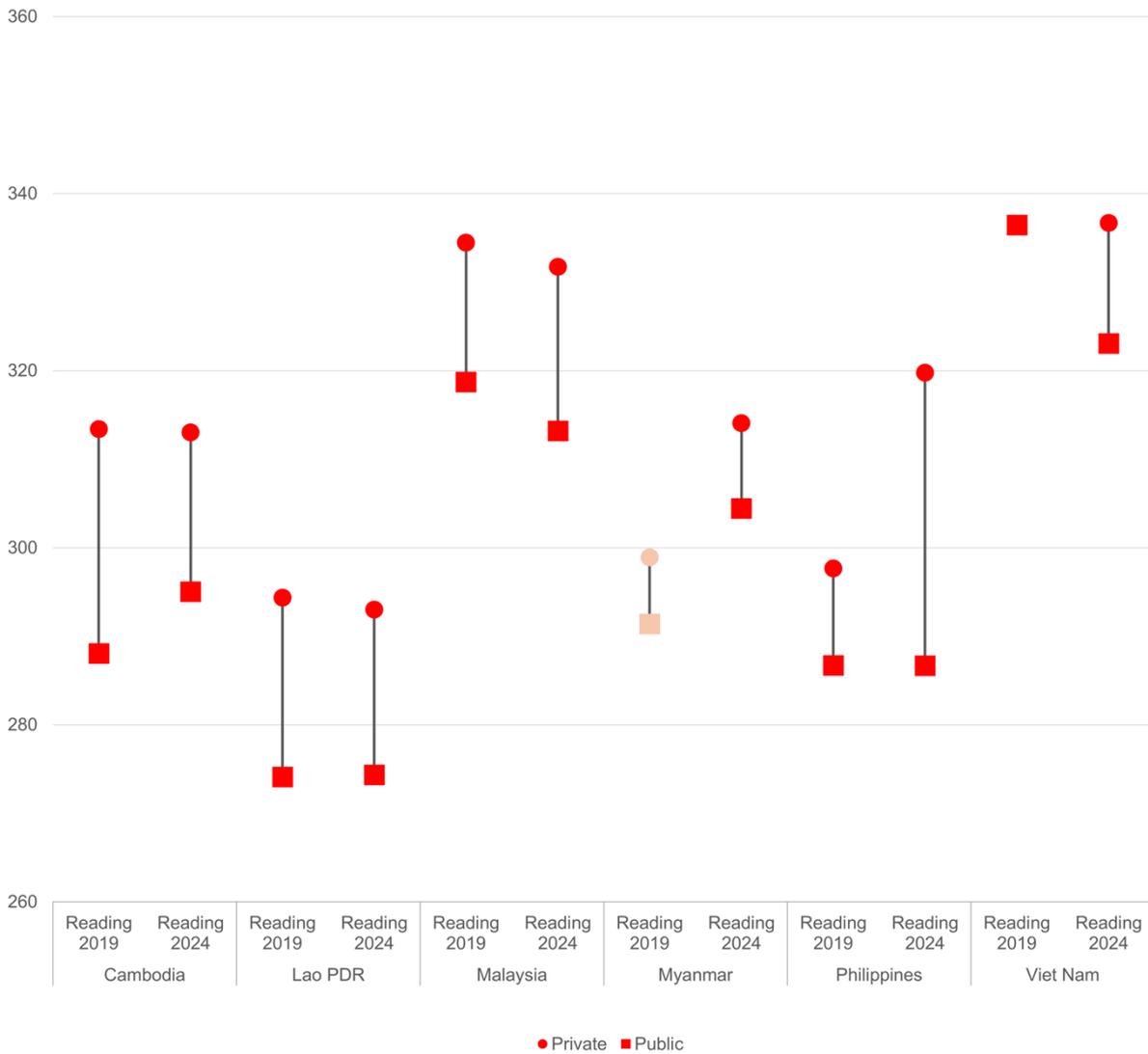
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Label values are only reported for SEA-PLM 2024. All figures are presented using rounded values.

As reported in Figure 4.28 and Figure 4.29, in all countries, the average performance of students attending private schools was higher than the average performance of students attending public schools in both reading and mathematics in the SEA-PLM 2024 cycle.

<sup>28</sup> As decided by each participating country

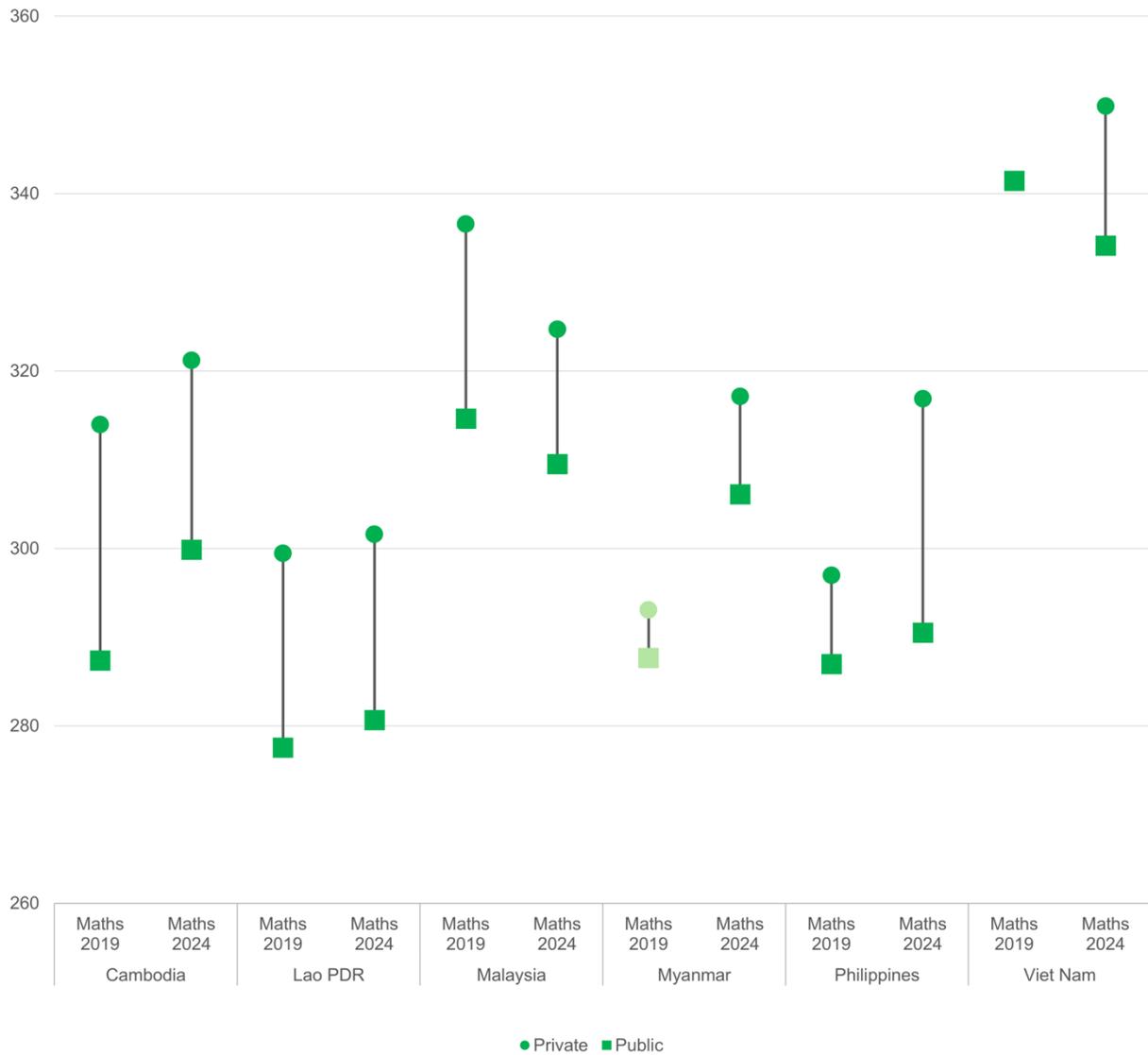
**Figure 4.28: Differences in average student reading scores by public and private school, country and survey cycle**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant. In Viet Nam, no private schools were recorded in SEA-PLM 2019; therefore only the public school average is reported for 2019.

**Figure 4.29: Differences in average student mathematics scores by public and private school, country and survey cycle**



\*Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Markers in light colour indicate that mean differences are not statistically significant. In Viet Nam, no private schools were recorded in SEA-PLM 2019; therefore only the public school average is reported for 2019.

In all countries except Cambodia (and for mathematics only in Malaysia), the difference between the private and public groups has also grown, particularly in the Philippines. In Malaysia, there was no significant change in the performance of students in the private schools in reading, but children in public schools had on average lower scores in 2024 compared with 2019.

## Class size

Large class sizes can exacerbate the challenges teachers face in managing their classes. In particular, teachers may have a harder time identifying and adequately supporting students from disadvantaged backgrounds and those behind, or at risk of falling behind, on learning. Smaller class sizes can allow teachers to improve classroom management and instructional practices, differentiate instruction and target support to students who fall behind; these factors may also increase student motivation and engagement (Anderson, 2000; Konstantopoulous & Sun, 2013). While evidence is mixed on whether smaller class sizes have a positive impact on different aspects of student learning, some research from low- and middle-income countries suggests positive effects in primary schools (McEwan, 2015; Wößmann & West, 2006).

SEA-PLM 2024 data show similar mixed effects at the national level, with no clear pattern across the region. Both positive and negative correlations between the average class size and the concentration of Grade 5 students showing low or high reading performance are observed.<sup>29</sup> In Lao PDR and Malaysia, a statistical linear relationship is observed between the average class size and the concentration of students with specific learning characteristics. This is also evident, with smaller strength, in Cambodia and the Philippines.

In the Philippines (0.11), Cambodia (0.14) and Lao PDR (-0.19), the correlation is estimated as weak to small; in Malaysia (-0.31) the correlation is estimated as moderate, indicating different trends in each country. While in Cambodia and the Philippines the concentration of very low-performing students in reading increases as student class size becomes larger, the concentration of very low-performing students in reading increases as the student's class size becomes smaller in Lao PDR and Malaysia, indicating, on average, more low-performing students in small class settings in those two countries. An inverse pattern emerged when considering the association between the concentration of high-performing readers and the class size observed in each country. In Viet Nam (0.02) and Myanmar (-0.10), this correlation is weak or almost null.

Similar results are observed when rural, urban and socioeconomic backgrounds are neutralized between students. Tables in Annex 4 report the exact correlation and linear relationship observed in 2024 for each country regarding Grade 5 class size and the concentration of low- and high-performing readers.

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<sup>29</sup> The number of students per class was calculated based on the total number of students participating in the survey in each class. Analysis for some countries excludes small schools, for example where fewer than five students were enrolled in Grade 5. Results may overestimate to some extent the overall average Grade 5 class size in these countries.

**Table 4.4: Grade 5 average class size (number of students), and changes over time between 2019 and 2024**

Country	2019		2024		Difference 2024 vs 2019		Significance of change
Cambodia	32.4	(0.60)	34.4	(0.66)	<b>1.9</b>	(0.90)	▲
Lao PDR	22.6	(0.59)	22.8	(0.61)	0.2	(0.85)	•
Malaysia	28.6	(0.51)	28.9	(0.39)	0.3	(0.64)	•
Myanmar*	31.0	(0.95)	34.2	(0.90)	<b>3.3</b>	(1.31)	▲
Philippines	36.3	(0.65)	33.3	(0.62)	<b>-3.0</b>	(0.90)	▼
Viet Nam	33.1	(0.38)	39.4	(0.08)	<b>6.2</b>	(0.39)	▲

\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

() Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

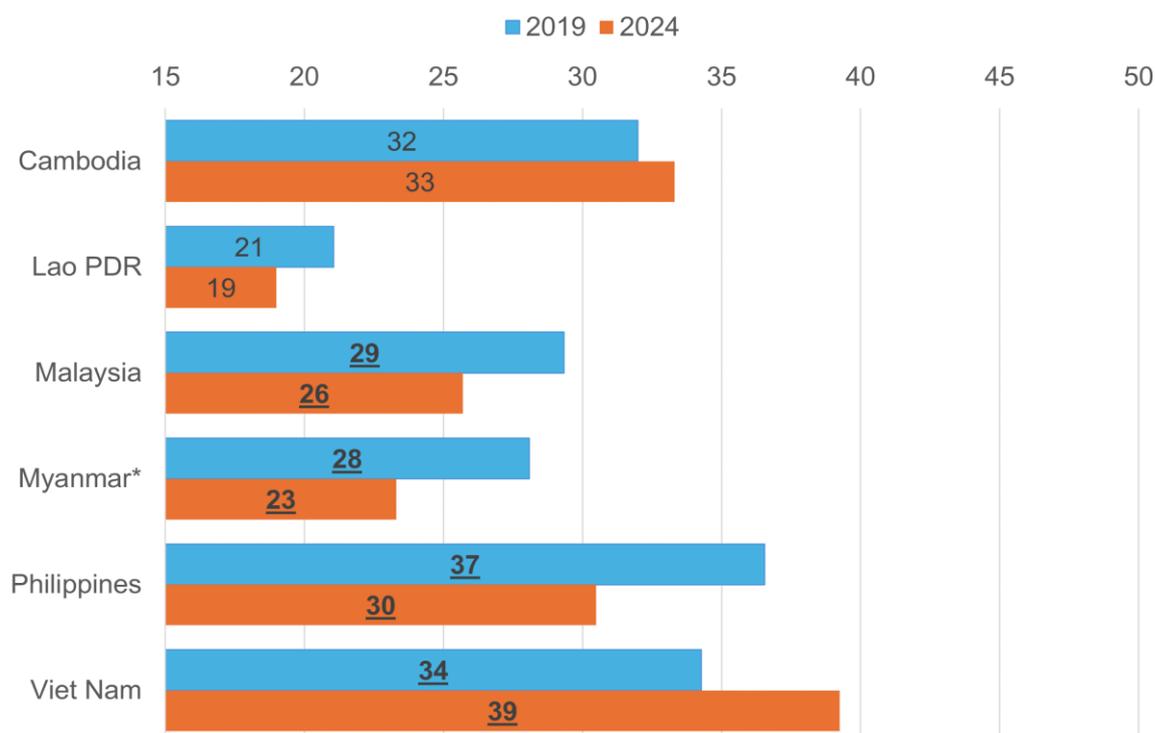
▼ Denotes a significant decrease from 2019

• Denotes no significant change from 2019

Note: All differences have been statistically tested at the 95% confidence level. Only statistically significant changes are reported; when no significant change is observed, the country is noted as having a similar national average across the two cycles. Statistically significant differences are highlighted in bold.

Table 4.4, Figure 4.30 and Figure 4.31 show the Grade 5 average class size and urban/rural breakdown in 2019 and 2024.

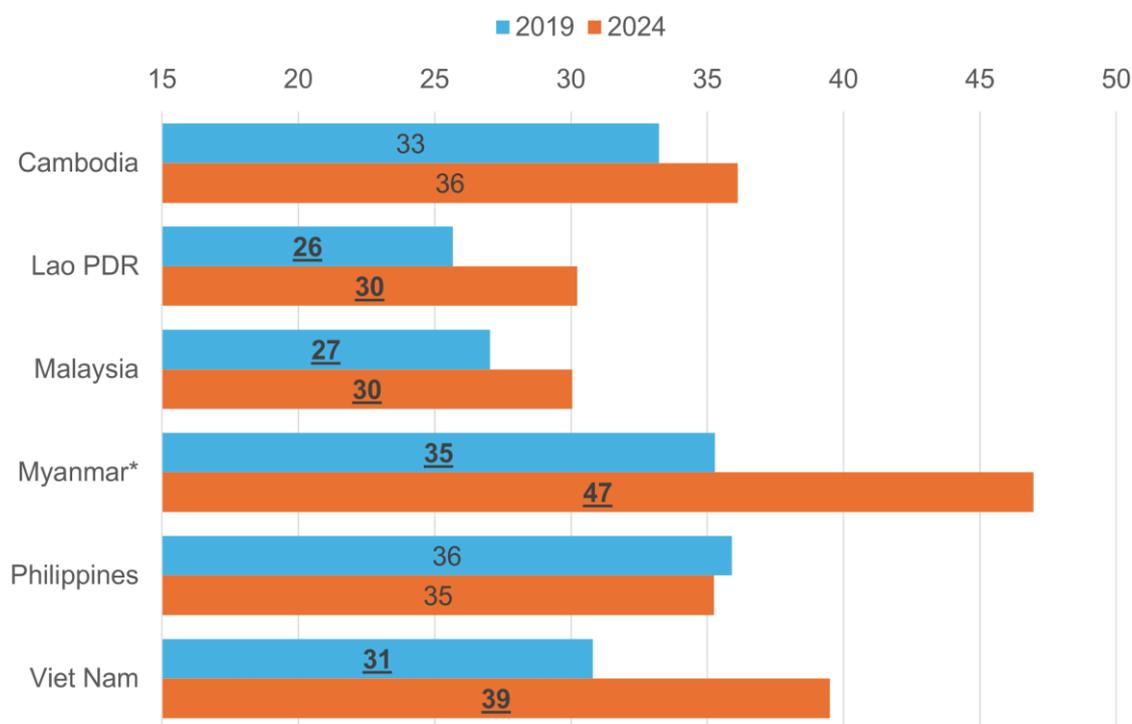
**Figure 4.30: Rural Grade 5 average class size (number of students), and changes over time between 2019 and 2024**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

**Figure 4.31: Urban Grade 5 average class size (number of students), and changes over time between 2019 and 2024**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

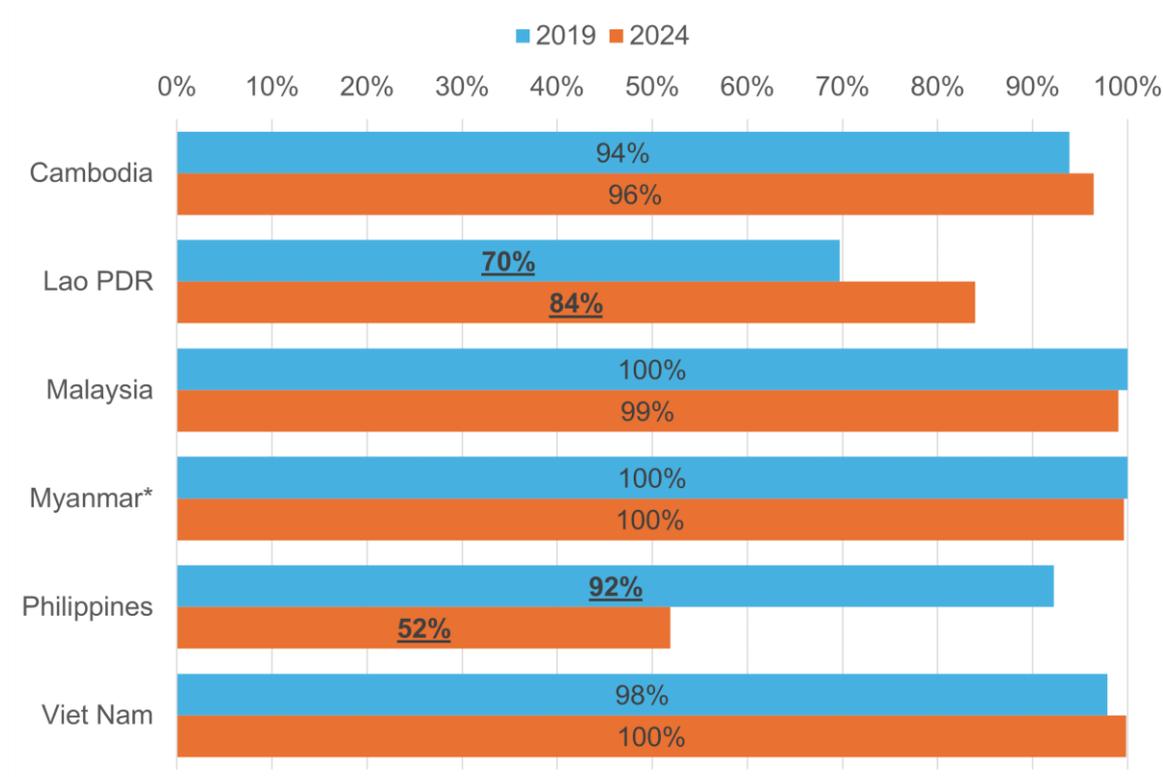
Class sizes have increased in rural areas in Viet Nam. An increase in class size is also observed in urban areas in Viet Nam, as well as in Lao PDR. Viet Nam and Cambodia have similar class sizes in rural and urban areas, while in other countries larger class sizes are observed in rural areas, with an average difference of about 10 to 20 students. The largest class sizes in the 2024 cycle are observed in Myanmar’s urban schools, with 47 students per class.

### Textbook availability

As in 2019, school principals were asked to report on the availability of language and mathematics textbooks for Grade 5 classes, specifying whether “no textbooks were available”, “each student had an individual textbook”, or “textbooks were shared between two or more students”. The results below focus on reading textbooks, as similar patterns were observed for mathematics, indicating that the conditions and challenges discussed for textbook availability largely apply across both subjects.

While the percentage of students in classes with at least one reading textbook per child has increased in Lao PDR (by 14 percentage points), in the Philippines there was a large drop, almost halving textbook availability. In other countries, the percentage of Grade 5 students having one textbook each was stable compared with 2019.

**Figure 4.32: Percentage of Grade 5 students by availability of one reading textbook per student, and changes over time between 2019 and 2024**

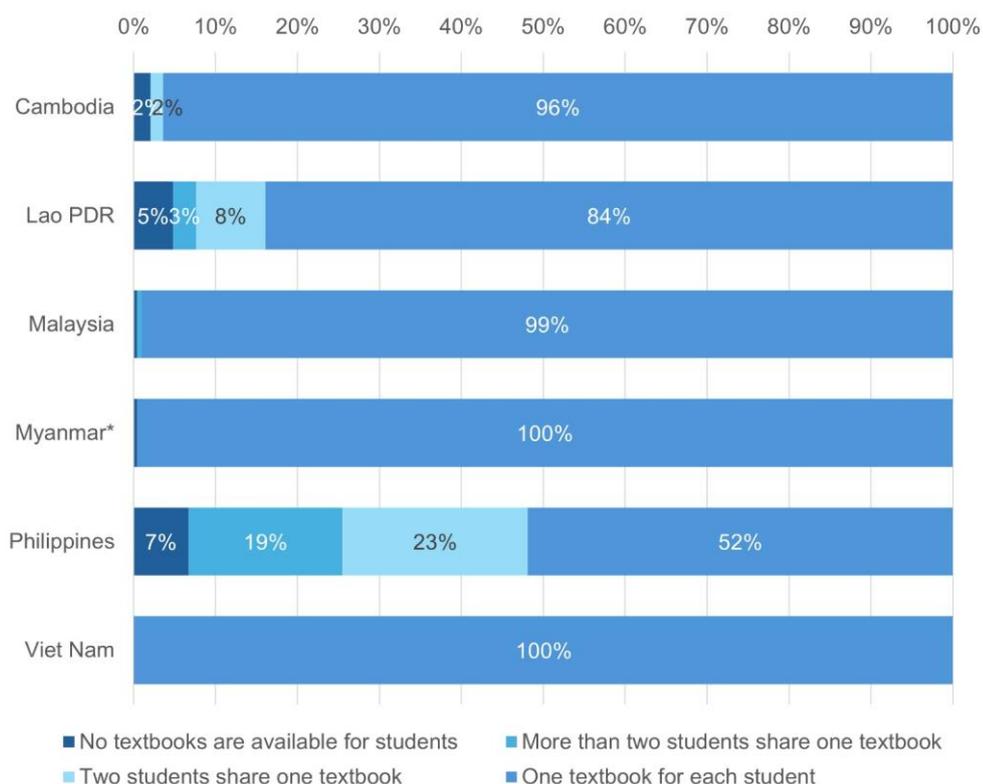


\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

On average across the six participating countries, the majority of children attended schools with one textbook per child, for both reading and mathematics lessons. In Lao PDR (11 per cent) and the Philippines (42 per cent), a modest percentage of Grade 5 children shared a reading textbook with at least one other student, as reported in Figure 4.33. In those two countries, a modest percentage of children actually shared a textbook with two or more children (an issue affecting between 3 per cent and 19 per cent of students in these countries). Compared with 2019, except Lao PDR and the Philippines, there were fewer children with no language or mathematics textbooks. (Annex 4 presents the detailed results for mathematics textbook availability.)

**Figure 4.33: Percentage of Grade 5 students by reading textbook availability in 2024**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

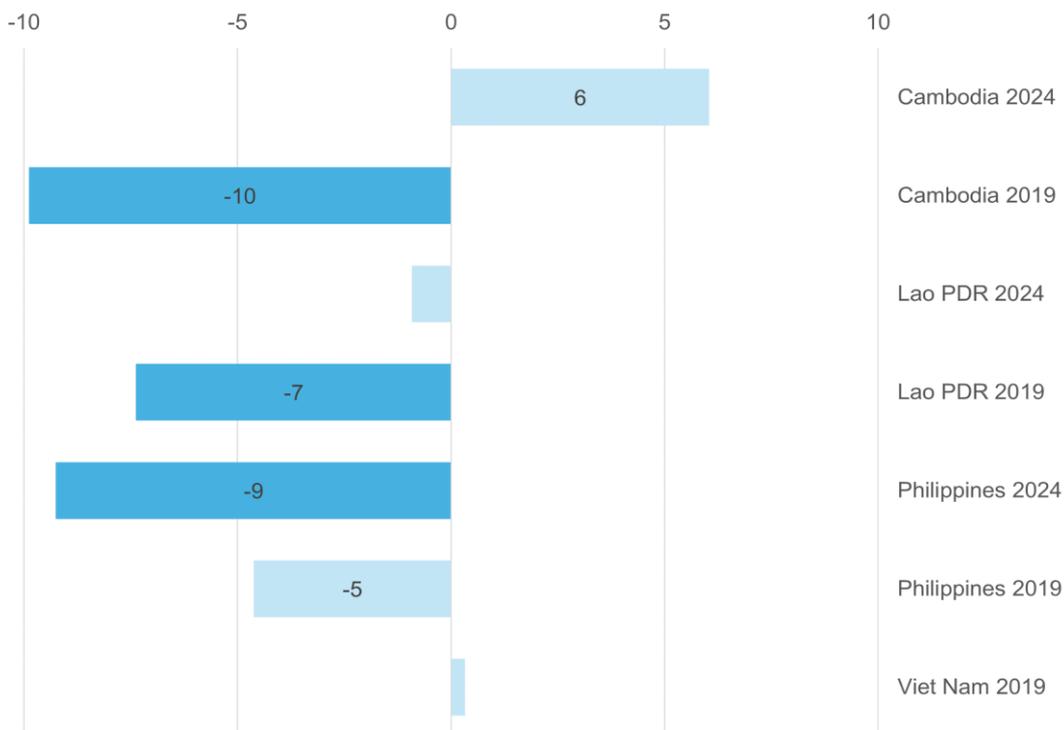
Note: Results are rounded to the nearest whole number, so some totals may appear inconsistent.

This situation raises issues regarding system- and school-level capacity to ensure that every child, regardless of grade, cohort, subject or school location, has access each year to a new, pre-owned or borrowed printed textbook. Important questions arise about how education systems and schools plan, advise and implement flexible strategies to mitigate shortfalls in low-technology learning materials, particularly once the school year has begun.

As displayed in Figure 4.34, the differences in average reading achievement for children who attended a school with one reading textbook per child compared with children who attended a school with no textbooks or shared textbooks are not significant in most cases; where a difference was noted in 2019, it has largely disappeared. This could be an indication of alternative teaching and learning materials (e.g., digital) being used to support learning, particularly in contexts where textbook availability may be limited.

In 2024, only in the Philippines was textbook availability associated with higher learning outcomes in the class, with students attending schools with one textbook per child scoring higher, on average, in both reading and mathematics. Similarly in Myanmar, this association was observed in the mathematics domain (see Annex 4). These results persist even after controlling for socioeconomic background, reinforcing that the lack of individual access to textbooks continues to be a meaningful contributor to learning disparities in specific systems. Annex 4 presents the detailed results.

**Figure 4.34: Score difference in reading between Grade 5 students who reported having no textbook or sharing their textbook and those who have their own textbook**



Note: Bars in light colour indicate that mean differences are not statistically significant. Malaysia 2019, Malaysia 2024, Myanmar 2019, Myanmar 2024 and Viet Nam 2024 are not reported as no or too few students reported having no textbook or sharing their textbook. Figures to the left of zero indicate that students who share a textbook have lower outcomes on average than those who have their own textbook; figures to the right indicate the opposite.

## **Bullying and other issues hindering school capacity and well-being**

Learning depends not only on the availability of physical resources and the characteristics of teachers and students, but also on the overall school environment. This section analyses some of the main obstacles and difficulties that students may experience that disrupt their learning. It also considers factors that may challenge schools in creating a fair, inclusive and safe environment.

SEA-PLM collects extensive information that helps to unpack some of the issues and difficulties that face students, teachers and schools and that may affect curriculum delivery and well-being. The data reported below focus on selected results only, extracted from two areas of the SEA-PLM questionnaires: children's issues occurring in school and schools' issues hindering school capacity.

The figures present the situation observed in 2024 compared with 2019 for each question selected for this report. Responses are reported from the perspective of head teachers, who responded to questions about the frequency with which each of these problems occurs in general in their school. When applicable, individual questions with regard to each dimension were aggregated and compared with the 2019 situation over two composite scale scores: C\_STUDISS in the school dataset for student-level issues occurring in schools, and C\_HINDER in the school dataset for school-level issues hindering school capacity. More information on each scale is reported below.

Further aspects of students' and teachers' well-being – such as mental, physical and social factors – can be further explored in SEA-PLM datasets. SEA-PLM contextual questionnaires capture children's and local stakeholders' voices and perceptions, and further exploration is encouraged.

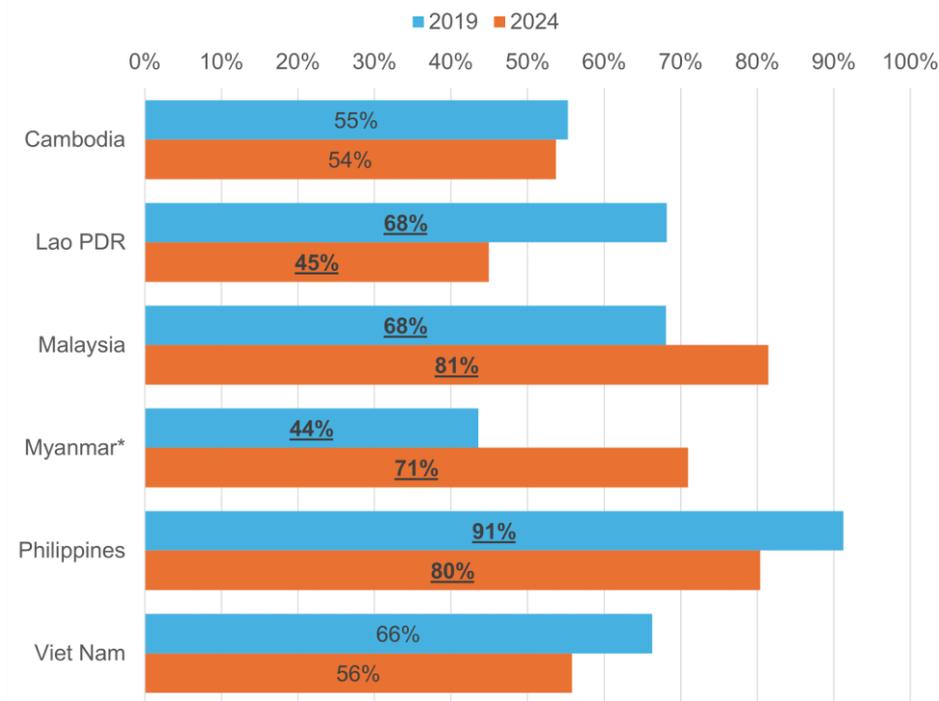
### ***Student-level issues occurring in schools***

Head teachers were asked to share their perspective on 12 potential issues among children that may occur in their school:

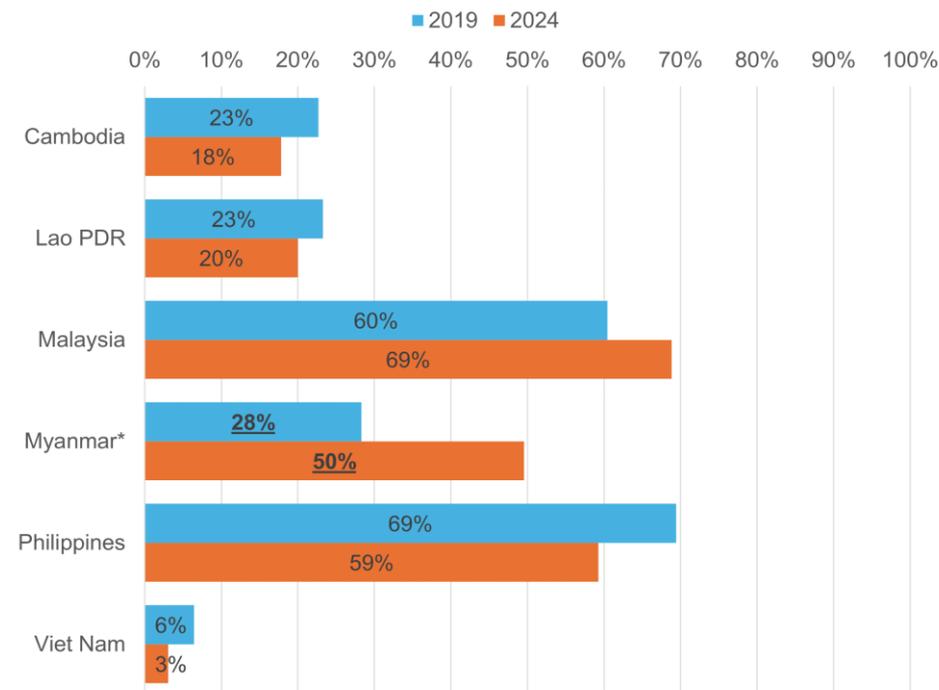
- coming late for class
- truancy
- classroom disturbance
- cheating
- vandalism
- aggression between students from different ethnic groups
- aggression between students due to religious differences
- bullying
- violence
- offensive behaviour towards girls
- offensive behaviour towards students with disabilities
- offensive behaviour towards teachers

School leaders reported issues against four frequency options according to their understanding of the issue: never or hardly ever; monthly (at least once a month); weekly (at least once a week); and daily or almost daily. A selection of issues are presented in Figure 4.35 to Figure 4.40, grouping together the monthly, weekly and daily/almost daily options into one category.

**Figure 4.35: Coming late for class**



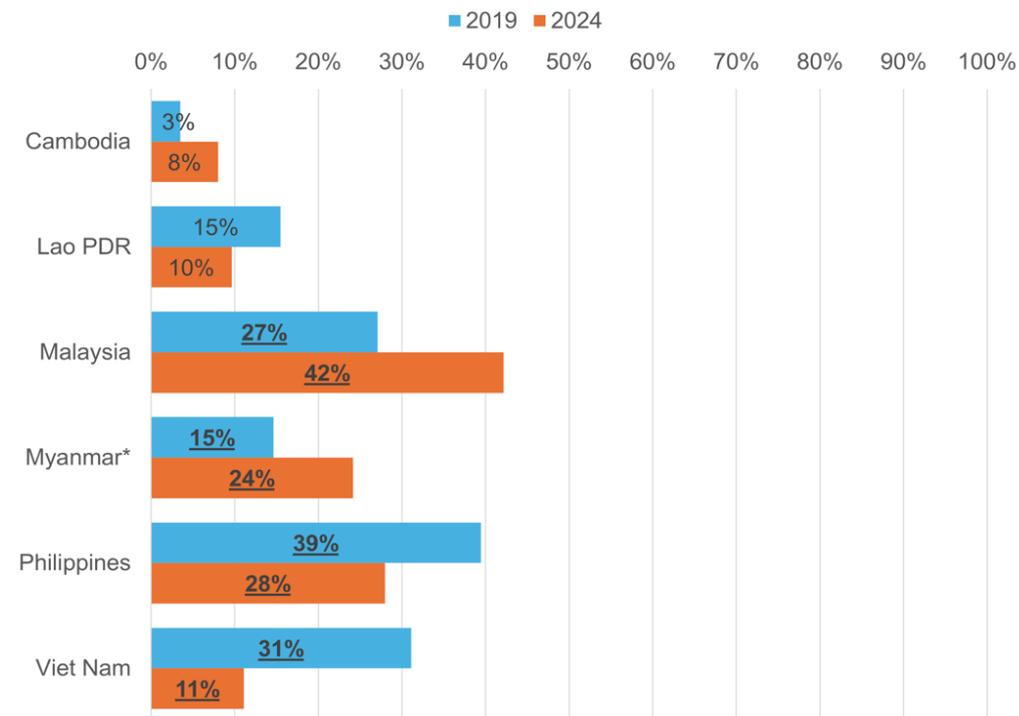
**Figure 4.36: Truancy**



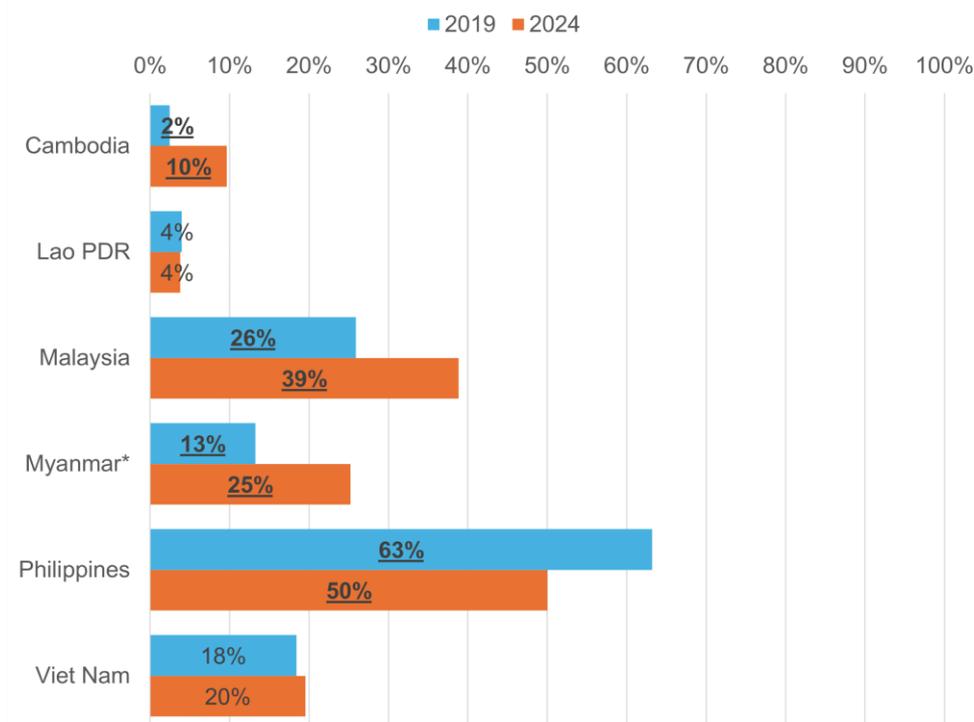
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

**Figure 4.37: Vandalism**



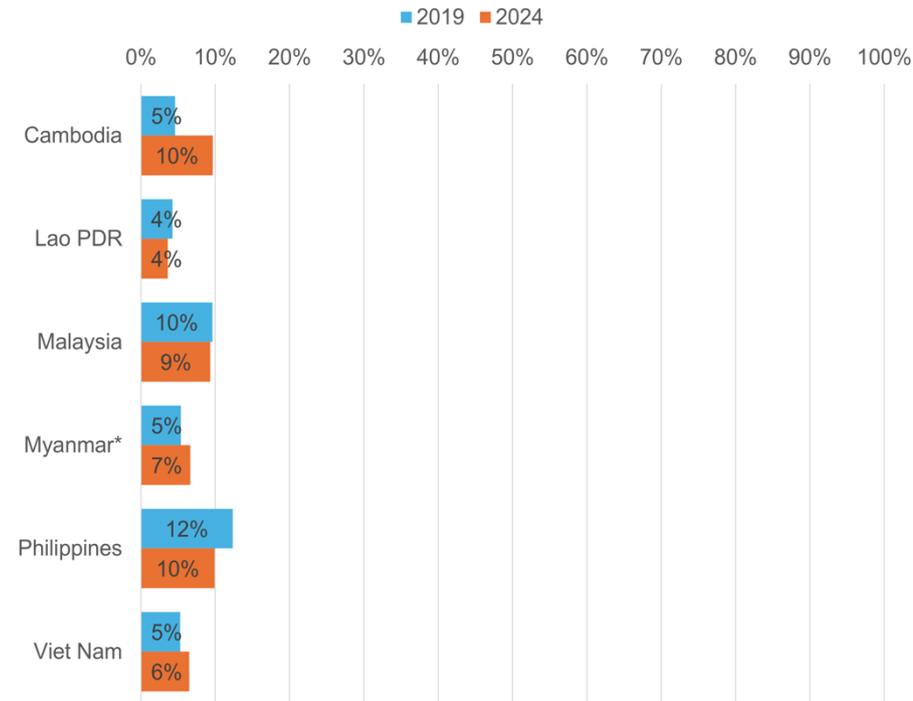
**Figure 4.38: Bullying**



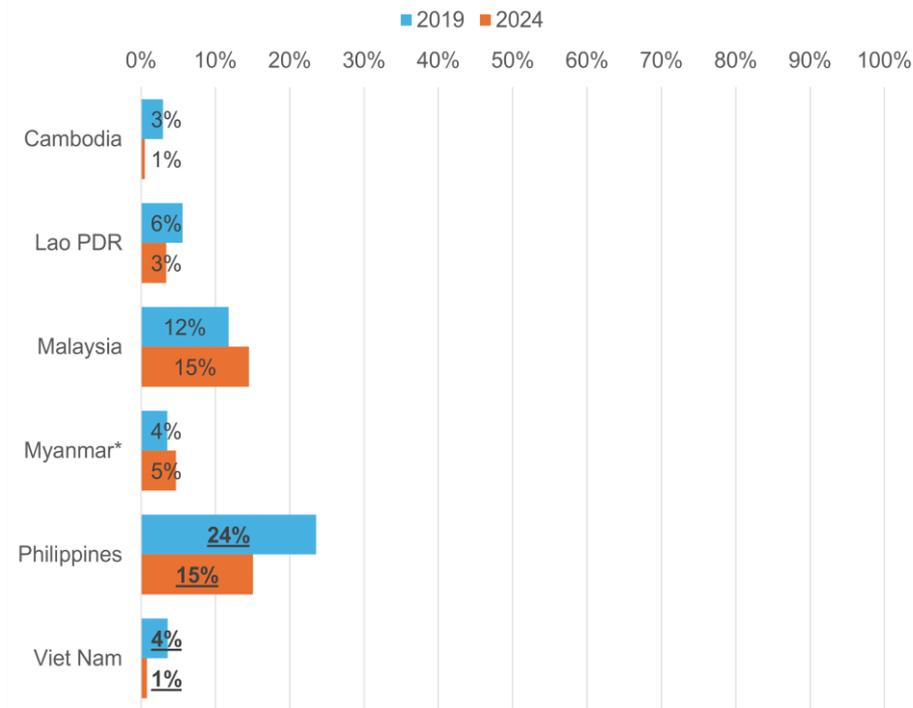
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

**Figure 4.39: Violence**



**Figure 4.40: Offensive behaviour towards girls**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

A regional scale was derived based on the responses to these 12 items (C\_STUDISS in the school dataset). The higher scores on this scale correspond to a greater number of issues occurring frequently among students in a given country. The 2019 and 2024 national mean comparisons indicate a positive or negative change or stable situation in the participating countries. A lower score in 2024 compared with 2019 indicates fewer issues stated as “occurring frequently among students” by head teachers (refer to Annex 4 for more data). See Table 4.5.

**Table 4.5: Issues in schools (compositive regional index), and changes over time between 2019 and 2024**

Country	2019		2024		Difference 2024 vs 2019	Significance of change	
Cambodia	47.8	(0.60)	48.7	(0.53)	0.9	(0.80)	•
Lao PDR	49.1	(0.65)	47.5	(0.73)	-1.6	(0.98)	•
Malaysia	52.1	(0.85)	56.2	(0.62)	4.1	(1.05)	▲
Myanmar*	45.9	(0.75)	50.7	(0.69)	4.9	(1.02)	▲
Philippines	56.4	(0.81)	53.9	(0.78)	-2.4	(1.13)	▼
Viet Nam	48.6	(0.56)	48.1	(0.58)	-0.6	(0.80)	•

\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Differences are reported by scale points

() Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

▼ Denotes a significant decrease from 2019

• Denotes no significant change from 2019

Overall, compared with 2019, issues among students occurring monthly, weekly, daily or almost daily in Grade 5 classes as reported by school leaders seem to be reducing in the Philippines, remaining stable in Cambodia, Lao PDR and Viet Nam, and increasing in Malaysia and Myanmar. Across the region (average six countries), the incidence of these issues has increased. In most cases, the overall national situation and change over time reported in the composite scale mirror the patterns seen for individual questions and challenges.

SEA-PLM 2024 data show negative correlation at the national level between a greater number of issues occurring frequently among Grade 5 students and performance in reading and/or mathematics. A small to modest negative statistical linear relationship is observed in Cambodia (-0.07, reading; -0.10, mathematics), Malaysia (-0.10, mathematics) and the Philippines (-0.24, reading; -0.23, mathematics). This means that the more frequent the students’ issues are, the lower their performance. In other countries and domains, there is no statistical association between the number of issues occurring frequently and Grade 5 reading and mathematics performance. In each country, the pattern for individual issues will need to be examined in detail to understand more about student well-being and learning disparities.

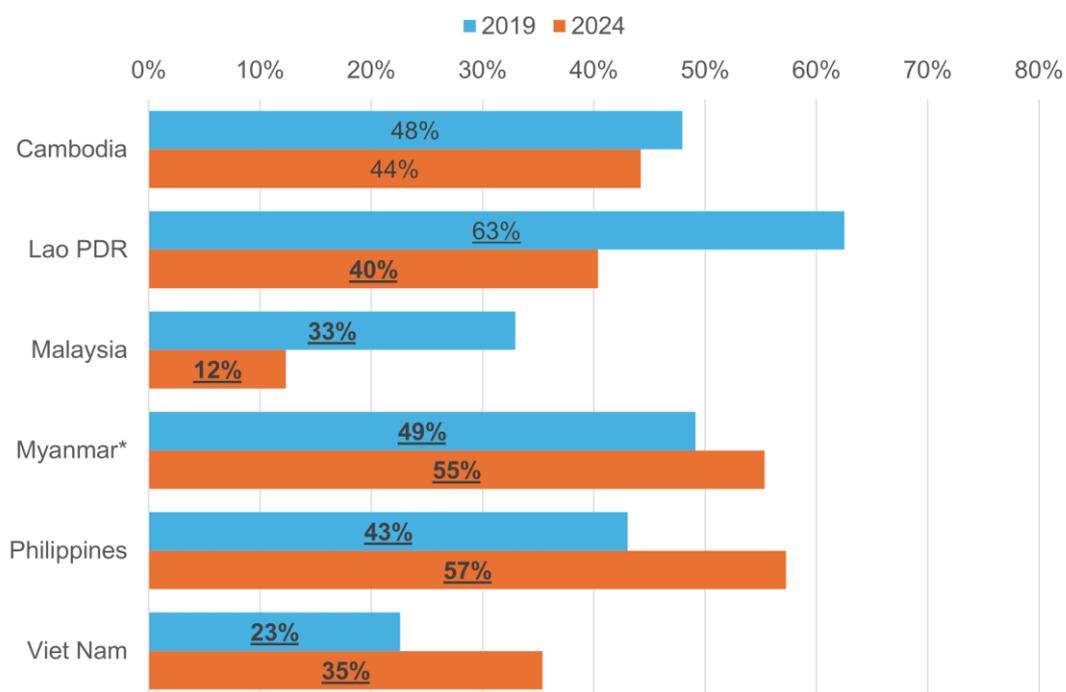
### School-level issues hindering school capacity

Head teachers were asked to share their perspective on the frequency of selected issues that could hinder their school’s capacity to provide instruction. They were asked about five areas:

- shortage or inadequacy of classrooms
- shortage or inadequacy of toilets
- shortage or inadequacy of instructional materials (e.g., textbooks)
- shortage or inadequacy of digital technology used for instruction (e.g., computers)
- lack of qualified teachers

School leaders reported issues against four frequency options: to a large extent; to a moderate extent; to a little extent; and not at all. These issues are presented in Figure 4.41 to Figure 4.45, reporting only average responses for each country from the category “to a large extent”.

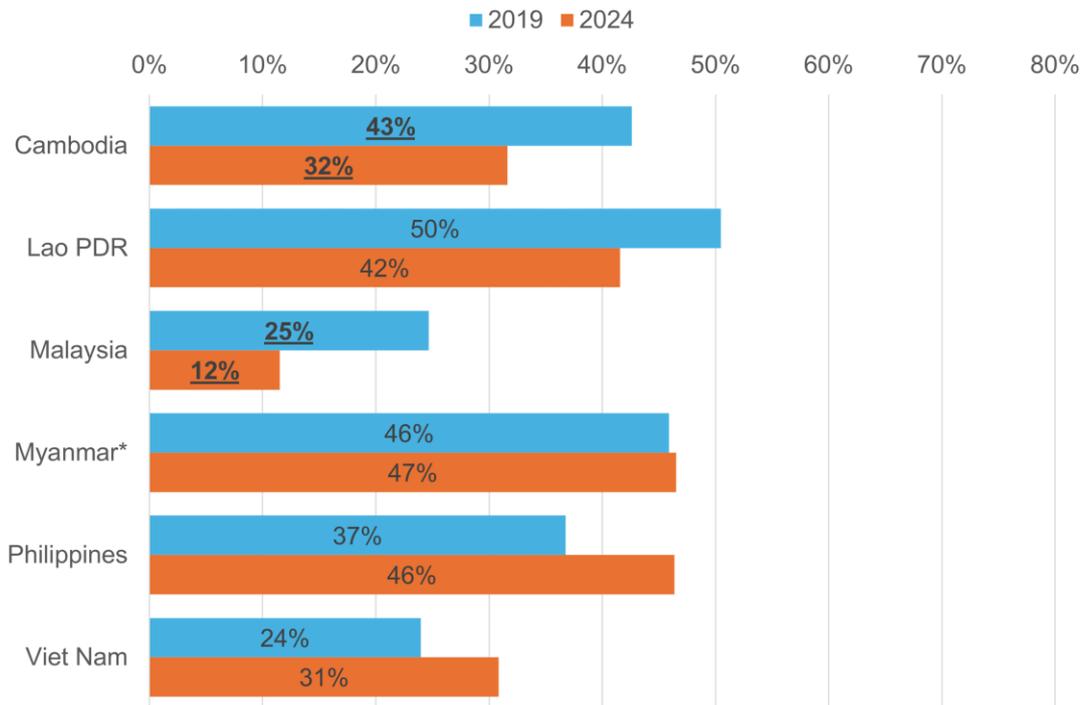
Figure 4.41: Shortage or inadequacy of classrooms



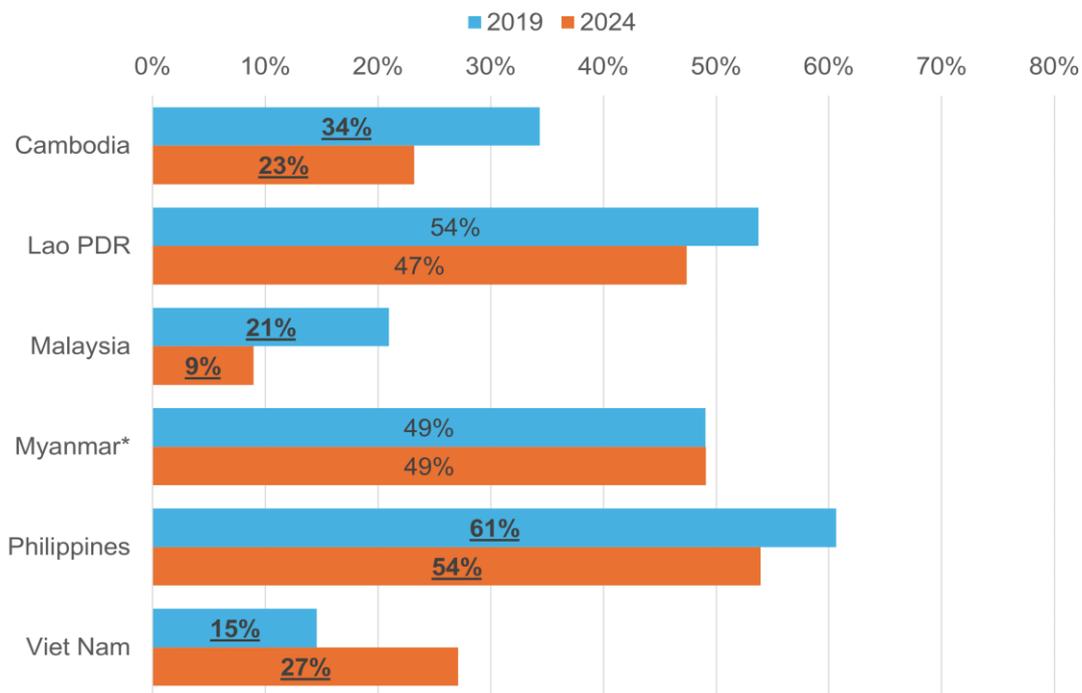
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

**Figure 4.42: Shortage or inadequacy of toilets**



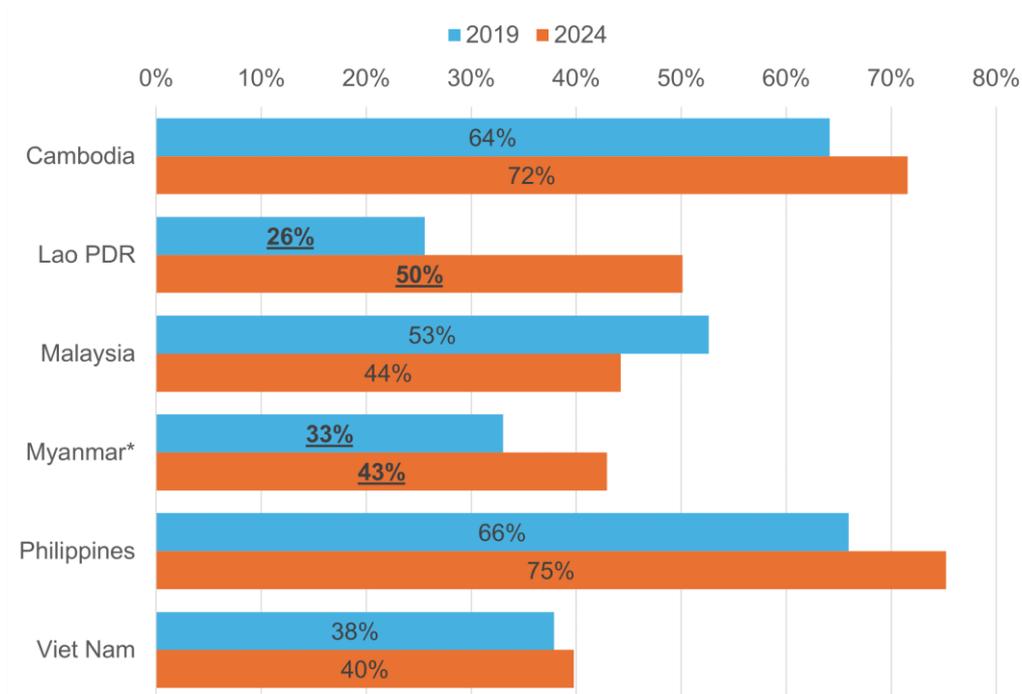
**Figure 4.43: Shortage or inadequacy of instructional materials**



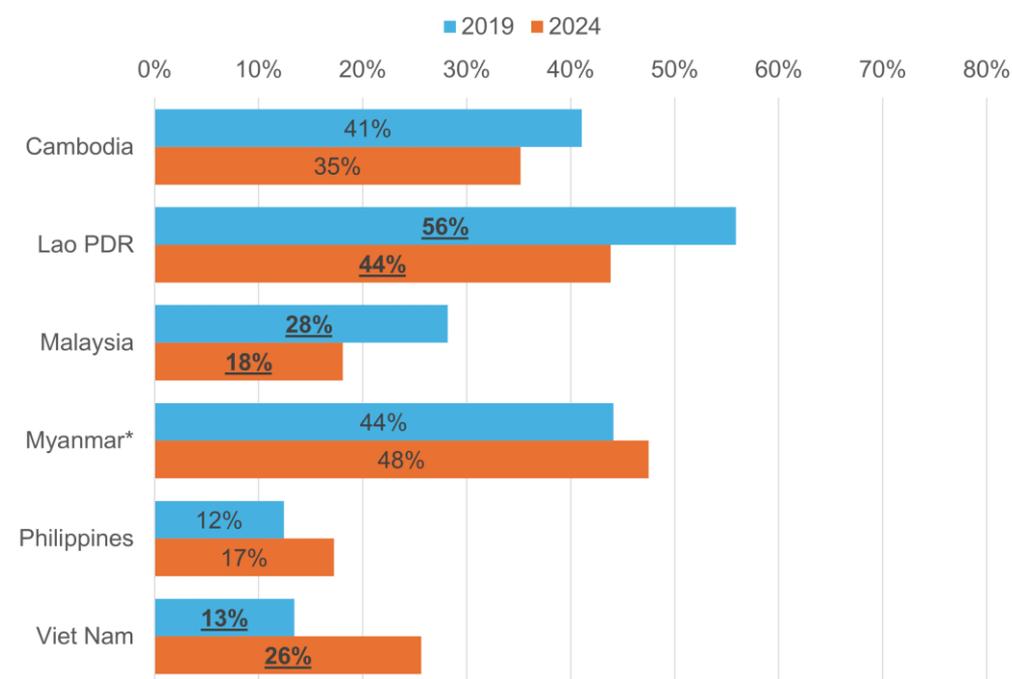
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

**Figure 4.44: Shortage or inadequacy of digital technology used for instruction**



**Figure 4.45: Lack of qualified teachers**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Labels with significant differences are underlined and bolded. All figures are presented using rounded values.

On average across the six countries, the most common issue hindering school capacity was a shortage or inadequacy of digital technology used for instruction. In some countries almost 75% of the children attended a school where the principal reported that this issue hindered school capacity to a large extent.

A regional scale was derived based on the responses to these five items (C\_HINDER in the school dataset). The higher scores on this scale correspond to a greater number of issues frequently hindering schools in a given country. Therefore, a low value or a decrease observed between 2019 and 2024 indicates an overall positive change, with fewer issues posing a challenge to schools. The aggregated scale enables the exploration of the overall situation and gives a better indication of the direction of changes across and within countries. See Table 4.6.

**Table 4.6: Issues hindering school capacity (compositive regional index), and changes over time between 2019 and 2024**

Country	2019		2024		Difference 2024 vs 2019	Significance of change
Cambodia	52.2	(0.78)	50.5	(0.70)	-1.7 (1.05)	•
Lao PDR	54.7	(0.51)	51.3	(0.76)	-3.3 (0.92)	▼
Malaysia	47.3	(0.69)	43.0	(0.78)	-4.3 (1.04)	▼
Myanmar*	52.5	(0.69)	54.7	(0.89)	2.2 (1.13)	▲
Philippines	51.0	(0.73)	51.9	(0.77)	0.9 (1.06)	•
Viet Nam	42.6	(0.77)	48.8	(0.96)	6.2 (1.23)	▲

\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Differences are reported by scale points

() Standard errors appear in parentheses

▲ Denotes a significant increase from 2019

▼ Denotes a significant decrease from 2019

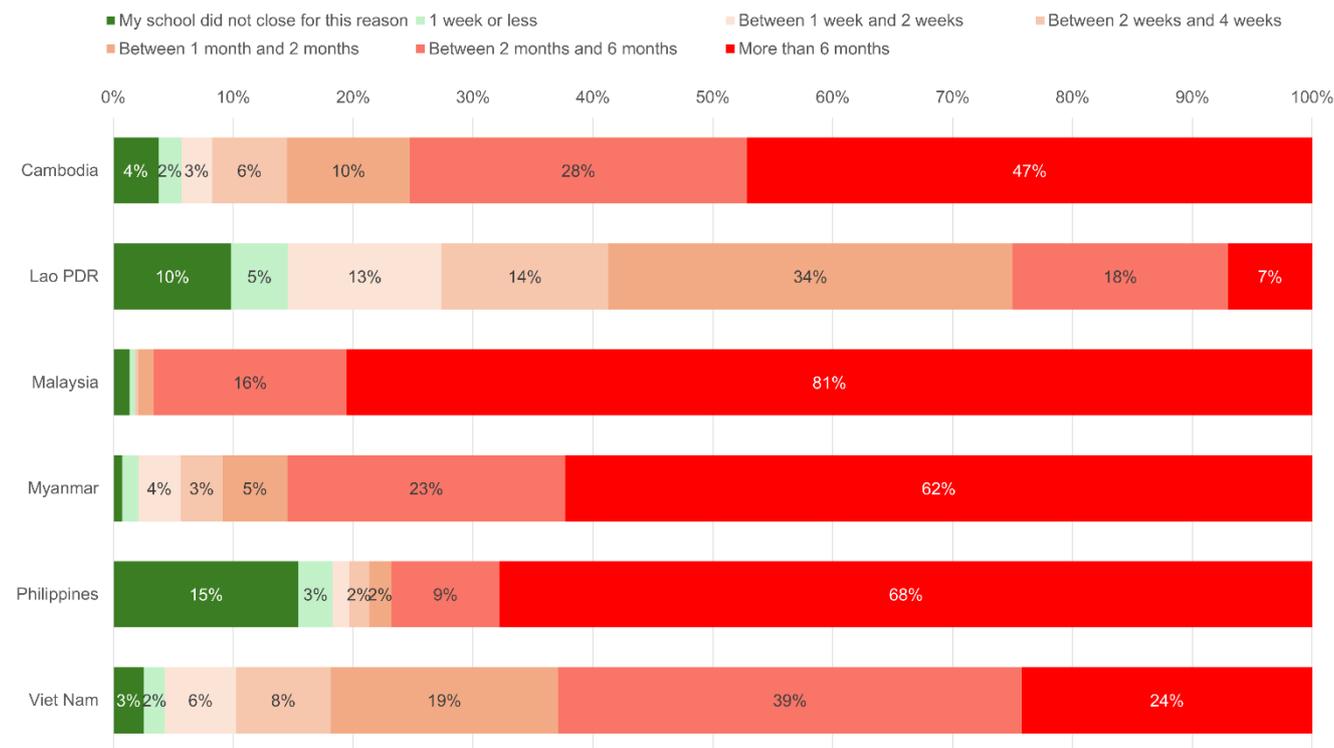
• Denotes no significant change from 2019

Overall, compared with 2019 and based on school leaders' reports, occurrences of issues hindering school capacity seem to be reducing in Lao PDR and Malaysia, remaining stable in Cambodia and the Philippines, and increasing in Myanmar and Viet Nam. In most cases, the overall national situation and change over time reported in the composite scale mirrors the patterns seen for individual questions and challenges. On average across the region, school leaders in the SEA-PLM 2024 rounds were more likely to report issues relating to the availability of digital technology, while access to instructional materials in most of the countries seems to be improving. Challenges with infrastructure appear to be diminishing in Cambodia, Lao PDR and Malaysia, but increasing in the other three countries. In each country, the pattern for individual issues will need to be examined in detail to understand more about student well-being and learning disparities.

## School closures during COVID-19

The SEA-PLM 2024 school leader questionnaires collected data on the frequency and length of school closures to explore how systemic or local crises or emergencies might affect education delivery.<sup>30</sup> They included questions on the length of physical school closure during the COVID-19 pandemic, as shown in Figure 4.46. Southeast Asian countries experienced some of the longest closures globally, with schools closed in some countries even as late as 2022.

**Figure 4.46: Percentage of children by school closure due to the COVID-19 pandemic, 2020–2022**



\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Note: Values below 2% are not reported in data labels. All figures are presented using rounded values.

In some countries – Malaysia (81 per cent), Myanmar (62 per cent) and the Philippines (68 per cent) – a majority of 2024 Grade 5 students attended a school that had been physically closed for more than six months during the pandemic. In some countries – Lao PDR (7 per cent) and Viet Nam (24 per cent) – school closures were shorter, with a smaller percentage of students physically away from school for more than half the year during the pandemic. Across the region, from 1 per cent (Myanmar) to 28 per cent (Lao PDR) of 2024 Grade 5 students experienced early grades in schools that did not close during COVID-19 or that were closed for a short period only (defined as less than three weeks).

The relationship between the length of the reported school closures in each country and the reading and mathematics performance by the end of Grade 5 was statistically analysed to understand the potential lasting impact of school closures on learning outcomes. The analysis sought to understand if Grade 5 students in schools with longer physical closure periods due to COVID-19 may have performed differently on the SEA-PLM test compared with students in schools with shorter closure periods. This analysis does not consider other factors that may have prevented schools from reopening, such as resourcing and available support. Only in

<sup>30</sup> Note that these responses are from school leaders and may differ from official policies or records.

Malaysia (for reading) and in Myanmar (for mathematics) is a significant difference observed, with students in schools that were closed longer demonstrating higher outcomes on average; in other countries, the length of school closure alone does not account for differences in point scores between students. (Refer to Annex 4 for the charts.)

## **Teacher qualifications**

Evidence from SEA-PLM 2019 highlighted the diversity of the teacher workforce, their classroom conditions, and their level of preparation and training upon entry to the profession. The secondary research in particular drew attention to the need to support pre- and in-service training and to improve teaching conditions, noting that a significant proportion of teachers in the region had not received targeted training for mathematics or reading instruction. Revitalizing teacher education has been and remains a key policy priority across Southeast Asia (the Southeast Asia Teachers Competency Framework was adopted in 2017).

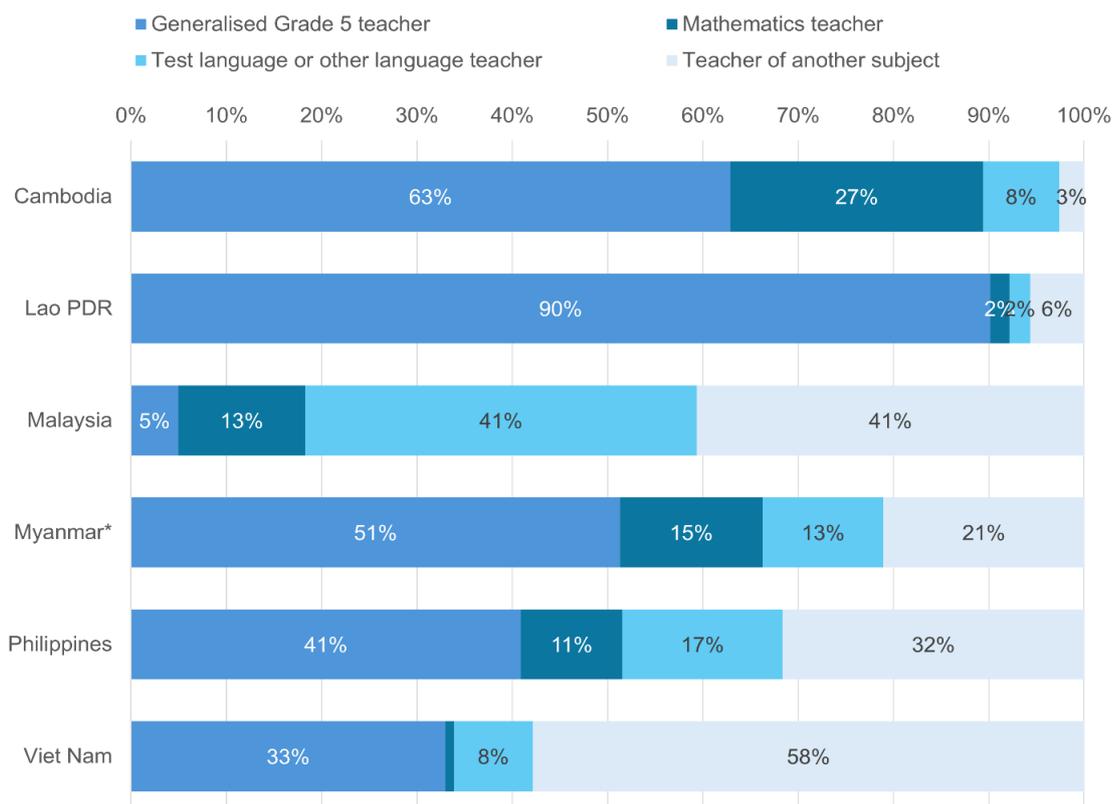
Teachers in upper primary must be adequately prepared to teach complex skills, building on the basic skills students should have learned throughout lower primary. They must also be ready to support students who might have struggled to master all the required competencies, a significant challenge in classrooms with a variety of learning levels. One of the main challenges noted by teachers across the region was the high proportion of students who have not yet mastered the basic skills.

All Grade 5 teachers in the sampled schools completed a teacher questionnaire, which examined their characteristics, level of academic education, pre-service and in-service training, experience, teaching practices, teaching confidence, and perception and attitudes about being a teacher. This section describes only some of the trends and differences observed in 2024 for teachers in charge of reading and mathematics lessons.

### ***Teacher specialization***

Teacher profiles and responsibilities in Grade 5 classes differ between and across the participating countries, with some countries training teachers as generalists (who study and teach all subject areas of the curriculum) and others training teachers as specialists (who study and teach one subject only, such as mathematics). In some schools, Grade 5 classes are led by generalists and specialists together.

**Figure 4.47: Percentage of Grade 5 students by type of teacher responsibility**



Note: ‘Teacher of another subject’ refers to specialist teachers in subjects other than mathematics or reading (language), such as sciences and social studies.

Note: Results are rounded to the nearest whole number, so some totals may appear inconsistent.

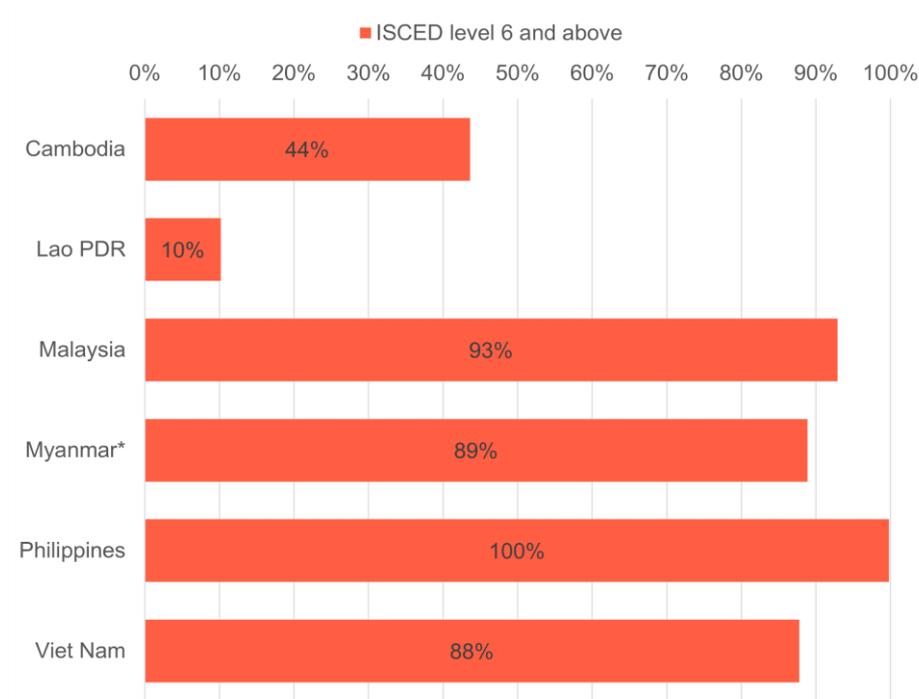
For example, in Lao PDR, 90 per cent of Grade 5 students who completed the SEA-PLM 2024 test were in a classroom with a generalist teacher who taught all or most of the subjects, while in Malaysia, about 95 per cent of Grade 5 students were learning with a specialized teacher (for language, mathematics or another subject). In half of the countries, the majority of Grade 5 students were learning with generalist teachers, in alignment with national policies related to teacher allocation in primary years.

### **Teachers’ pre-service qualifications**

Teachers in the participating countries had varying qualifications and degrees of preparation upon entry into the profession. Global professional teaching standards recommend that all teachers should be trained at least at university level and hold formal, recognized teaching qualifications that meet the standards defined by specific countries (UNESCO & Education International, 2019).

Figure 4.48 reports the percentage of children by whether the teacher in charge of reading lessons in the language of the SEA-PLM 2024 test had at least a university degree. SEA-PLM data offer further, more granular information to estimate exact education level.

**Figure 4.48: Percentage of Grade 5 students by whether teacher in charge of reading lessons in the language of the SEA-PLM 2024 test had reached university or above as the highest level of education upon entry into the profession**



\* Caution is required when interpreting and comparing estimates due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

There is no noticeable difference in the qualification levels of mathematics teachers compared with language teachers, so for the ease of discussion, only results related to teachers in charge of reading lessons in the language of the SEA-PLM 2024 test are discussed below. (See Annex 4 for the specific breakdown of mathematics teachers' qualifications.)

As reported by teachers in 2019, the great majority of Grade 5 students in Malaysia (93 per cent), Myanmar (89 per cent), Philippines (100 per cent) and Viet Nam (88 per cent) had teachers in charge of reading lessons in the SEA-PLM 2024 test language with ISCED level 6 education or above, indicating they had completed at least a bachelor's degree from a university. In those countries, the overall situation of pre-service qualifications remains similar to that observed in Grade 5 during SEA-PLM 2019.

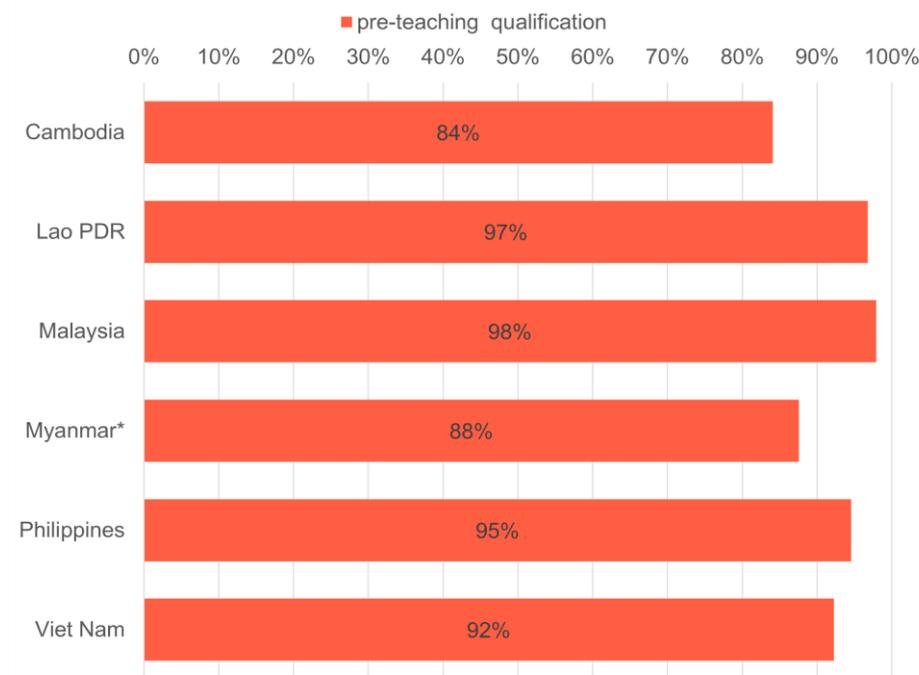
In Cambodia (44 per cent) and Lao PDR (10 per cent), Grade 5 students were more likely in 2024 than 2019 to have teachers in charge of reading lessons in the language of the SEA-PLM 2024 test with at least a bachelor's degree. In Cambodia, overall comparison of major trends suggests fewer teachers with very low pre-service qualifications and more teachers with ISCED level 6 equivalence in charge of Grade 5 students in 2024 compared with the situation in 2019 (about 40 percentage points increase); this may be a reflection of new policies and requirements for teachers in the country.<sup>31</sup> In Lao PDR, the overall comparison does not show a large change over time, and final estimates are not yet available, but there was potentially some small increase (about 5 percentage points).

<sup>31</sup> Final tests of significance remain to be calculated with SEA-PLM 2019 teachers' weights.

Initial statistical analysis shows a potential relationship between a higher concentration of low-performing readers and teachers with the lowest levels of pre-entry qualification in Cambodia and Lao PDR, suggesting that students with lower learning outcomes were most likely in class with teachers with lower academic levels.

As shown in Figure 4.49, across countries, the majority of students were learning language and reading with teachers who held a formal pre-teaching qualification upon entry into the profession. Similar results were received for mathematics teachers and are therefore not shown here but are available in Annex 4.

**Figure 4.49: Percentage of Grade 5 students by whether teacher in charge of reading lessons in the language of the SEA-PLM 2024 test had a formal pre-teaching qualification upon entry into the profession**



\* Caution is required when interpreting and comparing estimates due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

Statistical analysis does not show any relationship between Grade 5 students’ learning performance in reading or mathematics and whether teachers had formal pre-teaching qualifications upon entry into the profession.

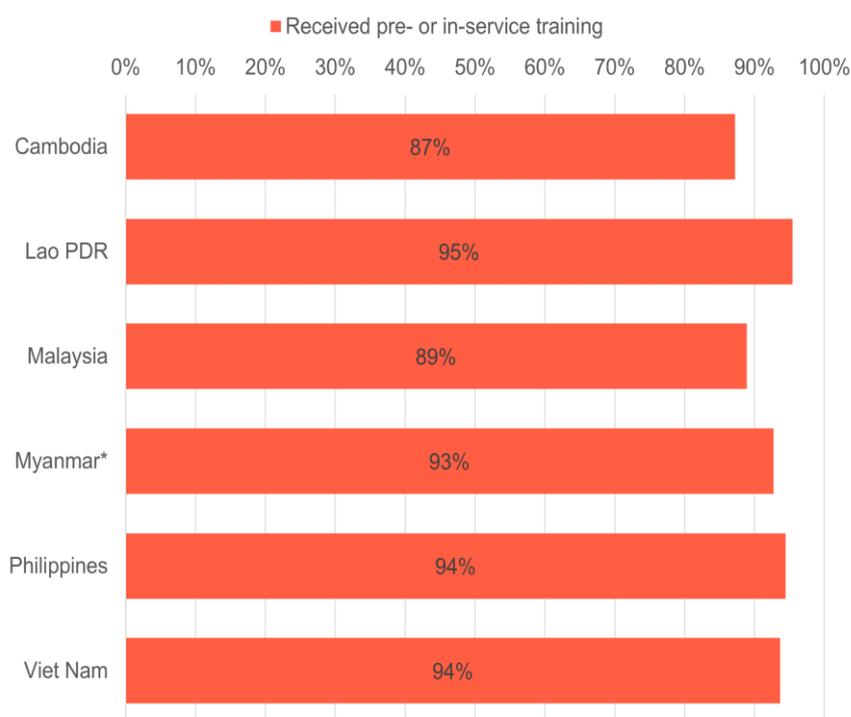
### **Pre- and in-service training for teachers**

Effective professional development and preparation for teachers should span pre-service and in-service education and be continuous so that teachers’ skills evolve throughout their careers (World Bank, 2018). All Grade 5 teachers were asked about the training they had attended, whether pre-service or in-service, in the domains they were in charge of teaching. Additionally, they were asked about training in specific techniques, including differentiated instruction, student assessment, information and communications technology, general teaching methods and inclusive education.<sup>32</sup>

Figure 4.50 reports the percentage of Grade 5 students by whether their teacher in charge of reading lessons had received dedicated training in teaching reading. (The results for mathematics teachers are largely the same and not reported here; please refer to Annex 4.)

<sup>32</sup> Data are available in the full SEA-PLM dataset and will be analysed further in the next phases.

**Figure 4.50: Percentage of Grade 5 students by whether teacher in charge of reading lessons in the language of the SEA-PLM 2024 test had received pre- or in-service training related to teaching reading**



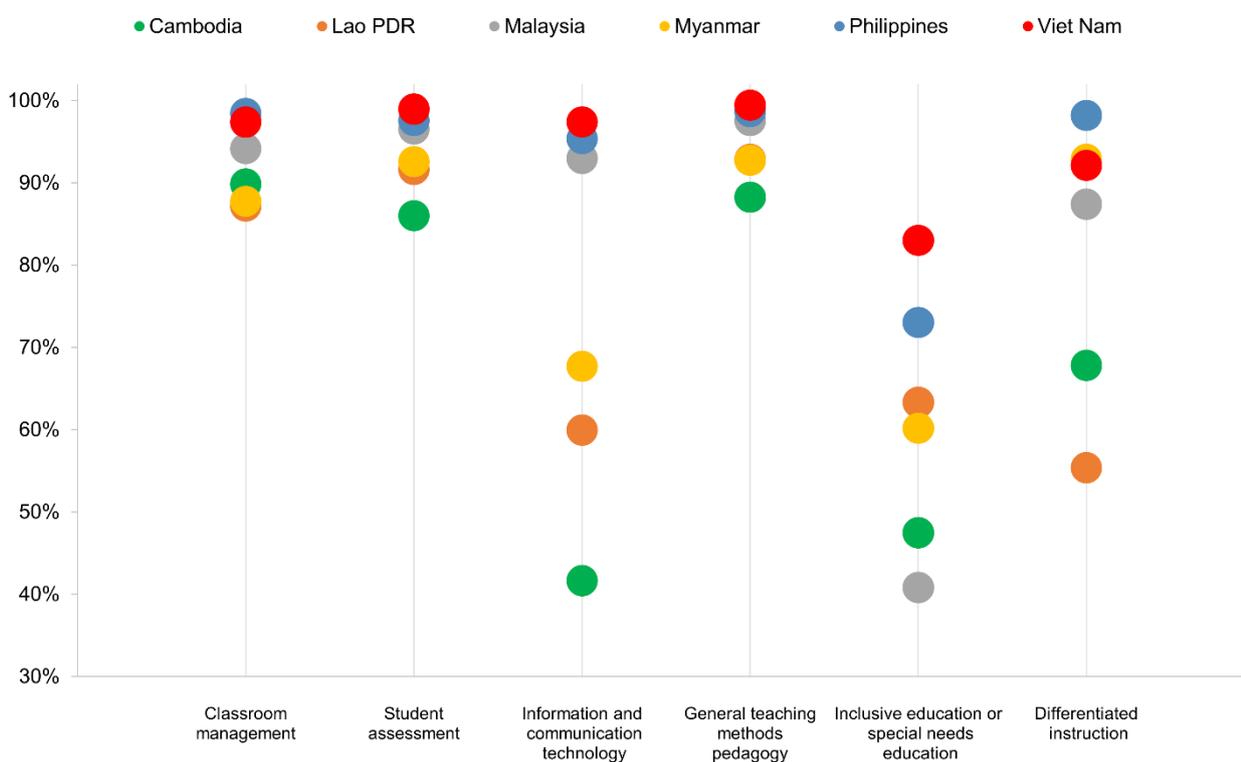
\* Caution is required when interpreting and comparing estimates for Myanmar due to significant changes observed in the composition of the Grade 5 population between the SEA-PLM 2019 and 2024 surveys.

The majority of children (ranging from about 87 per cent in Cambodia to 95 per cent in Lao PDR) attended schools where teachers in charge of teaching the language of instruction at Grade 5 reported that they had attended pre-service and/or in-service training related to teaching reading topics. However, in almost all countries, a non-negligible percentage of children in Grade 5 were in class with teachers who had received no training in reading (in the language of instruction used for SEA-PLM 2024) before or during their service, spanning from 5 per cent in Lao PDR and 6 per cent in the Philippines to 13 per cent in Cambodia.

Across countries, statistical analysis does not show any consistent and significant relationship between the concentration of low-performing Grade 5 students in reading and whether teachers had received subject-specific training.

In addition to subject-specific training, teachers often undertake further training in specific pedagogical methodologies or cross-cutting themes.

**Figure 4.51: Percentage of Grade 5 students in language lessons, by teachers' pedagogical training content**



Note: Teachers report on this training according to their own understanding of what is covered by the training and the standards set by each country.

Most teachers across the six countries reported having received training in classroom management and student assessment. Fewer teachers reported having received training in inclusive or special education or in using ICT for teaching. In many countries, teachers have low levels of confidence using ICT for teaching and learning, which is a concern for supporting digital transformation in classrooms and building digital literacy for the school communities and learners.

Many teachers, especially in Cambodia and Lao PDR, have not received specific training in differentiated instruction, which has been shown to be a cost-effective way to support foundational skills acquisition in students.

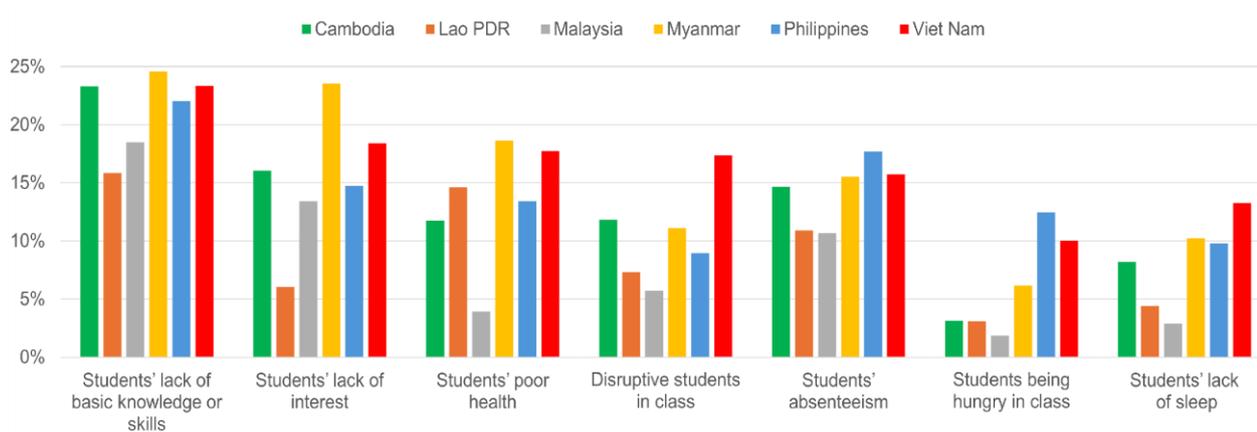
## Issues affecting students' learning in class

Learning can be affected by the motivation and well-being of students. SEA-PLM asked teachers to share their perspective on the level of frequency of seven selected issues that could affect students' learning in their class. Teachers indicated if these issues affected their students' learning to a large extent; to a moderate extent; to a little extent; or not at all.

- students' lack of basic knowledge or skills
- students' lack of interest
- students' poor health
- disruptive students in class
- students' absenteeism
- students being hungry in class
- students' lack of sleep

Only average responses for each country from the category 'to a large extent' are reported. They have been combined in Figure 4.52.

**Figure 4.52: Percentage of Grade 5 students facing a specific issue ('to a large extent' according to their teachers) in 2024**



Among the seven issues, the most common difficulty reported by teachers was the students' lack of basic knowledge or skills, with 15 per cent to 25 per cent of Grade 5 students in classes where teachers reported this as a concern. This is closely followed by 'students lack of interest', suggesting that motivation may be a greater hindrance to learning than issues affecting physical well-being such as being hungry or tired.



# Chapter 5

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## Key Insights and Policy Considerations from SEA-PLM 2024

# Chapter 5: Key insights and policy considerations from SEA-PLM 2024

All children have the right to quality and meaningful education. Foundational skills in reading and mathematics are especially critical as they form the bedrock upon which all further learning is built. When children master these fundamental competencies, they are better equipped to progress through higher levels of education, transition into meaningful employment, and contribute fully to their communities and societies.

This report has highlighted the key findings from the 2024 cycle, including regional patterns and country-level progress relative to 2019. By providing results that can be measured over time and benchmarked across education systems, the 2024 cycle offers the region a clearer picture of how children’s learning has evolved since 2019, how schools and systems are adapting to new challenges, and where more targeted action is needed to advance inclusive and equitable quality education for all. While deeper analysis and further research are encouraged, the results offer a clear and compelling picture of current learning levels and the trends shaping education across Southeast Asia. The following insights serve as a foundation for dialogue, policy action and continued collaboration to improve learning for every child in the region.

## **Contextual findings**

Since the first SEA-PLM cycle in 2019, the education landscape in the region has evolved significantly, including in response to the COVID-19 pandemic, climate change, political and financial instability, and rapid digital and technical advancements, including the increasing use of artificial intelligence (AI). SEA-PLM participating countries have responded in various ways, expanding early learning opportunities, adapting curricula and teaching modalities, and improving monitoring and accountability mechanisms.

Many of these reforms have been shaped, directly or indirectly, by the SEA-PLM 2019 insights and recommendations, which drew regional attention to the state of foundational learning in the region. SEA-PLM 2024 has sought to document some of these national and regional responses, which have involved education reforms in all countries, spanning from minor, small-scale adjustments to full-scale curriculum reforms, each aiming to respond to post-pandemic realities and demands and building school and system resilience. These have included provision of remedial and catch-up opportunities for children at risk of falling behind; investments in early childhood education (ECE), which are contributing to the rising ECE enrolment rates; and curriculum adaptations to prioritize foundational learning, as well as 21st century skills including green skills, among other reforms.

This contextual understanding of the current state of education systems, and the environment within which they operate, can in turn help understand the current state of learning.

## **Key insights and policy considerations from the 2024 results**

The following insights reflect on changes since 2019 and provide a forward-looking view. The insights consider the current state of learning, observed challenges and areas of progress. They point out areas for action that countries across the region will need to reflect upon to continue to make progress in learning outcomes for all children.

**1. Only half of the children meet minimum proficiency levels in reading; in mathematics, one third achieve this level. There is an urgent need to increase investment in foundational learning, prioritizing the most disadvantaged learners and schools.**

In 2024, only one in two children (53 per cent) reached the minimum proficiency level (MPL) for reading captured by Sustainable Development Goal (SDG) 4.1.1b; two in three children (68 per cent) met the MPL for mathematics. The MPLs reflect the minimum expected competencies, generally covered in national curriculum already at Grade 4 across the participating countries. No child should be unable to reach these minimum levels, given the resources and support provisioned for in education policies and programmes.

Looking beyond the minimum levels, to what is targeted by national curricula by the end of primary, SEA-PLM 2024 reveals a wide range of abilities across Grade 5 students. Regionally, 36 per cent of students reached the highest proficiency bands for reading (Band 6) and 52 per cent reached it for mathematics (Band 6 and above) (versus 34 per cent in reading and 40 per cent in mathematics in 2019). Simultaneously, almost one in five (17 per cent) of students in reading (one in ten, 11 per cent, in mathematics) students had only reached Band 2, demonstrating skills and knowledge expected in early grades of primary education. In some countries, roughly equal proportions of students fell into each SEA-PLM band, while in others, only a minority had reached Band 6 or were still left behind at Band 2. This highlights significant discrepancies in learning among students, even within the same classrooms, and indicates barriers to learning both within education systems and outside of them.

Students who do not meet the higher SEA-PLM proficiency levels in the reading and mathematics scales by the end of primary education are far less likely to meet national curriculum standards. Without targeted support, these learners face increased risk of falling behind and experiencing difficulties as they transition to higher grade levels.

Governments and education partners will need to prioritize long-term, system-wide reforms that strengthen early learning, support teachers and ensure that every child has access to quality education. Only through increased commitment and adequate resources can countries close persistent learning gaps, promote equity and build solid education foundations for all children.

**2. A degree of stability in learning outcomes has been achieved despite significant external shocks since 2019. Future-looking action and continued investment in building system resilience will be needed to prepare students and schools to face diverse shocks.**

At the regional level, SEA-PLM 2024 results show a mixed pattern of progress. Little to no progress has been made in reading, with the regional average unchanged since 2019; in mathematics, the regional average has increased slightly. These results, though limited, illustrate a degree of stability in learning outcomes despite significant external shocks, such as COVID-19 related school closures and numerous climate-related events, that have affected education systems over the past five years.

However, the regional average masks important variations across countries. While the rate of progress is uneven in the region, a larger proportion of students in most countries are reaching higher proficiency levels: regionally, in reading, 53 per cent reached minimum proficiency levels compared with 46 per cent in 2019; the figures are 68 per cent and 56 per cent respectively in mathematics. Fewer students remain in the lowest two bands: 30 per cent (versus 36 per cent) in reading and 19 per cent (versus 27 per cent) in mathematics. These

shifts in proficiency levels may reflect the impact of targeted investments to support low-performing students in schools and outside schools or, conversely, may signal persistent learning disparities and gaps for the most disadvantaged students.

Looking ahead, the increasing frequency of climate-related disruptions underscores the need for ministries and education stakeholders to sustain and reinforce efforts that support system stability. Continued investment in flexible learning modalities, climate-resilient education infrastructure, service delivery and preparedness measures will be essential to protect learning gains and ensure that further progress remains achievable across the region. With sustained focus and coordinated action, countries can build on this foundation to accelerate improvements, strengthen system resilience, and ensure that learning recovery translates into long-term gains for all children, including in the face of external shocks.

**3. The pace of improvement among students at the very low proficiency levels remains slow. Targeted strategies and accelerated support for the lowest performers will be needed to close the gap in learning outcomes.**

SEA-PLM 2024 shows that a significant proportion of Grade 5 students still manifest emerging competencies in reading or mathematics skills (and sometimes in both areas simultaneously) when assessed in the main official language of instruction. Across the region, 15 per cent of students only attained Band 2 in reading, the lowest proficiency band measured by SEA-PLM, demonstrating competencies expected to be mastered at Grade 1 or 2 in most national curricula in the region; for mathematics, the corresponding percentage is 9 per cent. Essentially, 1 in 10 Grade 5 students are still struggling with even the most basic foundational skills, despite having been in school for at least five years, highlighting the slow pace of improvement among the lowest performers.

Overall trends since 2019 reinforce this concern. The proportion of children at Band 2 in reading has not improved at the regional level, indicating stalled progress for the lowest-achieving readers. In mathematics, the regional average has significantly decreased (from 11 per cent to 9 per cent), indicating that more children are moving towards developing mid-level competencies in foundational mathematics. However, these gains must be examined carefully to understand which groups of learners are benefiting and whether the most vulnerable children are seeing meaningful progress. The learning outcomes for children from the lowest socioeconomic backgrounds have not improved, or have even declined, in the majority of the participating countries, widening the gap. The gap between boys and girls is widening in most countries in reading, and the learning outcomes of students who do not speak the language of the test at home have not improved, or even declined.

This challenge is further compounded by the out-of-school children, who are not captured in SEA-PLM assessments. In some participating countries, the proportion of out-of-school children aged 10–12 years ranges from 5 per cent to as high as 30 per cent. This population is likely to exhibit the weakest learning profiles and would almost certainly place at the very bottom of SEA-PLM proficiency scales. Even in countries where the out-of-school rate remains low (3 per cent or below), these children represent some of the most disadvantaged learners whose needs remain largely invisible in large-scale assessments.

Supporting students who remain at the lowest proficiency levels will require ministries and schools to adopt more targeted, learner-specific strategies, especially for disadvantaged groups. Several countries are beginning to introduce structured pedagogy, teaching-the-right-level approaches, and programmes that provide tailored instruction and remediation – approaches that have shown early promise. However, these interventions will require dedicated and sustained resources and efforts to support specific schools, territories, grades and subjects to make a meaningful difference and to show effective change. These measures will be needed to have

a long-term impact on learning progression, especially for specific profiles of learners most at risk of falling behind.

**4. Education systems continue to demonstrate barriers to learning that differentially affect students, resulting in different learning trajectories for boys and girls across the region and within countries. Greater efforts in building inclusive and gender-responsive systems will be needed to support all learners to reach their full potential.**

Across the 2024 participating countries, girls continued to outperform boys in reading, reflecting a gender pattern observed in the SEA-PLM 2019 results as well as across other regional large-scale assessments. In mathematics, gender differences are generally small and narrowing; in some countries, where previously no difference was observed in mathematics between the genders, boys are now outperforming girls. Changes like this indicate changes in underlying societal norms and need to be further unpacked to enable equal opportunities for all children, regardless of gender.

This learning disparity suggests that gender norms and expectations may already be shaping learning trajectories by the end of primary education. The teacher and student questionnaires, while not yet unpacked fully in this report, indicate important differences in attitudes and behaviours between girls and boys that may give some insight into the different learning outcomes.

These patterns underscore the need to address the underlying barriers that shape learning for boys and girls. Building inclusive, gender-responsive education systems will be essential to ensure that all learners receive the support they need to reach their full potential.

**5. Inequalities in learning outcomes continue to be driven by the socioeconomic status (SES) of the children. Greater efforts will be needed to address socioeconomic inequities and to understand the multiple factors shaping and impeding learning.**

Socioeconomic status (SES) continues to be a strong predictor of student achievement. Students from higher socioeconomic backgrounds consistently outperform their peers, with sizeable gaps evident in both reading and mathematics proficiency across all participating countries. SES plays such a significant role in shaping student achievement that, when accounted for in the analysis, the influence of other factors either strengthens or diminishes, highlighting SES as a central driver of learning outcomes.

Concerningly, in some countries, the gap in learning outcomes between students from different SES groups seems to be growing, with the average score of students from the lowest SES groups regressing from the 2019 cycle. SES-related factors are often further compounded by other sources of inequalities or marginalization, including gender norms, linguistic or ethnic backgrounds, and living location (urban/rural), among others.

While SEA-PLM does not and cannot capture all factors influencing a student's learning and their academic journey, it can identify and help profile both schools and students who counter expectations, both positively and negatively. In all countries, there are students and schools who are considered positively or negatively resilient (e.g., a student from the lowest SES performs in the top quartile of students). Further investigation is needed to understand these students and schools to enable improved policymaking and country-specific lessons on this type of resilience.

Targeted investments could potentially reduce inequities and drive overall system performance. This requires key ingredients like constant (and increased) financing for primary education, quality resources, and motivated, well-trained and efficient teachers. Additionally, there is a need to build a common understanding of the different multi-correlated factors that share learning trajectories, and support parents, teachers and schools to better address these barriers and sources of disparities.

**6. Early learning opportunities and school resources significantly boost student performance, but unequal access, driven by socioeconomic differences, limit these benefits. Investing in equity-focused interventions, such as quality ECE, teacher support and learning environments, will be needed to narrow achievement gaps.**

Across the region, in almost all countries, a larger proportion of students in Grade 5 reported at least some early childhood education (ECE) experience, which generally correlates with higher learning outcomes. The impact of ECE is mitigated by SES – possibly an indication of the quality of ECE available and accessible to children from different wealth quartiles.

Schools remain differently resourced, with unequal distribution and availability of learning materials, strong teachers, and safe, appropriate learning environments. Schools serving students from the lowest socioeconomic backgrounds are less likely to have adequate learning resources or extracurricular activities.

Improvements in contextual factors, such as teacher support, textbook access and safe learning environments, are linked to measurable gains in student performance, demonstrating high returns on equity-driven investments. Building on these initiatives could further mitigate inequalities linked to student backgrounds.

**7. Language alignment boosts learning and students generally perform better when their home language matches the test language. Aligning language policies with language needs will support children in their learning journeys.**

Across SEA-PLM 2024 participating countries, results show a strong and consistent pattern: students achieve higher scores when the language spoken at home aligns with the language used in the assessment (even equal to one year of learning in some countries). This effect is particularly pronounced in reading, where language familiarity directly influences a learner’s ability to decode, comprehend and engage with text. For many children, especially those from linguistically diverse or multilingual households, the mismatch between home and school languages creates barriers that hinder literacy development.

The relationship between language and learning is further shaped by the evolving nature of language policies across education systems in the region. The 2024 system-level questionnaires illustrate that many countries are moving towards policies that expect children to gain proficiency in multiple languages, either in an additional national language or a foreign language.

These patterns underscore the need for clearer language transition policies, stronger support for teachers working in multilingual classrooms and environments, and flexible instructional approaches that help children build conceptual understanding while progressively acquiring proficiency in multiple languages as envisioned by national policy.

**8. Teacher qualifications have improved, but persistent gaps in teacher preparedness continue to be observed. There is a need to further focus on strengthening teacher capacity beyond qualifications, with a focus on differentiated learning, inclusive pedagogy and the use of information and communication technology (ICT).**

On average, teacher qualifications continue to improve, reflecting steady investments in pre-service training, certification requirements, and continuous professional development frameworks. These improvements suggest that countries are building stronger teacher education systems, including increasing alignment with regional and global teacher professionalism standards.

However, despite these gains, persistent gaps remain in teacher preparedness and capacity, particularly in the areas of ICT integration, inclusive education and differentiated instruction. The biggest hindrance to teaching that teachers reported in 2024 was ‘students’ lack of basic knowledge or skills’; addressing this challenge will require further targeted investment not only in the quality of early primary grades, but also in teachers’ capacity to understand and address individual learning needs. These challenges were already evident in the 2019 cycle and continue to affect teachers’ ability to respond to diverse learner needs.

Many teachers also remain uncertain about using ICT for instruction; the integration of AI, which is rapidly rising, is still also largely underdeveloped. Closing these gaps will require more targeted, practice-based professional development, better access to practical resources, and comprehensive frameworks around education technology and AI. Teacher professional development needs to include a focus on differentiated instruction, foundational literacy and numeracy, and inclusive education. This will ensure that qualifications translate into stronger teaching practice and that students continue to learn in safe environments.

**9. The region is witnessing declining investment in education and a closing demographic window of opportunity. Education systems will need to increase equality and efficiency to ensure continued national development.**

National investment in education, measured as a percentage of government expenditure to education, has decreased in many countries; simultaneously, fewer resources are available from development partners. Many countries in the region are beginning to experience ageing societies, with increasing older populations relying on social services paid for by the working population’s taxes and investments. National productivity and continued economic growth will require education systems that enable all children to learn the skills they need to contribute meaningfully and in a peaceful manner; no child can be left behind.

Renewed commitment to public financing of education, including to meeting internationally agreed benchmarks, is necessary to ensure sustained investments in foundational learning. Investments in foundational learning will translate into strong human capital that could align with and respond to the demands of evolving labour markets and closing demographic windows.

**10. The use of data for evidence-based decision-making is still nascent. Further focus on monitoring progress and understanding and scaling up what works will strengthen data-driven policymaking and ensure the efficacy of investments.**

To drive sustained improvements and ensure equitable progress in basic education, countries will need to invest in strong and regular accountability mechanisms – ones that strengthen classroom-to-system-level monitoring, build national capacity to generate and use evidence, and advance equity-focused indicators and quality-driven

approaches – to adequately monitor and evaluate the impact of interventions, policies and programmes. Institutionalizing high-quality, comparable learning data is essential for understanding what works best in each specific context.

Sustained participation in large-scale learning assessments, such as SEA-PLM, are essential for building a regional set of indicators on foundational learning outcomes in Southeast Asia. These shared indicators enable countries to track equity trends, assess system effectiveness and monitor learning progress over time. By consistently implementing and using SEA-PLM evidence alongside national and classroom-level data, countries can drive targeted reforms and strengthen accountability, advancing equitable and quality education for all children and future generations across the region.

### **Looking ahead to 2029 and beyond**

*SEA-PLM's goal is that by 2030, countries in the region make measurable progress towards equitable foundational learning, narrowing equity gaps, ensuring that every child has a fair chance to learn.*

The two SEA-PLM cycles, in 2019 and 2024, show that children's opportunities to learn are strongly shaped by their learning environments and factors such as SES, gender and language of instruction. Marginalized groups face the steepest barriers. Addressing these disparities requires increased investments in education, identifying proven, cost-effective policies and practices, and drawing on data and evidence to appropriately target policies and practices. Ministries of education and all stakeholders will need to prioritize support for low-performing readers, promote gender-responsive classrooms, and develop language policies that support children's learning.

The region has made considerable investment in foundational learning, and progress is starting to be visible. This will need to be sustained for the next generations of learners.

SEA-PLM 2029 represents not just the next cycle of assessment but also a chance to reimagine the role of data in driving educational transformation across Southeast Asia. The journey from 2019 to 2024 has shown that commitments at the policy level must be matched by effective implementation, a stronger equity focus, and the deeper use of evidence.

The vision for 2029 and beyond is one where:

- every child achieves foundational learning by the end of primary school, with systems designed to detect and respond to learning gaps early
- equity is embedded in system design and planning, ensuring that financing, teacher training and deployment, and resource allocation are more inclusive and prioritize the most disadvantaged learners
- SEA-PLM is fully institutionalized, serving as both a monitoring tool and a catalyst for regional collaboration, helping countries learn from each other and accelerate progress towards the achievement of global and regional goals.

In this vision, SEA-PLM is not only an assessment but also a regional driver of change, strengthening evidence use, advancing accountability, and uniting Southeast Asian countries around a shared commitment: that no child in the region should be denied the chance to learn, thrive and contribute to their society.



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[www.seaplm.org](http://www.seaplm.org)  
SEA-PLM Regional Secretariat  
Mom Luang Pin Malakul Centenary Building  
920 Sukhumvit Road, Klongtoey, Bangkok 10110, Thailand.  
Tel: +66 (0) 2391-0144 Fax: +66 (0) 2381-2587