SEA-PLM 2019 Main Regional Report

Children's learning in 6 Southeast Asian countries

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Foreword

To advance in learning, children need to master the basics first. They need to learn to read so they can read to learn. They need numeracy to make sense of numbers and solve problems. They need to gain skills to interact within their communities, to understand their world. With a strong foundation, children will continue to acquire knowledge and develop skills through their lifetime. The education systems must therefore ensure children develop foundational skills and reliable data to monitor outcomes of that process is key to ensuring that children are learning.

The Southeast Asia Primary Learning Metrics (SEA-PLM) aspires to provide a world-class student learning assessment for the region, catering to the needs and context of different countries. The first cycle of this assessment, conducted in 2019 with six participating countries, sought to find out what Grade 5 children know and can do in reading, writing and mathematics. For the first time, global citizenship attitudes, values and behaviours of children were also measured by a large-scale learning assessment at primary education level.

In this report the findings of the SEA-PLM 2019 show alarming trends of inequities and poor learning. Across participating countries, 1 out of 3 children in Grade 5 is still performing at the level expected in the early years of primary education. However, this figure hides structural differences among systems as the percentage of children that are only able to read and write simple words and do basic mathematics range from 2% to 50% across the 6 participating countries.

Substantial difference is also revealed in the number of children performing at the highest levels of expected learning. For instance, in some countries a large majority (91%) of Grade 5 children are able to perform complex mathematical operations and interpret different data sources, while in others only few (8%) children are prepared for these tasks. Mastering the highest levels of the SEA-PLM scales in mathematics and reading is equivalent to what is the minimum expected in SDG 4.1 at the end of primary education, which show that many countries are still far from reaching this target.

The findings on global citizenship deserve special attention. For instance, children and teachers indicate significant interest in and concern with environmental issues, including climate change. Solving disagreements with classmates and solving problems in the community appeared to be among the most valued lessons learned at schools. At the same time, less than half of the children reported experience speaking in an organized debate or discussing global problems.

Encouraging findings emerge from the report as well. Data found that in all counties, children who had attended at least 1 year of preschool education consistently performed better than children who had not. On average, children who felt better and safer at school performed better than children who reported less positive feelings. In all countries, higher levels of parental engagement were associated with higher reading, writing and mathematics scores in children. This indicates that with the right policies, and programmes in place, a significant proportion of children may still be able to improve and reach higher proficiency levels.

The report concludes with a set of recommendations to achieve equity in learning. These call for improving early learning and school support policies and programmes; a stronger coherence among pedagogic practices, curriculum and assessments, as well as on teacher policies and practices that ensure teachers become authentic pedagogic experts. The report also calls for improving the capacity of the government to use data and to monitor learning and encourages the use of SEA-PLM 2019 rich data sets. Finally, the report invites all countries in Southeast Asia to join new SEA-PLM 2023 round and strengthen partnerships across the region.

SEA-PLM ambitious goals and collaboration potential are particularly important in the post COVID-19 era as the pandemic may increase the number of out-of-school children as well as the learning loss of those enrolled in real and virtual classrooms.

It is time for all education stakeholders to get aligned around strong equity learning strategies. SEA-PLM 2019 provides substantial evidence to inform these recommendations. SEAMEO Secretariat and UNICEF will be hand in hand working with countries and partners to provide every child a strong foundational learning.

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The development of the SEA-PLM Programme, with its consultative process and representative data, was only possible through the consultation of the Ministries of Education of all Southeast Asian countries and the commitment of SEA-PLM 2019 participating countries: Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam. A list of official representatives from the 6 SEA-PLM participating countries and UNICEF Country Offices is included in Appendix 5.

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The list of the official representatives of SEA-PLM 2019 participating countries and UNICEF Country Office staff involved along the conception of the SEA-PLM framework, development and implementation of this first cycle of SEA-PLM is presented in Appendix 5.

The list of experts from the SEA-PLM Technical Advisory Group that provided independent technical advice in the final methodology phases of SEA-PLM 2019 is presented in Appendix 5.

The SEA-PLM Secretariat wish to also gratefully acknowledge all stakeholders and former experts not mentioned above and in Appendix 5 who were involved in the inception and implementation stages of SEA-PLM.

Introduction

The Southeast Asia Primary Learning Metrics (SEA-PLM) Programme was launched by the SEAMEO Secretariat and UNICEF East Asia and Pacific Regional Office (EAPRO) with the aim to improve the capacity to measure learning outcomes, use data, and allow peer exchange on policies and practices in the region. SEA-PLM's ambitious agenda aims to contribute to countries' efforts to achieve Sustainable Development Goal (SDG) 4, and in particular, track progress on foundational learning (SDG 4.1.1), and knowledge and skills related to global citizenship (SDG 4.7).

As a key flagship of the Programme, the SEA-PLM Assessment was launched formally in 2014, to measure learning outcomes for children enrolled in Grade 5. Six participating countries: Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam, decided to embark on this adventure, to improve the future of millions of children. The SEA-PLM Secretariat is honoured to now present the SEA-PLM 2019 Main Regional Report. Findings presented in the five chapters of the report provide meaningful information to understand the level of resources, practices and learning outcomes at a national-level and within countries. Cross comparisons between subgroups of children and schools sheds light on the challenges and opportunities to address the learning and equity gaps in basic education across Southeast Asian countries.

Chapter 1 presents the overall approach of the SEA-PLM Programme and particularly the SEA-PLM 2019 scope and general primary education context in participating countries. It also details the methodology developed and applied, and shares some of the main SEA-PLM 2019 survey parameters, from test development to reporting.

Chapter 2 describes the level of performance, on average, of each country on the new SEA-PLM proficiency scales in reading, writing, and mathematical literacy. Such information on external regional metrics offers extensive quantitative and qualitative findings to address curriculum and monitoring efforts and reform. The content of the chapter addresses what students know and can do and targets specific areas of learning that teachers can focus on to support the improvement of performance. The chapter proposes, for the very first time, a new benchmark for reporting the percentage of children at or above the expected international minimum proficiency levels at the end of primary education, as referenced by SDG indicator 4.1.1b.

Chapter 3 addresses the challenge of resource allocation, actors' practices and equity of performance between different groups of learners. The survey used background questionnaires to collect extensive information about children, classes, teachers, schools, head teachers, parents and the community. Linking this information to learning performance over the three domains provides some benchmarks to understanding variations and inequity in performance levels and drivers of learning.

Chapter 4 reports children and teachers' attitudes, values and engagement in global citizenship-related topics specially developed by and for the SEA-PLM study. This new module generated new data and findings to question complex concepts, construction and effectiveness of local, regional and global citizenship education at the individual and school level.

Chapter 5 concludes the Main Regional Report of SEA-PLM 2019 by summarising the findings and highlighting challenges. Five policy recommendations are suggested to support better learning and equity in basic education, including how to use and further explore SEA-PLM 2019 data at the national and regional levels. An additional recommendation (Recommendation 6) suggests countries and partners be part of a SEA-PLM 2023 cycle. This will help to create a longitudinal understanding on learning changes at the system level, particularly looking at the impact of the COVID-19 pandemic.

We hope this report, and further national and regional research, offers a new policy momentum among Southeast Asian countries and partners. This can then, in turn confirm and set direction, priorities and encourage national and regional frameworks, actions, practices and research in key policy areas, as well as curriculum alignment, resource allocation, pedagogical practice and planning at regional, national and subnational levels.

The SEAMEO Secretariat and UNICEF Regional and Country Offices will continue to do their best to support governments in advancing the right to education and to reach the levels of equity and prosperity the region is committed to achieve. We invite more countries and partners to join us in these efforts.

The SEA-PLM Secretariat co-managed by SEAMEO Secretariat and UNICEF EAPRO

Executive summary

1. What is SEA-PLM 2019?

Southeast Asia Primary Learning Metrics (SEA-PLM) is a new regional large-scale student learning assessment programme, designed by and for countries in Southeast Asia. The programme aims to generate reliable data and evidence for monitoring learning outcomes across and within countries, and to understand what factors facilitate or hinder effective learning of children along their school journey. By doing so, each participating country can develop and implement policies and programmes to improve students' learning outcomes. SEA-PLM 2019 is the first round of this regional assessment.

Six countries from the region participated in SEA-PLM 2019: Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam. This first round focused on Grade 5 students, and on 3 learning domains: reading, writing and mathematics. A global citizenship questionnaire module was also developed as an experimental exercise in comparative large-scale assessment at primary education level. In addition, SEA-PLM 2019 used a series of background questionnaires to collect extensive information about children, classrooms, schools, teachers, head teachers, parents and communities.

SEA-PLM 2019 collected children's and schools' responses through paper-pencil tests and questionnaires, conducted with a sample of children that is representative of the entire school population enrolled at Grade 5 in each country. Tests and questionnaires were administered in the official language(s) of instruction in Grade 5 in each country. SEA-PLM 2019 data were collected towards the end of the 2018–2019 school year, just before the COVID-19 pandemic. Therefore, SEA-PLM 2019 provides a solid picture of the situation of children's learning before 2020 and could serve as an authentic baseline for future monitoring and trend analysis.

2. What children know and can do in reading, writing and mathematics?

Similar to other comparative large-scale assessments, SEA-PLM has developed its own proficiency scales in reading literacy, mathematical literacy and writing literacy to enable countries to measure and report overall student performance in each of these three domains across contexts and over time.

For each of the SEA-PLM 2019 proficiency scales – in reading, writing and mathematics – children who are in the highest band master the fundamental skills expected of them by the end of primary school. Those children are also more likely to engage well in other important Grade 5 curriculum content, including the development of skills commonly considered critical in the 21st century, such as communication, use of technology and critical thinking.

SEA-PLM proficiency scales provide an insight into what children can do and, importantly, what they should aim to do next. Understanding that learning is a progression and that teaching must be targeted at the level of students' abilities is central to understanding the results of SEA-PLM 2019.

2.1 Reading

SEA-PLM 2019 defines reading literacy as 'understanding, using and responding to a range of 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.

- There was a large variation (from 2% to 82%) across participating countries in the number of Grade 5 children who could read, understand and use explicit and implicit information from various types of text to reflect on new ideas and opinions. These skills are reflected in the highest Band (Band 6 and above) and are generally expected of children at the end of primary education. Similarly, there was a large variation (1% to 50%) across countries in the number of Grade 5 children with a level of reading proficiency equivalent to that expected in the first years of primary school (Band 2 and

below, which is the lowest Band). These children were still at the stage of matching single words to an image of a familiar object or concept.

- In Malaysia and Viet Nam, the majority of Grade 5 children had achieved the reading literacy skills expected of them at the end of primary school. In those 2 countries, a further 18% and 10% of children, respectively, were in Band 5 and were thus progressing towards achieving this level. These children had developed a solid basis in reading literacy skills in their language of instruction.

- In Cambodia, Lao PDR, Myanmar and the Philippines, a small to modest percentage of Grade 5 children had achieved Band 6 and above or were progressing (Band 5) towards achieving the expected levels of reading proficiency at the end of primary education.

- For some countries, Grade 5 is the end of primary school. In these countries, children who do not meet a minimum proficiency in reading by Grade 5 would likely struggle to transition to secondary school.

2.2 Writing

SEA-PLM 2019 defines writing literacy as 'constructing meaning by generating a range of written texts to express oneself and communicate with others, in order to meet personal, societal, economic and civic needs.' (UNICEF & SEAMEO, 2019, p.30) This definition considers the act of writing as meaning-making and does not include merely copying words or chunks of language. Measuring the writing domain is new in the area of comparative large-scale assessment at primary level and is an achievement in SEA-PLM 2019, where student writing is compared across a broad range of official languages of instruction.

- A vast proportion of students across all 6 SEA-PLM 2019 countries are not demonstrating writing proficiencies expected of a Grade 5 student.

- On average, approximately 9% of students who sat SEA-PLM 2019 performed at Band 7 and Band 8 or above, the highest 2 bands. The middle 4 bands have similar proportions of students in them; 51% of all students fall into 1 of the 4 middle bands. Below this, 40% of students across all 6 SEA-PLM 2019 countries are in the lowest 2 bands, indicating that they have only limited writing skills.

- In Viet Nam (more than 30%) and Malaysia (11%) a modest percentage of Grade 5 children had writing skills described in Bands 7 and 8 and above. These children may be able to transition well through to secondary education, and may possibly be on the right track to meet the challenges of a 21st century skills-based curriculum.

- In Cambodia, Lao PDR, Myanmar and the Philippines, a very limited number of Grade 5 children achieved higher levels of proficiency in writing. In Myanmar, 60% of children were in the 3 lowest bands, while in Cambodia, Lao PDR and the Philippines this increased to more than 70% of children. Therefore, even the highest performers of this group can produce very limited writing, with simple, insufficient ideas and limited vocabulary.

2.3 Mathematics

SEA-PLM 2019 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).

- In some countries there were very few (1%) Grade 5 children with a mathematical proficiency equivalent only to that expected in the first years of primary school, while other countries had a large number (57%) at this level. These children were still at the stage of solving simple problems – for example, requiring them to add or subtract 2 single-digit numbers together or to recognize simple shapes.

- In Malaysia and Viet Nam, the majority of Grade 5 children have achieved the mathematical literacy skills expected at the end of primary school, as indicated by a SEA-PLM 2019 mathematical proficiency of Band 6 and above.

- In Cambodia, Lao PDR, Myanmar and the Philippines, modest percentages of Grade 5 children have achieved the mathematical literacy skills expected at the end of primary school, as indicated by a

SEA-PLM 2019 mathematical proficiency of Band 6 and above. This implies that in these countries, the majority of Grade 5 children are still working towards mastering fundamental mathematical skills.

- Students found items where they needed to write an answer (constructed response) more difficult than those where they needed to select an answer from given options (multiple choice). Also, children appeared to be more familiar with undertaking calculations than with formulating, interpreting, communicating and explaining.

2.4 SEA-PLM 2019 alignment with the SDG 4.1

SEA-PLM 2019 methodology enabled overall national performance of participating countries to be reported for 2 Sustainable Development Goals indicators: SDG 4.1.1a (end of lower primary) and SDG 4.1.1b (end of primary).[1]

- The percentage of Grade 5 children performing at or above SDG.4.1.1b 'end of primary' indicator in reading ranges from 2 – 82% across participating countries.

- In mathematics, the percentage of Grade 5 children performing at or above SDG.4.1.1b 'end of primary' indicator ranges from 8 – 92% across participating countries.

3. Equity in learning opportunities

Understanding disparities in learning opportunities available to children and schools, and their associated literacy outcomes, is fundamental to creating sound policies that support and drive improvement in educational systems and results. In order to better understand the inequity that children experience, we need to understand their individual characteristics, their home environments and their school contexts to identify causes, risks and potential ways to change.

Education systems, policies and stakeholders strive to create and maintain equitable learning opportunities to compensate for the effects of social inequalities. The challenge of offering equal learning opportunities through all stages of basic education is complex but critical for all countries. When we compare collected data on children's perspectives, characteristics and experiences with achievement levels, we can identify vulnerable children and outcome bottlenecks, while also identifying and promoting good practices.

Children's background, home influence and school experience

- Children from higher socioeconomic backgrounds, and those attending schools in wealthier neighbourhoods performed better than children from less advantaged backgrounds. This pattern is consistent across all 3 domains, and the magnitude of this difference was substantial, ranging between 24 and 26 scale points, on average across countries, for the 3 learning domains.

- Girls are more likely to perform better than boys, regardless of socioeconomic status or school location, depending on the achievement domain. In all countries, boys had lower levels of achievement than girls in reading and writing. In 3 out of the 6 countries, boys had lower levels of achievement in mathematics in comparison with girls while no differences are observed in the other 3 countries. Despite the difference in performance, in all countries, few to large proportion of girls and boys still have difficulties in reaching the expected levels of performance across the three domains.

- Children who spoke the language of instruction more often at home achieved higher levels of literacy in reading, writing and mathematics than those who did not, except in the Philippines. This practice varied across countries, with almost all children speaking the official language of instruction at home at the end of primary education in Cambodia, Malaysia and Viet Nam compared with less than 1 in 10 children in the Philippines.

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[1] SDG Indicator 4.1.1: Proportion of children and young people (a) in Grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex. For some countries, Grade 5 is the end of primary education, while for other countries it is Grade 6. End of primary grade of measurement point as defined by GAML: plus or minus 1 year from the last year of primary according to ISCED level mapping in the country.

- In all countries, children who had attended at least 1 year of preschool education consistently performed better than children who had not. The positive influence of preparatory years continues to show benefits for children's outcomes at least 5 years into their primary education.

- In 4 out of the 6 countries, older age was not correlated with poorer learning performance, but grade repetition was. In Malaysia and Viet Nam, where the age of all or almost all Grade 5 children was 10 or 11 years and grade repetition was completely or almost non-existent, older children tended to achieve significantly higher scores in reading, writing and mathematics (but only in mathematics in Viet Nam).

School environment and teachers' profiles

- Children learning in larger schools, in well-resourced locations or with a textbook for each child, performed better than children in smaller, less well-resourced schools. Across the 6 participating countries, the majority of children (87%) attended schools where they had 1 textbook per child in Grade 5, for both language and mathematics lessons. In Lao PDR and the Philippines, around 20% of children shared a reading or mathematics textbook in Grade 5, sometimes with more than 2 children.

- In 3 of the participating countries, school principals reported that the lack of qualified teachers was a significant issue hindering school capacity to provide instruction to children. Countries all adopted different approaches to hiring and training teachers, including allocating generalist or specialist teachers.

- The majority of children attended schools where teachers in charge of the language of instruction had attended pre-service or in-service reading training. However, in almost all countries, a non-negligible percentage of children were in class with teachers who had received no training in reading (in the language of instruction used for the SEA-PLM assessment) before or during their service.

Children's, teachers' and parents' attitudes and engagements

- Most children had high levels of interest in school and, on average, children who felt better and safer at school performed better than children who reported less positive feelings. About 80% or more of children in all countries expressed positive attitudes about school. However, 10% of students across all countries and up to 20% of students in some countries reported not feeling comfortable at school and having a negative attitude towards school.

- In all countries, higher levels of parental engagement were associated with higher reading, writing and mathematics scores in children. Half of the children reported that their parents motivate them to succeed in school (47%). Around one-third reported that their parents ask them about what they are learning in school (34%). Around one-quarter reported that their parents help them with their homework (27%). However, a large proportion of children suggested that their parents rarely or never engage in these activities.

- Around one-third of children attended a school where teachers reported that children's hunger in class (34%) or lack of sleep (32%) were issues affecting their learning. In some countries, a higher percentage of teachers reported these factors.

- In several countries, a high percentage of teacher absenteeism and lateness was reported by children. In Viet Nam, children's perceptions of teachers were more positive than for children in other countries, with less than 1 in 10 (9%) reporting that their teacher was often or sometimes absent, compared with 38% to 58% across other countries, and 14% reporting that their teacher was often or sometimes late, compared with 51% to 67% across other countries.

4. Global Citizenship: what do children think about school, community and global matters?

SEA-PLM 2019 is the first large-scale comparative assessment to measure global citizenship attitudes, values and behaviours of children at primary level. Global citizens appreciate and understand the interconnectedness of all life on the planet. They act and relate to others with this understanding to make the world a more peaceful, just, safe and sustainable place (UNICEF & SEAMEO,, 2017, p.5).

As expected, children's responses in SEA-PLM 2019 showed their views on a range of topics, rather than a comprehensive understanding of global citizenship. Children at this age are naturally more aware of local issues within their community than they are of global matters and events outside their environment. In basic education, children's development of regional and global values relies on the efforts of teachers, schools and communities to encourage citizenship values and skills.

- Environmental issues (such as climate change and environmental pollution) and local topics related to the classroom environment (such as solving disagreements with classmates and solving problems in the community) appeared to be the most important and valued global citizenship topics and concepts learned at primary school.

- The majority of children reported that they participated in school activities, such as communicating ideas to their classmates, voting for class leaders, and participating in an activity to make the school more environmentally friendly. Less than half the children reported experience speaking in an organized debate, joining in classroom discussions about problems in the world and becoming a candidate for class leader.

- Most of the teachers indicated they were prepared for and felt confident teaching almost all topics listed in the questionnaire. Children's rights and respecting diversity were the topics teachers said they were most prepared for during pre-service training, and were also the topics teachers felt most confident teaching. Grade 5 teachers were consistently less prepared for teaching globalization (34% 'very well') and challenging inequality (42% 'very well') and also felt less confident teaching them.

- SEA-PLM findings may lead to systems, schools and practitioners reflecting on how to better frame local, regional and global concepts at the end of primary level while keeping national citizenship values and cultural beliefs as core goals.

- Systems, schools, children and practitioners can focus on global citizenship education, as outlined in the Sustainable Development Goal target SDG 4.7.1, which refers to (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, and mainstreamed at all levels in (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment. SEA-PLM 2019 findings support the monitoring of such system-level indicators and provide a new source of information for policy implementation within schools and classrooms.

5. Regional trends and policy recommendations

The new SEA-PLM proficiency scales provide solid benchmarks for the Southeast Asian region to examine what specific groups of Grade 5 children know and can do in reading, writing and mathematics. SEA-PLM 2019 also gauges children's and teachers' values and attitudes about global citizenship concepts, behaviours and activities.

SEA-PLM 2019 reveals stark differences between students' learning outcomes according to various profiles and characteristics, such as gender, socioeconomic status, language spoken at home, preschool experience and early developmental skills. Some of these disadvantages may be combined and thus the most vulnerable children face multiple deprivations and factors that negatively affect their learning (for example, boys from poorer households in remote rural areas).

The following 6 priority recommendations address how SEA-PLM 2019's key findings and evidence can be translated into specific policies. The recommendations align with Sustainable Development Goal 4 – Education 2030 (SDG 4), as well as relevant SEAMEO and ASEAN plans and frameworks. In light of the current COVID-19 pandemic and the forthcoming recovery phase, these recommendations are even more relevant and urgent.

- **Recommendation 1: Prioritize early learning in disadvantaged contexts**

- **Recommendation 2: Guarantee a solid start in primary education through on-time enrolment and progression for all children, especially the disadvantaged**

- **Recommendation 3: Ensure explicit and progressive learning standards in the curriculum of basic education, including in digital and blended learning options**

- **Recommendation 4: Support motivated and experienced teachers and positive school environments**

- **Recommendation 5: Use data, monitoring and research to achieve better learning**

- **Recommendation 6: Participate in and support SEA-PLM 2023 activities, including the opportunities and challenges arising from the COVID-19 pandemic**

Looking ahead

SEA-PLM 2019 data show that learning for all children is still a far-off goal, as are other related education targets. Countries face aggravated challenges ahead owing to the current COVID-19 pandemic and the subsequent economic downturn in the region. Compensating for several months of school closures and unplanned digital and blended learning will also require robust efforts to 'come back better'. However, the COVID-19 pandemic has brought opportunities to experiment with hybrid and flexible learning, and organizational pathways in education delivery and services. Several of these innovations can inspire and influence reform agendas.

Continuing a positive path towards learning improvement, countries and education stakeholders will thus require clear equity learning strategies, better implementation capacity, sufficient financial and human resources, and sturdy monitoring and improvement loop mechanisms. In this context, as part of this mandate, the SEA-PLM programme proposes that all countries in Southeast Asia, and their allies, continue this work to improve the capacity to measure learning outcomes, use data, and allow for peer exchange on policies and practices.

Chapter 1

SEA-PLM 2019 scope and methodology

Primary school learning outcomes are critical to children's development as well as to national, social and economic goals. Foundational skills learned in primary school, particularly reading and mathematics, are critical for later learning. Without solid and continuous high-quality learning outcomes in the primary school years, children's skills development, engagement and potential to contribute meaningfully to society is put at risk. It is for this reason that the global Sustainable Development Goals (SDGs) and regional education frameworks, such as those of SEAMEO and ASEAN, call for countries to enhance learning, with a focus on skills development, particularly in the early years and in basic education.

Along the school journey, basic education is the foundation from which children develop the necessary skills and confidence needed to succeed in life. To that end, national education systems and their partners must commit to employing the substantial resources they invest in this sub-sector of education to create relevant, effective and continuous learning opportunities for all children, while responding to the needs of their specific society and its beneficiaries.

Across Southeast Asia, national governments, education systems and communities are committed to supporting sustainable learning progress for all children. Policymakers and practitioners focus on designing and implementing appropriate and equitable education policies and practices, despite the often-limited resources, setbacks and time constraints. Every day, children, families, teachers, principals and education staff work hard to make children's experience in classrooms a journey of great learning. The 'learning for all', 'no one left behind' and child rights–based approaches have also emphasized the importance of developing systems that encourage equitable learning, so that every child gets the support they need to learn in primary education without exclusion or exception.

To ensure the effectiveness of such investments and efforts, it is essential that these interventions and systems are supported by adequate monitoring and assessment mechanisms. These programmes should generate evidence in a timely manner to inform policy development, governance and system accountability so that teaching and learning practices are further improved to ensure better learning outcomes for every child. As with other regions in the world, Southeast Asian countries must continue to build synchronized national assessment policies, and to develop tools and mechanisms that enable practitioners and decision-makers to support better learning for all children.

Southeast Asia Primary Learning Metrics (SEA-PLM) is a new comparative learning assessment programme, designed by and for countries in Southeast Asia. The programme aims to generate reliable data and evidence for monitoring learning outcomes across and within countries, and understanding what factors facilitate or hinder effective learning of children along their school journey. It also aims to promote cross-border exchange on learning and education policies, and to build the capacity of participating countries to design and conduct solid learning assessments. Furthermore, it aims to strengthen national education stakeholders' capacity to analyse, interpret and use learning outcomes data. Finally, SEA-PLM aims to help countries to identify, prioritize and address educational challenges in key policy areas, such as curriculum development, resource allocation, pedagogical practice, and planning at national and sub-national levels.

Through the first round of SEA-PLM – SEA-PLM 2019 – stakeholders obtained robust evidence to answer the critical question: How do children[2] in Southeast Asia perform against regional metrics in reading, writing and mathematics at the end of primary school? Participating countries gathered information to help monitor the progress of disadvantaged sub-groups of children and schools at the end of primary years, by exploring equity related to context and learning achievement. SEA-PLM 2019 findings will improve countries' understanding of children's Grade 5 learning achievements and barriers to achievement. SEA-PLM 2019 particularly measured achievement in Grade 5, as this period is considered an appropriate age for development of basic learning and competencies. Grade 5 was chosen by all participating countries as a common grade where all children should still be in primary school.

SEA-PLM also has the potential to address other educational questions through regional comparison of learning environments, children's experiences and school practices, as well as specific areas, such as the global citizenship education module developed in the SEA-PLM 2019 contextual questionnaires. Moreover, the SEA-PLM programme is structured so that children's achievement can be measured over time through subsequent cycles of assessments.[3] In the context of the 2020 COVID-19 pandemic, this is particularly relevant as SEA-PLM 2019 provides an authentic baseline for children's learning. With this baseline, participating countries will be able to compare their own children's learning levels before and after COVID-19, which disrupted students' learning despite various distance-learning strategies and programmes in each country.

SEA-PLM 2019's main survey was implemented at the end of the 2018–2019 school year. Six countries from the region participated: Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam[4]. This report is the product of a collaboration between participating countries, experts and representatives of SEAMEO, UNICEF and the Australian Council for Educational Research (ACER) with a range of other international and national experts. Scientific expertise, technical support and quality control for the design and implementation of SEA-PLM 2019 were provided by ACER. The SEA-PLM Technical Advisory Group was created after the first round of SEA-PLM to provide independent technical advice and to monitor the final methodology phases of SEA-PLM 2019. See Appendix 5 for a complete list of country representatives and experts involved since the SEA-PLM 2019 main survey.

This first report fills a critical knowledge gap, providing comparable and reliable data on learning outcomes in Southeast Asia for basic education. It applies international methods, processes and quality assurance mechanisms to ensure a credible measure of learning outcomes and context. Chapter 1 presents the overall context of basic education in the participating countries through a range of system-level indicators, as well as an overview of the methodology, scope and outputs of SEA-PLM 2019. This chapter aims to support readers' understanding of outcomes presented in the following analytical chapters.

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[2] Children in this report refer to students in the selected schools.

[3] As of 2020, SEA-PLM 2023 is the next intended cycle of SEA-PLM.

[4] Non-participating countries were invited to contribute in the inception phase for developing the instruments and are members of the governance board.

1.1 SEA-PLM 2019 participating countries

An accurate and constructive interpretation of SEA-PLM 2019 results requires a good understanding of national context, specific challenges and the historical evolution of national education systems. This section gives an overview of basic education in the 6 SEA-PLM 2019 participating countries – Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam – through a selection of recent system-level indicators[5].

Figure 1.1: Map of SEA-PLM 2019 participating countries

The SEA-PLM 2019 participating countries share key priorities for developing their education systems but also have quite different historical, political, economic and social landscapes. Context-specific factors shape the development of national education systems and the individual path and performance of children from early grades to higher levels of education. The table below presents relevant demographic, economic and educational characteristics of the 6 participating countries (ASEAN, 2019).[5][6]

Table 1.1: Selected demographic, economic and educational data of participating countries

	Population		Human Development Index	GDP per capital	Net enrolment rate at pre-primary level	Net enrolment rate at primary level	Net enrolment rate at secondary level
	Population (million)	% Aged 0-14 Years	Per category	(US$ PPP)	% of children	% of children	% of children
Year	2019	2018	2018	2018	2018[7]	2017[8]	2017[9]
Cambodia	15.6	31	Medium	1,541.4	22.8	92.6	37.1
Lao PDR	6.9	33	Medium	2,627.5	46.5	98.0	34.7
Malaysia	32.4	24	Very high	11,067.2	83.4	96.7	90.2
Myanmar	53.6	26	Medium	1,440.8	8.2	96.9	54.0
Philippines	106.6	31	High	3,214.8	64.5	94.2	76.0
Viet Nam	94.7	23	Medium	2,546.2	78.5	98.0	83.4

Source: ASEAN key figures (ASEAN, 2019) except pre-primary level rate (UNESCO-UIS), consulted in 2020

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[5] Other countries from Southeast Asia and other Asian countries have contributed to the development of the inception phase and are consulted annually as honorary members.

[6] Other national and international sources of information have been consulted (UNICEF, UNESCO, World Bank, Global Partnership for Education).

[7] The latest available data for the Philippines is 2017; for Viet Nam it is 2013.

[8] The latest available data for Lao PDR and Myanmar is 2015; for the Philippines it is 2013.

[9] The latest available data for Cambodia is 2016; Lao PDR is 2012.

The context-specific factors presented in Table 1.1 can affect learning, and differences can be observed between countries on these indicators. In the past 20 years, SEA-PLM countries have progressed significantly in meeting the demand for primary education and expanding school coverage. Even if countries are close to achieving universal access to primary education, challenges remain in reducing access disparities between children, increasing achievement for all, improving transition and achievement in secondary education, and providing at least 1 year of preschool for all children. Meeting these targets and other national priorities is critical to achieving good learning outcomes for all.

When interpreting findings on children's performance and learning outcomes in the following chapters, it is also important to reflect on some basic characteristics of education systems. The structure of basic education, the length of compulsory education and the school year, the coverage of preschool learning, and the language of instruction are all important variables that shape the design, implementation and achievement of curriculum targets in each country. Figures 1.2 and 1.3 present some national trends, based on existing data and estimation from research in basic education in Southeast Asia.

Figure 1.2: Structure of education systems and compulsory education in participating countries, 2019
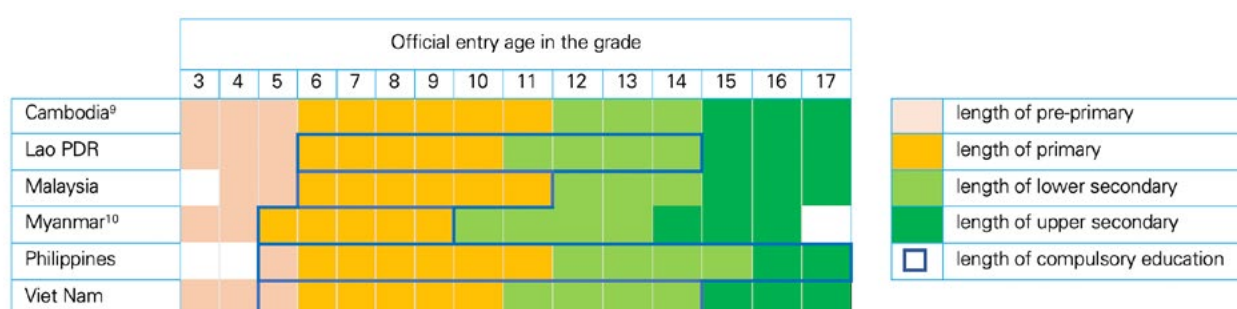
Source: UNESCO-UIS database consulted in 2020, data as officially reported by countries

There is noticeable variation in the structure and length of primary school cycles across the SEA-PLM participating countries. In all countries, children aged 6–10 years should be in primary school, but in 3 countries the primary school cycle includes 5 years of instruction while in the other 3 countries it includes 6 years. For instance, in Myanmar primary education starts at 5 years old and ends 5 years later, while in Cambodia it starts at 6 years old and ends 6 years later.[12]

In all countries, sampled children in Grade 5 were tested, regardless of their age and previous experience before and after entering primary school. In the 3 SEA-PLM countries with 5 years of primary education – Lao PDR, Myanmar and Viet Nam – children were tested at the end of primary school. For the other countries with 6 years of primary education – Cambodia, Malaysia and Philippines – the children were tested 1 year before the end of primary school. The official length of education (represented with the blue box in Figure 1.2) varies across countries due to the age of entry at primary level and the overall number of years of free compulsory education offered.

Two countries include pre-primary education as part of compulsory education. Table 1.1 illustrates the preschool coverage in each participating country. In the 6 participating countries, the percentage of children from an age cohort who benefit from 1 formal form of preschool education before entering basic education varies from 10% to 80%, on average, at the national level.

In all countries, SEA-PLM 2019 assessed children in the official language of instruction in schools at Grade 5 (see Figure 1.3). In early grades, some of the countries provide multilingual education in the national language(s) as part of their multilingual education (MLE) policy and introduce a second and/or other language in parallel. Context-specific factors are not presented here, as countries have different challenges and responses (see Kosonen, 2017).

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[10]   Primary education is not compulsory in Cambodia.

[11]   System under reform. In current system children start Grade 1 at 6 years old.

[12]   Effective ages of children who participated in the survey are reported in Chapter 3.

Figure 1.3: Main official first language of instruction in reading and mathematics at primary level in participating countries, 2019

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Cambodia	Khmer					
Lao PDR	Lao					
Malaysia	Chinese, Malay, Tamil					
Myanmar	Myanmar					
Philippines	Mother tongue[12]			Filipino and English[13]		
Viet Nam	Vietnamese					

Source: data based on official documentation

By Grade 5, children in all participating countries should already have transitioned (as applicable) to the country's primary language(s) of instruction for reading, writing and mathematics, as presented in Figure 1.3. Each participating country specified its test language(s) for SEA-PLM 2019, based on the official national language policy at Grade 5. This information is reported in Table 1.4.

All national data presented above may vary between sub-populations and schools within a country. Such variation – which is not presented here because of the overall system approach – may also help explain the disparities in educational outcomes within a country.

Despite national differences, all countries share common issues and challenges in supporting the development of relevant and sustainable levels of proficiency for all children. The SEA-PLM 2019 findings presented in the following chapters can contribute to addressing these challenges by providing evidence and opportunities for peer learning, collaboration and capacity-building.

1.1.1 Technical capacity-building and mentoring

Capacity-building of participating country teams is integral to the success of SEA-PLM, with a core commitment being to strengthen national-level capacity for the planning, implementation, analysis and use of assessment results. While a central focus of SEA-PLM capacity-building is supporting countries to apply common standards for all technical operations, the approach encompasses the full assessment cycle from inception to use of results for education reform.

During the implementation of an assessment round, support is oriented towards each country's National Team and key decision-makers charged with the management of SEA-PLM. Support comes in the form of regional and national training activities and strategies, including face-to-face training at the regional and country level, webinars, guideline resources, remote ongoing support and quality assurance.

In addition, SEA-PLM creates space for networking, peer learning, mentorship and collaboration between countries on learning and assessment policies during regional meetings. By involving a range of education stakeholders throughout the phases of an assessment cycle, SEA-PLM contributes to the development of collective regional experience in learning assessment, promoting dialogue and best practice among countries to encourage the use of evidence to transform education policy and practice.

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[13] One of the 18 stated national languages according to sub-regional division.

[14] English is the only official language of instruction for mathematics from Grade 4.

1.1.2 Programme governance, funding and institutional commitment

SEA-PLM is governed through the SEA-PLM Regional Steering Committee. Membership of the Steering Committee includes Ministry representatives of all Southeast Asian countries, as well as several partners who provide technical, financial and political support to the SEA-PLM initiative. Participating countries and the Technical Advisory Group are involved as core members. Southeast Asian countries not engaged in implementing a main survey, and other bilateral and multilateral partners are involved in the governance board through honorary membership. The SEA-PLM Secretariat, co-managed by the SEAMEO Secretariat and the UNICEF East Asia Pacific Regional Office (EAPRO), coordinates the overall process and stakeholders involved at regional and national levels, in collaboration with education ministries.

Figure 1.4: SEA-PLM 2019 governance structure map
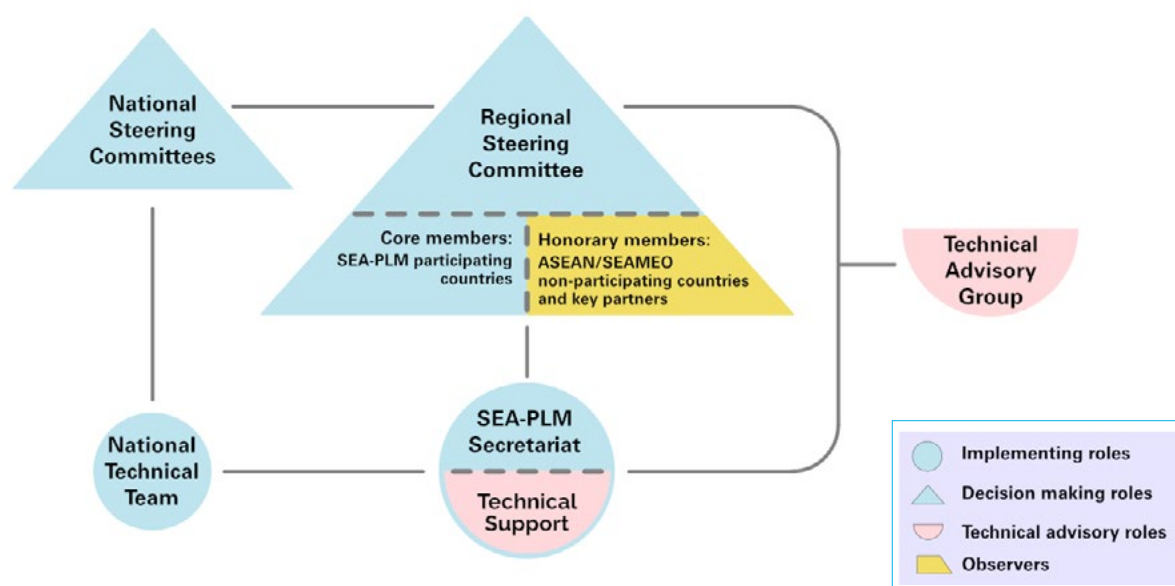
Six Southeast Asian countries committed with SEAMEO to implement and disseminate SEA-PLM 2019 results. SEA-PLM's overall regional roadmap is endorsed annually by SEAMEO High Official meetings, where Southeast Asian education ministries are represented. The development and implementation of SEA-PLM 2019 has been mainly funded by UNICEF EAPRO and UNICEF Country Offices. UNICEF has also supported regional and national operations by collaborating with participating countries, external experts and the SEAMEO Secretariat.

1.2 SEA-PLM 2019 scope and main methodology

The SEA-PLM programme aims to achieve the breadth and rigour of a large-scale international survey, while at the same time addressing the unique needs and contexts of countries in the Southeast Asia region. The sub-sections below provide general information on the scope and methodology of SEA-PLM 2019. Additional insights are available in the technical SEA-PLM documentation, such as the SEA-PLM 2019 assessment frameworks (UNICEF & SEAMEO, 2017).

SEA-PLM 2019 collected children's and schools' responses through paper-pencil tests and questionnaires, conducted with a sample of children that is representative of the school population enrolled at Grade 5 in each country.

In the inception phase – from 2012 to 2015 – the scope and format of the SEA-PLM assessment was constructed in collaboration with participating countries, observers, partners and technical experts, taking into consideration policy priorities, technical feasibility, international assessment standards and resource availability[15]. The SEA-PLM 2019 assessment frameworks (UNICEF and SEAMEO, 2017) summarize the concepts, processes, contributions and outputs developed during the inception phase.

Instruments and procedures used in SEA-PLM 2019 focused on delivering valid and reliable data on children's level of proficiency through tests in 3 learning domains: reading, writing and mathematics, while reporting on education context and participants' attitudes through questionnaires. In addition to the testing of fundamental learning, a global citizenship module was developed through contextual questionnaires as an experimental exercise in comparative large-scale assessment at primary education level.

SEA-PLM 2019 used a series of background questionnaires to collect extensive information about children, classrooms, teachers, schools, head teachers, parents and communities. This information helped to link the characteristics of children, schools and households to the learning performance of children and schools. Linking this information to the learning domains provides an important understanding of variations and inequity in children's performance levels, and the different drivers of learning and achievement.

Quality assurance was maintained for tests, questionnaires, survey procedures and data analyses. The tools were standardized across all countries and the entire assessment process, and in the delivery of the final databases, scales and indicators. This 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.

In each country, a technical team (known as the National Team) was responsible for managing the entire process at the national level. The National Team reported results within the country and also contributed to the regional dialogue about technical standards and the regional reporting of results. The lead of the National Team was an official member of the SEA-PLM governance board through a core membership within the Regional Steering Committee (see last section of this chapter for more information related to the SEA-PLM governance structure).

1.2.1 Test approach

The SEA-PLM 2019 assessment framework was developed from late 2014 to early 2015 as a foundation for the tests and questionnaires (UNICEF & SEAMEO, 2017). The protocols underlying the SEA-PLM tests and questionnaires were derived from international methods and standards for large-scale assessments of core learning areas common among national curricula.

By definition, SEA-PLM tests have been designed as an external measurement of education systems and their specific objectives. Furthermore, SEA-PLM adopts a literacy-based approach and references common curricula targets and content across Southeast Asian countries (UNICEF & SEAMEO, 2017).

The assessment of literacy in reading, writing and mathematics embraces the essential knowledge, skills and understanding of the national curriculum. It also investigates the extent to which such knowledge, skills and understanding can be used in a range of situations arising in both school and daily life. The literacy approach prepares young people to participate as effective members of society and use what they have learned at school – their reading, writing and mathematics skills – to deal with the many challenges they will meet in their life beyond school.

International learning domain experts collaborated in reviewing official Grade 5 curriculum documents, including relevant frameworks, syllabuses and other learning materials (UNICEF & SEAMEO, 2016) provided by the 11 countries from Southeast Asia. The SEA-PLM 2019 assessment framework outlined the approach and content of assessment in reading, writing and mathematics at Grade 5, based on consensus definitions of literacies at primary level, as agreed with Southeast Asian countries and learning domain experts.

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[15] The Australian Council for Educational Research (ACER) was contracted for managing technical activities in designing, implementing, coordinating, training, quality assurance and reporting the main regional results of SEA-PLM 2019. ACER's experts are mentioned in this report as technical experts.

Box 1.1: Learning area definitions, SEA-PLM 2019

SEA-PLM reading literacy is to understand, use and respond to a range of written texts, in order to meet personal, societal, economic and civic needs.

SEA-PLM writing literacy is to construct meaning by generating a range of written texts to express that person's self and to communicate with others, in order to meet personal, societal, economic and civic needs.

SEA-PLM mathematical literacy is a person's capacity when given a problem in a context that is of interest or importance to them. It measures how they translate the problem into a suitable mathematical formulation, apply mathematical knowledge and skills to find a solution, and interpret the mathematical results in relation to the context and review the merits or limitations of those results.

In line with the assessment's focus on the end of primary school, the literacy definition also included children's capacity for continuing learning in compulsory education. Indeed, the content assessed included not only expected outcomes at the end of primary school but also some precursor skills considered as essential stepping stones for the development of solid proficiency. SEA-PLM 2019 questions captured different levels of proficiency in reading, writing and mathematics, not only at Grade 5 level but also at early primary and early secondary levels. This was important, as children in Grade 5 across the participating countries demonstrated a wide range of proficiency, and the SEA-PLM assessment needed to capture and describe the broad range of what children can do.

The assessment questions underwent extensive trial testing in 2017 and 2018 to ensure they covered the agreed regional definitions of domain content and were appropriately targeted to children's abilities, as well as being culturally suitable for children in the Southeast Asian region.

1.2.2 Test and question format and content

Double the number of test items needed for the main survey were developed in the 3 cognitive domains – reading literacy, writing literacy and mathematics literacy. This ensured good coverage of content to match ability levels with cognitive tasks designed to address the literacy definitions.

In each of the 3 learning domains, items were ordered in categories corresponding to cognitive process and content domain. This organization allowed mapping to cover the entire literacy definition. Tables 1.2 and 1.3 present the number of items by cognitive process for each of the learning domains. Additional classification by type of question and sub-domain content are available in Appendix 1.

Table 1.2: Item classification in SEA-PLM 2019 – reading and mathematical literacy

Cognitive process						
Reading literacy				Mathematical literacy		
Recognize words	Locate	Interpret	Reflect	Apply	Interpret	Translate
5	20	21	5	23	14	17
Total reading 51 items				Total mathematics 54 items		

Table 1.3: Criteria classification in SEA-PLM 2019 – writing literacy[16]

Cognitive process					
Writing literacy					
Generating ideas	Controlling text structure and organization	Managing coherence	Using vocabulary	Controlling syntax and grammar	Other language specific features
8	5	4	5	7	5
Total writing 34 criteria					

The SEA-PLM 2019 assessment was a paper-pencil instrument that used selected-response questions (4-option multiple-choice questions) and constructed-response questions (short written responses: a number or a solution showing working in mathematical literacy; a word or 1 or 2 sentences in reading literacy[17]). Constructed-response tasks were particularly useful to assess children's thinking and reasoning, rather than their guessing a multiple-choice response. In the writing literacy assessment, every question required a written response ranging in length from 1 word to multiple paragraphs.

In line with other comparable large-scale assessments, each child completed only a selection of questions in 2 of the 3 learning domains, as the total number of questions would be equivalent to 4.5 hours of testing time. A rotated booklet design plan was applied to reduce overall fatigue testing time. Each child had 1 hour to complete the test and 30 minutes to complete the questionnaire. Statistical methods allowed the computation of comparable scores at the system level in the 3 learning domains. Eighteen different test booklets were administered randomly in each sampled classroom and school.

1.2.3 Test language

The source versions of all SEA-PLM 2019 materials were prepared in English. Tests and questionnaires were administered in the official language(s) of instruction in Grade 5 in each country. The testing language(s) were determined by the education ministry in each participating country. The table below presents the final list of test languages by country.

Table 1.4: SEA-PLM 2019 language(s) in participating countries

Country	Language
Cambodia	Khmer
Lao PDR	Lao language
Malaysia[18]	Chinese, Malay, Tamil
Myanmar	Myanmar language
Philippines	English
Viet Nam	Vietnamese

Quality assurance measures ensured that the intended meaning was consistent across translated versions. All test materials were double translated and reconciled by a professional translation company. Two translators independently translated the English-language source material into the target language; then a third person reconciled these 2 translations into a single national version as equivalent as possible to the source version in English. The quality of the instruments and the translation were pre-tested during a field trial in each participating country on children from a sample of schools representing different national contexts. This process was monitored and approved by each country and verified by an external body in collaboration with the National Team based on standardized procedures.

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[16] In writing, each question assessed a range of criteria, with points depending on the quality of the writing produced.

[17] Computers and other digital devices were not appropriate to measure literacy in reading, writing and mathematics for a national representative sample at primary level.

[18] National results in Malaysia are reported as a single entity in this report.

1.2.4 Background questionnaires and global citizenship module

Extensive background data were collected during the trial testing and the main survey to collect information about the learning context. This information was collected from children, parents, teachers and head teachers in each of the sampled schools through paper-pencil questionnaires. Where appropriate, data were aggregated to develop comparable contextual indicators.

Data from these questionnaires were used to understand the learning contexts of the countries and the relationships between children's experiences, school environments and learning performance, as presented in Chapter 3. Student and teacher questionnaires also provided extensive information about students' values and attitudes towards school, along with learning and teaching reading, writing, mathematics, and global citizenship–related activities, concepts and topics. Chapter 4 reports children's and teachers' attitudes, values and engagement in global citizenship topics specially developed by and for SEA-PLM 2019.

Global citizenship is a relatively new concept and expands the notion of citizenship and civics beyond the boundaries of the nation-state, with the implication that there are multiple issues that connect us. The global citizenship module in the SEA-PLM 2019 contextual questionnaires provided new qualitative and quantitative information to help countries and their education partners fill a gap in research around global citizenship.

Box 1.2: Global citizenship definition and areas assessed by SEA-PLM 2019[19]

In SEA-PLM 2019 the definition of global citizenship was 'Global citizens appreciate and understand the interconnectedness of all life on the planet. They act and relate to others with this understanding to make the world a more peaceful, equal, safe and sustainable place.'

The SEA-PLM 2019 instruments covered 2 of the 3 major domains identified in the intended SEA-PLM Global Citizenship Framework:

- the socio-emotional aspects, such as attitudes and values, relating to positive orientations including appreciation of diversity, equality and human rights
- the behavioural aspects related to activities that create positive change.[18]

Many socio-emotional aspects are relevant to global issues – for example, children's sense of belonging to multiple communities (local, national, regional and global), and their engagement as citizens with long-term sustainability and non-violent coexistence. The behavioural aspects relevant to global issues include activities children undertake that contribute to global information, that explore the interconnectedness of countries, and that engage with global long-term sustainability and a peaceful global community.

Children can hold attitudes and values about, or engage with, different aspects of global citizenship. Aspects of global citizenship are organized in the following 3 content areas:

- global citizenship systems, issues and dynamics
- global citizenship identities
- global citizenship engagement.

A children's global citizenship module was administered through the student questionnaire and measured attitudes and values in the first 2 content areas (systems, issues and dynamics; and identities) and behaviours in the third content area (engagement).

Questions relating to global citizenship were also included in the teacher questionnaire. These questions covered teachers' perceptions and values about global citizenship learning and skills, the coverage of global citizenship education in their pre-service programme, and their confidence levels in teaching global citizenship.

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[19] The cognitive aspects of learning about global structures, systems and issues are not covered through SEA-PLM 2019 instruments, owing to assessment priorities and technical considerations.

All concepts and content covered by the global citizenship module were defined, designed and tested in collaboration with participating Southeast Asian countries. In the early stages of developing the SEA-PLM global citizenship survey, official curricula of the Southeast Asian countries were audited to explore the global citizenship content and curricula concepts (UNICEF & SEAMEO, 2016). To detail these concepts, SEAMEO and UNICEF have jointly developed a specific Global Citizenship Framework (UNICEF & SEAMEO, 2017).

1.2.5 Data collection

In each country, the National Team was responsible for managing the data-collection operations and all activities conducted at the national level, such as printing, coding and data entry. The National Teams prepared and implemented the survey and supervised all operations and contributors using SEA-PLM guidelines and national resources.

Important confidentiality rules were established to maintain a high level of integrity and security. Results credibility and methodology neutrality are strongly dependent on all people involved adhering to the rules. People involved in the survey signed a confidentiality agreement to restrict access to SEA-PLM materials.

In each country, data were collected in assigned schools by school administrators and test administrators, under the supervision of the National Team. All administrators were trained by the National Team prior to operations, following SEA-PLM 2019 standardized materials, manuals and procedures. ACER technical experts supported National Teams in all operations by delivering in-country and remote assistance.

SEA-PLM 2019 main survey data were collected towards the end of the 2018–2019 school year. Owing to national school calendar specifications, SEA-PLM 2019 data collection took place between January and November 2019. Countries also scheduled data collection to avoid national examinations and climatic constraints. The table below presents the dates for training and field operations in schools. Countries completed their national survey data collection in a 1-month maximum period.

Table 1.5: SEA-PLM 2019 main survey operation period by country

Countries	Test administrator and school administrator training	Main survey data-collection period
Cambodia	June 2019	June 2019
Lao PDR	February 2019	April 2019
Malaysia	July 2019	September - October 2019
Myanmar	January 2019	January 2019
Philippines	November 2019	February 2019
Viet Nam	May 2019	May 2019

Tests and questionnaires were administered to all Grade 5 children in the sampled classroom. Before starting the survey, test administrators guided children through a few example items to ensure they understood the instructions.

1.2.6 Sampling and participation

Data from SEA-PLM 2019 were collected from a nationally representative sample of the whole population of children enrolled at Grade 5. This population is defined by UNESCO (2012) as 'all children enrolled in the grade that represents 5 years of schooling counting from the first year of ISCED Level 1.' This is referred to in SEA-PLM as Grade 5.

All participating countries applied the same sampling procedures: definition of the national target population[20], construction of the sampling framework, definition of stratification variables, sampling of schools and classes, and allocation of booklets among children within classes. SEA-PLM sampling used a 2-stage sampling process:

    i.   Schools were selected following a systematic procedure with selection probability proportional to the number of enrolled Grade 5 children from the targeted 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.

This 2-stage process was designed to achieve a sample in which all Grade 5 children from the population had the same chance of inclusion. Children's and schools' rates of participation were reported against international standards of participation to evaluate the reliability of national estimates.

See Appendix 1 for full tables of participation and exclusion rates.

1.2.7 Coding, data processing and scoring

Completed booklets and questionnaires were coded at the national level to apply the standardized procedures, assuring comparability by scoring children's response into templates. Experts provided guidance and training in the standard procedures to the National Teams at a regional workshop, to ensure consistency within and across countries and language versions.[21] Technical experts held in-country data entry workshops, performed data verification and provided remote support for data-cleaning tasks. This process resulted in intermediate and final comparable and documented datasets with appropriate scales and indicators.

The overall process for calibrating the SEA-PLM scale score is presented below.

Box 1.3: Development of the new SEA-PLM scale score

> Children's performance on SEA-PLM questions was calibrated and described on regional metrics (SEA-PLM described proficiency scales) so that learning outcomes can be compared accurately and reliably between countries and language versions. One scale was constructed for each cognitive domain: reading literacy, writing literacy and mathematical literacy. Test questions (items) were scaled using item response theory (IRT), scaling methodology through a 1-parameter model (Rasch, 1960) for dichotomous items, and the partial credit model (Masters & Wright, 1997) for partial credit items. The ACER ConQuest Version 5.9.0 software (Adams, Wu, Macaskill, Haldane, Sun and Cloney, 2020) was used for conducting the complete process described below.
>
> Preliminary item calibrations were conducted separately by country and then for the total 6 countries (each country sample was equally represented in the analysis) for each domain. To ensure the consistency of item parameters across countries measuring the underlying constructs for the 3 domains, the following analyses were run:

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[20] Some countries excluded entire schools and children from the target population of Grade 5 students, such as those in very remote schools, very small schools, international schools or schools in conflict zones. These removals remained under 5% of the overall national population of children enrolled at Grade 5, and thus met the standard sampling methodology of other international large-scale assessments.

[21] Except in the case of Malaysia, where operators were trained directly by an external expert rather than the National Team.

[22] In general, significant higher infit mean square (above 1.2) combined with low discrimination (item-rest correlation below 0.2).

- assessment of item fit
- differential item functioning (DIF) by sub-group
- item-country interaction

Items were flagged by country and for the total 6 countries for possible removal from the final scale because of translation or printing errors, inconsistency of item parameters across countries, poor fit statistics,[21] overall test targeting and reliability, or content item characteristics.

Final item calibrations by domain were conducted using the full country samples and then weighted by senate weights. The student weighted likelihood estimates (WLE) (Warm, 1989) and plausible values (PVs) methodology were then used on finalized regional item lists to generate values for children's knowledge by domain.

Using regional item parameters anchored at their estimated values from the calibration process, PVs were randomly drawn from the marginal posterior of the latent distribution (Mislevy, 1991; Mislevy & Sheehan, 1987; von Davier, Gonzalez, & Mislevy, 2009). Not-reached items were included as incorrect responses, just like the embedded missing responses. Estimations were based on the conditional item response model and the population model, which includes the regression on student background and questionnaire variables used for conditioning (Adams, 2002).

A conditioning 3-dimensional model was built for each country. The school mean performance variable adjusted for the student's own performance (WLE), dummy variables for the sampling stratum variable, school type, school location and student gender were used as direct regressors in the model. Most of the other student background variables – POCC (parental highest occupation), PARED (parental highest education), HOMERES (resources in the home) – and responses to questions in the student questionnaire were re-coded into dummy variables that were transformed into components by a principal component analysis (PCA). The principal components were estimated for each country separately. Subsequently, the components that explained 99% of the variance in all the original variables were included as regressors in the conditioning model.

Scale scores of all countries for each domain were normalized to 300 points and the standard deviation to 30 points, with all countries being given equal weighting. On this basis, the scores of approximately 2 in 3 children are in a range of 270 points to 330 points.

1.2.8 Quality assurance and database validation

Assuring data validity and survey reliability is critical for SEA-PLM as for other cross-national assessments. The SEA-PLM 2019 technical standards (UNICEF & SEAMEO, 2019) were defined and agreed with participating countries and experts. These standards guide technical activities, considering international conventions for large-scale assessments and the scope of SEA-PLM as a first round and as a regional assessment. The need for consistency, precision and generalisability of the data collected is recognized by participating countries and stakeholders.

An independent Technical Advisory Group of external experts was consulted to adjudicate the final database against the technical standards established for SEA-PLM 2019. All countries reached the expected technical standards. Those efforts support the publication of a robust comparative database and allow further replication of the survey.

1.3 SEA-PLM proficiency scales and Sustainable Development Goal 4.1.1

Children's proficiency in reading, writing and mathematics literacy was measured through SEA-PLM tests and described on new common proficiency scales specially designed for SEA-PLM regional assessment. Each proficiency scale is unique and was developed on the basis of children's empirical responses and each question's content and parameters. International standards and good practices were applied during the development of the scales to define several proficiency descriptors and bands representing consistent and progressive abilities along the scale. In each domain, the proficiency scales were developed on the basis of the SEA-PLM regional scales scores. More information related to the structure and content of the new SEA-PLM proficiency scales is presented in Chapter 2, Box 2.1.

SEA-PLM 2019 methodology enabled overall national performance of participating countries to be reported for 2 Sustainable Development Goals indicator in reading and mathematics: SDG 4.1.1a (end of lower primary) and SDG 4.1.1b (end of primary).[23] This process used qualitative alignment of SEA-PLM 2019 proficiency descriptors to include the SDG expanded definition of minimum proficiency levels, as endorsed by the Global Alliance to Monitor Learning and coordinated by the UNESCO Institute for Statistics (GAML, 2019). This initiative enables the reporting of national progress against United Nations targets for the year 2019.

Domain experts in charge of developing the SEA-PLM proficiency scales matched the content of the final SEA-PLM proficiency bands with the expanded definition of SDG 4.1.1a and SDG 4.1.1b to select the most appropriate band corresponding to the international definitions.[24] However, the SDGs do not identify writing literacy as an indicator, so it is not possible to consider SEA-PLM's writing literacy outcomes in relation to the SDGs.

Chapter 2 reports national Grade 5 student performance against the 3 SEA-PLM cognitive domains of reading, writing and mathematics. Indicators are reported for reading and mathematics at the end of primary only (SDG 4.1.1b)[25], more results on SDG 4.1.1a are reported in Appendix 5. For some countries, Grade 5 is the end of primary education, while for other countries it is Grade 6 (see Figure 1.2).

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[23] SDG Indicator 4.1.1: Proportion of children and young people (a) in Grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.

[24] The process of alignment between the SDG indicators and SEA-PLM band levels has been undertaken using qualitative alignment of proficiency descriptors. Ideally an alignment to the SDG indicators would also include an empirical linking process which has not yet been conducted by SEA-PLM.

[25] End of primary grade of measurement point as defined by GAML: plus or minus 1 year from the last year of primary according to ISCED level mapping in the country.

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Chapter 2

Children's proficiency in reading, writing and mathematics

Understanding what children know and can do is fundamental to creating sound policy that supports and drives improvement in educational systems and educational outcomes. Like other comparative large-scale assessments, SEA-PLM has developed its own proficiency scales in reading literacy, writing literacy and mathematical literacy. SEA-PLM's proficiency scales combine qualitative and quantitative information to report national learning outcomes that allow participating countries to report student performance in each literacy domain across contexts and over time.

SEA-PLM uses the term 'literacy' to emphasize that reading, writing and mathematical skills go beyond the fundamental school application of those domains to the application of knowledge and understanding in everyday life. Literacy is central to children's ability to achieve their personal goals and to contribute to the social and economic goals of their country and the region.

Proficiency scales offer a common reference to compare performance between and within countries. Describing children's knowledge in a rigorous, measurable and comparable way is a key milestone in any international assessment. Proficiency scales provide important information to enable education stakeholders and systems to monitor learning growth for students with different profiles, which in turn allows for sustainable improvement in curriculum achievement and literacy. Box 2.1 describes the structure and operation of the new SEA-PLM proficiency scales.

For each of the SEA-PLM 2019 proficiency scales – in reading, writing and mathematics – children who are in the highest band are likely to have mastered the fundamental skills expected by the end of primary school. Those children are also more likely to engage well in other important Grade 5 curriculum content, including the development of skills commonly considered critical in the 21st century, such as communication, technology use and critical thinking.

SEA-PLM proficiency scales provide an insight into what children can do and, importantly, what they should aim to do next. This, in turn, enables a more nuanced teaching and learning strategy at the national and school

levels to ensure that teaching is targeted at the level of students' abilities. Teaching the Grade 5 curriculum to students who are yet to master the foundational skills of reading, writing and mathematics will do little to improve student learning outcomes. Understanding that learning is a progression and that teaching must be targeted at the level of students' abilities is central to understanding the results of SEA-PLM 2019.

The new SEA-PLM proficiency scales also facilitate reporting against the global Sustainable Development Goals (SDGs) through alignment with SDG indicators for reading and mathematical proficiency at the end of primary school[26]. This benchmark offers additional information about how children are meeting the expected minimum proficiency threshold at Grade 5.

SEA-PLM 2019 provides countries and partners with a rich data source for further analysis. This work will lead to a better understanding of children's performance and learning contexts, and potential options to improve learning.

The following sections present the first analysis of this database through a regional lens. They describe the SEA-PLM proficiency scales and provide examples of tasks children were expected to perform at different levels of proficiency in each literacy domain. A number of findings are presented for each domain to show the learning levels of children in each country along the common regional continuum of the SEA-PLM proficiency scales.

Box 2.1: Reading the SEA-PLM proficiency scales

In SEA-PLM, students' proficiency in each domain is represented in the form of described proficiency scales. The proficiency scales are underpinned by an empirical scale based on actual student responses in the SEA-PLM 2019 assessment. Students are located on the scale based on their demonstrated levels of proficiency.

Each proficiency scale is divided into bands describing different levels of student proficiency. These bands were developed against the empirical scale through a process of grouping test items by difficulty and item content. Proficiency scales describe what children in each band can do. These bands of proficiency are unique to each domain and therefore are not directly comparable across the domains.

The SEA-PLM reading proficiency scale (Figure 2.1) includes 5 bands, ranging from Band 2 and below to Band 6 and above. The SEA-PLM writing proficiency scale (Figure 2.5) includes 8 bands, ranging from Band 1 and below to Band 8 and above. The SEA-PLM mathematical proficiency scale (Figure 2.10) includes 8 bands, ranging from Band 2 and below, to Band 9 and above.

For a child to be considered proficient in any given band, they must be able to correctly answer, on average, at least half the questions set in that band. A child whose score is at the lower end of the range can correctly answer at least 50% of the questions set for that band. A child whose score is at the higher end of the range can correctly answer close to 70% of the questions.

In summary, children in any given band can correctly answer the majority of the questions set for that band and for lower bands, but face greater difficulty in performing the activities set for higher bands. For instance, children in Band 3 can correctly answer most of the questions set for Bands 1, 2 and 3, but are likely to correctly answer less than 50% of questions in Band 4.

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[26] The SDGs do not refer to writing literacy.

2.1 Reading literacy

Reading literacy is a fundamental skill that students need in order to achieve their personal goals and to contribute to the social and economic goals of their country. The SEA-PLM 2019 assessment framework uses the term 'reading literacy' instead of 'reading' to emphasize that reading skills go beyond decoding words to applying reading comprehension, knowledge and understanding in everyday life.

The SEA-PLM 201 assessment framework defines reading literacy as 'understanding, using and responding to a range of written texts, in order to meet personal, societal, economic and civic needs' (UNICEF & SEAMEO, 2017, p. 21). The definition focuses specifically on written texts and emphasizes the interactions of readers with them.

In SEA-PLM, reading comprises 4 elements: recognizing text (recognize words); accessing information in texts (locate information); understanding meaning in texts (interpret); and relating texts to the student's broader knowledge and experience (reflect). As a first step, children must be able to recognize words, leading through to more complex comprehension skills related to locating, interpreting and reflecting on different text types that are written for different purposes. The format of a text may be continuous, non-continuous or mixed. The text type may be narrative, descriptive, persuasive, instructional or transactional. The context of a text may be personal, local or wider-world. The SEA-PLM reading literacy domain is therefore built on a multilayered understanding of what it means for a child to be able to read a variety of different texts for different purposes. More information on reading literacy, as defined in SEA-PLM 2019, is presented in the SEA-PLM 2019 assessment framework (UNICEF & SEAMEO, 2017).

Figure 2.1 presents the SEA-PLM proficiency scale for reading literacy. The scale includes 5 bands of proficiency, ranging from Band 2 and below to Band 6 and above. The proficiency within each band is described to illustrate what children can do. For instance, in the lowest band (Band 2 and below) children can identify relationships between words and their meanings in their language of instruction. A reader in Band 4 understands simple texts and can make plausible interpretations of the information in texts. At Band 6 and above, a reader understands texts with familiar structures, and can manage competing information when locating ideas and understanding implicit details.

Figure 2.1 also shows the proportion of children in each band across all 6 SEA-PLM 2019 participating countries, with associated scale score cut points reported for each of the bands. The proportion of children in each band for each participating country is presented in Figure 2.4.

Figure 2.1: SEA-PLM 2019 described proficiency scale for reading literacy, showing percentage of children in each band across all 6 countries

Band and % of students	Description of what students can typically do
Band 6 and above 317 points and above 29%	**Understand texts with familiar structures and manage competing information** 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.
Band 5 304 to less than 317 points 13%	**Make connections to understand key ideas** 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.
Band 4 289 to less than 304 points 18%	**Understand simple texts** 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.
Band 3 274 to less than 289 points 19%	**Read a range of everyday texts fluently and begin to engage with their meaning** 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.
Band 2 and below less than 274 points 21%	**Identify relationships between words and their meanings** There were only a few items in SEA-PLM 2019 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.

Note: Statistical standard errors appear in a table Appendix 2.

The 29% of children who performed at Band 6 and above demonstrated that they were proficient in understanding, using and responding to texts with familiar structures. They demonstrated skills that are consistent with the definition of reading literacy in the SEA-PLM 2019 assessment framework. This means, however, that approximately 7 out of 10 students were not yet reading at a level where they can understand, use and respond to a range of written texts in order to meet their needs.

Figure 2.2 provides an example of what children are expected to be able to read and understand at the end of Grade 5, as defined in SDG indicator 4.1.1b. (SDGs are discussed further below.) The item has an equivalent difficulty to Band 6 or above.

Figure 2.2: Example of reading item, Band 6

The Hole

'I can see something shiny at the bottom,' said Kit. 'Maybe it's a gold coin.'

'Don't be silly,' said Sara, peering into the hole. Her young brother was always seeing things, creating objects out of nothing.

'Maybe it's a sword,' continued Kit. 'Maybe a king buried a gold sword in the ground many years ago, and then forgot about it.'

'Maybe it's dirt, covered in dirt, covered in more dirt,' said Sara. 'It's just a hole, probably made by a wild animal.'

'You are wrong!' exclaimed Kit. 'No animal could make a hole as big as this!'

'Well, if you are so sure this is not an animal's hole, perhaps you should climb into it.'

Kit began to turn pale. 'Erm… No. I cannot go in the hole… because… I have a sore foot!'

Sara smiled; it had nothing to do with Kit's foot. A big hole could mean a big animal.

'I have an idea,' she said, picking up a stone that lay beside her. 'I will drop this into the hole. If we hear a clink, there is treasure. If we hear a thud, there is dirt. If we hear a yelp, there is an animal.'

Sara dropped the stone and they heard nothing for a moment. Then they heard a splash.

Why doesn't Kit want to climb into the hole?

    a.   Because he has a sore foot

    b.   Because he is scared

    c.   Because he doesn't know how to climb

    d.   Because he knows there is an animal in the hole

At the other end of the proficiency scale, 21% of children were estimated to be in Band 2 and below. The items in this band all assess the 'recognize words' reading process. This reveals that approximately 1 in 5 children in SEA-PLM 2019 participating countries were only at the stage of being able to recognize single familiar words. These students have not yet developed the essential foundational skills that are the building blocks of becoming a proficient reader. Figure 2.3: Example of reading item, Band 2 and below Figure 2.3: Example of reading item, Band 2 and below.

Figure 2.3: Example of reading item, Band 2 and below

Which word?

    a.   Car

    b.   Shoe

    c.   Wheel

    d.   Cat

2.1.1 Reading proficiency across countries

Children's proficiency in reading varied greatly across the 6 SEA-PLM 2019 countries. Some countries had a significant proportion of students in Band 6, while others had a significant proportion of students in the lowest band. The percentage of children from each participating country estimated to be in each band of the reading proficiency scale is shown in Figure 2.4. Countries are presented in alphabetical order.

Full tables of SEA-PLM 2019 reading literacy estimates per country are available in Appendix 2.

Figure 2.4: Percentage of Grade 5 children in each reading band, by country
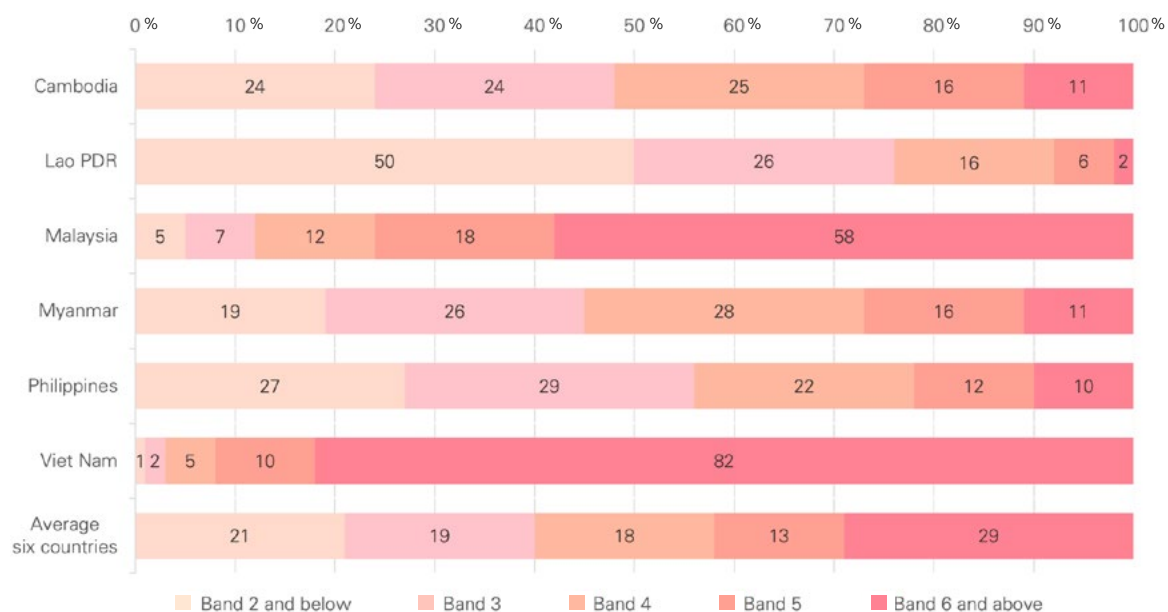
Note: Statistical standard errors appear in a table in Appendix 2.

- There was a large variation (from 2% to 82%) across participating countries in the number of Grade 5 children who could read, understand and use explicit and implicit information from various text types to reflect on new ideas and opinions. These skills are reflected in Band 6 and above and are generally expected of children at the end of primary education. Similarly, there was a large variation (1% to 50%) across countries in the number of Grade 5 children with a level of reading proficiency equivalent to that expected in the first years of primary school (Band 2 and below). These children were still at the stage of matching single words to an image of a familiar object or concept.

- In Malaysia and Viet Nam, the majority of Grade 5 children had achieved the reading literacy skills expected at the end of primary school. In those 2 countries, a further 18% and 10% of children, respectively, were in Band 5 and so were progressing towards achieving this level. These children have developed a solid basis in reading literacy skills in their language of instruction.

- In Cambodia, Lao PDR, Myanmar and the Philippines, small to modest percentages of Grade 5 children had achieved Band 6 and above or were progressing (Band 5) towards achieving the expected levels of reading proficiency at the end of primary education.

- For some countries, Grade 5 is the end of primary school. In these countries, children who do not meet a minimum proficiency in reading by Grade 5 will likely struggle to transition to secondary school.

- Analysis of score differences reveals a wide range of reading proficiencies within all countries, even those that performed the best overall. The question of equity is paramount across all of the 6 participating SEA-PLM countries. Examples of learning differences are explored in Chapter 3 through several context and policy variables relating to children and parents (for example, the comparison between boys and girls) and to classrooms and schools (for example, the comparison between children in different school locations).

2.1.2 SEA-PLM 2019 reading alignment with the SDGs

SEA-PLM 2019 reading proficiency measures can be used to report against the SDG education target (SDG 4.1) through their alignment with indicators SDG 4.1.1a and SDG 4.1.1b.

The SDG 4.1.1a indicator defines minimum proficiency in reading for 'end of lower primary' as:

Students read aloud and comprehend many single written words, particularly familiar ones, and extract explicit information from sentences. They make simple inferences when longer texts are read aloud to them. (Expanded definition, GAML, 2019, p. 12)

Children operating in SEA-PLM Band 3 and above appear to have a reading proficiency that meets or exceeds this 'end of lower primary' indicator, yet the children in Band 2 and below have not yet met this standard, even after having attended at least 5 years at school.

The SDG 4.1.1b indicator defines minimum proficiency in reading for 'end of primary' as:

Students independently and fluently read simple, short narrative and expository texts. They locate explicitly-stated information. They interpret and give some explanations about the key ideas in these texts. They provide simple, personal opinions or judgements about the information, events and characters in a text. (Expanded definition, GAML, 2019, p. 16)

Children operating in SEA-PLM 2019 Band 5 appear to have a reading proficiency consistent with several parts of this statement, including locating explicitly stated information and understanding the key ideas in texts. One aspect not covered by the Band 5 descriptor is providing opinions and judgements. However, at Band 6 and above children can use explicit information to support inferences, which goes beyond merely offering opinions and judgements. Children operating in Band 6 and above appear to have a reading proficiency that meets or exceeds this 'end of primary' indicator.

Table 2.1 shows the percentage of Grade 5 children in each SEA-PLM 2019 participating country who have met the minimum reading standard expected for 'end of primary', as defined in the SDGs. Percentages range from 2% to 82%.

Table 2.1: Percentage of Grade 5 children performing at or above SDG 4.1.1b 'end of primary' indicator in reading, by country

Country	Reading end of primary SDG 4.1.1b Band 6 and above	
	%	Standard Error
Cambodia	11	1.01
Lao PDR	2	0.41
Malaysia	58	2.06
Myanmar	11	0.78
Phillipines	10	1.21
Viet Nam	82	1.42

More information on the methodology of this alignment process is available in Chapter 1.

2.2 Writing literacy

Writing is a foundational skill for future learning and is essential for full participation in the economic, political and social life of adults. At school, writing is a basic tool for learning. In later life, writing is essential for participation in many aspects of everyday life. In the workplace, even routine jobs increasingly rely on high-level cognitive skills – including written communication – rather than on manual skills. In the digital age, personal and social communication is increasingly conducted in written text through social media. In the 21st century, written language is at least as important as it has ever been for the individual.

The SEA-PLM 2019 assessment framework defines writing literacy as 'constructing meaning by generating a range of written texts to express oneself and communicate with others, in order to meet personal, societal, economic and civic needs.' (UNICEF & SEAMEO, 2017, p. 30)

This definition considers the act of writing as meaning-making and does not include merely copying words or chunks of language. Measuring the writing domain is new in the area of comparative large-scale assessment at primary level and is a particular achievement in SEA-PLM 2019 where student writing is compared across a broad range of official languages of instruction.

Writing literacy is described in terms of content, context and process. Content refers to the types of written text that students produce. Context refers to the situations that give rise to the writing. Process refers to the skills that writers apply in constructing texts.

Writing may be done for a variety of purposes: from keeping personal records to showing one's knowledge in the classroom; from sharing one's experiences with others to getting things done; and from meeting the demands of one's job to participating in public life. Because of this, SEA-PLM adopts a functional literacy approach, and the following text types are assessed in SEA-PLM writing literacy: narrative, descriptive, persuasive, instructional and transactional. These categories are widely used in literacy frameworks, such as the Program for International Student Assessment 2009 reading literacy framework (OECD, 2010), although there are minor differences in the categorization of text types from one framework to another. SEA-PLM 2019 adds a text type – label – for simple tasks matching words to pictures, directed at early-stage writers.

In SEA-PLM, writing comprises 5 processes: generating ideas; controlling text structure and organization; managing coherence; using vocabulary; and controlling syntax and grammar. A 6th variable, other language-specific features, is included to accommodate other important processes that vary across languages. These include spelling, punctuation and character formation. In all elements, writing draws on knowledge of language (written and oral) and a range of skills, and as with reading literacy, the context of a text may be personal, local or wider-world. More information on writing literacy, as defined in SEA-PLM 2019, is presented in the SEA-PLM 2019 assessment framework (UNICEF & SEAMEO, 2017).

Figure 2.5 presents the SEA-PLM proficiency scale for writing literacy. The scale includes 8 bands of proficiency, ranging from Band 1 and below to Band 8 and above. The proficiency within each band is described to illustrate what children can do. For instance, in the lowest band (Band 1 and below) students have only limited ability to present ideas in writing. Students who are in the higher bands have demonstrated varying proficiencies in writing literacy skills, with those in Band 8 and above able to write cohesive texts with detailed ideas and a good range of appropriate vocabulary. Students in the higher bands are working towards meeting the SEA-PLM definition of writing literacy. The descriptions contain only the skills that are typical of most students in that band; individual students may not be able to demonstrate all of the skills described for the band in which they have been situated.

Figure 2.5 also shows the percentage of children in each band across all 6 SEA-PLM 2019 participating countries, with associated scale score cut points reported for each of the bands. The percentage of children in each band for each participating country is presented in Figure 2.9.

Figure 2.5: SEA-PLM 2019 proficiency scale for writing literacy, showing percentage of children in each band across all 6 countries

Band and % of students	Description of what students can typically do
Band 8 and above 346 points and above 5%	**Write cohesive texts with detailed ideas and a good range of appropriate vocabulary** Children can produce texts that draw on a wider-world context, with relevant, detailed and sometimes imaginative ideas. They can write texts with an introduction, body and conclusion in which ideas are well related and easy to follow. For example, they can provide a clear overall description of a detailed image. These children can write using a polite, formal style and a good range of appropriate vocabulary, with a degree of sophistication.
Band 7 338 to less than 346 points 4%	**Write clear, detailed texts in various contexts with adequate vocabulary** Children can produce texts that relate to wider-world, local and personal contexts, expressing ideas that go beyond mere description to include some persuasive or evaluative aspects. Ideas are well related and easy to follow, using sentences that are varied in structure and often correctly formed. They can produce some complex sentences, but these may contain errors. When writing about a personal context, for example about a favourite activity, they can use vocabulary that goes beyond the basic, to produce some interesting descriptive elements.
Band 6 327 to less than 338 points 9%	**Write simple texts for a range of purposes with above basic vocabulary** Children can produce texts that relate to local and personal contexts, presenting simple writing with some supporting details. They can produce sequenced writing that a reader can follow easily, but they are still learning to use linguistic devices to create cohesion within their texts. At this level, children's vocabulary is basic and beyond; it may be adequate to convey the detail of a message, for example, in a short, formal note.
Band 5 316 to less than 327 points 14%	**Write non-cohesive basic texts for a range of purposes, using simple vocabulary** Children can write texts such as notes, descriptions and narratives in a range of contexts, with well-controlled handwriting. They can communicate ideas in simple writing, obviously related to the task, with some attempt at detail. Their ideas are generally expressed in a logical sequence that is relatively easy to follow but may not be adequately linked with connecting words, or may lack an introduction or conclusion. A description of a detailed image, for example, may describe a range of elements in the picture with some detail but not comprise an integrated whole. Sentence forms are generally simple and may be repetitive or may be more complex but contain errors, although children can form correct question forms, and punctuation is usually correct. They can use vocabulary that is sufficient to convey a range of concepts but that lacks precision or clarity.

Band 4	Produce limited writing, conveying simple ideas with basic vocabulary
306 to less than 316 points	
14%	Children can produce limited writing related to the task, presenting simple ideas but lacking elaboration or detail. In a task such as writing basic instructions, they can present a process clearly, using 3 or 4 well-formed but simple sentences, and use the correct form of imperative language for instructions. Basic vocabulary may limit children's ability to convey detail at this level.
Band 3	**Produce very limited writing, with simple, insufficient ideas and limited vocabulary**
296 to less than 306 points	Children can produce limited writing relating to personal or local contexts. Ideas may be very simple, irrelevant or incomplete. They may be disjointed so that the text is difficult to follow. In writing a simple story, for example, there may be some sense of sequence, but it is not consistent or always clear. Children at this level display some competence in using a polite style, and can form questions. Children can produce simple or repetitive sentences that use repetition of pronouns or nouns to link ideas. Their handwriting is legible, with most letters (or characters) well-formed. Basic vocabulary at this level is inadequate to convey a good description or may be repetitive.
14%	
Band 2	**Produce very limited writing, with fragmented ideas and inadequate vocabulary**
287 to less than 296 points	Children can write in a limited way. Ideas can be unclear, irrelevant, limited or consist of fragments only. These children may be able to write 1 simple correct sentence, or produce incomplete sentences or sentences containing many errors and inconsistent punctuation. Sentence structure is likely to be repetitive. Children's vocabulary at this level is basic and inadequate to convey a clear message or is very repetitive.
10%	
Band 1 and below	**Limited ability to present ideas in writing**
less than 287 points	Children may be able to produce a few sentences with very limited content. When trying to describe a picture, for example, they may focus on only a few isolated features or produce extremely general ideas. They can produce some imperative language, but it is inconsistent. The limited range of vocabulary accessed by students in this band would be inadequate to describe a picture. Words used are likely to be basic and repetitive.
30%	

Note: Statistical standard errors appear in a table in Appendix 2.

The assessment of writing literacy in SEA-PLM is different from the assessments of reading and mathematics, because all of the writing questions require students to produce a written response of varying length, while the questions in reading and mathematics are short open questions or multiple-choice questions. In writing, each question may assess a range of criteria with differing numbers of scale score points available to be awarded, depending on the quality of the writing produced.

For example, a labelling task may only assess the 1 criterion of use vocabulary. Does the student know how to write the word for a given picture? In contrast, an everyday communication task might be assessed according to 3 criteria (such as controlling text structure and organization) and several other language-specific features (such as spelling, handwriting and level of politeness). Each specific criterion may contain up to 4 score points. All the criteria used to assess writing are based on the 6 previously mentioned writing processes. This method of assessing writing provides participating countries with a wealth of information about what their students can do.

To illustrate this, a sample writing task and sample criteria are presented in Figure 2.6, Figure 2.7 and Figure 2.8.

Figure 2.6: Example of writing item

Brothers' Race

Use the picture to help you write a story. Write as much as you can.

One day, Kai challenged his older brother to a race.

The coders assess each student's writing in response to the prompt about 2 brothers having a race. They might assess the writing on various features, such as ideas, sequencing of events and vocabulary. Figure 2.7 shows how the coder would mark Criterion A, the ability of the student to sequence the events and whether they make sense (coherence) in their story.

Figure 2.7: Example of criterion, writing scale

Criteria A	Score	Description
Sequence of events/ coherence	0	No sense of sequence
	1	Some sense of sequence but not consistent or always clear
	2	Series of narrative events in sequence that make sense

Students who are not able to demonstrate this particular skill would score zero. Score point 1 represents a partial demonstration of the skill, while score point 2 represents a full demonstration of the skill.

Coders marking this same task would likely consider other criteria as well. For example, they may rate the student's writing in terms of its ideas as they pertain to a narrative task, using a criterion called story elements, as shown in Figure 2.8.

Figure 2.8: Example of criterion, writing scale

Criteria B	Score	Description
Story elements	0	Evidence of a response but no relevant information is included
	1	Ideas are present but not a narrative
	2	Ideas are linked into a narrative

The focus in this criterion is not on the quantity of ideas but rather on whether students demonstrate the ability to link their ideas into a narrative. Students who do no more than describe the elements of the picture of the brothers' race, for example, would be likely to receive a score of 1. More information and examples about assessing writing literacy are presented in the SEA-PLM 2019 assessment framework (UNICEF & SEAMEO, 2017).

2.2.1 Writing proficiency across countries

Children's proficiency in writing varied greatly across the 6 SEA-PLM 2019 countries. Some had significant proportions of children in Bands 7 and 8 and above, while others had a significant proportion of children in the lowest bands. The percentage of children from each participating country estimated to be in each band of the writing proficiency scale is shown in Figure 2.9. Countries are presented in alphabetical order.

Full tables of SEA-PLM 2019 writing literacy estimates per country are available in Appendix 2.

Figure 2.9: Percentage of Grade 5 children in each writing band, by country

Note: Statistical standard errors appear in a table reported in Appendix 2.

- A significant finding of the SEA-PLM 2019 writing assessment is that a vast proportion of students across all 6 SEA-PLM 2019 countries are not demonstrating writing proficiencies expected of a Grade 5 student.

- In total, approximately 9% of students who sat SEA-PLM 2019 performed at Band 7 and Band 8 or above, the highest 2 bands. The middle 4 bands have similar proportions of students in them; 51% of all students fall into 1 of the 4 middle bands. Below this, 40% of students across all 6 SEA-PLM 2019 countries are in the lowest 2 bands, indicating that they have only limited writing skills.

- For some countries, a relatively high proportion of students were in the upper bands for writing. For other countries, however, large gaps in learning outcomes were evident.

- In Viet Nam, more than 30% of Grade 5 children had writing skills described in Bands 7 and 8 and above. These children may be able to transition well through to secondary education, and may possibly be on the right track to meet the challenges of a 21st century skills based curriculum.

- In Malaysia, almost 12% of Grade 5 children produced writing in the top 2 bands of writing proficiency.

- In Cambodia, Lao PDR, Myanmar and the Philippines, a very limited number of Grade 5 children achieved higher levels of proficiency in writing. In Myanmar approximately 60% of children were in the 3 lowest bands while in Cambodia, Lao PDR and the Philippines this increased to more than 70% of children. The highest performers of this group can produce very limited writing, with simple, insufficient ideas and limited vocabulary. The weakest students have only limited ability to present ideas in writing.

2.3 Mathematical literacy

The SEA-PLM 2019 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).

SEA-PLM mathematical literacy is oriented to include the specific curricula and interests of participating Southeast Asian countries at Grade 5. The assessment of mathematical literacy takes into account the wide range of abilities of students across the countries. It includes 'basic skills… as well as knowledge typically developed in the primary schooling years' (UNICEF & SEAMEO, 2017).

SEA-PLM items require the use of broad mathematical competencies. In addition, they require the mathematical knowledge and skills appropriate to the students' stage of development. To help achieve a balanced coverage of these factors, items developed for the SEA-PLM 2019 assessment were categorized in 3 main ways. First, according to content: chance and data, measurement and geometry, and number and algebra; second by process: translate, apply and interpret; and finally, by response type: multiple choice and constructed response. More information on mathematical literacy, as defined in SEA-PLM 2019, is presented in the SEA-PLM 2019 assessment framework (UNICEF & SEAMEO, 2017).

Figure 2.10 shows the SEA-PLM proficiency scale for mathematical literacy. The scale includes 8 bands of proficiency ranging from Band 2 and below to Band 9 and above. The proficiency within each band is described to illustrate what mathematics children know and can do, based on SEA-PLM 2019 test questions. For instance, in the lowest band (Band 2 and below) children have difficulty understanding place value, scales of measurement and ordering 2-digit numbers. These children are at the level of emerging mathematical skills. A mid-level mathematical learner (Bands 3, 4 and 5) will begin to more fluently solve arithmetic problems and apply number properties and units of measurement. A more proficient learner (Band 6 and above) is able to perform more mathematical operations (including with fractions), interpret tables and graphs, apply fractions and percentages, and analyse data representations.

Figure 2.10 also shows the proportion of children in each band across all 6 SEA-PLM 2019 participating countries, with associated scale score cut points reported for each of the bands. The proportion of children in each band for each participating country is presented in Figure 2.14.

Figure 2.10: SEA-PLM 2019 proficiency scale for mathematical literacy, showing percentage of children in each band across all 6 SEA-PLM countries

Band and % of students	Description of what students can typically do
Band 9 and above 347 points and above 8%	There were too few items in SEA-PLM 2019 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.
Band 8 334 to less than 347 points 6%	**Think multiplicatively and convert between units** 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.

Band 7 321 to less than 334 points 9%	**Apply fractions and percentages and analse data representations** 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.
Band 6 308 to less than 321 points 12%	**Perform mathematical operations, including with fractions, and interpret tables and graphs** 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.
Band 5 295 to less than 308 points 16%	**Fluently solve arithmetic problems** 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.
Band 4 282 to less than 295 points 19%	**Apply number properties and units of measurement** 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.
Band 3 269 to less than 282 points 16%	**Understand place value and scales of measurement** 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.
Band 2 and below less than 269 points 14%	There were too few items in SEA-PLM 2019 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.

Note: Statistical standard errors appear in a table reported in Appendix 2.

While this proficiency scale is relative rather than absolute, descriptions in Figure 2.10 can be compared with items from external international assessments (for example, Trends in International Mathematics and Science Study; TIMSS) and with international standards (for example, SDG 4.1.1 indicators, as discussed below). This comparison can indicate what level of achievement is expected of children by the end of Grade 5. Children who are performing at Band 6 and above have demonstrated mathematical skills that are consistent with these indicators of expected achievement by the end of Grade 5.

Among the 6 participating countries, on average, 35% of children in Grade 5 performed at Band 6 or above. Those children are on the right track to meet the challenges of a 21st century skills-based curriculum when they transition through to secondary education. The SEA-PLM 2019 results show that approximately 2 out of 3 children within the 6 countries are not yet at this level. Results per country show large variations in children's proficiency between and within countries (see Figure 2.14).

Figure 2.11 provides an example of what children would be likely to answer correctly at Band 8 or above.

Figure 2.11: Example of mathematical item, Band 8

Water bottles

A shop has 103 boxes of water bottles.

There are 24 water bottles in each box.

How many bottles of water are in the shop in total?

This item requires students to multiply numbers greater than 100, in context. An added difficulty is that the item is in constructed-response format, requiring students to generate an answer rather than select one. On average across the 6 participating countries, 14% of children are estimated to be in Band 8 and above.
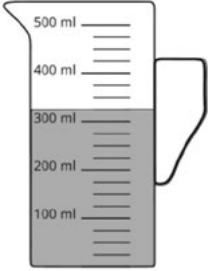
Figure 2.12 provides an example of what children would be likely to answer correctly at Band 5 or above.

Figure 2.12: Example of mathematical item, Band 5

Amount of lemon juice

Li has lemon juice in this jug.

How many millilitres (ml) of juice are in the jug?

   a. 301

   b. 310

   c. 325

   d. 350

This item requires students to read a value from a scale on a measuring jug. The level of the liquid in the jug is at a tick mark situated between the intervals marked with values. Students need to interpret the scale and interpolate the correct value. On average, across the 6 participating countries, 51% of children are estimated to be in Band 5 and above.

Figure 2.13 provides an example of what children would be likely to answer correctly at Band 3. Children in Band 3 have mathematical proficiency comparable to expected levels required in early grades of primary education.

Figure 2.13: Example of mathematical item, Band 3

Goals

The red team scored 4 goals. The blue team scored 7 goals.

How many more goals did the blue team score than the red team?

   a. 3

   b. 4

   c. 7

   d. 11

This item requires only 1 very simple calculation with 1-digit numbers. It is set in a very limited context, requiring little reading. It requires only basic application of the skill of finding the difference between 2 numbers. On average, across the 6 participating countries, 14% of children at Grade 5 would be unlikely to answer this item correctly.

2.3.1 Mathematical proficiency across countries

Children's proficiency in mathematics varied greatly across the 6 SEA-PLM 2019 countries. Some countries had a significant proportion of children in the higher bands (as expected generally at the end of primary education), while others had a significant proportion of children in the lowest bands (as expected of children in early grades of primary education). The percentage of children from each participating country estimated to be in each band of the proficiency scale is shown in Figure 2.14. Countries are presented in alphabetical order.

Full tables of SEA-PLM 2019 mathematical literacy estimates per country are available in Appendix 2.

Figure 2.14: Percentage of Grade 5 children in each mathematics band, by country

Note: Statistical standard errors appear in a table reported in Appendix 2.

- In some countries there were very few (1%) Grade 5 children with a mathematical proficiency equivalent only to that expected in the first years of primary school, while other countries had a large number (57%) at this level. These children were still in the stage of solving simple problems – for example, requiring them to add or subtract 2 single-digit numbers together or to recognize simple shapes. To take another example, in some countries there were few (8%) and in other countries a very large majority (91%) of Grade 5 children who could solve problems involving measuring devices requiring conversion of metric units (Band 6), as generally expected at the end of primary education. This situation illustrates the huge disparities in mathematical proficiency across the 6 participating countries.

- In Malaysia and Viet Nam, the majority of Grade 5 children have achieved the mathematical literacy skills expected at the end of primary school, as indicated by a SEA-PLM 2019 mathematical proficiency of Band 6 and above. In these countries, large numbers of children are on the right track to meet the challenges of a 21st century skills-based curriculum when they transition through to secondary education.

- In Cambodia, Lao PDR, Myanmar and the Philippines, modest percentages of Grade 5 children have achieved the mathematical literacy skills expected at the end of primary school, as indicated by a SEA-PLM 2019 mathematical proficiency of Band 6 and above. This implies that in these countries the majority of Grade 5 children are still working towards mastering fundamental mathematical skills.

- In all countries, a significant proportion of children may still be able to reach the higher mathematical proficiency bands (Band 6 and above) if the right school and system-level support is provided. For example, there were many children who could interpolate capacity from a marked cylinder and estimate the mass of an object (Band 5), and with the right support they could learn to solve problems involving measuring devices requiring conversion of metric units of length and capacity (Band 6).

- For some countries, Grade 5 is the end of primary school. Children who do not meet the mathematical proficiency expected for Grade 5 will struggle to complete their primary education and/or to transition into secondary school.

- Students found items where they needed to write an answer (constructed response) more difficult than those where they needed to select an answer from given options (multiple choice).

- The results showed fewer chance and data items in the lower proficiency levels of the SEA-PLM 2019 scale. This may reflect that topics in this area are not taught to children as much (or perhaps as carefully) as for the other 2 strands (number and algebra, and measurement and geometry).

- Children appeared to be more familiar with making calculations than with formulating, interpreting, communicating and explaining.

2.3.2 SEA-PLM 2019 mathematics alignment with the SDGs

SEA-PLM 2019 mathematical proficiency measures can be used to report against the SDG education target (SDG 4.1) through their alignment with indicators SDG 4.1.1a and SDG 4.1.1b.

The SDG 4.1.1a indicator defines minimum proficiency in mathematics for 'end of lower primary' as:

> *Students can read, write and compare whole numbers up to 100. They can add and subtract numbers within twenty and solve application problems involving numbers within twenty. Students can recognize simple shapes and their elements. They can read simple data displays. They possess foundational knowledge of spatial orientation and can appraise the relative size of real-world objects. (Expanded definition, GAML, 2019, p. 25)*

Children operating in SEA-PLM Band 4 and above appear to have a mathematical proficiency that meets or exceeds this 'end of lower primary' indicator, yet the children in Band 3 and below have not yet met this standard, even after having attended at least 5 years at school.

The SDG 4.1.1b indicator defines minimum proficiency in mathematics for 'end of primary' as:

> *Students can add and subtract whole numbers within 1,000 and demonstrate fluency with multiplication facts up to 10 x 10 and related division facts; solve simple real-world problems with whole numbers using the 4 operations (consistent with the grade and performance level) and identify simple equivalent fractions; select and use a variety of tools to measure and compare length, weight and capacity/volume; understand the relationships between different units of time, e.g. seconds, minutes, hours, days, weeks, months, and years; retrieve multiple pieces of information from data displays to solve problems; recognise and name 2-dimensional shapes by their simple attributes; and apply the concept of equivalence by finding a missing value in a number sentence. (Expanded definition, GAML, 2019, p. 29).*

Children operating in SEA-PLM Band 6 and above appear to have a mathematical proficiency that meets or exceeds this 'end of primary' indicator.

Table 2.2 shows the percentage of Grade 5 children in each SEA-PLM 2019 participating country who have met the minimum mathematical standard expected for 'end of primary', as defined in the SDGs. Percentages range from 8% to 92%.

Table 2.2: Percentage of Grade 5 children performing at or above the SDG 4.1.1b 'end of primary' indicator in mathematics, by country

Country	Mathematics end of primary SDG 4.1.1b Band 6 and above	
	%	Standard Error
Cambodia	19	1.34
Lao PDR	8	0.77
Malaysia	64	0.94
Myanmar	12	1.96
Philippines	17	1.38
Viet Nam	92	1.11

More information on the methodology of this alignment process is available in Chapter 1.

Chapter 3

Equity in learning opportunities

Understanding disparities in the learning opportunities available to children and schools, and their associated literacy outcomes, is fundamental to creating sound policy that supports and drives improvement in educational systems and results. That understanding complements what we know overall about children's literacy in reading, writing and mathematics based on their performance on SEA-PLM 2019 proficiency scales, as presented in Chapter 2. In order to better understand the inequity that children experience, we need to understand their individual characteristics, their home environments and their school contexts to identify causes, risks and potential ways to change.

Education systems, policies and stakeholders strive to create and maintain equitable learning opportunities to compensate for the effects of social inequalities. The challenge of offering equal learning opportunities through all the stages of basic education is complex but critical for all countries. Regardless of children's performance in reading, writing and mathematical literacy, all countries have room for improvement. This is particularly relevant for disadvantaged children, where the compounding effects of disadvantage and lower academic achievement risk becoming a permanent handicap for their progress and future.

As with other comparative large-scale assessments, SEA-PLM 2019 collected a vast set of contextual data on children's perspectives, characteristics and experiences, from surveys of children, parents, schools and teachers. These quantitative variables allow investigation of the various contexts in which children learn and teachers and communities operate. When we compare this information with achievement levels, we can identify vulnerable children and outcome bottlenecks, while also identifying and promoting good practices.

Stakeholders are encouraged to combine and compare SEA-PLM 2019 evidence with other sources of information, previous studies and overall national standards and targets to understand national challenges for developing better and more equitable learning for children. Addressing gaps between and within schools and between children is vital. The SEA-PLM programme is designed to compare learning outcomes and contextual indicators over time and across countries through a regular cycle of assessment and reporting. This process of repeated assessment encourages the measurement of progress to reduce disparities while also increasing the overall level of children's achievement in basic education.

In general, children's learning outcomes are shaped by successful teaching and learning practices at school. It is also well established that children's home backgrounds have a strong influence on academic achievement.

The descriptive statistical outputs presented in this chapter draw on existing research in comparative education and achievement factors. The following sections offer a regional snapshot, in the SEA-PLM 2019 participating countries, of selected topics of policy interest, using reliable variables extracted from the SEA-PLM 2019 database.

Contextual questionnaires

In addition to paper-pencil tests assessing children's reading, writing and mathematical literacy, the SEA-PLM 2019 main survey included 4 questionnaires to gather contextual information about teaching and learning. These contextual questionnaires were informed by the concepts and core content areas in the SEA-PLM assessment framework (UNICEF & SEAMEO, 2017).

- A student questionnaire, given to participating Grade 5 children, collected information about children's characteristics, home background, school community and attitudes about learning. This questionnaire also contained questions to measure children's global citizenship values, attitudes and behaviours (see Chapter 4).

- A parent questionnaire, given to the parents of participating children, collected information about children's home background, home resources, preschool attendance, and reading, writing and mathematical literacy capabilities before entering primary schooling.

- A school questionnaire, given to school principals, collected information about the school environment and characteristics, including the school's climate, facilities, resources, teaching practices and policies, and community and social context.

- A teacher questionnaire, given to Grade 5 teachers, collected information about teachers' education and training, and their attitudes about their school, classroom resources and practices. This questionnaire also contained questions to measure teachers' global citizenship values, attitudes and behaviours (see Chapter 4).[27]

Learning results and contextual variables

This chapter explores some of the data and findings from each of the 4 SEA-PLM 2019 questionnaires in order to illustrate the environments faced by children in Grade 5. The analysis shows the extent to which differences in children's backgrounds, home environments and school contexts are associated with national averages in reading, writing and mathematics literacy using SEA-PLM 2019 proficiency scales. The discussion outlines disparities between countries, between children within countries, and between sub-groups of children in all 6 participating countries. For ease of reading, data are visualized through graphics, while complete tables of estimates and test significance are reported in Appendix 3. Box 3.1 provides more details on how the information and analysis of the questionnaires are presented in this chapter.

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[27] All full- or part-time Grade 5 teachers responded to the questionnaire. For schools with more than one classroom or with domain-specialist teachers, the number of teachers may vary from the number of classes.

Box 3.1: How to read and compare resources, practices, outcomes and children's learning disparities

Data from the 4 contextual SEA-PLM 2019 questionnaires are reported in various ways through this chapter. All results are reported through a similar graphical format to facilitate reading, while tables of results for each section are reported in Appendix 3. For each section, figures show the national average of frequency by responses for selected variables of interest (for instance, the proportion of children who expressed agreement with an item). For ease of reporting, in some instances responses are grouped (for example, combining 'Strongly agree' and 'Agree' to provide a measure of agreement). In each graphic, statistics are reported at the country level and as the average across countries, and, where relevant, for sub-groups of children within countries. Results for each country have been weighted so that each has an equal contribution to the average.

A difference of 6 scale points on the learning proficiency scales represents one-fifth of a standard deviation (and is interpreted as a small difference), a difference of 15 scale points represents one-half of a standard deviation (and is interpreted as a moderate difference) and a difference of 30 scale points represents 1 standard deviation (and is interpreted as a large difference).

Where appropriate and relevant, contextual data are reported using numerical indices or an index based on coherent sets of items to provide a more parsimonious picture of differences across countries and differences between sub-groups of children, and to measure the association between those constructs and the SEA-PLM 2019 scale scores. The Rasch partial credit model (Masters & Wright, 1987) was applied to construct the contextual indices and to standardize the item response theory scores to have a quantitative average score of 50 points and a standard deviation of 10 points. A difference of 2 scale points represents one-fifth of a standard deviation (and is interpreted as a small difference), and a difference of 5 scale points represents one-half of a standard deviation (and is interpreted as a moderate difference).

For the socioeconomic index only (SES), the average score for each country is 0 and the standard deviation is 1. For this scale only, scores are strictly not comparable between countries as a unique scale is computed per country. More information related to the construction of this index is available in Box 3.2. A list of all the contextual indices published in this report is available at the end of Appendix 3; more indices are available in the SEA-PLM 2019 regional database.

All statistical tests of significance between group means are reported at the 95% confidence level. All not statistically significant differences between groups are indicated in notes under the figures presented in this chapter. Where there is no mention, differences between groups are significant at the 95% confidence level. At the 95% confidence level, differences of means are 95% certain for the entire population of children.

Trends identified in this chapter need to be carefully considered, as the national average of 2 or 3 sub-groups of children does not capture the variation in children's performance within each sub-group. For example, statistical outputs in this report do not compare lower-performing boys with lower-performing girls, only the overall average performance of the sub-group of all girls in comparison with the sub-group of all boys.

Therefore, correlations between 1 contextual variable and differences in scale scores do not necessarily imply causality between the variable and learning performance. For example, while data clearly show a statistical and significant average difference in learning achievement between children who participated in preschool and children who did not benefit from preschooling, it cannot be assumed that all children who participate in pre-primary education will succeed in school. There may be other underlying factors influencing this relationship, due to different effects of preschooling on different profiles of children. Therefore, it is important to understand the interplay between contextual factors in the findings.

The possibilities for reporting SEA-PLM contextual data are infinite. Owing to time considerations and policy interests, this report prioritizes and highlights some of the key contextual information and national particularities from the database. Where appropriate and relevant, the characteristics of sub-groups of children (preschool attendance, for example) within the entire population of Grade 5 children are compared to describe learning environments and illuminate the differences between contexts, schools and children within countries. Such information is essential to compare learning progression and overall proficiency in literacy between countries, children and schools, and between the 3 learning domains covered in SEA-PLM 2019.

Where relevant and appropriate, national averages of learning achievement for these sub-groups of Grade 5 children are compared within each country through robust statistical analysis. Such data outputs contribute to estimating the level of disparities in learning outcomes between sub-groups of children and educational variables of interest. SEA-PLM data structure allows the generalizing of findings at the country scale; results must be considered as a national picture of all children enrolled at Grade 5 in 2019. In some sections, only the level of resources or the extent of practices and attitudes are discussed, without reference to children's learning outcomes.

Where disparities are consistent for all 3 learning domains and for the majority of countries, the educational challenges are addressed for the whole Southeast Asian region during the years of basic education. Further research and secondary analysis on equity within and between countries, along with the profiles of children and schools, will be developed elsewhere.

3.1 Equity effects of children's background, home influence and school experience

Home influence has an important impact on a child's development and affects learning opportunities. For example, activities that family members undertake with a child, such as helping them with their homework, may provide a supportive environment for learning and increase expectations of schooling. School experiences and individual pathways through school may also profoundly affect children's learning, particularly as those effects accumulate over a number of years. In most contexts, the socioeconomic status of the family is the most influential factor, and affects many other factors. The role of systems and schools in providing quality learning experiences for all children is crucial for children's success in basic education.

This section describes how learning achievement varies among groups of children with different backgrounds, home influences and school experiences. Where relevant and appropriate, overall learning outcomes between the different sub-groups of children represented by national averages are compared within each country to estimate the level of existing learning disparities. Children's background, home influence and school experience findings are presented based on the SEA-PLM 2019 database and 8 major policy areas of interest shared among the countries.[28] The discussion examines the effects on learning achievement of:

- gender
- age
- socioeconomic status
- combined gender, school location and socioeconomic status
- preschool education
- school readiness in language and mathematics
- speaking the language of instruction at home
- grade repetition.

3.1.1 Gender

Within all 6 participating SEA-PLM 2019 countries, similar proportions of boys and girls were enrolled at Grade 5 (see Appendix 3). This pattern matches national data available from the UNESCO Institute for Statistics.[29]

Figure 3.1: Differences in average reading, mathematics and writing scores by gender
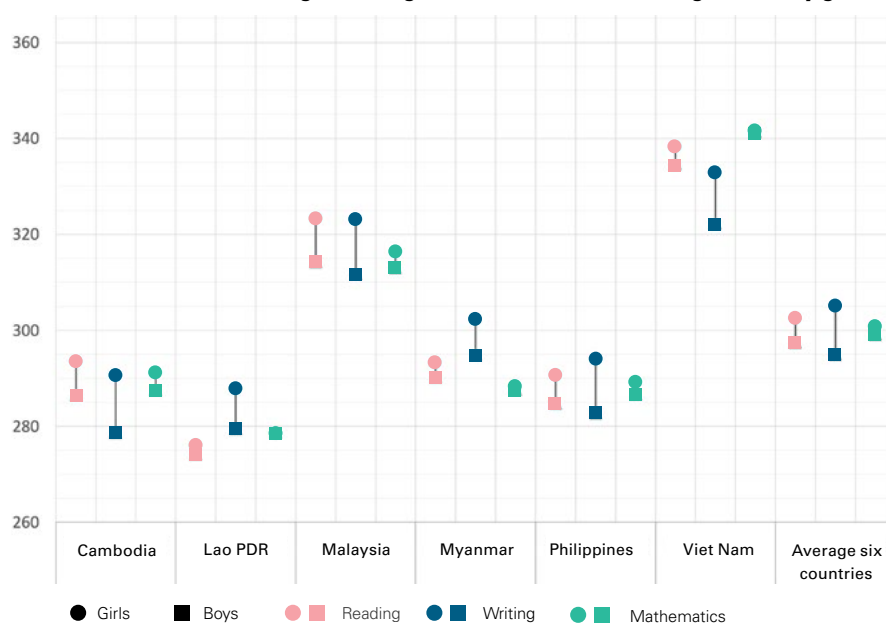
Note: means differences are not statistically significant in Lao PDR, Myanmar and Vietnam in mathematics.

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28 This list is not exhaustive and represents only a selection of variables from the SEA-PLM 2019 database.

29 Data taken from http://uis.unesco.org/en/topic/gender-equality-education (accessed September, 2020).

Significant differences between gender groups are noted in Appendix 3. On average, girls were significantly more likely to have higher levels of achievement in both reading and writing literacy, a pattern that was evident in all SEA-PLM 2019 countries. Girls had higher levels of mathematical literacy than boys in Cambodia, Malaysia and the Philippines. National averages showing that girls outperform boys at Grade 5 in reading and writing literacy are consistent with findings in other comparative large-scale assessments implemented in Southeast Asia and the Pacific, including the Progress in Reading Literacy Survey (PIRLS) and the Pacific Islands Literacy and Numeracy Assessment (PILNA), in which some SEA-PLM 2019 countries also participated (Mullis, Martin, Foy & Hooper, 2017; EQAP, 2019).Despite the difference in performance, in all countries, few to large proportion of girls and boys still have difficulties in reaching the expected levels of performance across the domains. In relation to Sustainable Development Goal 4 – Education 2030 (SDG 4) for reading and mathematics, there were more girls than boys at or above SDG 4.1.1b in all countries. The largest differences were observed in Malaysia, where there were 15% and 7% more girls at or above the reading and mathematics SDG 4.1.1b, respectively. (See Chapter 1 for more information on SDG reporting in SEA-PLM 2019.)

Equity related to gender at Grade 5 should be further analysed by taking into account other aspects of gender issues, such as access, dropout rates, stereotypes, higher education and employment.

3.1.2 Age

The SEA-PLM 2019 assessment measures learning outcomes of Grade 5 children. As illustrated in Figure 3.2, in all countries the majority of children were aged 10 or 11 years at the time of the data collection.

Figure 3.2: Percentages of children by age group
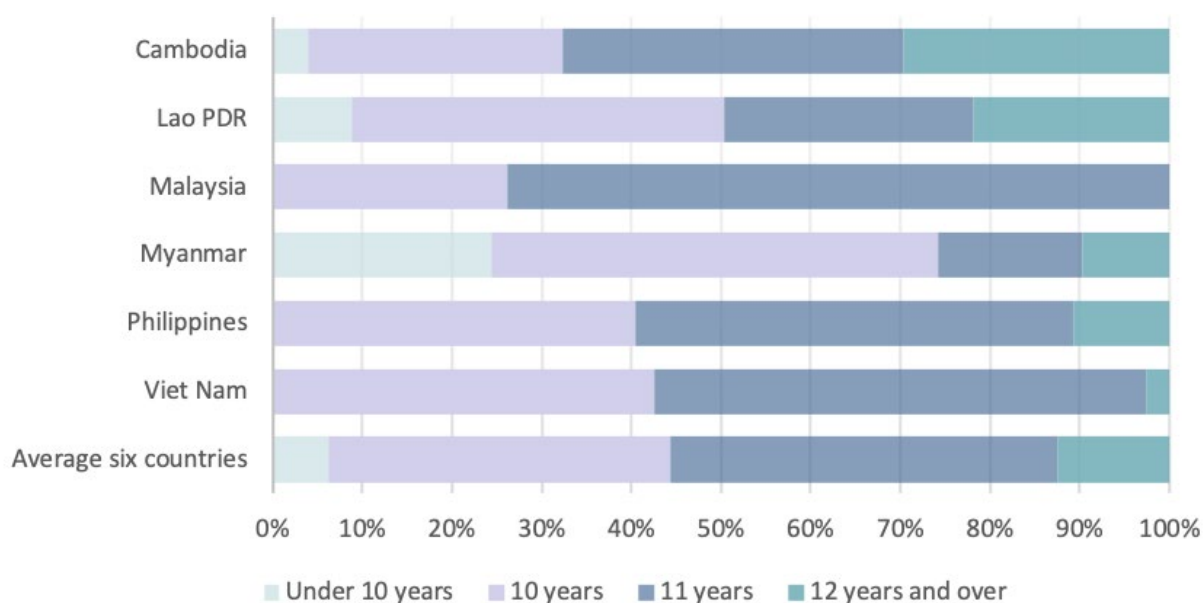
In Myanmar, there was a larger proportion of students aged 9 years at Grade 5 in comparison with other countries. While 5 out of the 6 countries have official entry age at Grade 1 fixed at 6 years, the Myanmar education system officially starts primary school at 5 years. The differences between countries illustrate not just differences between official and effective ages of entry, but also different grade repetition practices. Grade repetition only affected children in some of the SEA-PLM 2019 participating countries (see section 3.1.8). The bigger variations across countries were in the proportion of children aged under 10 years, ranging from 0% to 24%, and the proportion of children aged 12 years, ranging from 0% to 30%.

Multiple regression models were used to predict student performance in reading, writing and mathematics, using age, grade repetition and socioeconomic status as predictor variables. In 4 out of the 6 countries, older age was not correlated with poorer learning performance, but grade repetition was. In Malaysia, older students tended to achieve significantly higher scores in reading, writing and mathematics, when grade repetition and socioeconomic status are held constant. For Viet Nam and Cambodia, older students tended to achieve significantly higher scores in mathematics only. Cambodian students who repeated a grade tended to achieve significantly lower scores in reading, writing and mathematics.

3.1.3 Socioeconomic status

In all countries, students from higher socioeconomic backgrounds tended to achieve significantly higher scores in reading, writing and mathematics.

As in other comparative large-scale assessments, socioeconomic status in SEA-PLM is defined as a construct combining educational, occupational and wealth influences (Hauser, 1994). Children's socioeconomic background is believed to influence their achievement in a variety of learning areas (Sirin, 2005; Saha, 1997; Woessmann, 2004). Results from other large-scale international and regional assessments have demonstrated strong associations between home background characteristics and academic achievement (OECD, 2019; Mullis, Martin, Foy & Hooper, 2017; CONFEMEN, 2014; UNESCO OREALC, LLECE, 2015).

A socioeconomic status (SES) index was developed within SEA-PLM 2019 to capture the relationship between children's socioeconomic status – estimated within each country and not comparable across countries – and their learning performance in reading, writing and mathematical literacy. Such information is relevant to estimate how background origins relate to learning disparities at the end of primary education. 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 the system and community should be able to reduce the effect of societal inequalities in learning from birth to the end of primary education. The capacity of education systems and schools to attenuate the influence of home background on learning outcomes provides meaningful information about the effects of equity policies and stakeholders' efforts for improving basic education.

SEA-PLM 2019 does not estimate the previous efficiency of systems in reducing the impact of socioeconomic status while also increasing basic education enrolment for a generation of children. However, further repeated cycles of SEA-PLM studies will allow effects to be compared over time using SEA-PLM 2019 as a baseline reference.

The SEA-PLM 2019 SES index was computed for each child by combining individual responses from the parent questionnaire about parental education, parental occupation and home possessions. This index estimates children's home SES background in each country based on standardized questions. The higher scores on this index correspond to greater resources available to the family. Box 3.2 provides more details on the construction of the index.

Box 3.2: How the SEA-PLM 2019 SES index was constructed

The measurement of home socioeconomic status was derived nationally, based on 3 parameters: the highest parental occupation of either parent, the highest educational level of either parent, and the home resources of the children's family through the home resources scale.

Highest parental occupation level was derived using the parent questionnaire. Parents or householders were asked to indicate which broad category of occupations matched the current main occupation of the child's parents. The higher of these occupation groups (where responses were received for both parents) was selected using hierarchical rules ranking each occupation group based on its correspondence to a predefined classification index. The final value recorded was an ordinal variable.

Highest parental education level was derived using the parent and student questionnaires to measure the educational level attained by each of the parents. Categories in these questions were based on established International Standard Classification of Education levels relevant to each country, where a hierarchy was established based on the number of years of formal education required for each type of educational qualification. Where both parent and student data were available, the data from the parent was used only. Where data existed for both parents, the higher of the 2 levels of educational achievement was selected, based on the hierarchy. This value was then converted to the number of years of formal education required to attain this level of education for each respective SEA-PLM 2019 country.

The home resources index was captured from a series of questions relating to the home resources of the family, which encompassed home possessions, the number of meals a child had per day, the quality of household walls, the lighting type, the presence of utilities such as electricity and water, and the number of books in the household. Item response theory was used to derive a single score for each individual who responded to a minimum of 2 of the questions used in the index. This score was standardized and set to a metric. Higher scores for this index corresponded to greater resources available to the family in comparison with other children in that country only.

For respondents with missing data for only 1 variable, missing values were imputed with predicted values plus a random component based on a regression of the other 2 variables. If there were missing data for more than 1 variable, the SES index was not computed for that case and a missing value was assigned.

Variables with imputed values were then used for a principal component analysis at each country level. This means that no comparison of SES index scores can be made across countries. The SES index scores were obtained as component scores for the first principal component, with 0 being the score of an average respondent within each country and 1 being the standard deviation in each country.

For ease of presentation of the results, overall children's learning differences per country are broken down into quartiles of SES index level in each country. Each group represents a quarter of the national distribution of SES resources in the families of the children in the study. Figure 3.3 presents the score differences between the national averages of those 4 categories, per country and per each of the 3 learning domains.

Figure 3.3: Differences in average reading, writing and mathematics scores by socioeconomic status

SES scale bottom quartile ■   SES scale second quartile ◆   SES scale third quartile ▲   SES scale upper quartile ●

■ ◆ ▲ ● Reading   ■ ◆ ▲ ● Writing   ■ ◆ ▲ ● Mathematics
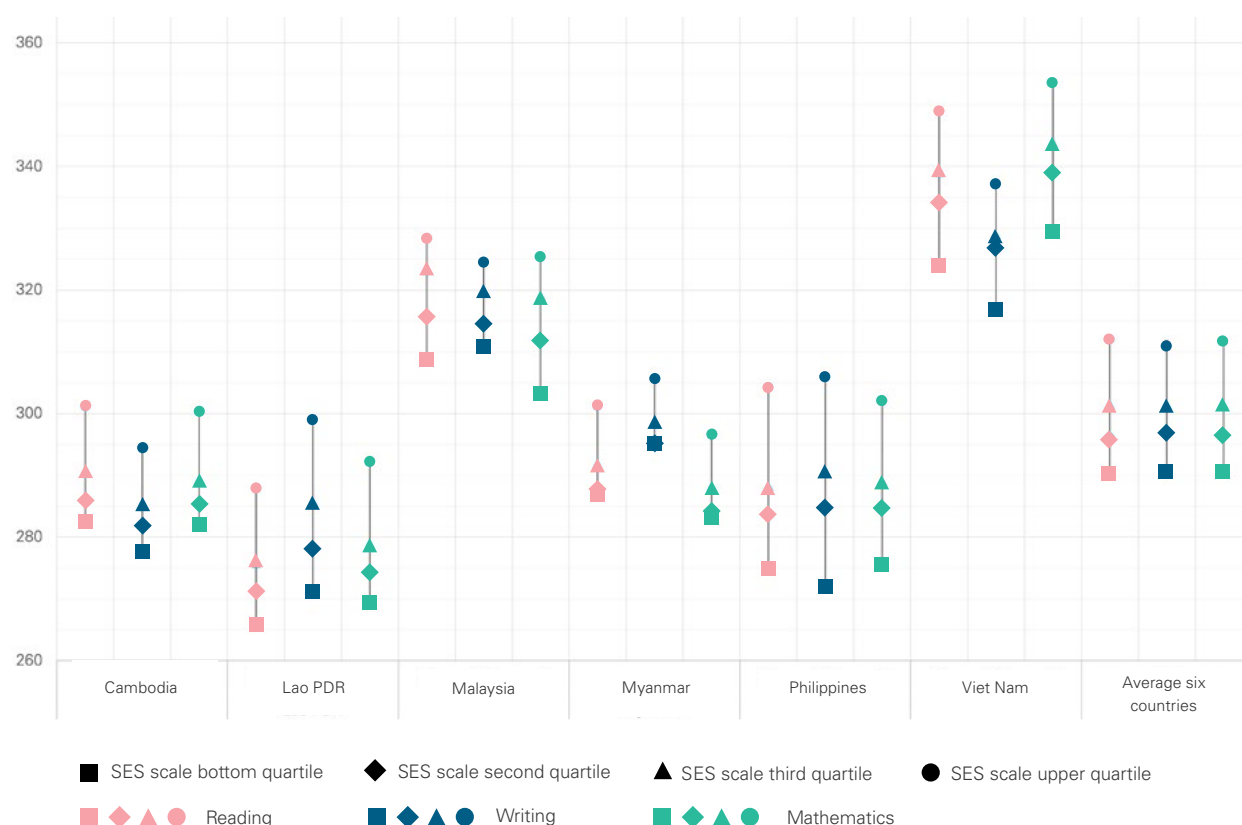
The figure shows a general pattern of increasing achievement based on quartiles of the SES index nationally. In all 6 participating countries, children belonging to the bottom SES quartile had the lowest levels of achievement, whereas children belonging to the upper SES quartile had the highest levels of achievement. This pattern is consistent across all 3 domains, and the magnitude of this difference was substantial, ranging between 24 and 26 scale points, on average across countries, for the 3 learning domains.

These results highlight equity issues in schooling, where children from more disadvantaged backgrounds are performing at lower levels than their peers. The findings may also indicate that countries' efforts in the last decade to reduce the impact of social inequity on children's learning have not been sufficiently effective.

Accurately tracking the effect of socioeconomic status on learning performance is critical within each country, considering that children's dropout rates and out-of-school profiles are not included in the SEA-PLM study. SEA-PLM offers a robust framework to estimate progress over time and estimate how systems and communities can prioritize their efforts with sub-groups of children and schools.

3.1.4 Combined gender, school location and socioeconomic status

This section discusses the combined influence of 3 contextual factors – gender, school location and socioeconomic status – on overall mathematical literacy achievement. Table 3.1 presents the effects of those 3 variables on mathematical literacy when context effects of the variables are equalized. Tables for reading and writing are reported in Appendix 3. See section 3.2.2 for more information about the effects of school location.

Table 3.1: Regression coefficients for the effects of gender, school location and SES on mathematical performance

Country	Regression coefficients for predictor variables							
	Gender: difference between girls and boys after accounting for effects of school location and socioeconomic status (Girls=1, Boys=0)		**School location:** difference between urban and rural children after accounting for effects of gender and socioeconomic status (Urban=1, Rural=0)		**SES:** standardized index of socioeconomic status background after accounting for effects of gender and school location		**Combined effect of all 3 factors:** percentage of score variation (%)	
Cambodia	**3.7**	(0.7)	**19.5**	(2.8)	**6.2**	(0.5)	19	(2.8)
Lao PDR	0.4	(0.8)	6.2	(3.5)	**9.2**	(0.7)	19	(2.5)
Malaysia	**2.7**	(0.9)	3.9	(2.0)	**8.3**	(0.5)	17	(1.9)
Myanmar	0.2	(0.5)	**4.5**	(1.2)	**5.4**	(0.4)	12	(1.9)
Philippines	**3.1**	(0.7)	**5.6**	(1.6)	**9.5**	(0.5)	28	(2.7)
Viet Nam	0.0	(0.8)	1.3	(1.4)	**9.2**	(0.7)	15	(1.9)
Average 6 countries	**1.7**	(0.3)	**6.9**	(0.9)	**7.9**	(0.2)	18	(0.9)

Note: ( ) Standard errors appears in parentheses.
In bold when difference between comparison groups is statistically significant at p<0.05.

Statistical analysis shows that gender was a significant and consistent predictor of performance for mathematics in Cambodia, Malaysia and the Philippines, even when socioeconomic context and school location are equalized between children.

On average across countries, school location influenced achievement independently of children's socioeconomic status and gender for all 3 learning domains, with urban children outperforming rural children. Socioeconomic status also remained a strong predictor of achievement for all 3 domains in every country, even when context effects related to gender and school location are equalized between children, with children from higher socioeconomic backgrounds outperforming those from lower socioeconomic backgrounds.

Across countries, gender, school location and socioeconomic status explain a significant proportion of the score variation for mathematics – between 12% and 28%.

The overall trend observed in mathematics was similar in reading and writing in all countries. The accumulation of disadvantage contexts and gender gaps contributes, on average, 10% to 30% of the overall variation of children's scores in each country.

Although there was some variation across countries, this finding stresses the need for mitigating structural socioeconomic inequalities and their effects on individual achievement and learning environment from the early years.

3.1.5 Preschool education

The ages between birth and 5 years are critical for a child's development. It is well accepted that attendance in a quality preschool education programme can have lasting positive effects on children's academic and social-emotional wellbeing outcomes (Bakken, Brown & Downing, 2017; Trawick-Smith, 2014). While recognizing that types of preschool education vary quite considerably, the benefits of attendance in lower-income countries has been established in other large-scale assessments (EQAP, 2019; CONFEMEN, 2014; UNESCO OREALC, LLECE, 2015). Children who are economically disadvantaged in comparison with their peers can have limited readiness for school activities in both quantitative and qualitative ways (Brophy, 2006).

Parents of children participating in SEA-PLM 2019 were asked about their child's preschool attendance. Almost three-quarters of Grade 5 children had attended preschool education. The majority of these (around half of all children) had attended for 2 years or more. However, there was considerable country variation in the proportion of children attending preschools, and their duration of attendance, as highlighted in Figure 3.4.

Figure 3.4: Percentage of children by preschool education
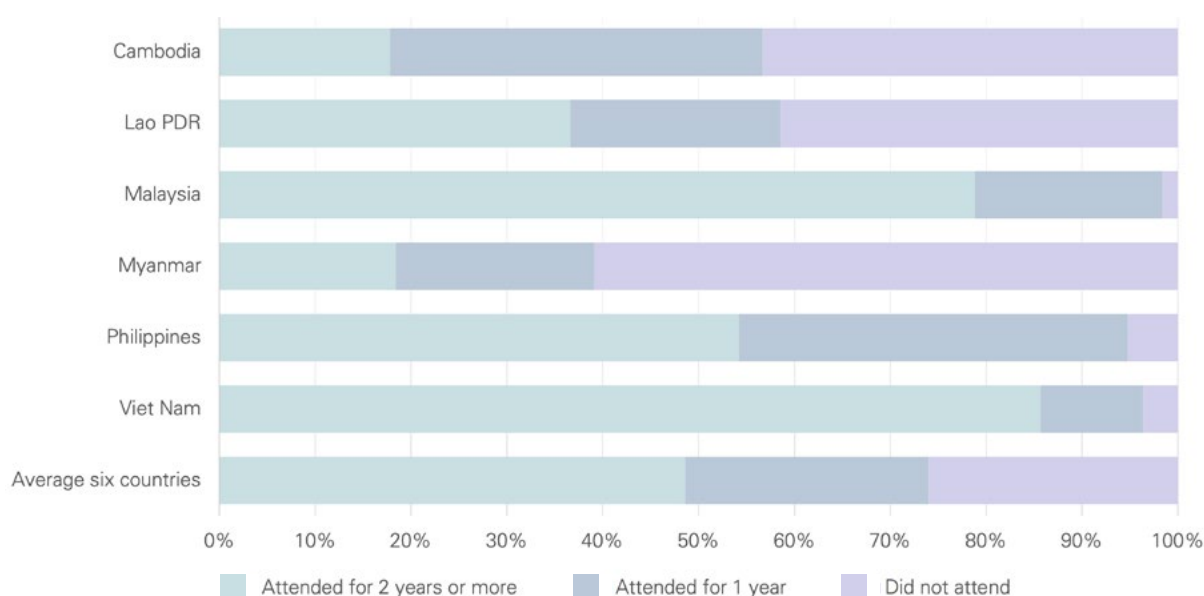
Figure 3.5 outlines the achievement averages in reading, writing and mathematics for 2 groups of children – those who did attend preschool for 1 year or more compared with those who did not.

Figure 3.5: Differences in average reading, writing and mathematics scores by preschool education
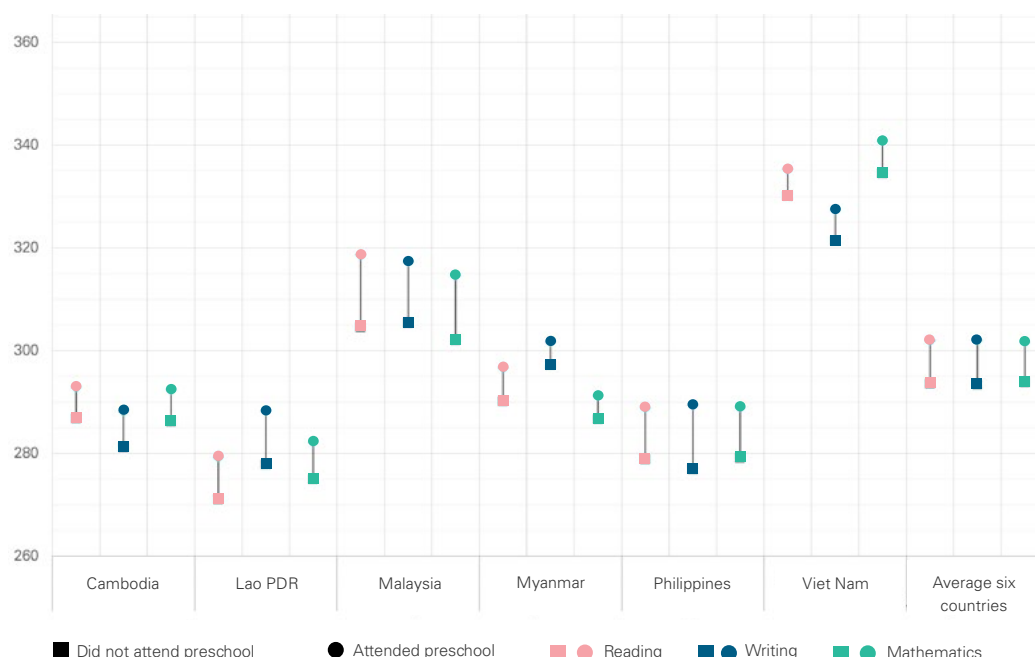
In reading, writing and mathematics, children who had attended preschool had, on average, higher scores compared with those who had not attended. Across countries, that difference ranged from 5 to 14 scale points.

Although the influence of preschool attendance on achievement is expected to attenuate over time, this finding shows that a large positive effect still exists even 5 years into schooling across all countries and domains. This emphasizes the disadvantage for those children who are unable to attend preschool.

This finding questions the system's capacity to provide at least 1 year of free and compulsory pre-primary education for all children prior to entrance into basic education, and highlights the need for an alternative strategy to support home and community-based early childhood education.

3.1.6 School readiness in language and mathematics

In recognition that there is a relationship between prior abilities and current levels of achievement in children at Grade 5, parents were asked which language and mathematical tasks their children could perform before attending primary school. Tasks are listed in Table 3.2. The question did not mention in which language the children were able to do the tasks.

Table 3.2: Tasks that children could perform prior to primary education

Early language tasks before entering primary education	Early mathematical tasks before entering primary education
o recognize most letters of the alphabet o read some words o write letters of the alphabet o write some words o recognize his/her name o write his/her name	o count by himself/herself up to 10 o recognize different shapes (e.g. square, triangle, circle) o do simple addition o write the numbers from 1 to 20 o recognize colours

Children were grouped by those who could complete 10 or more of the tasks before attending primary school and those who could complete fewer than 10 before attending primary school. The percentage of Grade 5 children whose parents declared their child could perform fewer than 10 of the early language and mathematical tasks varied from 15% in Malaysia to 50% in Cambodia.

Figure 3.6: Percentage of children by ability to perform early language and mathematical tasks prior to primary education
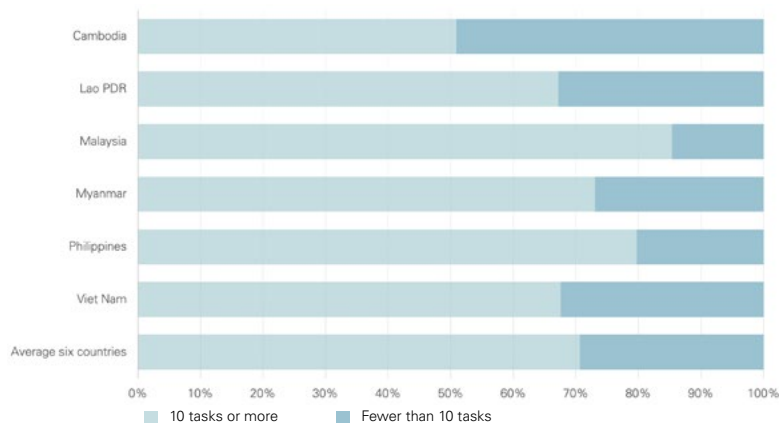
Figure 3.7 illustrates learning differences at Grade 5 between those 2 sub-groups of children in the 6 SEA-PLM 2019 participating countries. In 4 out of the 6 countries, children whose parent declared they were able to perform 10 or more of the reading and mathematical tasks before primary education had, on average, higher learning achievement at Grade 5 in reading, writing and mathematical literacy compared with children who could perform fewer than 10 of the tasks before primary education.

Figure 3.7: Differences in average reading, writing and mathematics scores by ability to perform early language and mathematical tasks prior to primary education
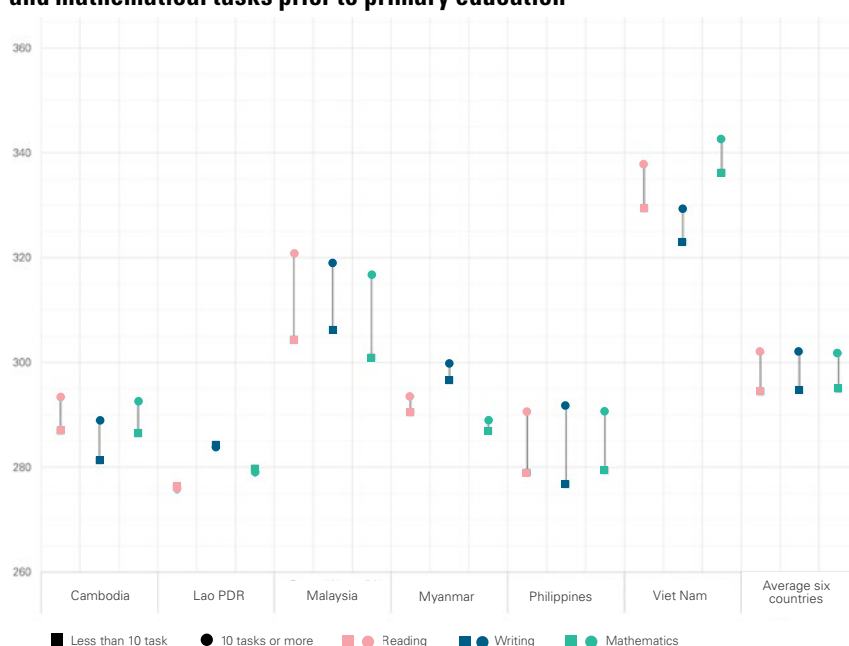
Note: means differences are not statistically significant in Lao PDR and Myanmar in all 3 learning domains.

Although half to almost 90% of children started primary education capable of undertaking 10 or more of the language and mathematical tasks, children who are not in the position to develop those capacities during preschool or at home need to be supported across early grades to compensate for their lack of pre-existing skills, to reduce gaps in learning across the early stages of basic education and beyond.

Those early skills are still the source of differences between children, even 5 years after they enter primary education. Systems, local communities and schools might continue engaging more children with mother tongue–based multilingual education, and introducing early reading and oral activities for children in the language of instruction later in primary education and beyond.

3.1.7 Speaking the language of instruction at home

Children participating in SEA-PLM 2019 were asked what language they most often speak at home, and this data was mapped against the language of the test. In 2 countries, 90% or more of children reported speaking the language of the test at home, compared with less than 10% of children in 1 country and approximately 60% to 80% in the 3 remaining countries.

Figure 3.8: Percentage of children by whether the language of instruction is spoken at home

Children speak the language of instruction at home most of the time

Children don't speak the language of instruction at home most of the time
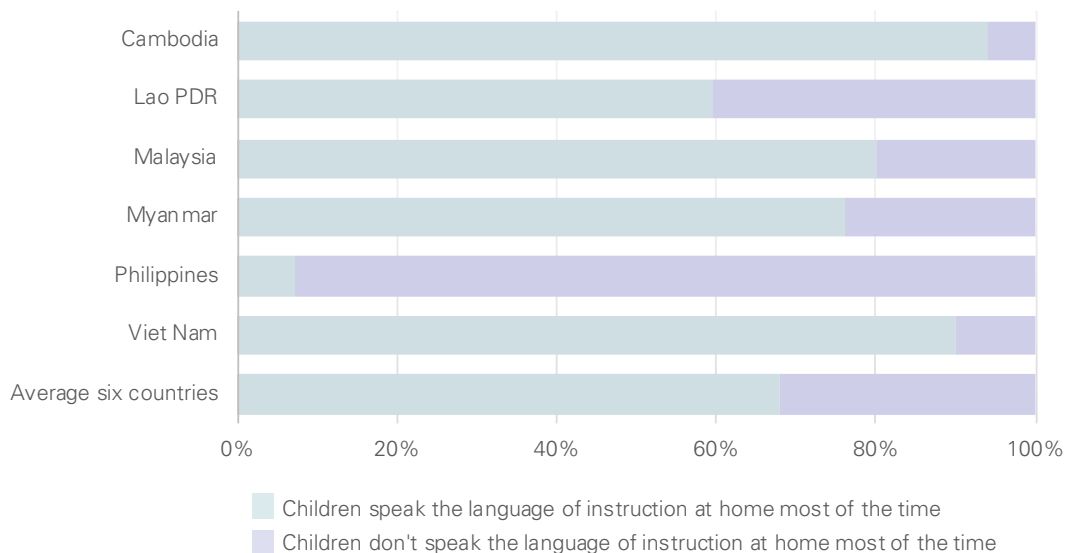
Across 5 of the 6 participating countries, on average in all domains, children who reported that the language of instruction (also the language of the test) was the same as the language spoken at home outperformed children who spoke a different language at home, as presented in Figure 3.9. Higher differences were observed for writing literacy in generally lower-performing countries, with scores increasing by 10 to 20 points when the language spoken at home was the same as the language of instruction.

Figure 3.9: Differences in average reading, writing and mathematics scores by whether the language of instruction is spoken at home

■ Children don't speak the language of instruction at home most of the time   ▲■ Reading   ▲■ Writing   ▲■ Mathematics

▲ Children speak the language of instruction at home most of the time
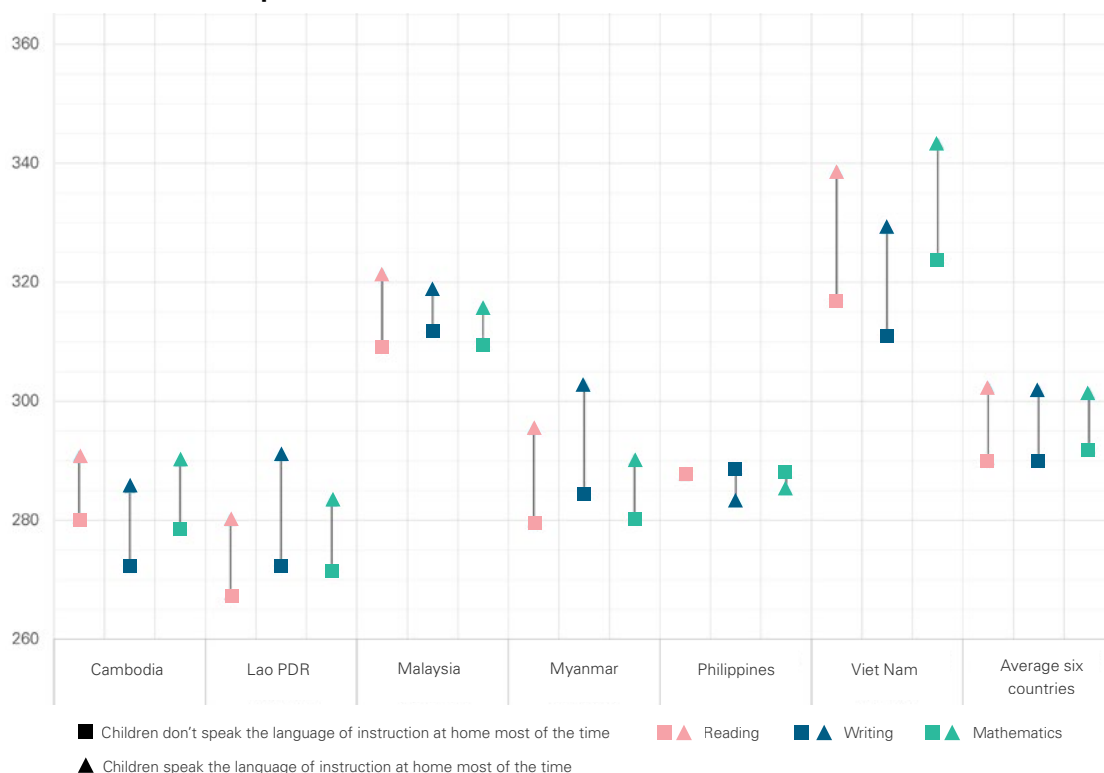
3.1.8 Grade repetition

Official grade repetition policies vary by country, with some adopting automatic progression of children and others basing children's progression on proven performance. In Malaysia, grade repetition is almost non-existent, with less than 1% of children reported to have repeated. In Viet Nam, this practice affected less than 10% of children enrolled at Grade 5 in 2019. On average, across the other 4 SEA-PLM 2019 countries, 20% to 40% of children at Grade 5 reported having repeated a grade of schooling.

Figure 3.10: Percentage of children by grade repetition
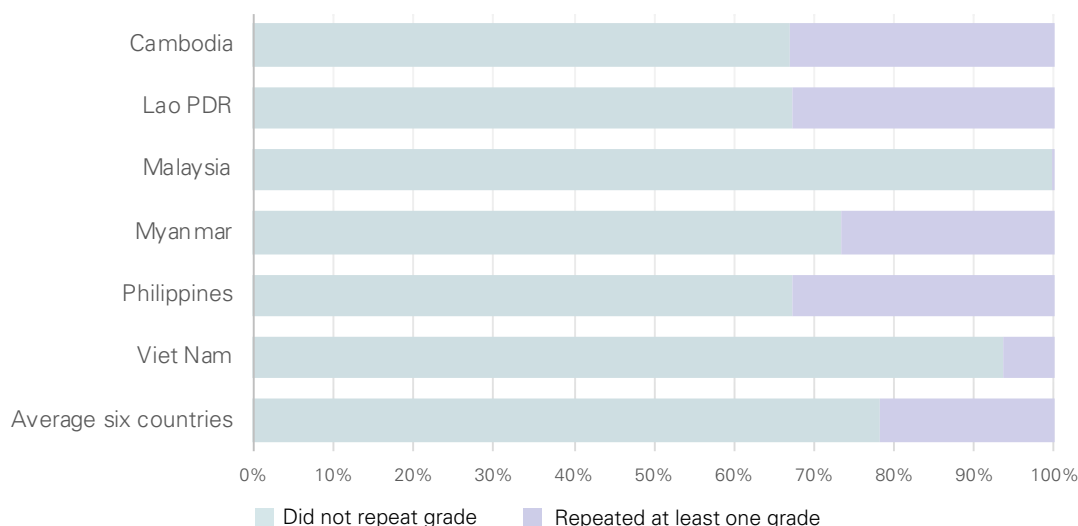
The SEA-PLM 2019 findings show an association between grade repetition and children's performance, as shown in Figure 3.11.

Figure 3.11: Differences in average reading, writing and mathematics scores by grade repetition
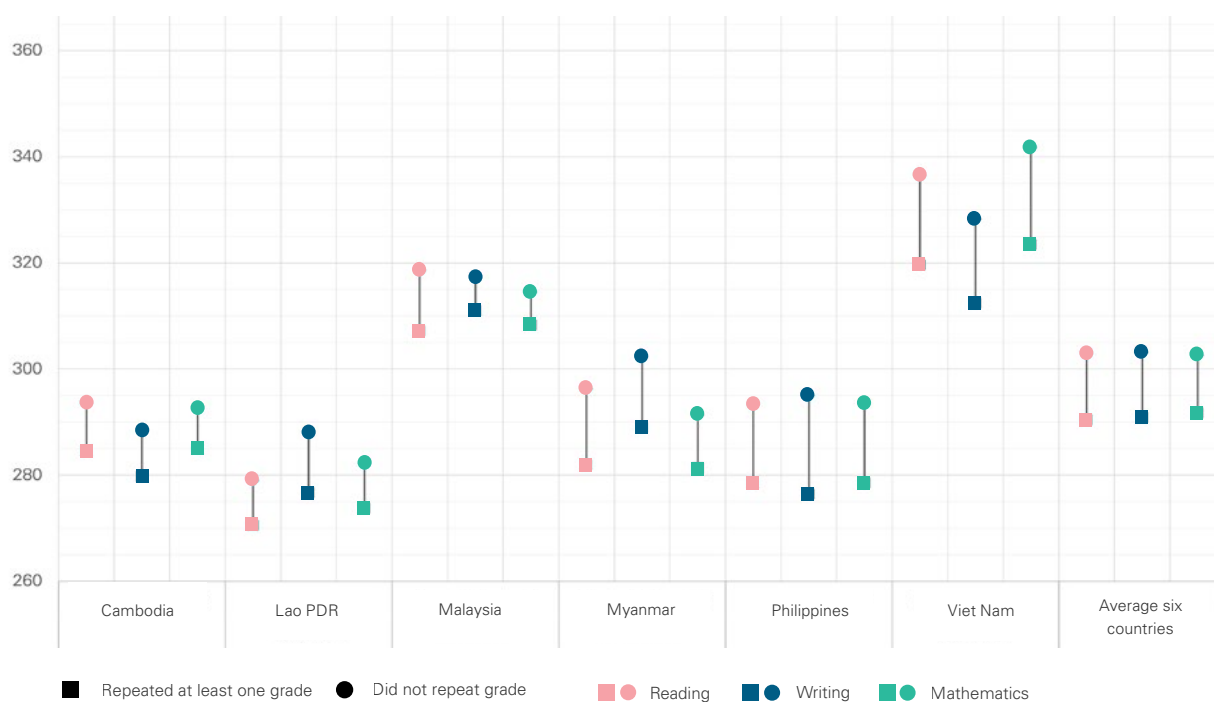
Note: means differences are not statistically significant in Malaysia in the 3 learning domains.

Children who had previously repeated a grade were more likely, on average, to have lower levels of achievement in reading, writing and mathematics in comparison with children who had not repeated a grade (differences of 12, 12 and 11 scale points, respectively). These results are similar to observations in other comparative large-scale assessments (CONFEMEN, 2014; OECD, 2018; OREALC/UNESCO Santiago, 2015) in other regions. These findings warrant further investigation on the relationship between grade repetition, achievement and system-level influences.

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3.2 Equity effects of school environment and teacher profiles

The availability of classroom and school resources plays an important role in children's success in school. Similar to the relationship identified in the previous section between home influences and school achievement, a supportive learning environment at school also positively influences the progression of students across basic education from the early grades. Providing adequate resources for all children and adequate support to teachers is a first step towards more equitable school environments, and the associated improvement in children's learning outcomes.

These conditions also influence teacher engagement and the climate of a school. In certain cases, systems may encourage further action to target specific profiles of learners and to focus on specific stages of basic education and learning areas to improve educational achievement.

This section describes the school environment and teachers' preparation and specialization through the analysis of the SEA-PLM 2019 database at the national level; all data are aggregated at the country scale. Where relevant and appropriate, children's learning outcomes by sub-groups are compared within each country. Findings are discussed below in 4 areas:

- school size
- school location
- access to textbooks and library
- teachers' preparation and specialization.

3.2.1 School size

In all 6 participating countries, the vast majority of Grade 5 children attended public schools.[30] In Cambodia, Lao PDR, Myanmar and the Philippines that percentage was 90% to 96% of children, and in Malaysia and Viet Nam public school attendance was almost universal (99% to 100%). This regional trend reflects national public investment from the last decades in developing public school access at primary education.

School sizes varied both within and across SEA-PLM 2019 participating countries. For analysis, schools are divided into 4 groups of school size: less than 200 children, 200 to 499 children, 500 to 999 children, and 1,000 children and over.[31] In Lao PDR, most children at Grade 5 (74%) were enrolled in schools with less than 200 children, while in Malaysia (30%), the Philippines (35%) and Viet Nam (30%) around a third of the children attended schools with 1,000 children and over. Those particularities illustrate how national school systems are organized to match the education demand.

Figure 3.12: Percentage of children by school size

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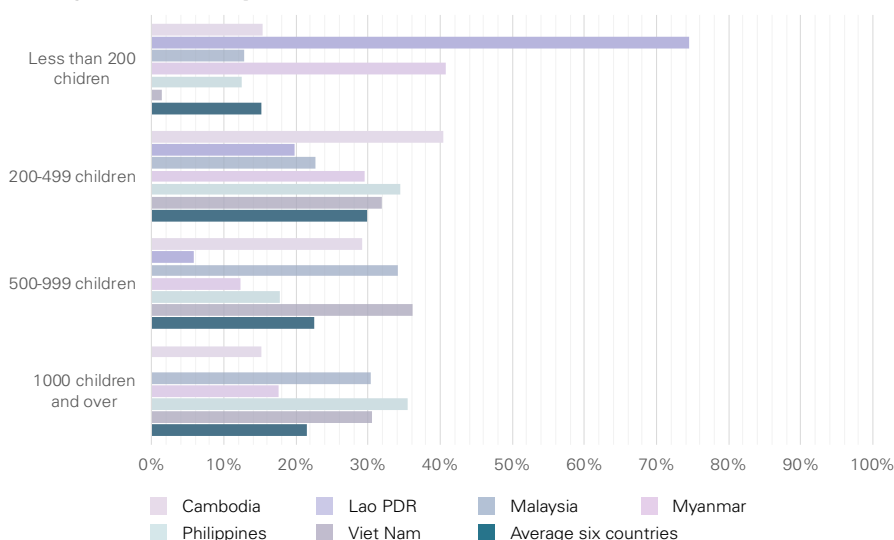
[30] See Appendix 3 for the percentage of children by type of school.

[31] In all countries, very small schools were excluded from the target population.

Figure 3.13 displays the differences in average learning achievement between children in the bigger schools (upper quartile, 1,000 children and over) and children in the smaller schools (bottom quartile, less than 200 children), for each of the 3 learning domains.

Figure 3.13: Differences in average reading, writing and mathematics scores by school size

Note: means differences are not statistically significant in Malaysia in writing, and in Myanmar in all 3 learning domains.
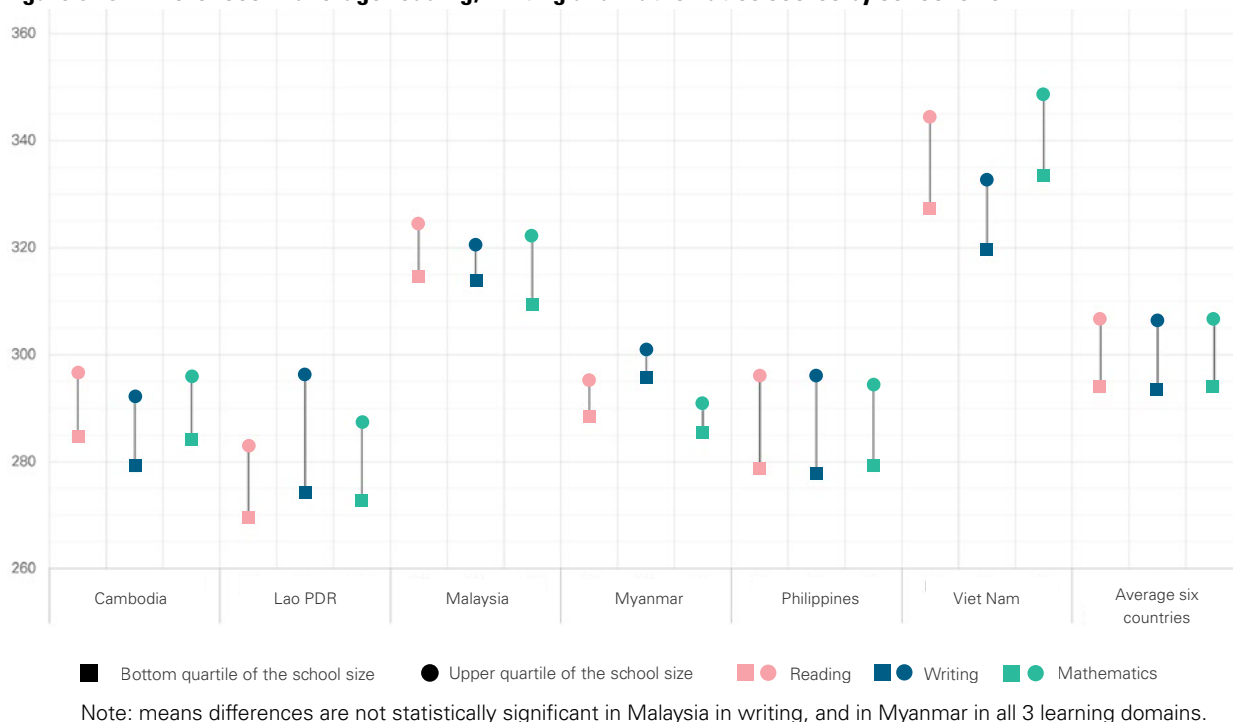
The differences in achievement between children at the smallest schools and those attending the largest schools was significant, with children at the largest schools having higher levels of achievement in all 3 learning domains. In 5 of the 6 countries, the average differences were similar between the countries and between the 3 learning domains.

When socioeconomic context, school location and gender effects were equalized between children, the effect of school size on learning performance was annulled in most of the countries and learning domains. However, in Myanmar, children in the smallest schools (less than 200 children) still had better results than children in larger schools (200 children and over) in the 3 domains, even when those context effects were accounted for.

Systems and communities must continue to consider children's needs and environmental specificities in areas where schools are small, to support more learning opportunities. More research on school characteristics, resource allocation and the effect of those resources on learning experiences is encouraged at both the regional and national levels.

3.2.2 School location

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). On average, across countries, just over half of the children attended schools located in a village.

Figure 3.14: Percentage of children by school location
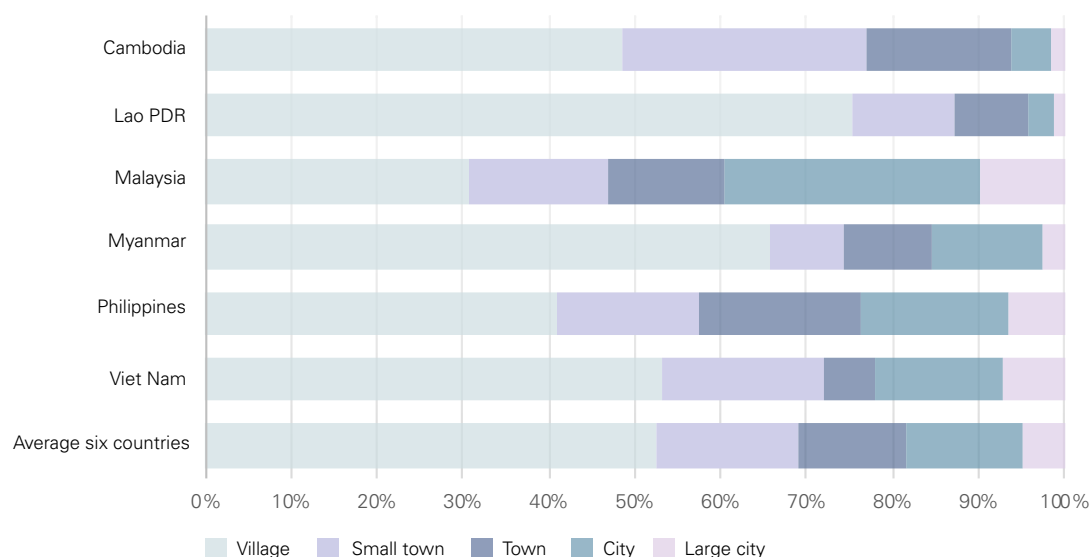
Resources in the local area

School principals were asked to respond 'Yes' or 'No' for each of the 12 following resources being available in their school's local area: public libraries, cinemas, theatres/music halls, foreign language schools, museums/art galleries, playgrounds, public gardens/parks, religious centres, sports facilities, shopping centres/marketplaces, youth cultural centres, and hospitals/clinics.

Appendix 3 shows the proportion of children attending a school where the principal reported that these resources were available in their school's local area. Across the 6 participating countries, around three-quarters of children attended a school with playgrounds (73%) and religious centres (71%) available in the local area. This level is more or less similar among countries. On average among the 6 countries, children were less likely to attend a school with a theatre or music hall (7%), museum or art gallery (12%), or cinema (14%) available in the local area.

A regional scale (RESOU) was derived based on the responses to the 12 items (see Box 3.1 for technical information). The higher scores on this scale correspond to greater cultural, social and health infrastructure resources available in the local area of the school where children are enrolled. Figure 3.15 displays the differences in average learning achievement based on quartiles of resources in the local area, for each of the 3 learning domains.

Figure 3.15: Differences in average reading, writing and mathematics scores by school area resources

Legend: ■ Bottom quartile of the school resources scale ● Upper quartile of the school resources scale ■● Reading ■● Writing ■● Mathematics
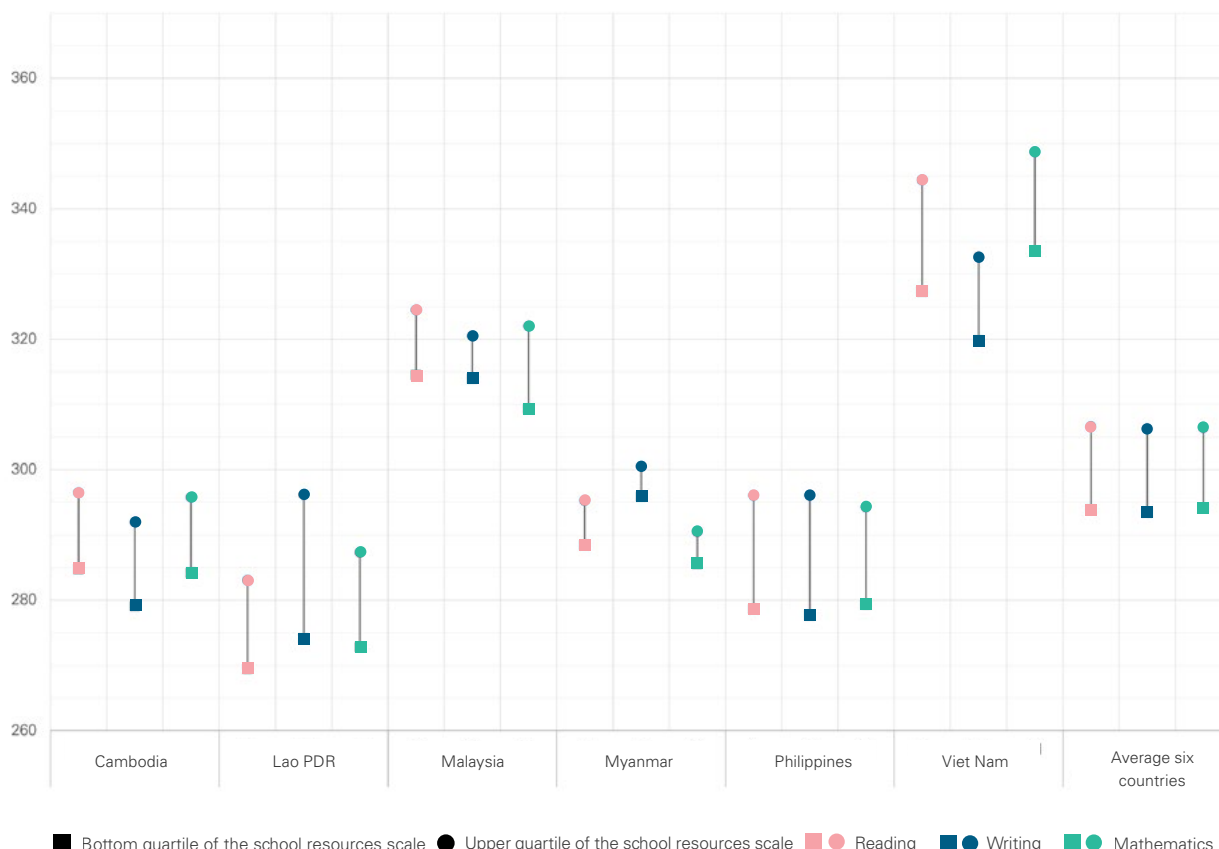
Across the SEA-PLM 2019 countries, on average, children attending schools in the upper quartile of local area resources had a higher average achievement in reading, writing and mathematics than children attending schools in the bottom quartile. Across all countries except Myanmar, those achievement differences were between 10 and 15 scale points in each learning domain.

Stakeholders may continue to reduce those disparities by offering more learning opportunities for children in areas with fewer resources, for both the current cohort of students and the coming generation.

3.2.3 Access to textbooks and library

Textbook availability

School principals were asked to indicate the number of language and mathematics textbooks available in the school for Grade 5 classes. Options were: no textbooks available, children had 1 textbook to themselves, or children shared a textbook with another child or multiple children.

On average across the 6 participating countries, the majority of children (87%) attended schools with 1 textbook per child, for both language and mathematics lessons. In Lao PDR and the Philippines, around 20% of Grade 5 children shared a reading or mathematics textbook. In those 2 countries, a modest percentage of children shared a textbook with 2 or more children (an issue affecting between 25% and 40% of students in these countries). In all countries except Malaysia, there were few children with no language or mathematics textbooks. Appendix 3 presents the detailed results.

Figure 3.16 displays the differences in average learning achievement in reading, writing and mathematics for children who attended a school with 1 textbook per child compared with children who attended a school with no textbooks or shared textbooks.

Figure 3.16: Differences in average reading, writing and mathematics scores by textbook availability

■ No textbook or shared   ● One textbook per child   ■ ● Reading   ■ ● Writing   ■ ● Mathematics
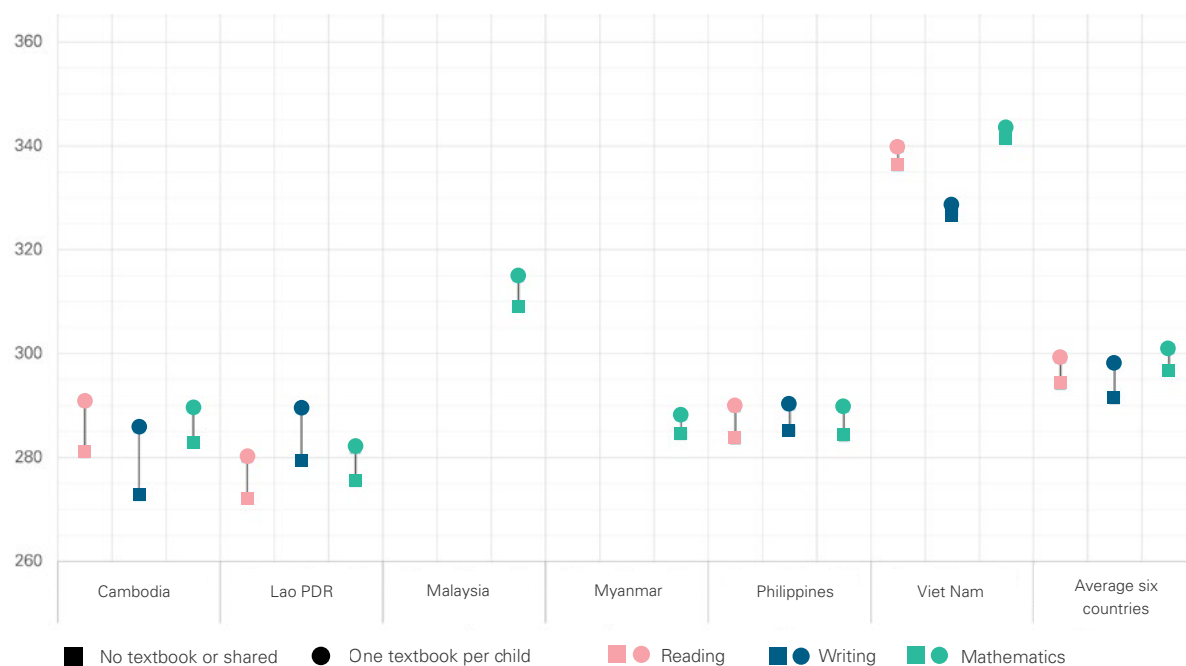
Note: means differences are not statistically significant in Viet Nam in reading; in the Philippines and Viet Nam in writing; in Cambodia, Malaysia, Myanmar and Viet Nam in mathematics. Estimates are not computed in Malaysia and Myanmar for reading and writing, as 100% of children are reported with 1 textbook per child.

Children were more likely to have higher average achievement if they had their own textbook at school. The relationship between textbook availability and achievement appeared consistent across all 3 learning domains. Systems and communities may continue to invest in allocating free textbooks for all learning domains across basic education, and plan urgent short-term remedial interventions before starting the new academic year.

Library access

School principals were asked whether their school had a library. Just under three-quarters of children attended schools where there was a library available in the school. However, this varied significantly across countries, with 1 country reporting that 100% of children had access to a library, while another reported that only 35% of children had access to a library at school.

Figure 3.17: Percentage of children by availability of school library

□ Library available in the school   □ No Library available in the school
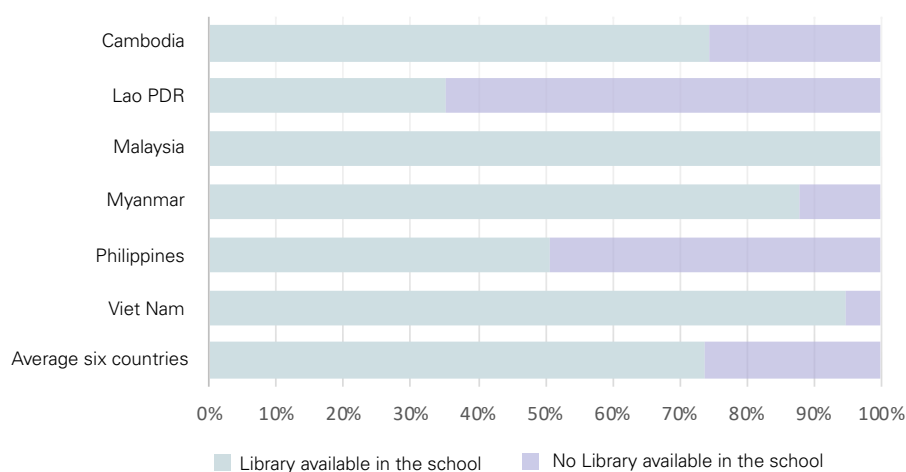
Investing in a school library supports children's interest in reading and engagement in reading for pleasure, and expands opportunities for them to access a variety of texts. Classroom libraries could be encouraged as an alternative to school libraries.

3.2.4 Teacher profiles

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 and teaching confidence. The complete SEA-PLM 2019 database provides useful information on the teachers from the sample classrooms, but also reflects the profiles of all teachers in charge of teaching full-time or part-time in any Grade 5 classroom in the sampled schools.

The SEA-PLM 2019 Main Regional Report publishes only details of teachers from the sample classrooms, with a focus on teachers in charge of teaching reading and/or mathematics. Further research will extend the analysis to all Grade 5 teachers from the sampled schools regardless of their role.

This section describes only the main trends and differences observed within and between countries in teachers' specializations, academic training, and pre- and in-service training experience.

More information regarding the personal characteristics of teachers (for example, gender, age and experience) is available in the database but not reported here.

Box 3.3: How to interpret the SEA-PLM 2019 teachers' data Teachers specialization

Teachers' data were self-reported by the teachers during the SEA-PLM 2019 main survey, and thus represent their opinions.

Statistical outputs are reported only for variable modalities with at least 5 teachers or 30 children per category. When a group of teachers represents fewer than 5 teachers or 30 children in the database, results are not reported in the figures and tables, and a missing code is reported.

Children's learning achievements at Grade 5 are affected not only by Grade 5 teachers but also by multiple teachers from the earlier grades. SEA-PLM 2019 did not capture the characteristics of teachers in charge of grades before Grade 5. The SEA-PLM 2019 Main Regional Report does not report children's learning performance according to Grade 5 teachers' profiles.

Teacher specialization

National policies on teacher specialization are different across the 6 participating countries, with varying uses of generalist teachers and specialist teachers covering individual learning domains. Figure 3.18 shows for each country the national percentage of Grade 5 children according to their teacher(s)' specialization.[32]

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[32] Based on data from the sampled classes only.

Figure 3.18: Percentage of children by teacher specialization
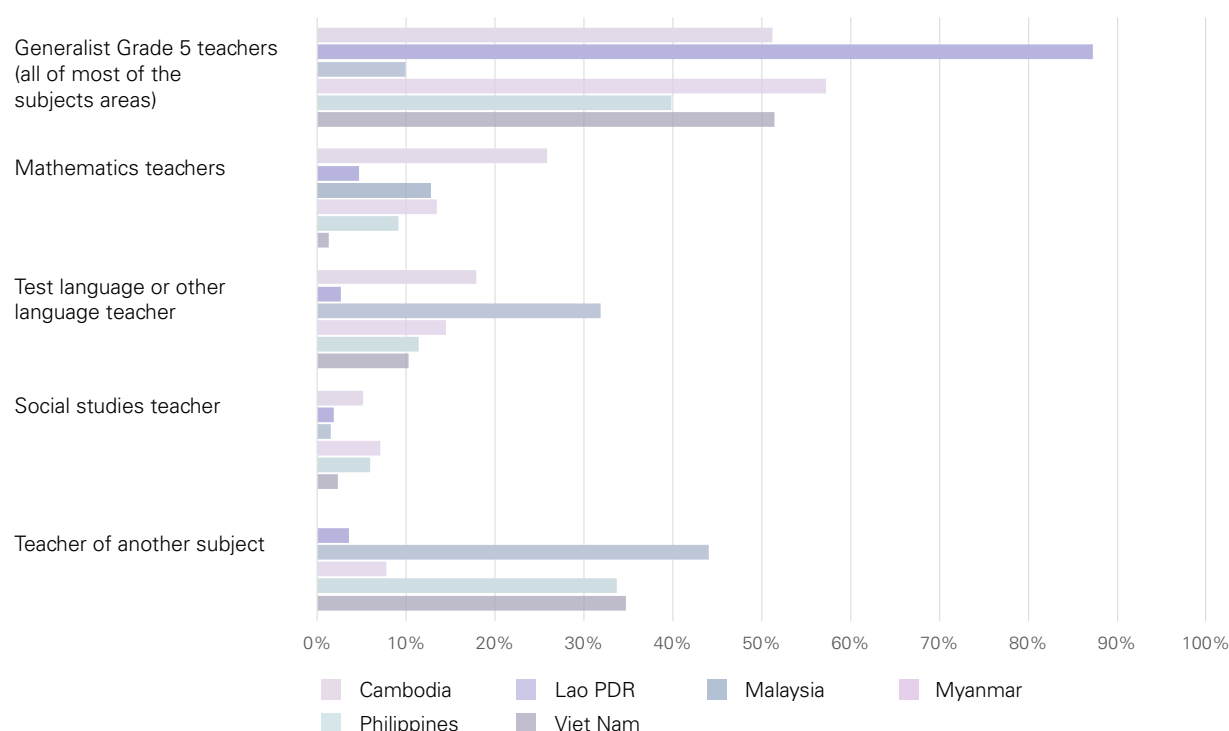
In 5 out of the 6 participating countries, the majority of Grade 5 children had 1 generalist teacher for all or most of their subjects,[33] while in Malaysia children learned more with specialist teachers in charge of teaching only specific learning domains.

Teacher education levels

Figure 3.19 shows the percentage of Grade 5 children by the highest level of education attained by their teacher(s) in charge of teaching language and/or mathematics.[34] Differences between and within countries illustrate national policies for hiring teachers.

Figure 3.19: Percentage of children by teachers' highest level of education

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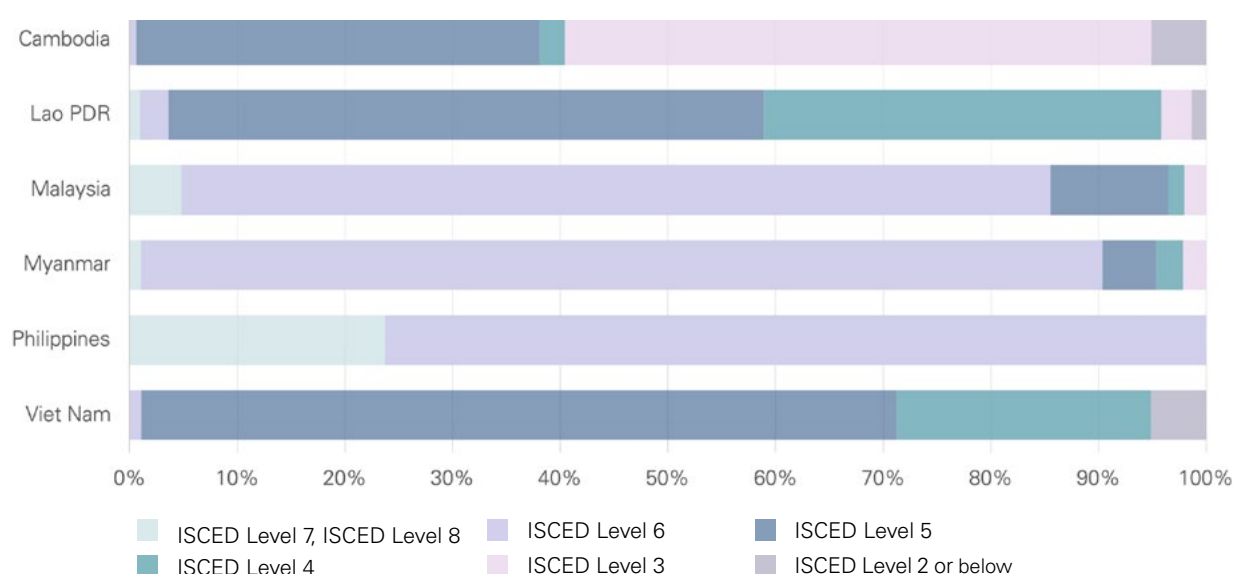
[33] A generalist teacher is responsible for a particular group of children, with most of the day spent with the one class. This type of teacher is expected to teach in all or most of the key learning areas in the compulsory curriculum.

[34] Based on data from the sampled class only.

In Malaysia, Myanmar and the Philippines, the majority of Grade 5 children had mathematics and language(s) of instruction teachers who have a degree at the bachelor or equivalent level. In Lao PDR and Viet Nam, children were taught primarily by teachers who have attained a short cycle of tertiary education or post-secondary level of education. In Cambodia, children were mostly in classes with teachers who have completed an upper-secondary education or a short cycle of tertiary education.

Teacher training

All Grade 5 teachers were asked about the training they had attended, whether pre-service or in-service. For the ease of presentation, only responses from the Grade 5 teachers in charge of reading and writing in the language of instruction are reported in Figure 3.20.

Figure 3.20: Percentage of children by teachers' training in the language of instruction
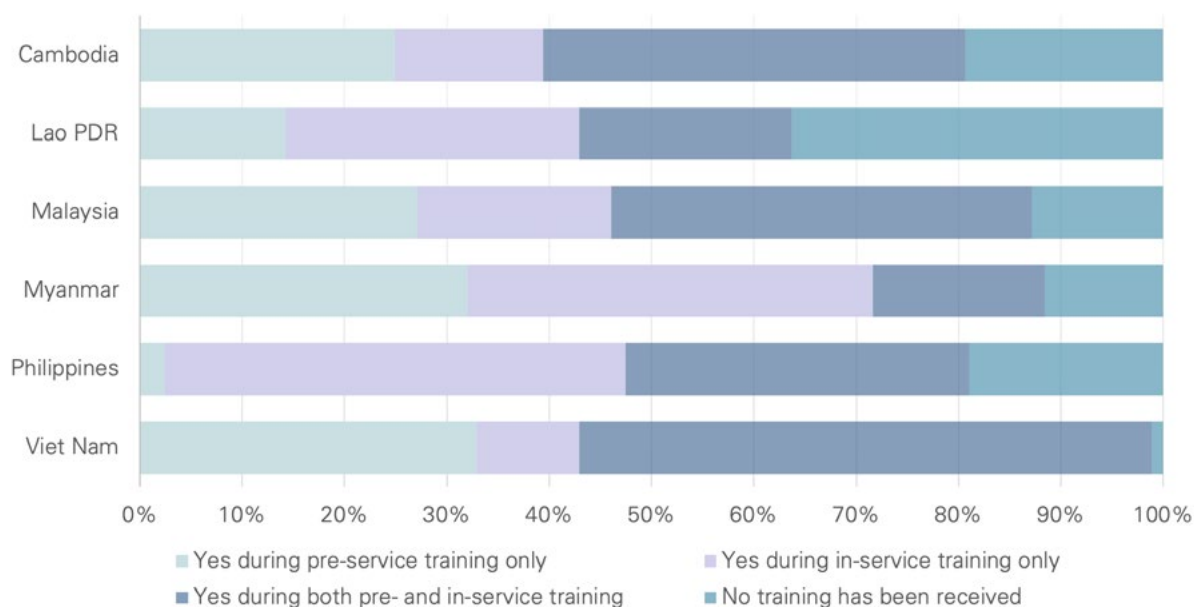
The majority of children attended schools where teachers in charge of teaching the language of instruction at Grade 5 reported that they had attended reading training during pre-service and/or in-service training. However, in almost all countries, a non-negligible percentage of children in Grade 5 were in class with teachers who had received no training in reading (in the language of instruction used for the SEA-PLM 2019 assessment) before or during their service.

The overall pattern of responses is similar for teachers in charge of mathematics, as shown in Appendix 3.

3.3 Equity effects of children's, teachers' and parents' attitudes and engagement

Local stakeholders' positive attitudes and a conducive school climate are critical for engaging strong commitment, learning progress and wellbeing for the entire community and generations of learners. Primary schools and teachers also play a crucial role in supporting positive social and emotional attitudes and behaviours from the early grades to develop a better, sustainable society and help children unleash their potential and talents.

Other large-scale assessments, such as the Programme for International Student Assessment (PISA) for older children, have shown that children who are more engaged in their schools tend to have greater academic and wellbeing outcomes. Moreover, motivation to achieve and feelings of competence have been shown to be strong predictors of future outcomes (OECD, 2017). With younger children at primary levels, the scope to address such questions is narrower, but investigating their values and beliefs is still possible and relevant.

This section complements not only the other sections in this chapter but also Chapter 2 on children's proficiency and Chapter 4 on global citizenship education. This section provides further information about the practices and attitudes involved in supporting better learning and progression for both children and communities. The analysis examines how these practices and attitudes vary across the 6 participating countries.

This section also presents data on how principals and teachers perceive school quality standards and understand issues affecting learning in their community.

The following analysis unpacks some of the self-declared practices, behaviours, perceptions and attitudes available in the SEA-PLM 2019 database, based on student, parent, principal and teacher questionnaires. Findings are discussed below in 3 areas:

- children's attitudes about school
- parental engagement in children's learning
- perception of issues affecting children's learning in the classroom.

3.3.1 Children's attitudes about school

In the SEA-PLM 2019 student questionnaire, children were asked to indicate their level of agreement with the following statements:

- I like being at school
- I feel safe when I am at school
- I feel like I belong to this school
- I have learnt things at school that are useful
- I make friends easily at school.

Figure 3.21 presents the proportion of children who agreed or strongly agreed with each statement. Most children in all participating countries expressed positive attitudes about attending their school. Positive attitudes – liking school, feeling safe, having a sense of belonging, learning useful things and making friends easily – were expressed by about 80% or more of children, on average, across countries. Similar findings of overwhelmingly positive attitudes about schooling in primary school children were observed in the Pacific Islands Literacy and Numeracy Assessment (PILNA, 2018; EQAP, 2019).

However, on average, 10% of children across all countries and up to 20% in some countries reported not feeling comfortable at school and having a negative attitude about school.

Figure 3.21: Percentage of children by children's attitudes about school
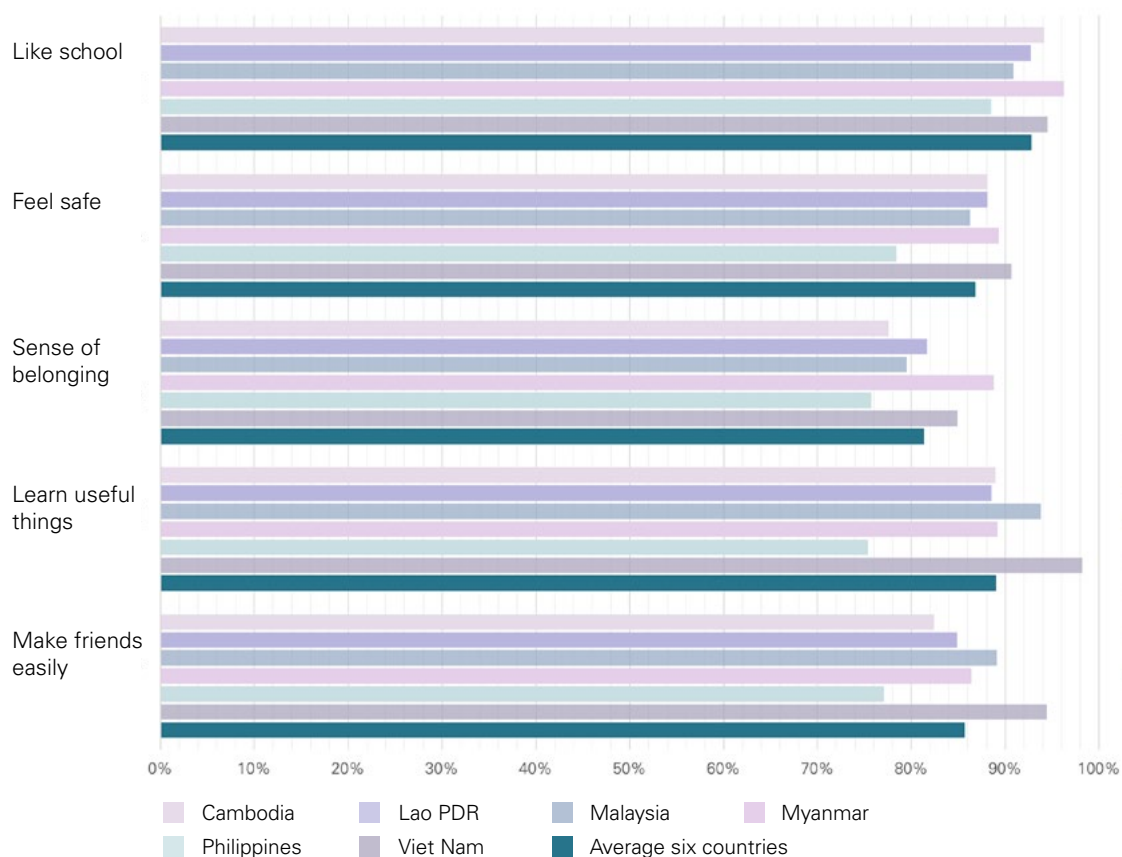
A regional scale (SCHATT) was derived based on the responses to these items (see Box 3.1 for technical information). The higher scores on this scale correspond to more positive attitudes about school. Figure 3.22 displays the difference in children's average achievement based on the 2 extreme quartiles of children's attitudes about school, for each of the 3 learning domains.

Figure 3.22: Differences in average reading, writing and mathematics scores by children's attitudes about school
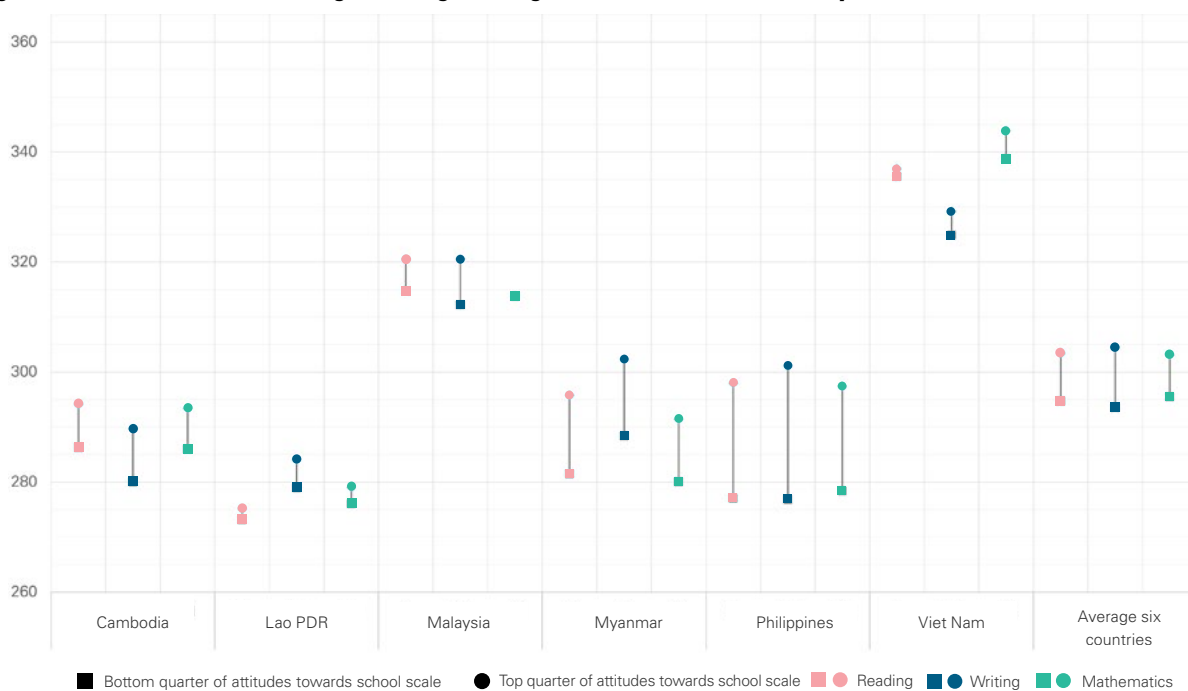
Note: differences are not statistically significant for reading in Lao PDR and Viet Nam; and for mathematics in Malaysia and Lao PDR.

The figure shows that across most of the SEA-PLM 2019 countries, achievement for all 3 domains was significantly higher for children with more positive attitudes about school (the upper quartile) than for children with the least positive attitudes about school (the bottom quartile). The difference ranged between 4 and 24 scale points across the 3 domains. On average, the learning context where children feel better and safer at school is correlated with better children's achievement.

Systems and communities may continue to value constructive, collaborative interactions between children and teachers within schools and with the local community to promote positive attitudes about school. More research could be undertaken to better understand the circumstances where children reported less agreement with positive statements about school.

3.3.2 Parental engagement in children's learning

In the SEA-PLM 2019 student questionnaire, children were asked a series of questions about how often the following activities related to parental involvement in schooling occurred:

- I have to do homework for school

- My parents/guardians ask me what I am learning in school

- I talk about my schoolwork with my parents

- My parents/guardians check if I do my homework

- My parents/guardians help me with my homework

- My parents motivate me to succeed in school.

Figure 3.23 shows the proportion of children who reported that their parents were involved daily or almost daily in each of the activities. On average across each country, about half of the Grade 5 children reported that their parents motivate them to succeed in school (47%) and that they have to do homework for school (46%).

Around one-third reported that their parents check if they do their homework (36%) and ask them what they are learning in school (34%), and that they talk about their schoolwork with their parents (32%). Around one-quarter reported that their parents helped them with their homework (27%). However, the majority of children reported that their parents rarely or never engaged in these 4 activities.

Figure 3.23: Percentage of children by parental engagement in children's learning
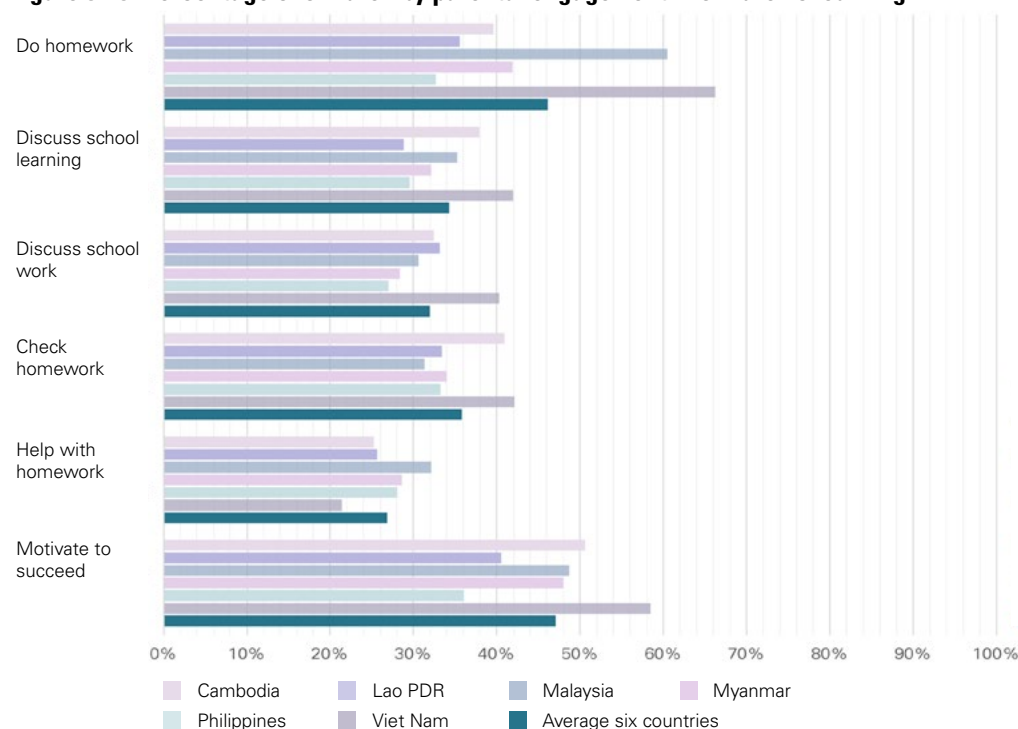
A regional scale (PARENG) was derived based on the responses to these items (see Box 3.1 for technical information). The higher scores on this scale correspond to higher levels of parental engagement. Figure 3.24 displays the differences in children's average achievement based on quartiles of parental involvement in their child's schooling, for each of the 3 learning domains.

Figure 3.24: Differences in average reading, writing and mathematics scores by parental engagement in children's learning
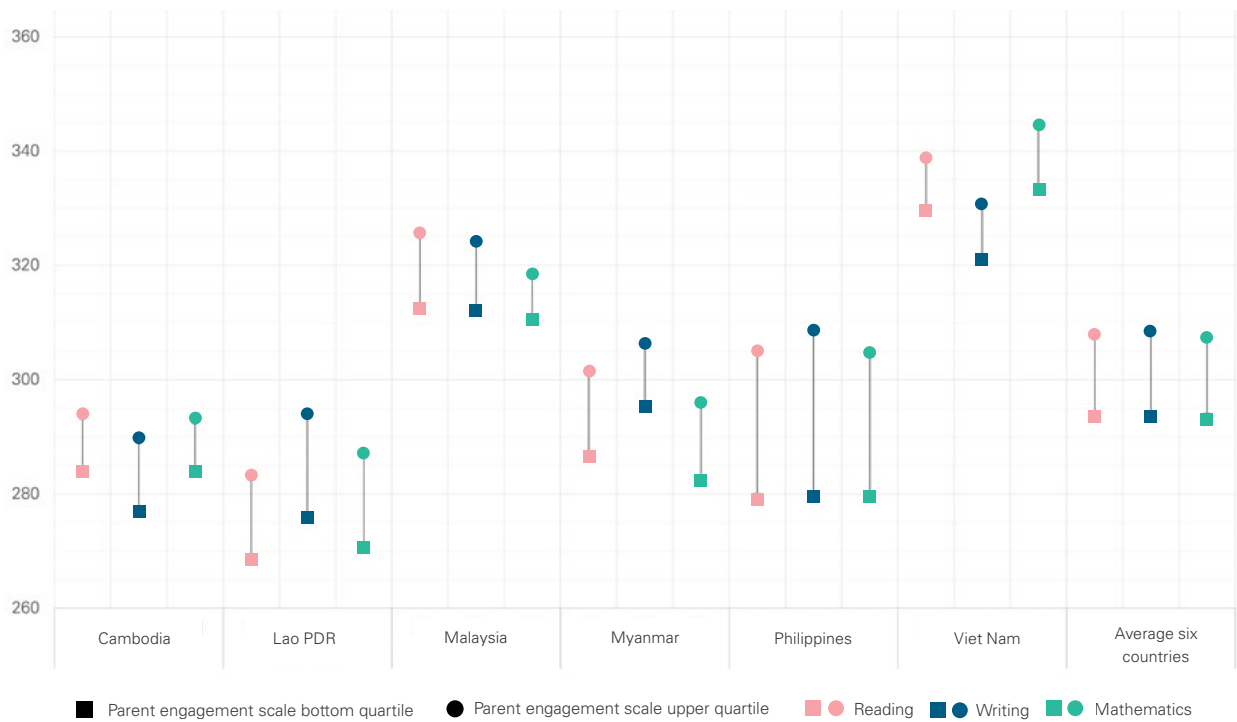
There were substantial differences in learning between children from families whose parents are highly involved in their schooling compared with children whose parents are less involved. On average across the 6 participating countries there was a scale-point difference of between 14 and 16 scale points across all 3 learning domains. In all countries, higher levels of parental engagement were associated with higher reading, writing and mathematical literacy scores for children. However, the pattern of this relationship varied across countries.

3.3.3 Perception of issues affecting children's learning in the classroom

Children

Children were asked how often their teachers came to class late, how often their teachers had to wait a long time for children to quiet down, and how often teachers were absent (they could select 'Often', 'Sometimes', 'Rarely' or 'Never').

Figure 3.25: Percentage of children who indicated teacher classroom-related issues as occurring 'often' or 'sometimes'
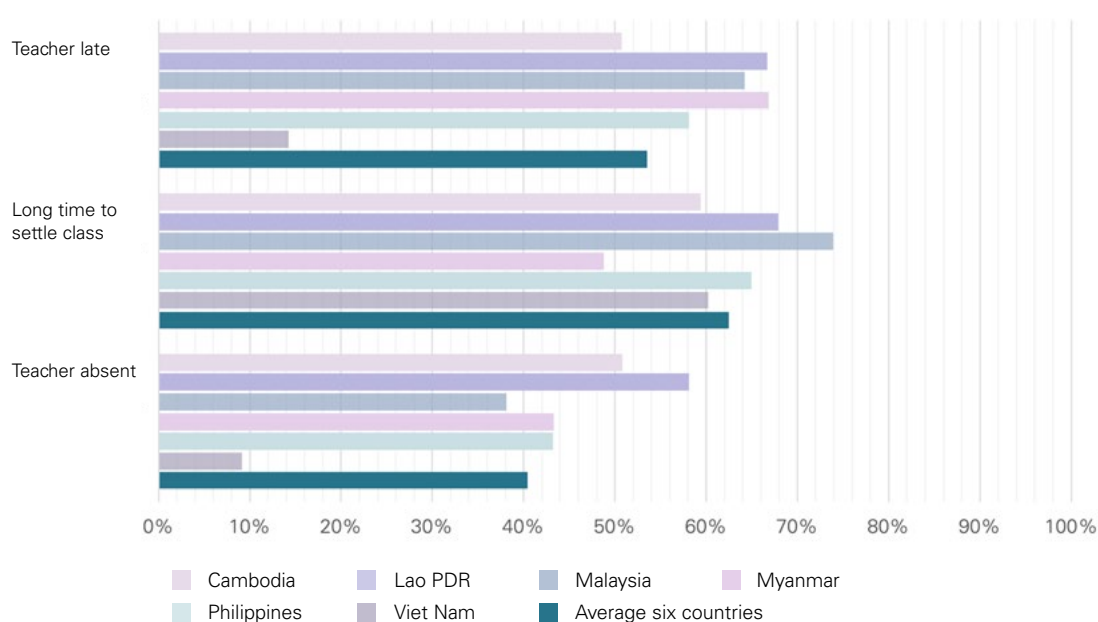
On average across the 6 participating countries, just over half of the children reported that their teacher was late to class (sometimes or often), more than three-fifths of children reported that their teacher took a long time to settle the class down, and approximately two-fifths of children reported that their teacher was absent.

In all 6 participating countries, a high proportion (from 49% to 74%) of children reported that it often or sometimes took their teacher a long time to settle the class. In Viet Nam, children's perceptions of classroom issues were more positive than for children in the other countries – less than 1 in 10 (9%) reported that their teacher was often or sometimes absent, compared with 38% to 58% across the other countries, and 14% reported that their teacher was often or sometimes late, compared with 51% to 67% across the other countries.

This finding raises the need for systems and communities to continually identify and eliminate explicit and informal practices that could reduce teachers' effectiveness and the time available for learning.

School principals

Principals were asked about issues that hindered their school's capacity to provide instruction, specifically:

- Shortage or inadequacy of classrooms

- Shortage or inadequacy of toilets

- Shortage or inadequacy of instructional materials (e.g. textbooks)

- Shortage of computers

- Lack of qualified teachers

Figure 3.26 shows the proportion of children who attended a school where the principal reported that each issue hindered school capacity to a large or moderate extent.

Figure 3.26: Percentage of children by principal reporting issues hindering school capacity
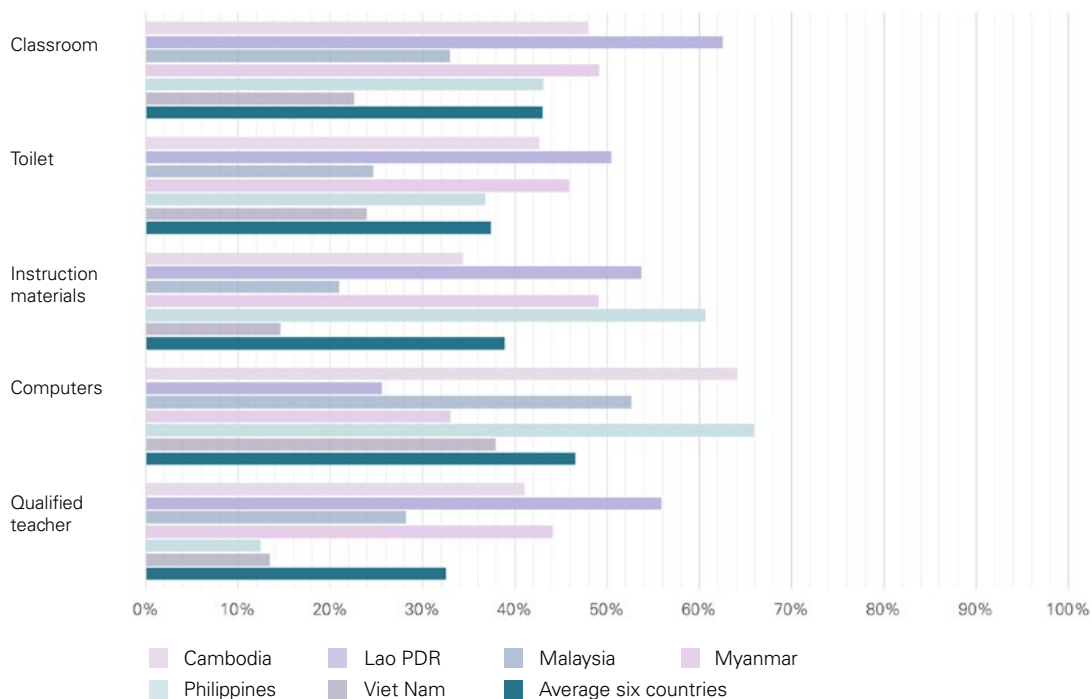
On average across the 6 countries, the most common issue hindering school capacity was a shortage of computers, with almost half of the children attending a school where the principal reported that this issue hindered school capacity to a large or moderate extent (46%). Around two-fifths of children attended a school where the principal reported that a shortage or inadequacy of classrooms (43%), instructional materials (39%) or toilets (37%) were issues for their school, while one-third attended a school where lack of qualified teachers was an issue (32%).

A regional scale (HINDER) was derived based on the responses to these 5 items (see Box 3.1 for technical information). The higher scores on this scale correspond to a greater number of issues hindering school capacity. Figure 3.27 displays the differences in children's average achievement based on the 2 extreme quartiles of issues hindering their school's capacity, for each of the 3 learning domains.

Figure 3.27: Differences in average reading, writing and mathematics scores by principal reporting issues hindering school capacity
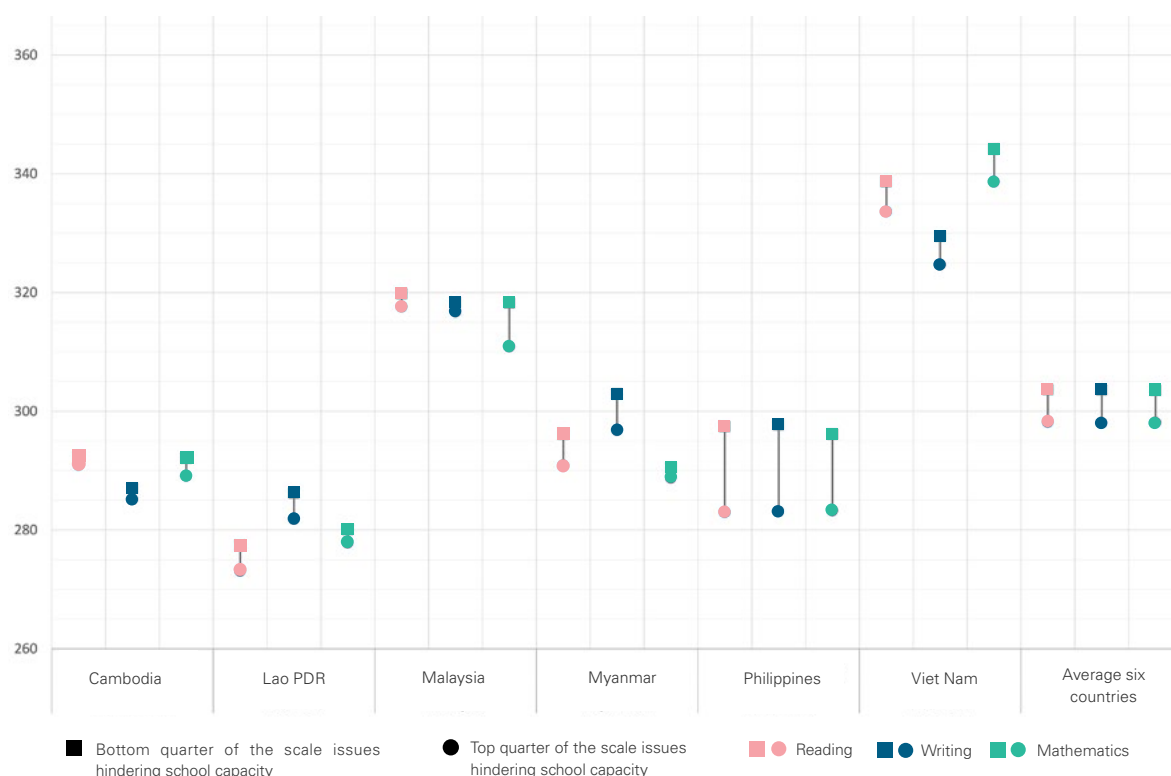
Note: differences are not statistically significant for reading in Cambodia, Lao PDR, Malaysia, Myanmar and Viet Nam; for mathematics in Cambodia, Lao PDR, Myanmar and Viet Nam; for writing in Cambodia, Lao PDR and Malaysia.

Across the 3 learning domains, when comparison is significant (see note below Figure 3.27), on average children who attended a school where the principal reported a greater number issues (those in the upper quartile) had lower average achievement compared with those attending schools where the principal reported a smaller number of issues (those in the bottom quartile).

Teachers

To complement principals' reporting of issues hindering school capacity, all Grade 5 teachers from the sampled schools were asked to indicate the extent to which 7 different issues affected the learning of their Grade 5 students ('To a large extent', 'To a moderate extent', 'To a little extent' and 'Not at all'). These issues were:

- 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.

Figure 3.28: Percentage of children by teachers reporting issues affecting children's learning 'to a moderate extent' or 'to a large extent'
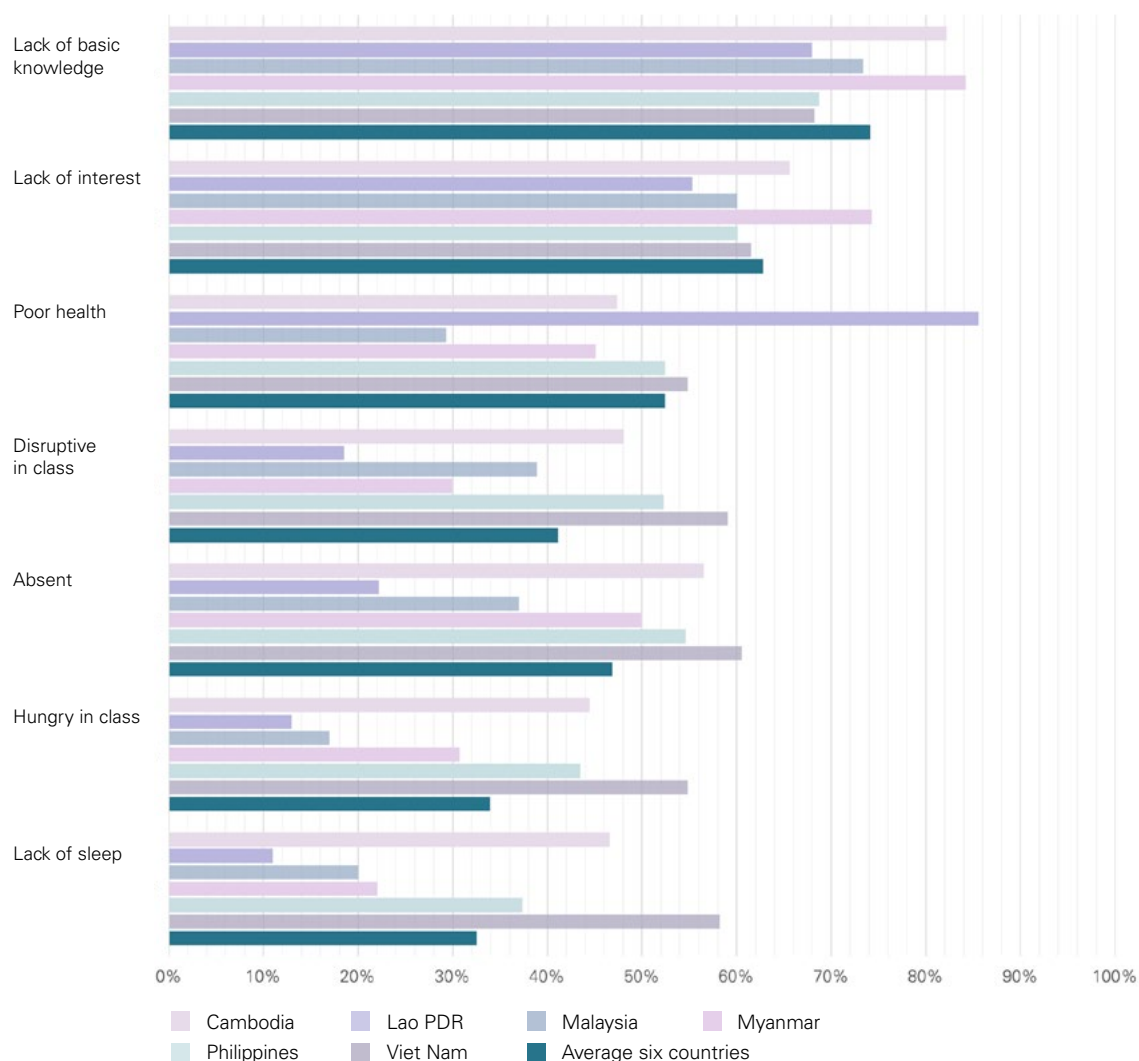
On average across the 6 countries, the most common difficulty, with three-quarters of children attending schools where teachers reported this issue, was lack of basic knowledge (74%), followed by lack of interest (63%). Around one-third of children attended a school where teachers reported children being hungry in class (34%) or children lacking sleep (32%).

On average, approximately half of the Grade 5 children attended schools where teachers reported that poor health affects learning. In Lao PDR, this situation was particularly prevalent, with almost 85% of students attending schools where the teachers perceived poor health as a strong issue affecting learning.

These findings point to difficulties that teachers may face in delivering Grade 5 instruction as expected in the official programme. They also address the need for systems and communities to better monitor health and wellbeing within each school and each stage of basic education.

3.4 Summary of findings

This chapter has described the overall level of equity linked to various contextual factors related to teaching and learning outcomes, by aggregating and comparing outputs of students, parents, teachers and school principals in participating SEA-PLM countries.

Results showed learning inequalities in all countries between children, but the study also revealed several gaps in resources, school experience and practices between different school and children profiles. By pointing out those factors through a comparative perspective between and within countries, the SEA-PLM 2019 Main Regional Report investigates educational policies that contribute to high learning outcomes for all children and reduce inequalities in basic education.

Addressing the learning gap for all children is a complex challenge, as governments and communities across the region will not all be able to immediately apply the same level of high-quality standards, resources and practices to all children, grades, curriculum content and schools. Any single regional or national response will not be adequate, as existing policies, experience, education structures and capacity for transformation vary for each country.

While socioeconomic factors may not be something that can be easily changed in the short term for many children, there are other related factors that, if understood and recognized, can be addressed, compensated for and prioritized at the system and local levels. For example, countries can prioritize the development of fundamental skills for children coming from disadvantaged backgrounds, in the early grades and beyond.

All countries are encouraged to explore the contextual equity factors and the construction of learning through the sub-national lens, further to this report. More national and regional research using the SEA-PLM 2019 database is encouraged in the Southeast Asian community to better understand the differential effects of variables on specific categories of schools and profiles of children. Countries and partners may consider the SEA-PLM 2019 Main Regional Report as a starting point before entering into more regional and national secondary analysis comparing different points of view, implications and interests.

The sections below summarize the main results about the effects of equity issues on Grade 5 children's performance in reading, writing and mathematical literacy in the 6 participating countries, stating the average outcomes and overall findings.

3.4.1 Children's background, home influence and school experience

- Children faced different influences of equity at home and school. Acknowledging these gaps and the needs of different stakeholders and structures, given existing evidence and recommendations, is crucial for setting priorities to reduce learning differences between individuals, groups of children and schools.

- Children from higher socioeconomic backgrounds (as defined through the SES index established in this study), and those attending schools in wealthier neighbourhoods performed better than children from less advantaged backgrounds. These results reinforce the importance of children's backgrounds and the reproduction of societal inequalities at school in the early grades. In some countries, inequalities are huge and are still affecting children's proficiency in reading, writing and mathematics by the end of primary education. Findings address the challenge of reducing the effect of children's origin and societal inequalities at school over time and place, and across basic education. Countries' efforts in the last decade to reduce the impact of social inequities on children's learning have not been sufficiently effective for all groups of children.

- Girls were more likely to perform better than boys, regardless of socioeconomic status or school location, depending on the achievement domain. In all countries, boys had lower levels of achievement than girls in reading and writing. In 3 countries, they had lower levels of achievement in mathematics in comparison with girls. More research across the different profiles of girls and boys is encouraged to estimate if gaps in performance between sub-groups of children are constant across other variables of interest. Despite the difference in performance, in all countries, few to large proportion of girls and boys still have difficulties in reaching the expected levels of performance across the domains.

- Children who spoke the language of instruction more often at home achieved higher levels of literacy in reading, writing and mathematics than those who did not, except in the Philippines. This practice varied across countries, with almost all children speaking the official language of instruction at home at the end of primary education in Cambodia, Malaysia and Viet Nam compared with less than 1 in 10 children in the Philippines.

- A third of children had attended at least 2 years of preschool education. However, there was considerable country variation in the proportion of children attending preschools, and their duration of attendance. The positive influence of these preparatory years continues to show benefits for children's outcomes at least 5 years into their primary education. Children who had attended at least 1 year of preschool education consistently performed better than children who had not. The systems need to explore alternative modes of sustainable preschool in order to provide at least 1 year of free, high-quality preschool education to enable successful transition into early primary school years.

- Most Grade 5 children in most countries demonstrated a solid grasp of key language and mathematical skills prior to entering school. These children consistently outperformed children who did not have those skills. This finding highlights the importance of creating an environment in the early years of school that replicates a literate home environment and focuses on building core foundational skills of language, vocabulary, communication and mathematics.

- In 4 out of the 6 countries, older age was not correlated with poorer learning performance, but grade repetition was. In Malaysia and Viet Nam, where the age of all or almost all Grade 5 children was 10 or 11 years and grade repetition was completely or almost non-existent, older children tended to achieve significantly higher scores in reading, writing and mathematics (only in mathematics in Viet Nam), when grade repetition and socioeconomic status are held constant.

- Children who had repeated a grade were more likely to have lower levels of achievement in reading, writing and mathematics in comparison with children who had not repeated a grade. Official grade repetition policies vary by country, with some adopting automatic progression of children and others basing children's progression on proven performance. In Malaysia, grade repetition is almost non-existent, with less than 1% of children reported to have repeated. In Viet Nam, this practice affected less than 10% of children enrolled at Grade 5 in 2019. On average, across the other 4 SEA-PLM 2019 countries, 20% to 40% of children at Grade 5 reported having repeated a grade of schooling. While these findings warrant further investigation on causes and outcomes, children's performance and system efficiencies play an important part in levels of grade repetition.

3.4.2 School environment and teacher profiles

- Children learning in larger schools in well-resourced locations, with a textbook for each child, performed better than children in smaller, less well-resourced schools. Across the 6 participating countries, the majority of children (87%) attended schools where they had 1 textbook per child in Grade 5, for both language and mathematics lessons. In all countries except Malaysia, there were still a proportion of children learning in schools where the principal reported that there were no language or mathematics textbooks. In Lao PDR and the Philippines, around 20% of children shared a reading or mathematics textbook in Grade 5, sometimes with more than 2 children.

- The availability of school libraries varied significantly across countries, with principals in Malaysia reporting that all children had access to a library, while in another country principals reported that 35% of children had access to a library at school. This shows an example of the importance of allocating adequate and free resources for all schools in the appropriate language from the early grades.

- In 3 of the participating countries, school principals reported that the lack of qualified teachers was a significant issue hindering school capacity to provide instruction to children. Countries all adopted different approaches to hiring and training teachers, and allocating generalist or specialist teachers.

- In 5 out of the 6 countries, children were being taught by 1 generalist teacher for all or most of their subjects, while in Malaysia, children were learning more with specialist teachers in charge of teaching only specific learning domains.

- The majority of children attended schools where teachers in charge of the language of instruction had attended pre-service or in-service reading training. However, in almost all countries, a non-negligible percentage of children were in class with teachers who had received no training in reading (in the language of instruction used for the SEA-PLM 2019 assessment) before or during their service.

3.4.3 Children's, teachers' and parents' attitudes and engagement

- Most children in all participating countries had high levels of interest in school. About 80% or more of children in all countries expressed positive attitudes about school – such as liking school, feeling safe at school and having a sense of belonging. However, 10% of students across all countries and up to 20% of students in some countries reported not feeling comfortable at school and having a negative attitude towards school.

- On average, children who felt better and safer at school performed better than children who reported less positive feelings. Systems and communities may continue to value constructive, collaborative interactions between children and teachers within schools in learning activities and other projects with the local community to promote and value a peaceful school.

- In all countries, higher levels of parental engagement were associated with higher reading, writing and mathematics scores in children. Half of the children reported that their parents motivate them to succeed in school (47%). Around one-third reported that their parents check if they do their homework (36%) and ask them about what they are learning in school (34%), and that they talk about their schoolwork with their parents (32%). Around one-quarter reported that their parents help them with their homework (27%). However, a large proportion of children suggested that their parents rarely or never engage in those activities. Strategies that better communicate with parents and provide practical solutions for better parental engagement with children's learning are likely to have a significant impact on children's success in school.

- A large majority of children attended schools where their teachers considered that lack of basic knowledge (74%) and lack of interest (63%) affected children's learning in class. Around one-third of children attended a school where teachers reported that children's hunger in class (34%) or lack of sleep (32%) were issues affecting children's learning. In some countries, a higher percentage of teachers reported these factors. This may confirm the difficulty for teachers in delivering Grade 5 instruction as expected in the official programme. This finding also strengthens the need for systems and communities to better monitor health and wellbeing within each school during the stages of basic education.

- In several countries, high percentage of teacher absenteeism and lateness were reported by children. In Viet Nam, children's perceptions of teachers were more positive than for children in other countries, with less than 1 in 10 (9%) reporting that their teacher was often or sometimes absent, compared with 38% to 58% across other countries, and 14% reporting that their teacher was often or sometimes late, compared with 51% to 67% across other countries. A high proportion (from 49% to 74%) of children reported that it often or sometimes took their teacher a long time to settle the class. This raises the need for systems and communities to identify and eliminate explicit and informal practices that could reduce the time for learning and teachers' effectiveness in basic education.

Chapter 4

Global citizenship education at primary level

Global citizenship is a relatively new concept that expands the notion of citizenship beyond the boundaries of the state, with the implication that there are multiple issues that connect us as citizens of the globe. Global citizenship is generally described in terms of global belonging, solidarity and collective identity.

The definition of global citizenship in SEA-PLM, generated in collaboration with Southeast Asian countries and experts, acknowledges the need for region-specific characteristics, and local appropriateness and relevance at community, school and individual levels. The SEA-PLM 2019 global citizenship assessment framework states:

> *Global citizens appreciate and understand the interconnectedness of all life on the planet. They act and relate to others with this understanding to make the world a more peaceful, just, safe and sustainable place. (UNICEF & SEAMEO, 2017, p. 5).*

Certainly, there is no single, common Southeast Asian regional identity with core shared values, and the participating countries are acknowledged as greatly diverse in history and culture. Nonetheless, it was anticipated that, across the region, there would be universal values, principles and standards that most people uphold as important or worthy – such as peace, safety, security, stability and justice. Similar values are also present in literature relating to global citizenship education (UNICEF & SEAMEO, 2017, p.6).

SEA-PLM 2019 is the first large-scale comparative assessment to measure global citizenship attitudes, values and behaviours of children at primary level. The representative sample of Grade 5 children in the 6 participating countries provided a unique and valuable insight into global citizenship education across the Southeast Asian region.

The SEA-PLM 2019 global citizenship questionnaires – developed through the assessment framework and contextual questionnaires[35] – fills a gap in global citizenship research, providing countries and stakeholders with new qualitative and quantitative information. All concepts and topics covered by the questionnaire were defined, designed and trial tested in collaboration with participating Southeast Asian countries. Global citizenship education as a specific concept is derived from civics and citizenship education. It is still emerging as a standalone domain in curriculum documentation in Southeast Asia, as it is in international research on civics and citizenship.

One of the major challenges for the development of the global citizenship questionnaires was the relatively young age of children in Grade 5. At this age, children are not expected to have formally learned all of the specific concepts and elements in this area. In fact, most of their civics and citizenship knowledge, as well as what they know and think about global citizenship, is generally acquired in other subjects, informally at school and in out-of-school contexts (in particular at home).

Many of the attitudes, values and behaviours inherent in the SEA-PLM concept of global citizenship embed and support 21st century learning, such as critical thinking, problem-solving, empathy and collaboration. Beyond reflecting on existing policies and practices, the SEA-PLM global citizenship framework, data and questionnaires provide crucial information that could be useful for regional and international agendas. In particular, Sustainable Development Goal (SDG) target 4.7 focuses on all learners acquiring the knowledge and skills needed to promote sustainable development, including global citizenship.

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[35] SEA-PLM 2019 instruments only focused on measuring attitudes, values and behaviours, and did not include cognitive questions to measure knowledge and proficiency.

4.1 Global citizenship education in SEA-PLM 2019

In the early stages of developing the SEA-PLM global citizenship questionnaires, official curricula of the Southeast Asian countries were audited to explore global citizenship concepts and topics within curricula at the end of primary level (UNICEF & SEAMEO, 2016). The review identified where global citizenship concepts and topics were located in curricula, and whether they aligned with the underpinning concepts and definition of global citizenship education in SEA-PLM. To ensure consistency with SEA-PLM, Grade 5 or approximate level curriculum frameworks in 9 countries were reviewed in detail.

The curriculum review confirmed that most of the main concepts typically associated with global citizenship education were included in all curricula at primary level, with some nuance in how concepts and topics were put into practice in terms of teaching, learning and intended outcomes.

Box 4.1 summarizes the main findings from the curriculum audit (UNICEF & SEAMEO, 2016).

Box 4.1: Findings from the review of the official curriculum audit

In all countries' curricula, global citizenship education concepts at primary level are most frequently located in introductions or backgrounds, as statements relating to aims or objectives. In a number of cases these aims include not only knowledge-related goals but also the development of behaviours and skills, and attitudes and values. However, while many curricula use terms such as 'interdependence', 'global issues', and 'active citizenship' in the introductory sections, they do not necessarily expand upon these terms. Where global citizenship concepts such as 'social diversity', 'social cohesion', 'respect for difference', 'peace', 'equity', 'justice', 'participation' and 'active citizenship' are included in objective statements related to knowledge, behaviours, skills, attitudes and values, they are not necessarily translated into learning outcomes in the framework content at the end of primary level. No sub-domains specific to global citizenship were identified.

The outcome of the audit signalled that it would be beneficial for countries to consider further the extent to which global citizenship education currently exists explicitly or implicitly in their curricula, and whether this coverage meets their expectations or if further integration needs to occur. If global citizenship education or new topics and concepts related to global citizenship education are to be more integrated within basic education, then explicit links need to be made with learning outcomes and the learning areas in which they are embedded. This will support relevant assessment and mobilize adequate pedagogical resources.

Complete information on SEA-PLM 2019's global citizenship content is published in the SEA-PLM 2019 global citizenship framework (UNICEF & SEAMEO,, 2017). Chapter 1 provides summary information.

The SEA-PLM 2019 questionnaires were developed on the basis of concepts and topics to support the coverage of the domains and sub-domains of the SEA-PLM 2019 global citizenship definition. Individual questions and derivate indices in the different languages of administration were pre-tested on small samples of Grade 5 children through 2 phases of trial testing in the participating countries. These empirical processes confirmed the degree of validity and relevance of questions for Grade 5 teachers and children in schools through item analysis. Biased questions concerned with contextual issues were removed from the final main questionnaires. Figure 4.1 presents a summary of the concept classification for attitudes and values, and behaviours and skills, used during the SEA-PLM 2019 main survey.

Questions were developed against 2 measurement sub-domains identified in the SEA-PLM 2019 global citizenship framework: attitudes and values, relating to positive orientations including appreciation of diversity, equality and human rights; and behaviours and skills, relating to activities that create positive change.[36]

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[36] The third measurement sub-domain – cognitive aspects – was not covered through SEA-PLM 2019 instruments, owing to assessment priorities and technical considerations.

Figure 4.1: SEA-PLM 2019 concept classification of children questionnaire

		Content sub-domains		
		Systems, issues and dynamics	**Identities**	**Engagement**
Measurement sub-domains	**Attitudes and values**	Children's perception of global citizenship topics learned at school (1 question). Children's attitudes towards global citizenship topics (1 question). Children's attitudes towards societal issues (2 questions). Children's attitudes towards environmental sustainability (1 question).	Children's attitudes towards national and regional identity (1 question).	
	Behaviours and skills			Children's participation in activities related to global citizenship education at school (3 questions).

Questions were also developed and classified in relation to 3 content sub-domains: systems, issues and dynamics; identities; and engagement.

The official questionnaire instructions in all countries and schools provided a content glossary for test administrators, to facilitate children's understanding of the global citizenship questionnaire. Test administrators read out a standardized script to the whole class to assist children in understanding the terms used in the global citizenship questions. Administrators were trained not to further elaborate on the question itself and not to unintentionally 'lead' the children to answer in a certain way. The questionnaire was not under time constraints. The glossary is published in Appendix 4.

Box 4.2: Measuring global citizenship education in SEA-PLM 2019

The global citizenship questionnaire was administered to children to measure attitudes and values, and behaviours and skills. The teacher questionnaire also contained questions relating to global citizenship education, addressing teachers' attitudes and values and their preparation for teaching global citizenship topics, through questions about pre-service programmes and confidence levels.

Questions in both the children and teacher questionnaires were constructed using a Likert-style item response format which required respondents to indicate the best response for them. Based on their choices, frequency tables for each question were prepared for each of the 6 countries. For the ease of data presentation in this report, children's responses under each sub-category were gathered into 2 categories. For example, responses of 'A little' or 'Nothing' were aggregated together in 1 category, and responses of 'Some' or 'A lot' were aggregated together in 1 category. Only 1 of the 2 aggregated categories is presented in the figures of this chapter. All estimates against each question and response are presented in Appendix 4.

The numbers in the figures are weighted frequencies representing the percentage of children in the population of Grade 5 children. For the teacher questionnaire, all Grade 5 teachers in the sample schools were included, not just the teachers of the children sampled.

When applicable, scale indices were derived to illustrate how well questions that were conceptually linked by domain of interest correlated with one another. This provided validity of the conceptual links of the domains. Correlations were also used to identify the extent to which there was a link between the responses to the global citizenship questions and children's performance in reading, writing and mathematics. See Appendix 4 for more detailed outputs on scale indices.

The descriptive analysis presented in the following sections explores children and teachers responses to individual questions, across all 6 participating countries. The discussion explores the data, concepts and findings from SEA-PLM 2019's global citizenship education questionnaires.

Further exploration of SEA-PLM global citizenship education data, and correlations between the test and questionnaire, would offer greater confidence in describing the profile of children, teachers and school contexts where issues and topics related to global citizenship were reported. This analysis might better identify needs and gaps per sub-group among the countries. Further analysis might also allow better identification of global citizenship education levels and their relationship with other academic domains and other 21st century skills.

4.2 Children's perception of global citizenship education

4.2.1 Perception of global citizenship topics learned at school

Children were asked about how much they learned in classroom topics related to (i) global and regional events (questions a, b, c), (ii) interpersonal considerations (questions d, e, f) and (iii) environmental issues (questions g, h, i, j, k). Topics were defined based on the SEA-PLM 2019 definition of global citizenship. Response categories 'A lot' and 'Some' are aggregated into one category and represented in Figure 4.3. Through children's response to topics learned at school, the data indirectly addresses the level of exposure children perceive to have on these topics.

Figure 4.2: Questionnaire item – Children's perception of global citizenship topics learned at school

At school, how much have you learned about the following topics?

Please tick **one** box in **each row**.

	A lot	Some	A little	Nothing
a) What is happening in countries near <Country of test>	01	02	03	04
b) What is happening in the world	01	02	03	04
c) How things that happen in other countries affect <Country of test>	01	02	03	04
d) Understanding people that are different to you	01	02	03	04
e) How to solve <disagreements> with classmates peacefully	01	02	03	04
f) How you can help solve problems in your own <community>	01	02	03	04
g) How to protect the environment	01	02	03	04
h) Pollution in <country of test>	01	02	03	04
i) Pollution in places outside <country of test>	01	02	03	04
j) Loss of natural resources, for example water, energy and useable land	01	02	03	04
k) <Climate change>	01	02	03	04

Across the 6 countries, more than half the children identified that they learned 'Some' to 'A lot' in class about almost all topics. Children's perspectives on the topics they were learning were consistent among most of the countries.

Figure 4.3: Percentage of children who perceived the global citizenship topics being learned at school
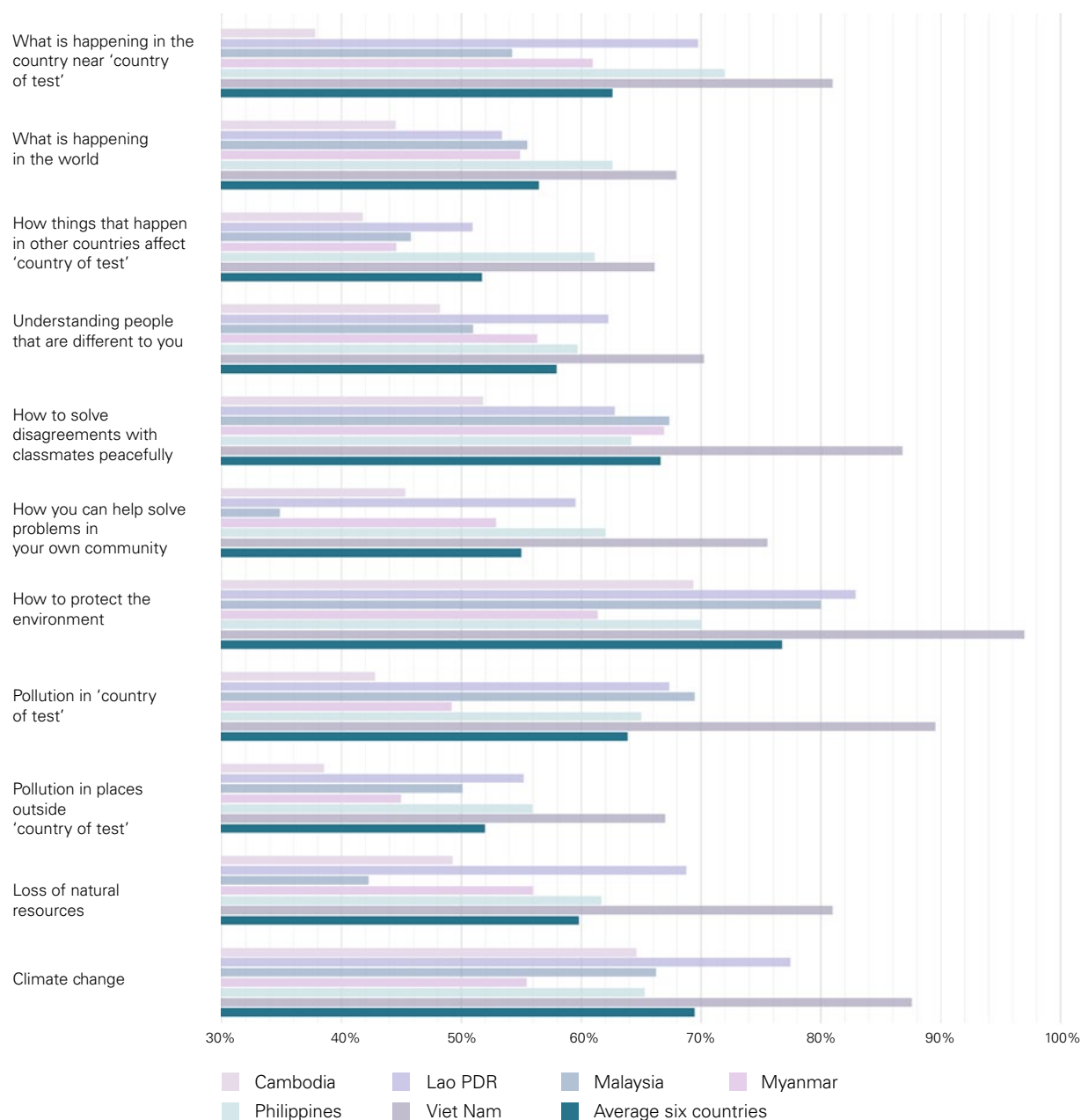
Across the 6 countries, in the topics related to global and regional events, children identified that the topic they learned the least was how things that happen in other countries affect their country (52%), with 21% of children saying they did not cover anything at all on this topic. In all countries, children reported learning marginally more about what is happening in countries near them than what is happening in the world.

In the topics related to interpersonal considerations, children identified the topic they learned the most was how to solve disagreements with classmates peacefully (67%). However, only around half the children said they covered 'A lot' or 'Some' of understanding people that are different to you and how you can help solve problems in your own community, with around 20% of children saying they did not learn about these topics at all.

In the topics related to environmental issues, children identified the topics they learned the most were climate change (70%) and protecting the environment (77%). There was less perceived coverage of their loss of natural resources (60%) and particularly low perceived coverage of pollution in other countries (52%), with 23% of children indicating that they did not cover this topic at all.

4.2.2 Attitudes about global citizenship education

Children were asked how important they thought it was to learn about topics related to (i) global and regional events (questions a, b, c), (ii) interpersonal considerations (questions d, e, g, h, i) and (iii) environmental issues (question f). Topics were defined based on the SEA-PLM 2019 global citizenship conceptual definition. Response categories 'Very important' and 'Quite important' are aggregated into one category and represented in Figure 4.5.

Figure 4.4: Questionnaire item – children's attitudes about global citizenship education

How important is it for you to learn about each of the following topics?

Please tick **one** box in **each row**.

	Very important	Quite important	Not very important	Not at all important
a) What is happening in countries near your own	01	02	03	04
b) What is happening in the world	01	02	03	04
c) How things that happen in other countries affect <Country of test>	01	02	03	04
d) Understanding people that have a different <ethnicity / race> to you	01	02	03	04
e) How to solve <disagreements> with classmates peacefully	01	02	03	04
f) How to protect the environment	01	02	03	04
g) How you can help to solve problems in your own <community>	01	02	03	04
h) Other languages spoken in your country	01	02	03	04
i) Languages spoken in other countries	01	02	03	04

For all topics except one, more than 70% of children indicated that the topic was important. Only 64% of children valued learning a language spoken in another country, with 14% responding that it was not at all important. The topic most valued by children was protecting the environment (89%). Understanding people who have different ethnicity/race (70%) and learning other languages spoken in your country (73%) were both valued less compared with other topics, but these still presented relatively high frequencies.

There were some consistencies in the topics that were valued across countries. For example, protecting the environment was consistently the most-valued topic across all countries, and most countries placed similar value on understanding people who have different ethnicity/race. Despite some differences across countries, the relative order of what children valued remained constant.

Figure 4.5: Percentage of children who identified the topic to be important to learn in school
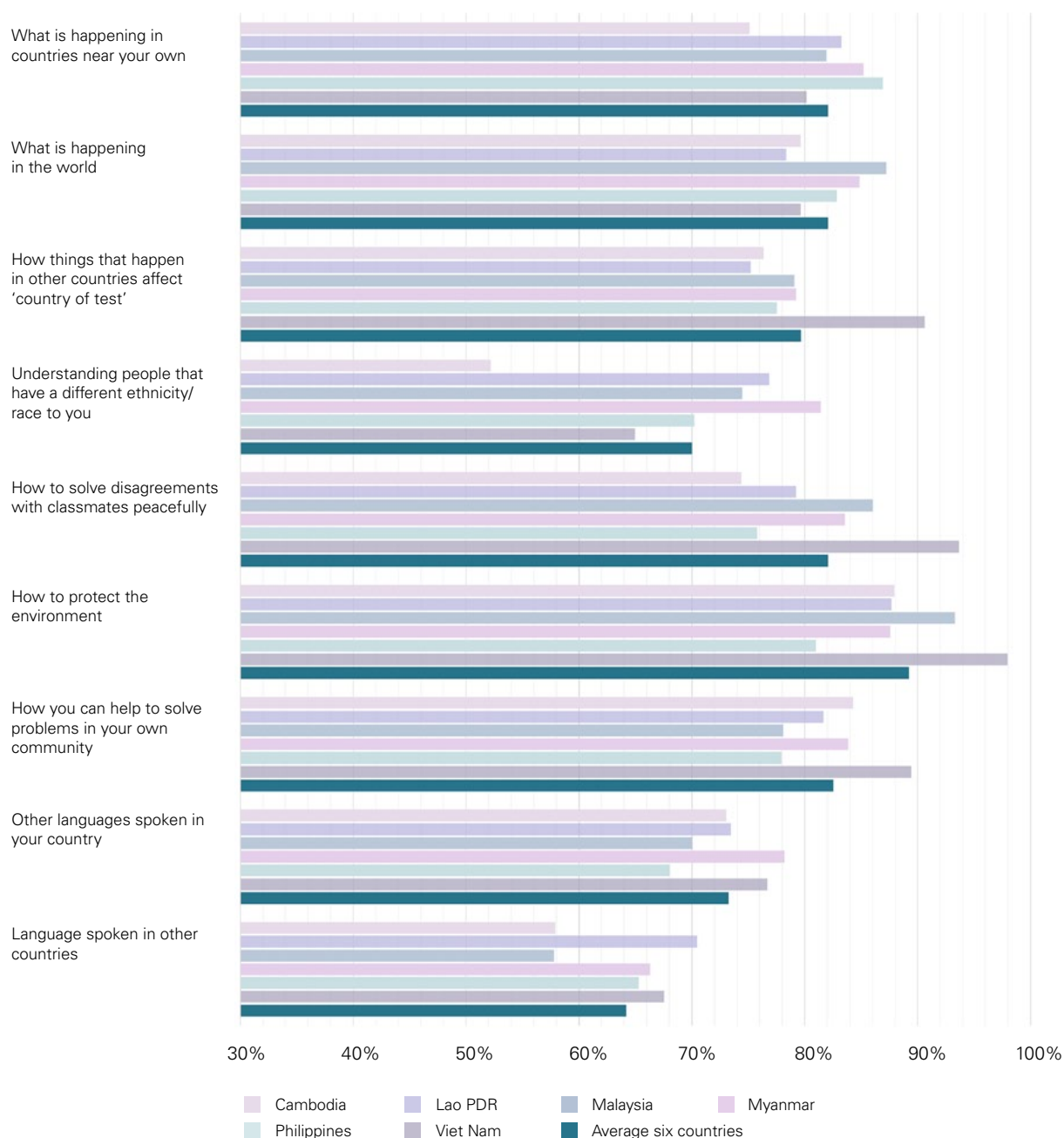
In most topics there was less than 20% difference between what children percieved to be covered in the classroom and what they valued highly, indicating that children's attitudes may be influenced by topics they are exposed to at school. Protecting the environment was particularly well aligned, with 77% of children indicating it was well covered, and 89% of children indicating that it was highly valued.

There were a couple of topics with a bigger discrepancy between what was taught and what was valued. One was how things that happen in other countries affect their country; 28% more children valued this than indicated it was taught. Similarly, for the topic solving problems in your own community, 28% more children valued this than indicated it was taught. This suggests that children viewed these topics as worth learning but have had less opportunity to do so.

4.2.3 Attitudes about societal issues

Children were asked their level of agreement with various statements about societal issues. Response categories 'Agree' and 'Strongly agree' are aggregated into one category and represented in Figure 4.7.

Figure 4.6: Questionnaire item – children's attitudes about societal issues

How much do you agree or disagree with each of the following statements?

Please tick **one** box in **each row**.

	Strongly agree	Agree	Disagree	Strongly disagree
a) The world is a fair place.	01	02	03	04
b) It is important that people from different \<ethnic / racial\> backgrounds \<get along\> with each other.	01	02	03	04
c) It is important that all \<ethnic / racial\> groups are treated equally.	01	02	03	04
d) Rich countries should control poor countries.	01	02	03	04
e) Everyone should be allowed to say what they think about the government.	01	02	03	04
f) It is the government's \<job / role\> to protect the environment.	01	02	03	04
g) All people in society must protect the environment.	01	02	03	04

Across the 6 countries, there was a large amount of agreement that *the world is a fair place* (81%) and all *ethnic/racial groups should be treated equally* (83%). There was less agreement that you can say what *you think about the government,* with 26% of children disagreeing or strongly disagreeing.

Figure 4.7: Percentage of children who agreed to statements regarding societal issues
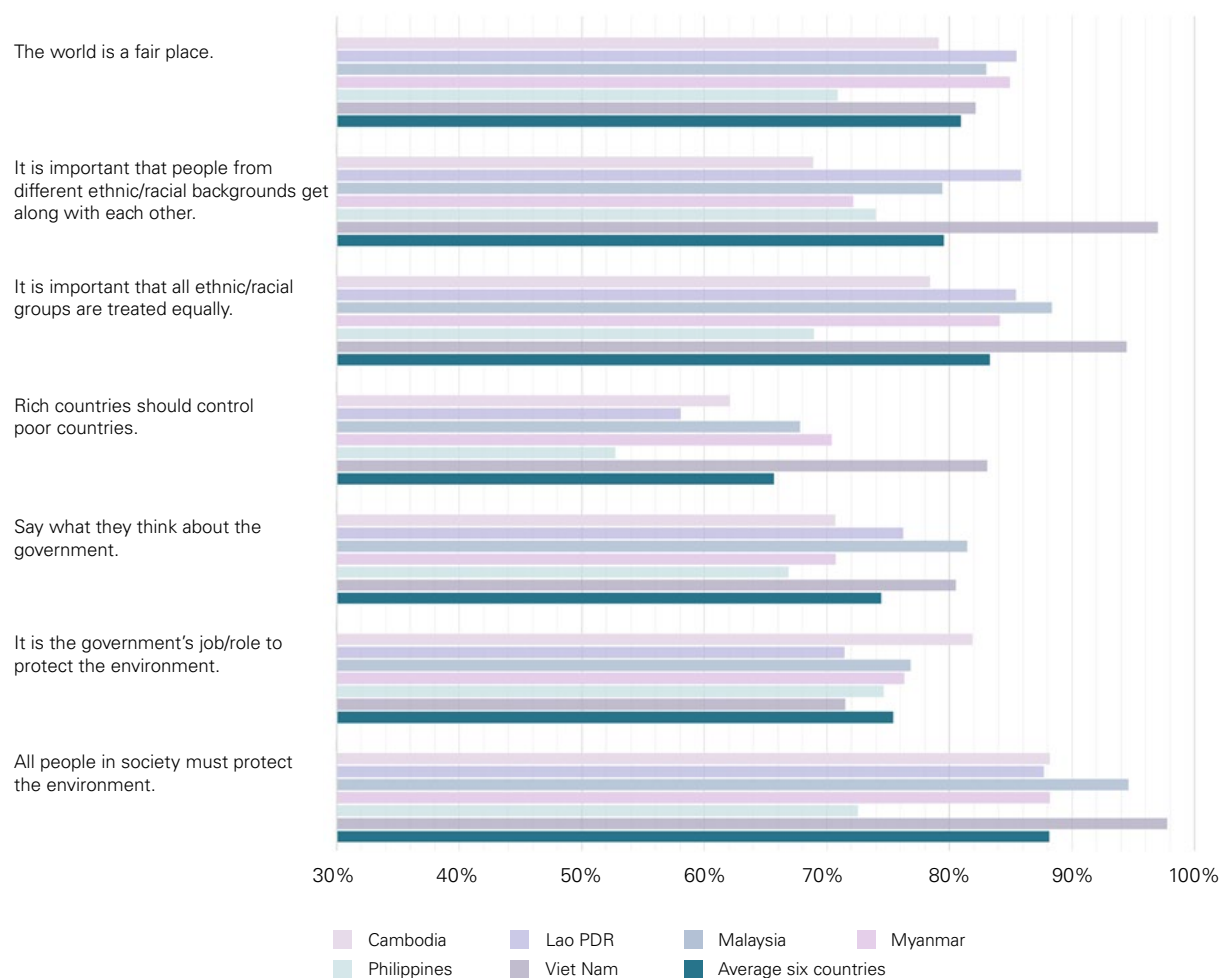
The greatest level of agreement across all countries was that *all people in society must protect the environment* (88%), with less agreement that i*t is the government's role to protect the environment* (75%). This question presented more variability between countries than others. The lowest level of agreement was that *rich countries should control poor countries* (66%).

4.2.4 Attitudes about environmental sustainability

Children were asked whether they were concerned about specific environmental sustainability issues. Response categories 'Quite worried' and 'Very worried' are aggregated into one category and represented in Figure 4.9.

Figure 4.8: Questionnaire item – children's attitudes about environmental sustainability

How <worried> are you about the following issues?

Please tick **one** box in **each row**.

	Not at all worried	Not very worried	Quite worried	Very worried
a) Pollution in <country of test>	□ 01	□ 02	□ 03	□ 04
b) Pollution in places outside of <country of test>	□ 01	□ 02	□ 03	□ 04
c) <Power> shortages	□ 01	□ 02	□ 03	□ 04
d) Extinction of plants	□ 01	□ 02	□ 03	□ 04
e) Extinction of animals	□ 01	□ 02	□ 03	□ 04
f) Loss of natural resources	□ 01	□ 02	□ 03	□ 04
g) Water shortages	□ 01	□ 02	□ 03	□ 04
h) <Climate change>	□ 01	□ 02	□ 03	□ 04

Figure 4.9: Percentage of children who were worried about environmental sustainability issues
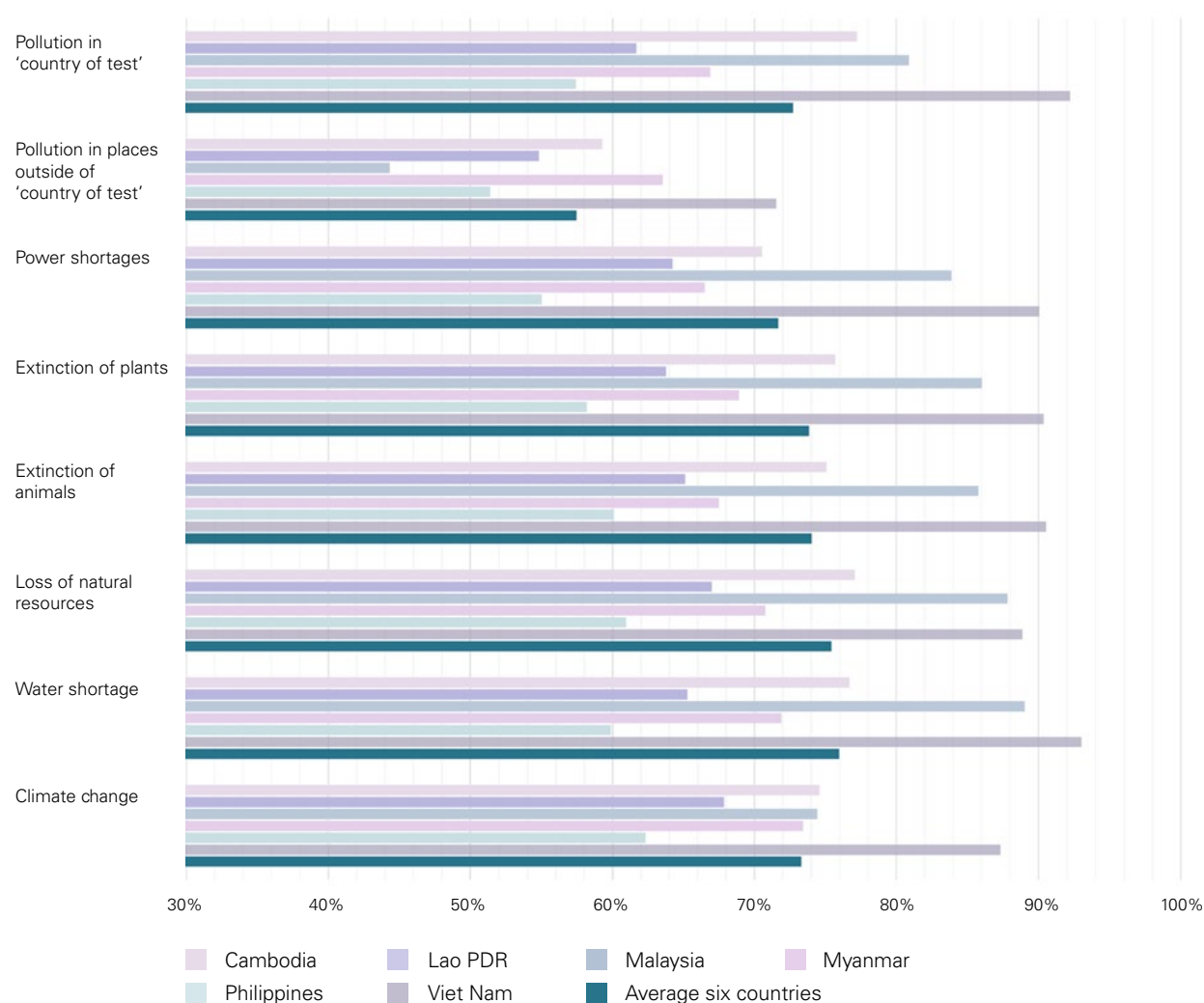
Children expressed similar amounts of concern for most issues (around 70%). However, children were less worried about *pollution in places outside of their country* (57%) in comparison with other issues. This was the only item that referred to an issue in other countries.

Box 4.3: Relationship between indices related to global citizenship education and learning performance in reading, mathematics and writing

Data reveals statistical correlations between some children's concerns and learning performance in reading, writing and mathematics. The strongest correlations in the majority of countries were between children's concern for environmental sustainability issues and learning performance (0.4 in reading, 0.3 in writing and 0.3 in mathematics). On average, children who met higher proficiency levels in reading, writing and mathematics were more likely to have concerns about environmental sustainability issues (GLOBCON index). The correlations may be influenced by the prevalence of coverage of the topic at school, as perceived by the children, and the emphasis placed on the topic. In some countries, the overall level of children's literacy is at the stage of emerging or fundamental reading, which may lead to a lack of understanding of abstract concepts and topics related to global citizenship as measured through SEA-PLM paper-pencil questionnaires.

4.2.5 Attitudes about national and regional identity

Children were asked their level of agreement with various statements about national and regional identity. Response categories 'Agree' and 'Strongly agree' are aggregated into one category and represented in Figure 4.11.

Figure 4.10: Questionnaire item – children's attitudes about national and regional identity

How much do you agree or disagree with each of the following statements?

Please tick **one** box in **each row**.

	Strongly agree	Agree	Disagree	Strongly disagree
a) I feel I belong to <Country of test>.	□ 01	□ 02	□ 03	□ 04
b) I think of myself as Asian.	□ 01	□ 02	□ 03	□ 04
c) I feel connected to the rest of the world.	□ 01	□ 02	□ 03	□ 04
d) I feel I have a lot in common with other children in <Country of test>.	□ 01	□ 02	□ 03	□ 04
e) I feel I have a lot in common with other children in Asia.	□ 01	□ 02	□ 03	□ 04
f) I feel I have a lot in common with children in the world outside Asia.	□ 01	□ 02	□ 03	□ 04

The majority of children felt they belong in their country (82%) and that *they have a lot in common with other children in their country* (76%). In the majority of countries, less than 60% of children *identify as Asian* and, in several countries, fewer than 60% *felt connected to the rest of the world.*

Figure 4.11: Percentage of children who agreed with statements about national and regional identity
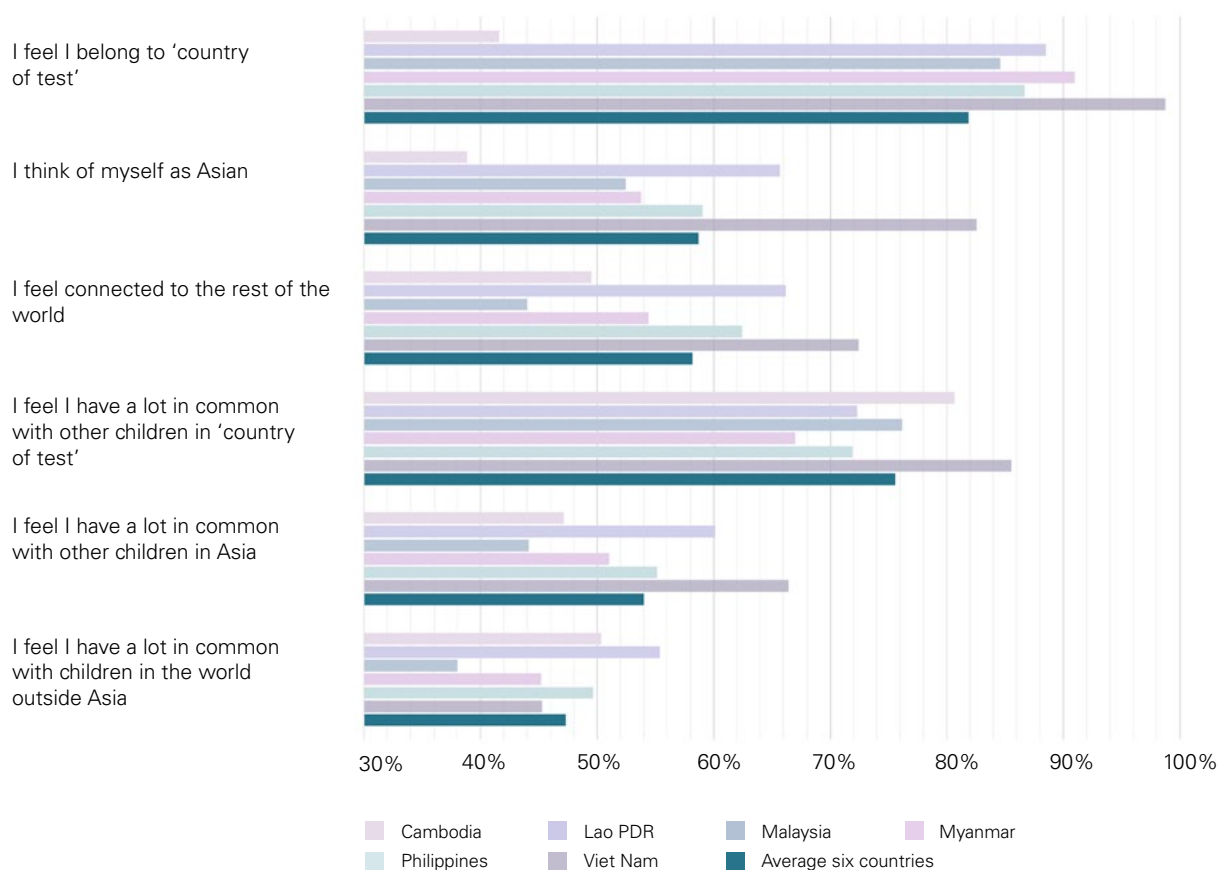
In most countries, about half of the children agreed or strongly agreed that they have a lot in common with other children in Asia. There was less frequency in identifying with other children outside Asia. Responses indicate that, generally, almost half of the children in Grade 5 do not feel a particularly strong association with Asia as a regional.

4.3 Children's participation in global citizenship related activities

4.3.1 Participation in school activities related to global citizenship

Children were asked whether they had participated in school activities related to global citizenship. Figure 4.13 displays results for the 'Yes, I have done this' response only.

Figure 4.12: Questionnaire item – children's participation in school activities related to global citizenship

At school, have you ever done any of the following activities?

Please think about all schools you have been to since the first year of <ISCED level 1>.
Please tick **one** box in **each row**.

	Yes, I have done this.	*No, I have never done this.*
a) Speak in an <organised debate>	☐ 01	☐ 02
b) Present ideas to your class	☐ 01	☐ 02
c) <Speak up> in classroom discussions about problems in the world	☐ 01	☐ 02
d) Vote for <class captain / leader / monitor>	☐ 01	☐ 02
e) Become a candidate for <class captain / leader / monitor>	☐ 01	☐ 02
f) Participate in an activity to make the school more <environmentally friendly> (e.g. through water-saving or recycling)	☐ 01	☐ 02

Across the 6 countries, the most frequently undertaken activities were *presenting ideas to their class* (72%), *voting for class leader* (70%), and *participating in an activity to make the school more environmentally friendly* (67%). Less than half of all children reported having *spoken in an organized debate* (39%), *spoken up in classroom discussions about problems in the world* (45%), or *become a candidate for class leader* (44%).

Figure 4.13: Percentage of children who indicated they had participated in school activities related to global citizenship
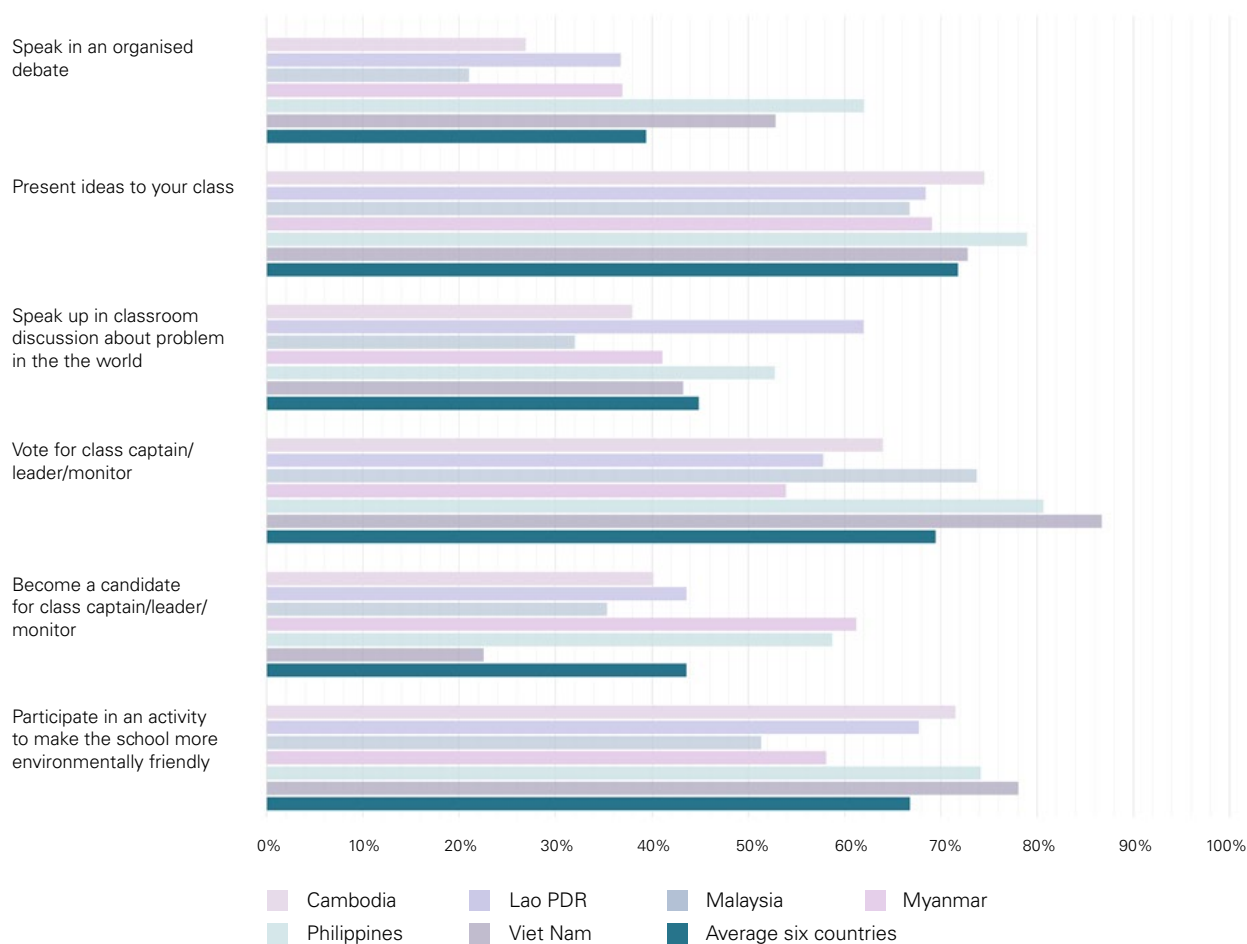
4.3.2 General activities related to global citizenship

Children were asked whether they would engage in general activities related to global citizenship. Response categories 'I will do this' and 'I might do this' are aggregated into one category and represented in Figure 4.15.

Figure 4.14: Questionnaire item – general activities related to global citizenship

Will you do each of the following activities?

Please tick **one** box in **each row**.

	I will do this	I might do this	I might not do this	I will not do this
a) Tell someone who is littering to stop.	☐ 01	☐ 02	☐ 03	☐ 04
b) \<Stand up\> for a classmate who is being badly treated by other students.	☐ 01	☐ 02	☐ 03	☐ 04
c) Help other people in your \<community\>.	☐ 01	☐ 02	☐ 03	☐ 04
d) Make friends with someone from another country.	☐ 01	☐ 02	☐ 03	☐ 04
e) Encourage other people to help protect the environment.	☐ 01	☐ 02	☐ 03	☐ 04
f) Join a group to help protect the environment.	☐ 01	☐ 02	☐ 03	☐ 04

Across the 6 countries, around 80% of children indicated they will or might engage with most behaviours. However, fewer children indicated they will or might *make friends with someone from another country* (69%).

Figure 4.15: Percentage of children who were willing to participate in activities related to global citizenship

Tell someone who is littering to stop

Stand up for a classmate who is being badly treated by other students

Help other people in your community

Make friends with someone from another country

Encourage other people to help protect the environment

Join a group to help protect the environment

50%   60%   70%   80%   90%   100%

Cambodia   Lao PDR   Malaysia   Myanmar
Philippines   Viet Nam   Average six countries
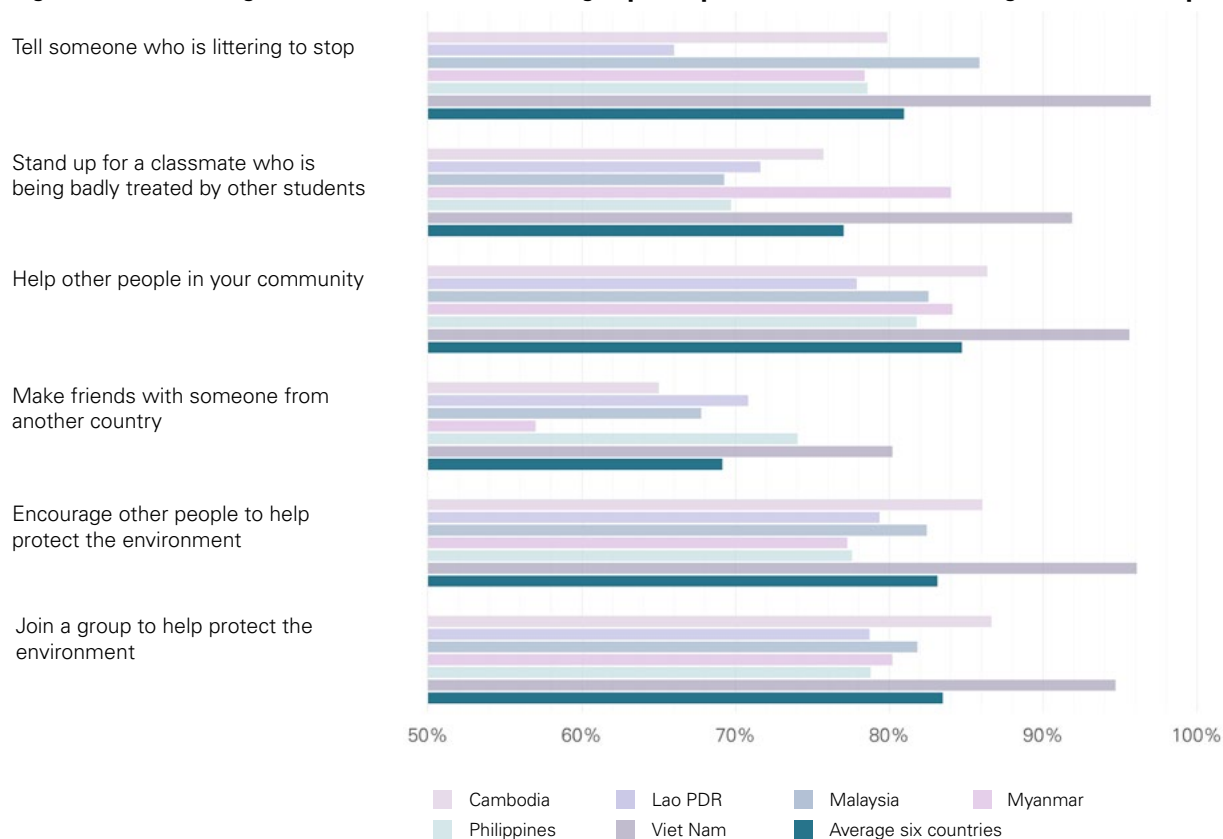
4.3.3 Future school activities related to global citizenship

Children were presented with a list of activities related to global citizenship that might be offered in their school and asked how likely they would be to participate in each activity. Response categories 'Very likely' and 'Quite likely' are aggregated into one category and represented in Figure 4.17.

Figure 4.16: Questionnaire item – future school activities related to global citizenship

Listed below are different activities that might be offered at your school. If you were given the chance, how likely is it that you would participate in each activity?

Please tick **one** box in **each row**.

	Very likely	Quite likely	Not very likely	Not at all likely
a) Vote for <class captain / leader / monitor>	☐ 01	☐ 02	☐ 03	☐ 04
b) Become a candidate for <class captain / leader / monitor>	☐ 01	☐ 02	☐ 03	☐ 04
c) Join a group of students to support an issue you agree with	☐ 01	☐ 02	☐ 03	☐ 04
d) Speak in an <organised debate>	☐ 01	☐ 02	☐ 03	☐ 04
e) <Speak up> in a classroom discussion about problems in the world	☐ 01	☐ 02	☐ 03	☐ 04

Across the 6 countries, around 80% of children indicated that they *would vote for a class leader or join a group of children to support an issue they agree with*. Further, 66% of children indicated they would *become a candidate for class leader or speak up in a classroom discussion*. Only around half of the children indicated they would *speak in an organized debate* (56%). Across countries, the patterns of response were consistent, indicating similarities in the activities children were interested in pursuing.

Figure 4.17: Percentage of children who indicated they were likely to participate in future school activities related to global citizenship
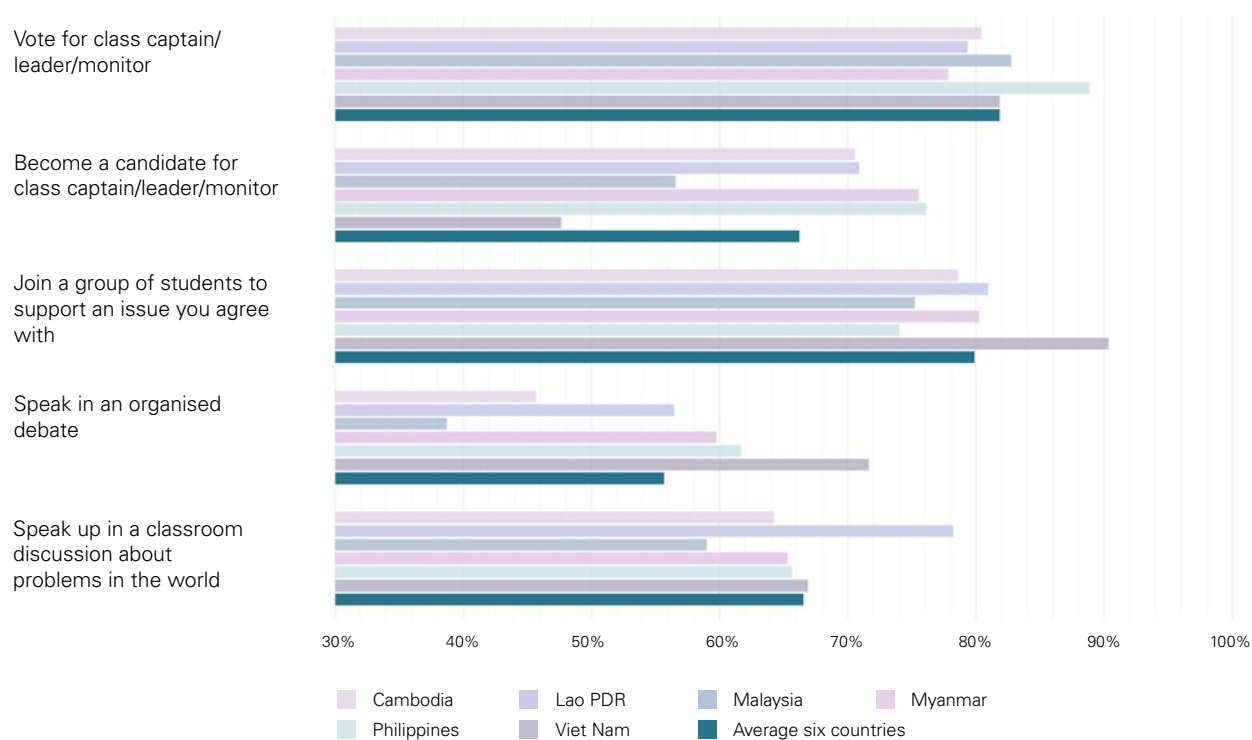
4.4 Teachers' perception of global citizenship education

The teacher questionnaire collected valuable data on pre-service teacher education and teachers' confidence with global citizenship topics. The information fills an important gap in knowledge about how prepared teachers feel to engage with such activities in class. All Grade 5 teachers in sampled schools completed the same questionnaire.

4.4.1 Pre-service preparation for global citizenship education

Teachers were asked about how well their pre-service education programme had prepared them to teach global citizenship topics as defined in SEA-PLM 2019. Response categories 'Very well' and 'Quite well' are aggregated into one category and represented in Figure 4.19.

Figure 4.18: Questionnaire item – teacher's pre-service preparation for global citizenship education

How well has your pre-service teacher education programme prepared you to teach about:

Please tick **one** box on **each line**.

	Very well	Quite well	Not very well	Not at all
a) Local current events	☐ 01	☐ 02	☐ 03	☐ 04
b) Global current events	☐ 01	☐ 02	☐ 03	☐ 04
c) Globalisation	☐ 01	☐ 02	☐ 03	☐ 04
d) Children's rights	☐ 01	☐ 02	☐ 03	☐ 04
e) Environmental protection	☐ 01	☐ 02	☐ 03	☐ 04
f) Sustainable development	☐ 01	☐ 02	☐ 03	☐ 04
g) Respecting diversity	☐ 01	☐ 02	☐ 03	☐ 04
h) Conflict resolution	☐ 01	☐ 02	☐ 03	☐ 04
i) Inequality	☐ 01	☐ 02	☐ 03	☐ 04
j) Injustice	☐ 01	☐ 02	☐ 03	☐ 04
k) Peace and conflict	☐ 01	☐ 02	☐ 03	☐ 04
l) Taking action to challenge inequality	☐ 01	☐ 02	☐ 03	☐ 04

Figure 4.19: Percentage of teachers who felt prepared to teach global citizenship topics

Cambodia — Lao PDR — Malaysia — Myanmar — Philippines — Viet Nam — Average six countries
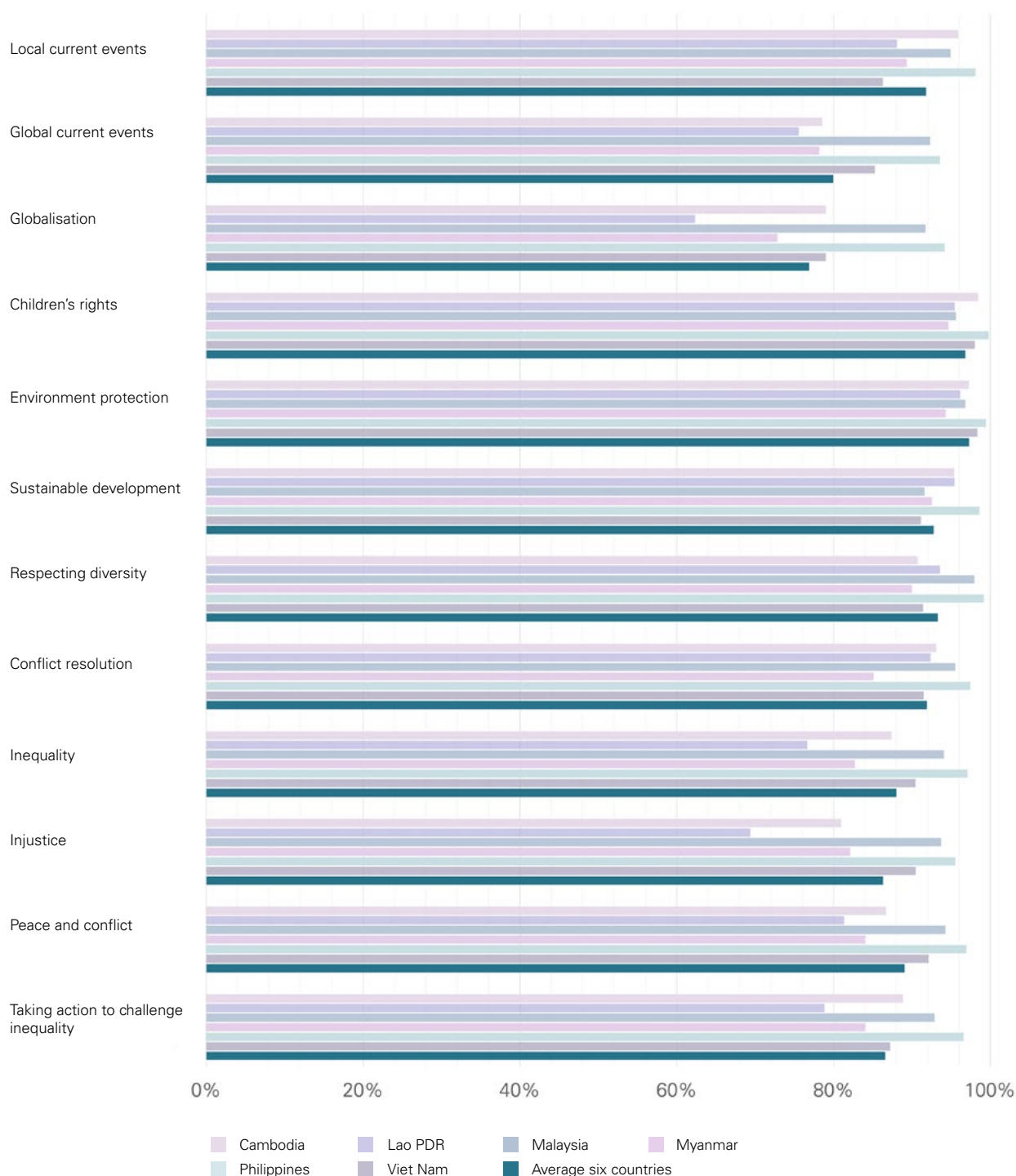
Across the 6 countries, a large majority of teachers (70%+) felt they had been well prepared to teach each of the topics. In all 6 countries, teachers considered they had been most prepared for *children's rights and protecting the environment* (both 97%). In comparison with other topics, fewer teachers considered their pre-service programme had prepared them to teach *globalization* (76%) and *global current events* (80%).

Only a small percentage of teachers reported that pre-service training did not prepare them to teach topics related to the *environment, global issues and interpersonal topics.*

4.4.2 Confidence in teaching global citizenship topics

Teachers were asked how confident they were to teach global citizenship topics. Across all countries, the majority of teachers indicated they had high levels of confidence in all topics. Response categories 'Very confident' and 'Quite confident' are aggregated into one category and represented in Figure 4.21.

Figure 4.20: Questionnaire item – teacher's confidence in teaching global citizenship topics

How confident are you to teach <Grade 5> students at your school about:

Please tick **one** box on **each line**.

	Very confident	*Quite confident*	*Not very confident*	*Not at all confident*
a) Local current events	01	02	03	04
b) Global current events	01	02	03	04
c) Globalisation	01	02	03	04
d) Children's rights	01	02	03	04
e) Environmental protection	01	02	03	04
f) Sustainable development	01	02	03	04
g) Respecting diversity	01	02	03	04
h) Conflict resolution	01	02	03	04
i) Inequality	01	02	03	04
j) Injustice	01	02	03	04
k) Peace and conflict	01	02	03	04
l) Taking action to challenge inequality	01	02	03	04

Figure 4.21: Percentage of teachers who felt confident to teach global citizenship topics

Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Viet Nam, Average six countries
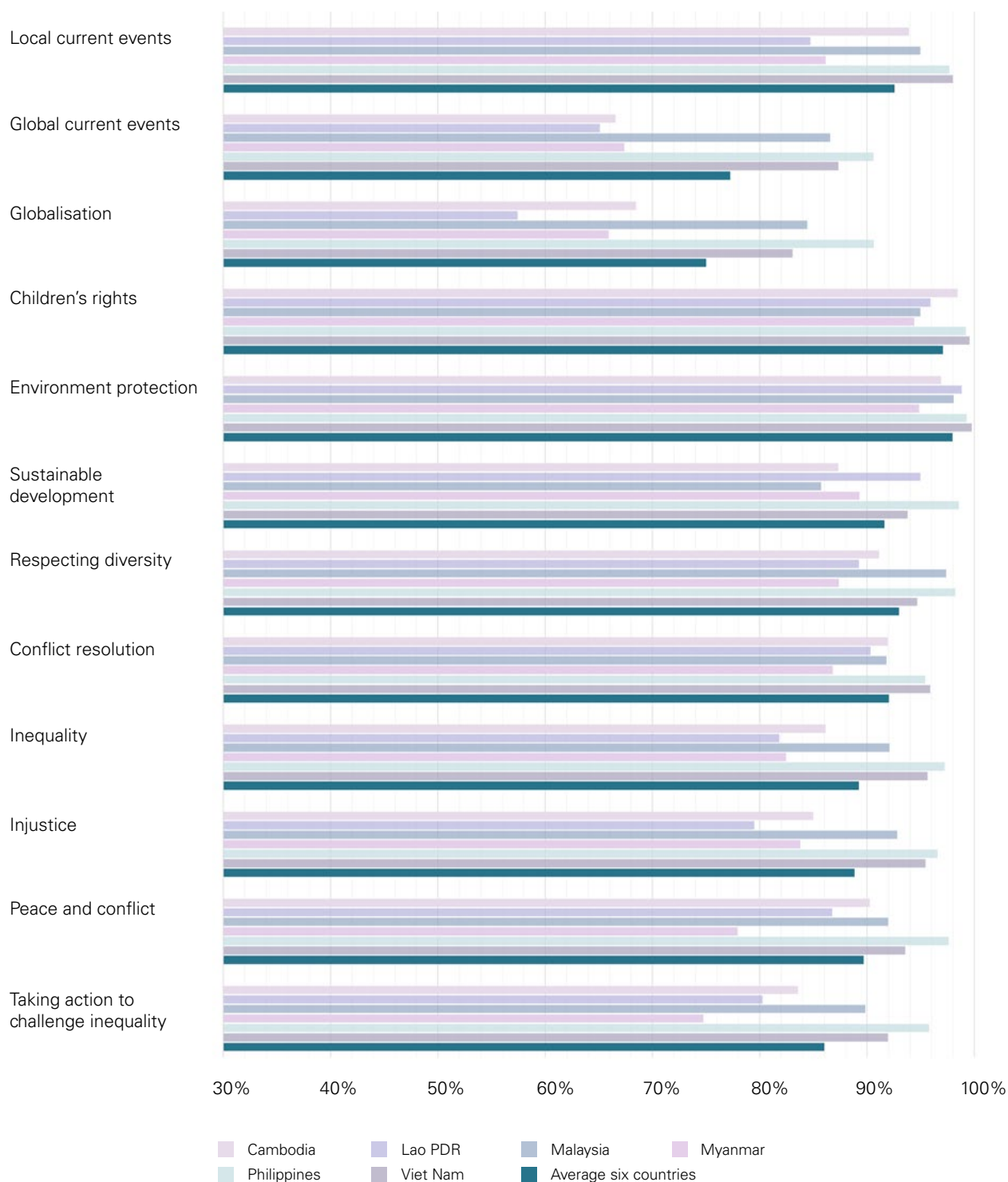
Almost all teachers reported the highest levels of confidence for protecting the environment (98%), *children's rights* (97%) and *respecting diversity* (93%), and the lowest levels of confidence for *globalization* (75%). Generally, across all countries, teachers felt more confident teaching about local events than global events.

4.5 Teachers' perception of global citizenship education

4.5.1 Attitudes about children's global citizenship skills, values and characteristics

Teachers were asked how important they thought it was for young children to develop skills, values and characteristics related to global citizenship, as defined in SEA-PLM. Response categories 'Very important' and 'Quite important' are aggregated into one category and represented in Figure 4.23.

Figure 4.22: Questionnaire item – teacher's attitudes about children's global citizenship skills, values and characteristics

How important is it for young people to develop the following skills, values and characteristics?

Please tick **one** box on **each line**.

		Very important	*Quite important*	*Not very important*	*Not at all important*
a)	Feeling connected to other people outside their family, community or country	01	02	03	04
b)	Being interested in the world	01	02	03	04
c)	Caring about the problems of people outside their community or country	01	02	03	04
d)	Wanting to make the world a better place	01	02	03	04
e)	Acting to make the world a better place	01	02	03	04
f)	Encouraging others to act to make the world a better place	01	02	03	04
g)	Thinking that all people should be treated equally	01	02	03	04
h)	Willing to challenge injustice	01	02	03	04
i)	Acting to address inequality	01	02	03	04
j)	Accepting that people are different	01	02	03	04
k)	Seeing how local problems have global consequences	01	02	03	04
l)	Valuing traditional histories and cultures other than their own	01	02	03	04

Figure 4.23: Percentage of teachers who considered children's global citizenship skills, values and characteristics to be important
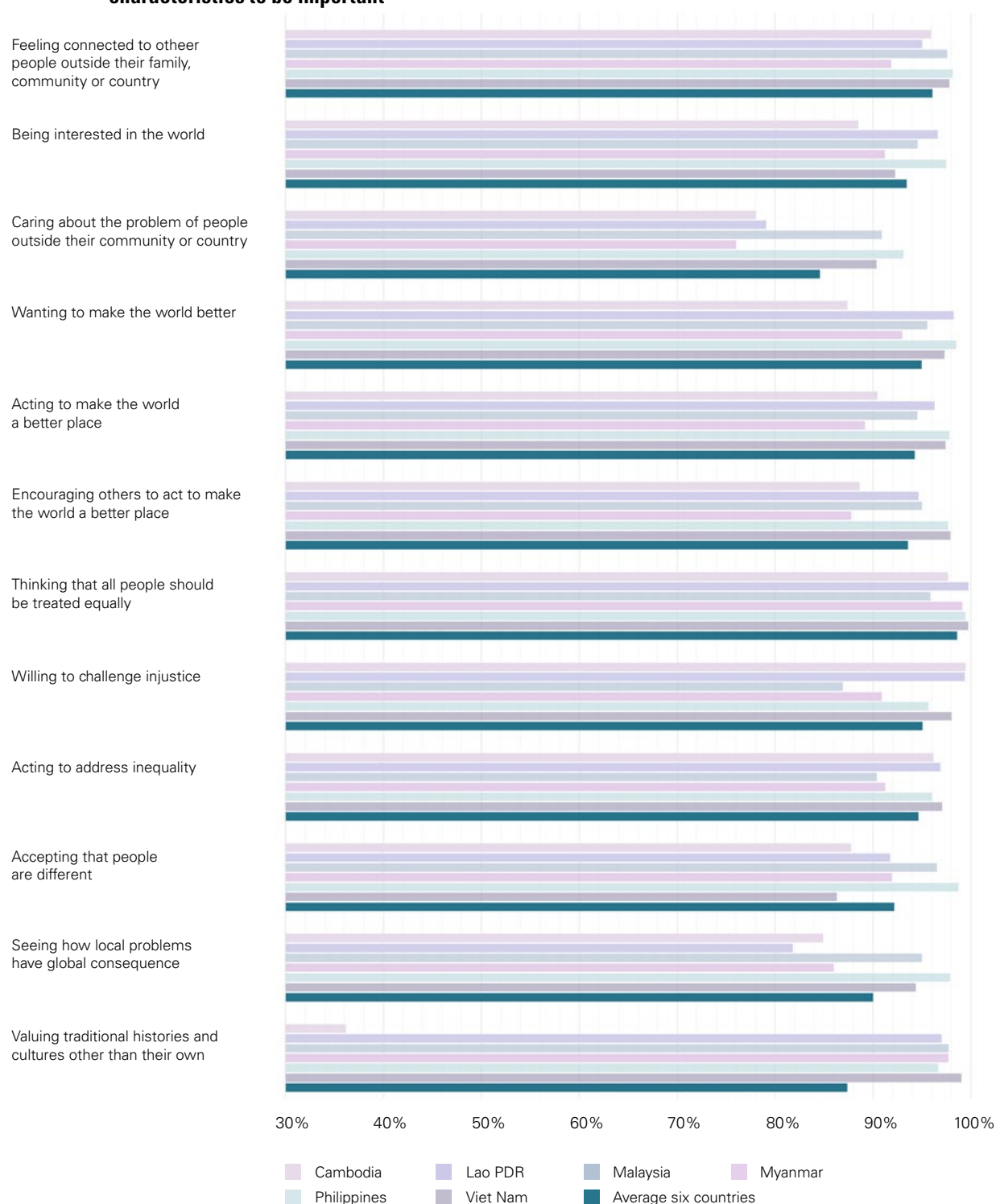
Across the 6 countries, a large majority of teachers (85%+) identified that they highly valued all of the skills and values, regardless of whether they were about social factors, valuing other cultures or making the world better. The most-valued was *treating people equally* (99%), and this was relatively consistent across most countries. The least-valued was *caring about problems of people outside their community or country* (85%). Across countries there were reasonable similarities in the percentage of teachers valuing the different skills and values.

4.5.2 Teacher's attitudes about children's global citizenship learning at school

Teachers were also asked how important they thought certain topics were for Grade 5 children to learn at school. Response categories 'Very important' and 'Quite important' are aggregated into one category and represented in Figure 4.25.

Figure 4.24: Questionnaire item – teacher's attitudes about children's global citizenship learning at school

How important is it for \<Grade 5> students to learn at school about each of the following content areas?

Please tick **one** box on **each line**.

	Very important	Quite important	Not very important	Not at all important
a) What is happening in countries near their own	☐ 01	☐ 02	☐ 03	☐ 04
b) What is happening in the world	☐ 01	☐ 02	☐ 03	☐ 04
c) How things that happen in other countries affect \<Country of test>	☐ 01	☐ 02	☐ 03	☐ 04
d) Understanding people that have a different \<ethnicity/race> to them	☐ 01	☐ 02	☐ 03	☐ 04
e) How to solve \<disagreements> with classmates peacefully	☐ 01	☐ 02	☐ 03	☐ 04
f) How to protect the environment	☐ 01	☐ 02	☐ 03	☐ 04
g) How they can help to solve problems in their own \<community>	☐ 01	☐ 02	☐ 03	☐ 04
h) Other languages spoken in their country	☐ 01	☐ 02	☐ 03	☐ 04
i) Languages spoken in other countries	☐ 01	☐ 02	☐ 03	☐ 04

Across the 6 countries, a large majority of teachers valued all topics very highly (around 90%). The most-valued topics were how to solve disagreements with *classmates peacefully* (98%) and *how to protect the environment* (99%). On average across the 6 countries, the least-valued topic was *languages spoken in other countries* (73%).

Figure 4.25: Percentage of teachers who considered that children's global citizenship learning at school is important
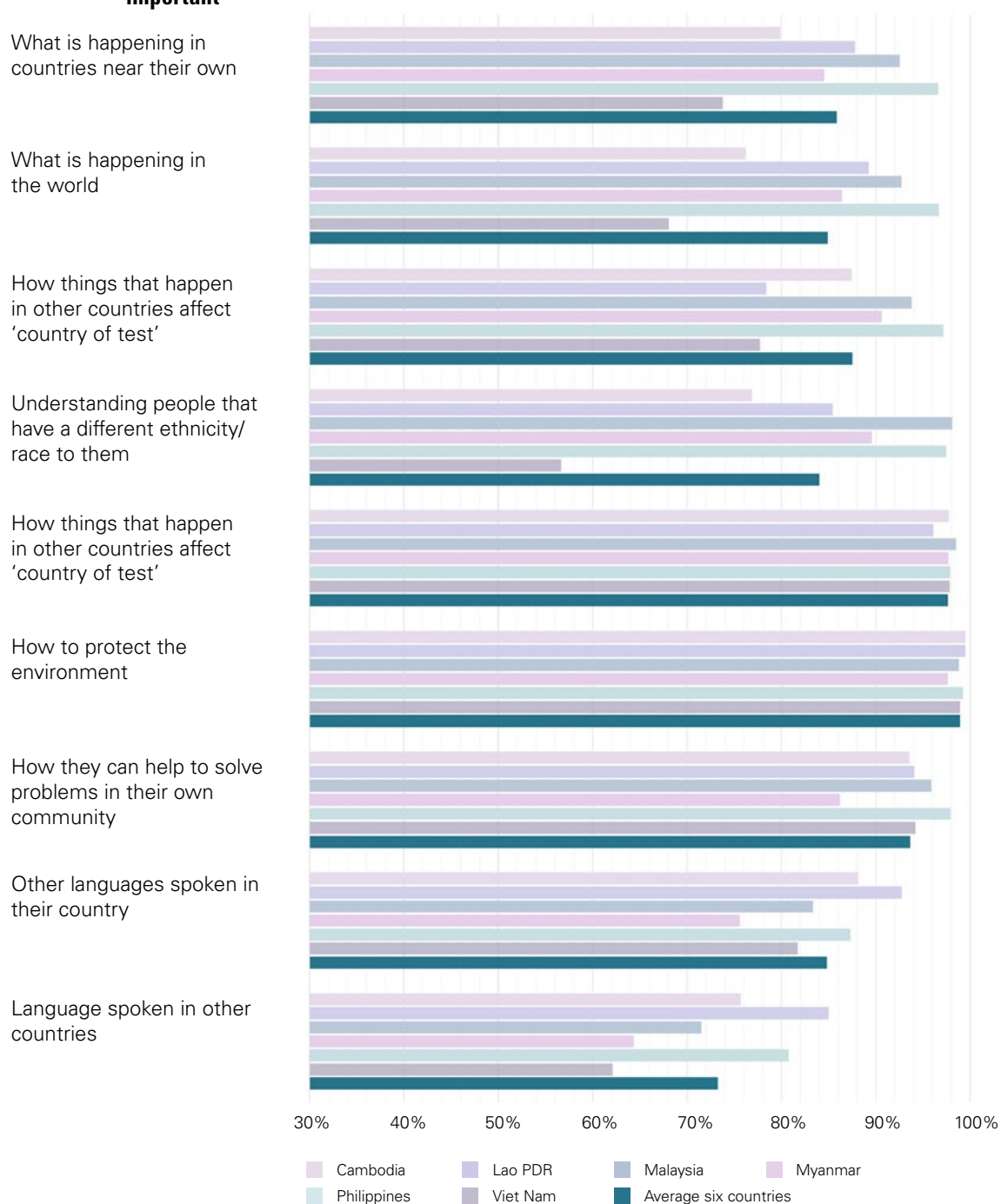
Between countries there were clear differences in the value teachers placed on different topics. Understandably, teachers from different countries may place different values on particular topics, and may have differing priorities. However, it seems that all teachers in all countries placed the most emphasis on protecting the environment.

4.5.3 Perception of children's opportunities for global citizenship education at school

All Grade 5 teachers in the sample schools were asked whether children participate in activities related to global citizenship in a typical school year. Figure 4.27 presents the 'Yes' category.

Figure 4.26: Questionnaire item – perception of children's opportunities for global citizenship education at school

Below is a list of activities that may be carried out by the school possibly in cooperation with external groups / organisations.

In a typical school year, do <Grade 5> students take part in any of these activities?

Please tick **one** box on **each line**.

	Yes	No
a) Activities related to environmental sustainability (e.g. <energy and water saving, recycling>)	☐ 01	☐ 02
b) Activities to help poor or underprivileged people or groups	☐ 01	☐ 02
c) Activities working with students from other schools in <country of test>	☐ 01	☐ 02
d) Activities working with students from another country	☐ 01	☐ 02
e) Activities related to improving facilities for the <local community> (e.g. <public gardens, libraries>)	☐ 01	☐ 02

Across the 6 countries, the majority of teachers indicated that Grade 5 children participated in school activities related to *environmental sustainability* (69%) and *helping poor or underprivileged people or groups* (62%). About half of teachers indicated that children participated in school activities relating to *other children in their country* (45%) and *improving local facilities* (57%). Very few reported that children participated in school activities related to *children in other countries* (10%).

Figure 4.27: Percentage of teachers who reported that global citizenship activities took place in a regular school year
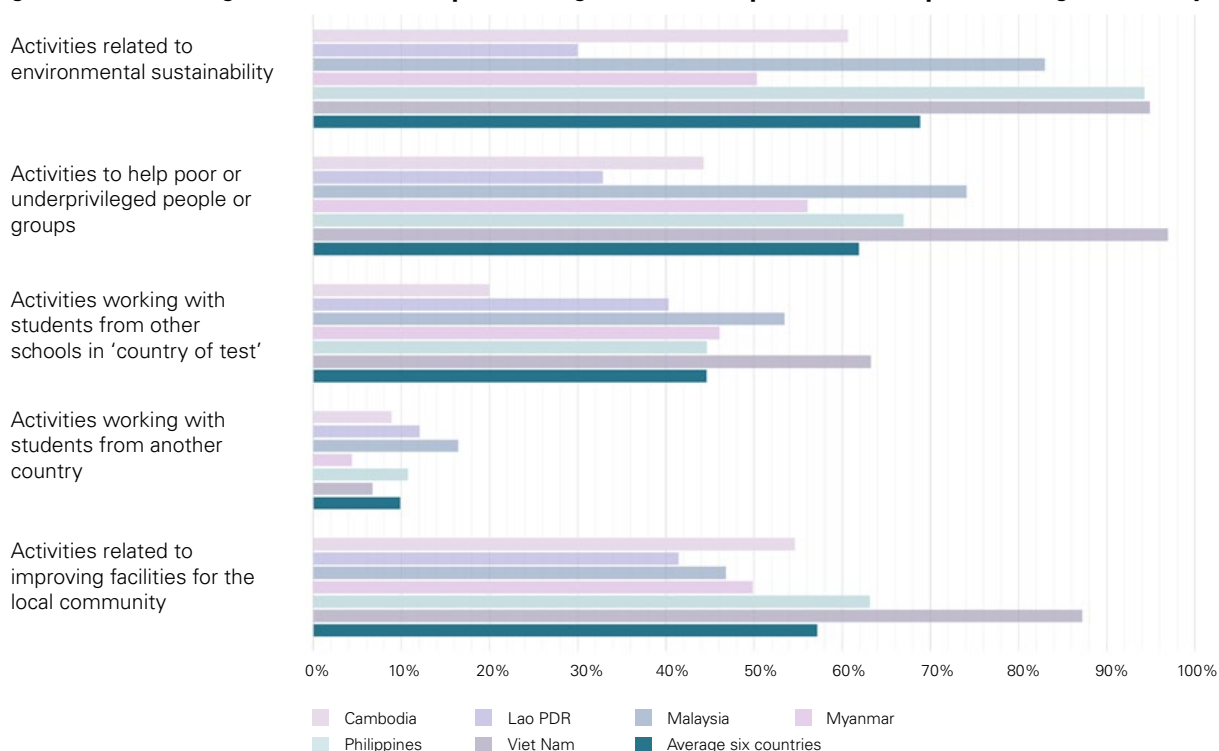
4.6 Key findings and emerging themes for global citizenship education

The SEA-PLM 2019 global citizenship questionnaire provides much-needed insights into global citizenship education at the primary level in participating countries. The SEA-PLM 2019 data, based on the responses of Grade 5 children and teachers, provide valuable information about the attitudes, values and behaviours of Grade 5 children and teachers across a range of global citizenship topics and concepts.

4.6.1 Key findings

- Environmental issues (such as climate change and environmental pollution) and local topics related to the classroom environment (such as solving disagreements with classmates and solving problems in the community) appeared to be the most important and valued global citizenship topics and concepts learned at primary school. Environmental issues at primary level are heavily embedded in both science and social studies, and are explicitly covered in the Grade 5 official programmes across the countries. Other topics that go beyond the classroom – such as interpersonal issues and global and regional events – may receive less attention, and lessons on these may occur more naturally, or less explicitly, at primary level.

- There were consistencies in the perceptions of most of the children and teachers about the level at which global citizenship topics were being taught and learned at school. There were also general consistencies between children and teachers in the value they placed on topics. For example, across countries, when children reported a high level of value for a particular local issue, teachers were likely to declare a similar level of value for the same issue.

- The majority of children reported that they participated in school activities that relate to global citizenship education, such as communicating ideas to their classmates, voting for class leader, and participating in an activity to make the school more environmentally friendly. Less than half the children reported experience speaking in an organized debate, joining in classroom discussions about problems in the world and becoming a candidate for class leader. This provides insight into the global citizenship activities that children found engaging during class time, but also identifies some room for improvement in promoting more activities related to global citizenship within schools.

- Both children and teachers valued global citizenship education to a greater extent than they reported that the topics were covered in the classroom. Further, more children indicated they will or might engage with global citizenship activities in the future than were currently engaging in those activities, which suggests that children would engage more should they be given the opportunity.

- Most of the teachers indicated they were prepared for and felt confident teaching almost all topics listed in the questionnaire. Children's rights and respecting diversity were the topics teachers said they were most prepared for during pre-service training, and were also the topics teachers felt most confident teaching. Grade 5 teachers were consistently less prepared for teaching globalization (34% 'very well') and challenging inequality (42% 'very well') and also felt less confident teaching them. Across countries, teachers were most confident with the topics most covered in pre-service training. This may represent a relationship between training and confidence. There was also consistency across countries in teachers' perspectives, with reasonable similarities in the topics that are valued.

- Responses from the questionnaire reinforce the conclusions from the SEA-PLM official curriculum review by reporting that most of the Grade 5 children and teachers in most of the countries have a better grasp of local issues than of regional and global ones. More specifically, the questionnaire highlighted that, in all countries, less than 60% of Grade 5 children identified themselves as Asian. This finding from the children's perspective is supported by the responses of Grade 5 teachers, who generally reported having less confidence in cross-national attitudes and values compared with local community and classroom issues.

4.6.2 Emerging themes

- By encouraging knowledge exchange and providing research, the SEA-PLM 2019 global citizenship module supports regional and national dialogue, and efforts on global citizenship concepts, topics and skills across basic education and beyond. Countries and stakeholders can use this report and the released framework and questionnaires to acknowledge, credit and increase national capacities and research across the Southeast Asian region. Systems, schools, children and practitioners can focus on global citizenship education, as outlined in the Sustainable Development Goal target SDG 4.7.1, which refers to (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment. SEA-PLM 2019 findings support the monitoring of such system-level indicators and provide a new source of information for policy implementation within schools and classrooms.

- The children's responses in SEA-PLM 2019 showed their views on a range of topics, rather than a comprehensive understanding of global citizenship. Children of this age are naturally more aware of local issues within their community than they are of global matters and events outside their environment. In basic education, children's development of regional and global values relies on the efforts of teachers, schools and communities to encourage citizenship values and skills.

- SEA-PLM 2019 identified variation within and across countries in the value that teachers and children place on global citizenship. Such variation may be explained by differences in official curriculum and materials, and teachers' and school leaders' practices. Developing more school-based community activities with underlying objectives related to citizenship could be beneficial in promoting topics related to global citizenship. Providing equal opportunities to develop citizenship at primary level may be a crucial step to undertake before adding regional and global identities and concepts.

- Findings in this report may lead to systems, schools and practitioners reflecting on how to better frame regional and global concepts at the end of primary level while keeping national citizenship values and cultural beliefs as core goals. At the end of primary level, countries may have an interest in schools, teachers and children progressively increasing their awareness of regional issues and dynamics outside of the local community. Activities to support increased awareness may be encouraged within existing learning activities in fundamental domains (for example, 'Exploring the world' in reading and mathematics) and/or within social and citizenship areas. Further explicit development of global citizenship subjects may be beneficial in the compulsory curriculum at the secondary level and beyond.

Chapter 5

Findings and recommendations

Quality education and learning is a fundamental right for every child and a strategic, smart investment for individuals, families, governments and societies. Guaranteeing children a solid foundation in learning is an essential building block in achieving prosperity, equity, and peaceful and sustainable societies in Southeast Asia. The SEA-PLM programme strengthens governments' capacity to identify children's learning outcomes in reading, writing and mathematics, and to use this information to create better conditions for equitable learning. The programme also collects data on attitudes and values related to global citizenship education and concepts.

The SEA-PLM 2019 Main Regional Report aims to inform policy dialogue around learning improvement throughout the region, which is even more relevant now owing to the impact of COVID-19 on children's education. SEA-PLM provides a space for participating countries to define and confirm key priorities and strategies to improve students' learning. Participating countries and partners are strongly encouraged to use the SEA-PLM 2019 datasets to analyse and reflect on the appropriateness and effectiveness of national and regional policy frameworks, implementation plans and practices, and monitoring and feedback strategies. SEA-PLM 2019 sheds new light on critical issues such as curriculum development and implementation, resource allocation and transformation, school practices and teacher development.

SEA-PLM 2019 data can also be used to provide evidence about the learning and equity challenges of different sub-groups of children and countries. Participating countries can use this information to target support at improving learning outcomes among the most disadvantaged and vulnerable children at regional, national and sub-national levels.

5.1 Key findings

The new SEA-PLM proficiency scales provide solid benchmarks for the Southeast Asian region to examine what specific groups of Grade 5 children know and can do in reading, writing and mathematics. SEA-PLM 2019 also gauges children's and teachers' values and attitudes about global citizenship concepts, behaviours and activities, which are becoming more and more important for thriving in the 21st century world.

Children's performance on the SEA-PLM 2019 proficiency scales clearly demonstrates large differences in learning outcomes between countries and between groups of students within each country. The outcomes also reveal substantial need and room for improvement in supporting students to achieve the national, regional and international standards of learning expected at the end of primary education.

More specifically, SEA-PLM 2019 reveals stark differences between students' learning outcomes according to various profiles and characteristics, such as gender, socioeconomic status, language spoken at home, preschool experience and early developmental skills. It should be noted that some of these disadvantages may be combined and thus the most vulnerable children face multiple deprivations and factors that negatively affect their learning (for example, boys from poorer households in remote rural areas). The SEA-PLM 2019 data also highlight that in addition to students' home environment, the resources and contexts of schools and classrooms have a substantial impact on learning.

5.2 Recommendations to improve learning

SEA-PLM 2019 presents a wide range of policy recommendations to facilitate improvement of students' learning, with a strong equity focus, across the 6 participating countries in the region.

The following 6 priority recommendations address how SEA-PLM 2019's key findings and evidence can be translated into specific policies. Aligned with SEA-PLM programme goals, the recommendations focus on improving the foundational learning and skills of all students. Some recommendations target system-level changes, while others focus on the practices of schools and communities. See Box 5.1 for a summary.

The recommendations align with Sustainable Development Goal 4 – Education 2030 (SDG 4), as well as relevant SEAMEO and ASEAN plans and frameworks. They are also consistent with existing national and regional commitments, and with evidence and recommendations from other initiatives, such as the 5-year Progress Review of SDG 4 in the Asia-Pacific (UNESCO and UNICEF, forthcoming). The recommendations also take into account other existing global and regional evidence, including from participating SEA-PLM countries.

Encouraging fruitful collaboration and trust between the different stakeholders at all levels – regional, national, community and school – is crucial for creating real improvement in equitable learning outcomes. In light of the current COVID-19 pandemic and the forthcoming recovery phase, these recommendations are even more relevant and more urgent.

Box 5.1: Summary of the 6 priority recommendations

Recommendation 1: Prioritize early learning in disadvantaged contexts

Recommendation 2: Guarantee a solid start in primary education through on-time enrolment and progression for all children, especially the disadvantaged.

Recommendation 3: Ensure explicit and progressive learning standards in the curriculum of basic education, including in digital and blended learning options

Recommendation 4: Support motivated and experienced teachers with conducive teaching and positive school environments

Recommendation 5: Use data, monitoring and research to achieve better learning environments

Recommendation 6: Participate in and support SEA-PLM 2023 activities, including the opportunities and challenges arising from the COVID-19 pandemic

Recommendation 1: Prioritize early learning in disadvantaged contexts

- Expand provision of at least one to 1 year of free pre-primary education to children in disadvantaged communities (for example, remote rural areas and informal urban settlements) to equip them with a solid foundation in cognitive, physical and socio-emotional skills.

- Ensure smooth transition to primary education, and enrolment at the right age.

- Support parental education and multi-sectoral early childhood development services (including health, nutrition, water and sanitation, and poverty alleviation mechanisms).

- Support specialized training programmes for early years' educators.

- Provide adequate investment in early learning systems, proportionate to the investment in primary education.

- Promote mother tongue–based multilingual education in the early grades of pre-primary.

- Continue to make early learning a priority during and after the COVID-19 pandemic. Continue pre-primary services and protect their budgets.

Recommendation 2: Guarantee a solid start in primary education through on-time enrolment and progression for all children, especially the disadvantaged

- Formalize and guarantee 9 years of free and compulsory basic education for all children (aligned with SDG 4).

- Increase, or at least maintain and protect, the volume and proportion of the overall education budget at the internationally recommended level (4% to 6% of GDP, or 15% to 20% of total public expenditure).

- Allocate sufficient resources to basic education and ensure smart investment to implement equity-focused programmes, even if they require additional costs to accommodate hard-to-reach children.

- Eliminate direct and indirect costs incurred by the poorest households, with support for students, households and/or schools (for example, scholarships, cash transfers and school grants).

- Establish better mechanisms to support all schools and teachers in their pedagogic and inclusive practices in classrooms. This includes continuing the process to abolish grade repetition, and supporting children with learning challenges.

- Work with communities, teachers and principals to eliminate gender stereotypes and address gender gaps in learning processes and outcomes, with emphasis on underperforming boys and girls, depending on the local contexts.

- Provide special support to schools in disadvantaged communities (often small schools in remote rural areas). Ensure equitable allocation of resources (including topped-up school grants, experienced teachers, textbooks, facilities and other materials).

Recommendation 3: Ensure explicit and progressive learning standards in the curriculum of basic education, including in digital and blended learning options

- Define clear student learning standards that integrate all components of the learning processes for each key domain and at every stage of primary education. Ensure curriculum frameworks and materials, teacher standards and assessment frameworks are closely aligned with these standards.

- Strengthen mechanisms that monitor student learning, including system-wide and school-level assessment to understand the gap between expected standards and actual student learning, with a focus on reading, writing and mathematics. Understanding children's learning progression better equips parents, teachers, schools and education systems to support targeted intervention strategies for all children to improve their learning outcomes.

- Prepare teachers and school leaders to better understand the use of standards in their teaching practices and ensure that teaching is targeted to the student level.

- Establish clear and consistent policies about the language of instruction. Children who are taught in the same language throughout their primary education years perform better in reading, writing and mathematics.

- Support the introduction of learning intervention strategies in the early years of education. Interventions should include specialized training programmes for teachers to assist all children to develop strong reading comprehension skills, especially children from linguistically diverse communities.

- Prioritize and adequately finance pre-primary education programmes for all children, but especially for children from disadvantaged backgrounds. Programmes should incorporate strong parental involvement in children's early learning, with a focus on language development.

- Integrate and teach concepts and knowledge associated with global citizenship, within children's immediate environments and communities. This global citizenship education is associated with stronger transversal skills, such as communication, empathy, respect for diversity, decision-making and self-management.

- Support teachers to implement digital literacy in their teaching and to introduce digital instruction and technologies in (online and offline) classes, especially in remote and disaster-prone communities.

Recommendation 4: Support motivated and experienced teachers and positive school environments

- Attract, retain and invest in teachers and school leaders who have proven to have (or have the potential to develop) the right teaching competencies and knowledge. Continue to evaluate the quality of instruction and teachers' aspirations administratively and technically. Provide feedback and support in a timely and relevant manner to promote realistic improvement, professional development and access to instructional resources.

- Support schools, teachers and supervisors with incentives and in-service and participative training to target identified gaps and needs, and encourage curriculum evolution. Poor teacher training is linked to unclear programme objectives, overreliance on textbooks, and weak assessment and reporting. Provide particular support for new teachers. Growing evidence indicates that in-service training and support for new teachers is more effective than support later on in their careers.

- Support school leaders and supervisors to encourage and monitor inclusion and wellbeing, including in digital and blended education formats. In particular, ensure principals and teachers are prepared and willing to address the diversity of learners (for example, special needs, disabilities and learning difficulties) and specific environments (for example, multi-grade and multilingual classrooms).

- Select committed teachers for the first 3 years of primary education, and support them to excel in responding to the learning needs of all students.

- Support teachers to develop project-based and community-based pedagogies and to link these with academic learning goals (such as reading, writing and mathematics). Support teachers to develop children's transversal skills (for example, problem-solving, critical thinking and creativity).

- Develop digital literacy and technology education for teachers and principals. Facilitate pre-service and in-service professional development in this area, access to instruction materials and administrative support.

Recommendation 5: Use data, monitoring and research to achieve better learning

- Develop and support learning assessment policies and mechanisms to cover basic education priorities and progress at the classroom and individual level. Use appropriate assessment strategies, mechanisms and reporting activities, as well as support mechanisms in schools, districts and regions, for better accountability and use of data.

- Prioritize the long-term capacity of education ministries and the individuals serving within them, so that they can generate and use evidence to improve policy implementation and support for schools and teachers.

- Support and coordinate research, peer learning and knowledge exchange to inform all stakeholders about curriculum progress – intended, implemented and achieved – and new trends.

- Use SEA-PLM 2019 results as a key baseline to measure learning progress against SDG 4.1, Sector plans, and other national and regional benchmarks (for example, GPE indicators), and as a baseline measure of student learning prior to the COVID-19 pandemic.

- Use the evidence, framework, curriculum audit and questionnaires from the SEA-PLM 2019 global citizenship module to contribute to the debate about and monitoring of SDG 4.7.

- Unpack SEA-PLM 2019 national data to identify disadvantaged children and schools, and to assess the associated differences in resources, practices and learning outcomes in schools.

Recommendation 6: Participate in and support SEA-PLM 2023 activities, including the opportunities and challenges arising from the COVID-19 pandemic

- Support the SEA-PLM programme and its 3 aims: (i) generate comparative data on student learning competencies and contexts; (ii) promote the use of data and findings from system to school level; and (iii) strengthen cross-border collaboration and national capacities to improve learning for all.

- Participate in the new cycle of SEA-PLM (SEA-PLM 2023) to generate comparisons in learning outcomes over time. SEA-PLM 2019 can provide an authentic baseline of learning and system-level progress before the COVID-19 pandemic.

- Agree on a regional agenda for the SEA-PLM framework that can generate meaningful cyclical data and monitor the following 3 targets over time and across the region: i) all children enjoy an appropriate and high-quality basic education journey; ii) all children achieve at least adequate levels of proficiency in reading, writing and mathematics throughout basic education years; and iii) all children develop good socio-emotional skills and positive attitudes towards education, which reinforces their lifelong learning and overall wellbeing.

5.3 Looking ahead

SEA-PLM 2019 participating countries have ambitious plans to improve learning and equity and to achieve the SDG 4 education agenda. SEA-PLM 2019 data show that learning for all children is still a far-off goal, as are other related education targets.

Countries face aggravated challenges ahead owing to the current COVID-19 pandemic and the subsequent economic downturn in the region. Compensating for several months of school closures and unplanned digital and blended learning will also require robust efforts to 'come back better'. However, the COVID-19 pandemic has brought opportunities to experiment with hybrid and flexible learning, and organizational pathways in education delivery and services. Several of these innovations can inspire and influence reform agendas.

Continuing a positive path towards learning improvement, countries and education stakeholders will thus require clear equity learning strategies, better implementation capacity, sufficient financial and human resources, and sturdy monitoring and improvement loop mechanisms. In this context, as part of this mandate, the SEA-PLM programme proposes that all countries in Southeast Asia, and their allies, continue this work to improve the capacity to measure learning outcomes, use data, and allow for peer exchange on policies and practices.

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Appendix 1 - Chapter1

Table 1.1: Classification of questions on SEA-PLM 2019 reading proficiency scale by cognitive process

Bands	Cognitive process				Totals
	Recognize Words	Locate	Interpret	Reflect	
Band 6 and above		1	4	1	5
Band 5		7	10	2	20
Band 4	1	7	4	1	13
Band 3		5	3	1	9
Band 2 and below	4				4
Total	**5**	**20**	**21**	**5**	**51**

Table 1.2: Format of questions on SEA-PLM reading proficiency scale by response type

Bands	Response type		Totals
	Constructed Response	Multiple Choice	
Band 6 and above	3	2	5
Band 5	2	18	20
Band 4	3	10	13
Band 3		9	9
Band 2 and below		4	4
Total	**8**	**43**	**51**

Table 1.3: Classification of questions on SEA-PLM mathematical proficiency scale by cognitive process

Band	Cognitive process			Totals
	Apply	Interpret	Translate	
Band 9 and above	2			2
Band 8	1	2	4	7
Band 7	2	1	2	5
Band 6	5	2	4	11
Band 5	4	6	6	16
Band 4	4	1		5
Band 3	4	2	1	7
Band 2 and below	1			1
Total	**23**	**14**	**17**	**54**

Table 1.4: Classification of questions on SEA-PLM mathematical proficiency scale by content strand

Band	Content Strand			Totals
	Chance & Data	Measurement & Geometry	Number & Algebra	
Band 9 and above	1	1		2
Band 8	2	1	4	7
Band 7	2	1	2	5
Band 6	2	6	3	11
Band 5	2	5	9	16
Band 4	1	2	2	5
Band 3	1	5	1	7
Band 2 and below			1	1
Total	**11**	**21**	**22**	**54**

Table 1.5 Format of questions on SEA-PLM 2019 mathematical proficiency scale

Band	Response Type		Totals
	Constructed Response	Multiple Choice	
Band 9 and above	2		2
Band 8	7		7
Band 7	1	4	5
Band 6	2	9	11
Band 5	5	11	16
Band 4	1	4	5
Band 3		7	7
Band 2 and below		1	1
Total	**18**	**36**	**54**

Table 1.6 Classification of writing processes in SEA-PLM 2019

Process	Number of criteria	Percentage of criteria
Generating Ideas	8	23%
Controlling text structure and organization	5	15%
Managing coherence	4	12%
Using vocabulary	5	15%
Controlling syntax and grammar	7	20%
Other language-specific features	5*	15%
Total	**34**	**100%**

*per language

Table 1.7 Text type of writing tasks on the SEA-PLM 2019 writing scale

Context	Number of tasks
Personal	1
Local	4
Wider World	5

Table 1.8 Population and sample information

Country	Total population grade 5	Total population exclusion	Total schools exclusion	Total desired target schools	Population exclusion rate	School exclusion rate	Total desired target population
Cambodia	332,677	67	5	7,310	0.02%	0.07%	332,610
Lao PDR	149,030	1,012	310	7,074	0.68%	4.20%	148,018
Malaysia	450,674	1,825	503	7,362	0.40%	6.40%	448,849
Myanmar	948,589	43,600	8,198	38,011	4.60%	17.74%	904,989
Philippines	2,316,663	113,206	8,736	42,411	4.89%	17.08%	2,203,457
Viet Nam	1,391,981	57	52	15,093	0.004%	0.34%	13,919,24

Table 1.9 Planned and surveyed schools, classes and students participating rate

Country	Total Sampled Schools	Number of Excluded Schools	Total Eligible Schools	Non-Participating Schools without replacements	Schools with lower than 50% Student Participation Rate	Participating Sampled Schools	Participating First Replacement Schools	Participating Second Replacement Schools	Number of Selected Classes	Number of Participating Classes	Number of Participating Students	Number of Non-Participating Students
Cambodia	177	0	177	0	0	177	0	0	177	177	5,396	531
Lao PDR	236	3	233	0	0	233	0	0	233	233	4,698	111
Malaysia	160	0	160	0	0	160	0	0	160	160	4,479	257
Myanmar	203	1	202	0	1	201	0	0	201	201	5,694	119
Philippines	176	3	173	0	0	173	0	0	173	173	6,083	222
Viet Nam	150	0	150	0	0	149	1	0	150	150	4,837	29

Table 1.10 Surveyed schools, classes and students response rate

Country	Unweighted School Response Rate - Sampled Schools only	Unweighted School Response Rate - Sampled and Replacement Schools	Unweighted Class Response Rate	Unweighted Student Response Rate	Unweighted Overall Response Rate - Sampled Schools only	Unweighted Overall Response Rate - Sampled and Replacement Schools	Weighted School Response Rate - Sampled Schools only	Weighted School Response Rate - Sampled and Replacement Schools	Weighted Class Response Rate	Weighted Student Response Rate	Weighted Overall Response Rate - Sampled Schools only	Weighted Overall Response Rate - Sampled and Replacement Schools
Cambodia	100.0%	100.0%	100.0%	91.0%	91.0%	91.0%	100.0%	100.0%	100.0%	90.9%	90.9%	90.9%
Lao PDR	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%
Malaysia	100.0%	100.0%	100.0%	94.6%	94.6%	94.6%	100.0%	100.0%	100.0%	94.5%	94.5%	94.5%
Myanmar	99.5%	99.5%	100.0%	98.0%	97.5%	97.5%	100.0%	100.0%	100.0%	98.6%	98.6%	98.6%
Philippines	100.0%	100.0%	100.0%	96.5%	96.5%	96.5%	100.0%	100.0%	100.0%	96.5%	96.5%	96.5%
Viet Nam	99.3%	100.0%	100.0%	99.4%	98.7%	99.4%	99.4%	100.0%	100.0%	99.4%	98.8%	99.4%

Appendix 2 - Chapter2

Table 2.1 Proportion of children at Grade 5 by reading band by participating country

	Band 2 and below		Band 3		Band 4		Band 5		Band 6 and above	
Cambodia	24	(1.26)	24	(1.02)	25	(0.76)	16	(0.93)	11	(1.01)
Lao PDR	50	(1.74)	26	(1.23)	16	(0.91)	6	(0.55)	2	(0.41)
Malaysia	5	(0.71)	7	(0.91)	12	(1.07)	18	(0.87)	58	(2.06)
Myanmar	19	(1.41)	26	(0.91)	28	(1.02)	16	(0.94)	11	(0.78)
Philippines	27	(1.51)	29	(1.19)	22	(0.98)	12	(0.88)	10	(1.21)
Viet Nam	**1**	**(0.29)**	2	(0.43)	5	(0.58)	10	(0.79)	82	(1.42)
Average six countries	21	(0.51)	19	(0.40)	18	(0.37)	13	(0.34)	29	(0.51)

() Standard errors appear in parentheses.
In bold - results based on fewer than 30 students and/or 5 schools should be interpreted with caution.
Because results are rounded to the nearest whole number some totals may appear inconsistent.

Table 2.2 National reading average and standard deviation by participating countries

	Mean		Standard deviation	
Cambodia	290	(0.82)	22	(0.43)
Lao PDR	275	(0.78)	21	(0.42)
Malaysia	319	(1.13)	24	(0.64)
Myanmar	292	(0.78)	20	(0.37)
Philippines	288	(0.91)	21	(0.59)
Viet Nam	336	(0.88)	22	(0.65)
Average six countries	300	(0.37)	30	(0.21)

() Standard errors appear in parentheses.

Table 2.3 National percentile reading average by participating countries

	5th Percentile	10th Percentile	20th Percentile	30th Percentile	40th Percentile	50th Percentile	60th Percentile	70th Percentile	80th Percentile	90th Percentile	95th Percentile
Cambodia	254 (1.55)	262 (1.08)	271 (0.93)	278 (0.97)	285 (0.95)	291 (1.05)	296 (1.05)	302 (0.94)	309 (0.96)	318 (1.22)	325 (1.32)
Lao PDR	242 (1.06)	249 (1.13)	258 (1.01)	264 (0.97)	269 (1.03)	274 (0.99)	279 (0.95)	285 (1.05)	293 (1.03)	302 (1.27)	310 (1.43)
Malaysia	275 (1.92)	286 (2.11)	300 (1.85)	309 (1.67)	316 (1.16)	322 (1.04)	327 (1.09)	332 (0.89)	338 (1.09)	347 (1.14)	353 (1.20)
Myanmar	259 (1.41)	266 (1.13)	275 (0.86)	281 (1.01)	286 (0.97)	291 (0.81)	297 (0.81)	302 (0.88)	309 (0.96)	318 (1.12)	325 (1.12)
Philippines	257 (0.93)	263 (0.99)	270 (0.82)	275 (0.87)	280 (0.86)	286 (0.92)	291 (1.17)	297 (1.13)	305 (1.46)	316 (1.90)	325 (2.06)
Viet Nam	299 (2.51)	308 (1.70)	318 (1.25)	326 (1.09)	332 (0.95)	337 (0.93)	343 (0.84)	348 (0.78)	355 (0.77)	364 (0.75)	371 (1.07)
Average six countries	264 (0.67)	272 (0.58)	282 (0.48)	289 (0.46)	295 (0.40)	300 (0.39)	306 (0.41)	311 (0.39)	318 (0.44)	328 (0.52)	335 (0.57)

() Standard errors appear in parentheses.

Table 2.4 Proportion of children's national performance in reading against SDG 4.1.1a and SDG 4.1.1b

	At or below Band 2 (Below SDG 4.1.1a)	Band 3, 4 or 5 (At or above SDG 4.1.1a but below SDG 4.1.1b)	Band 6 or above (At or above SDG 4.1.1b)
Cambodia	24 (1.26)	65 (1.16)	11 (1.01)
Lao PDR	50 (1.74)	48 (1.61)	2 (0.41)
Malaysia	5 (0.71)	37 (1.75)	58 (2.06)
Myanmar	19 (1.41)	70 (1.29)	11 (0.78)
Philippines	27 (1.51)	63 (1.59)	10 (1.21)
Viet Nam	1 (0.29)	18 (1.29)	82 (1.42)
Average six countries	21 (0.51)	50 (0.60)	29 (0.51)

() Standard errors appear in parentheses.

Table 2.5 Proportion of children at Grade 5 by writing band by participating country

	Band 1 and below		Band 2		Band 3		Band 4		Band 5		Band 6		Band 7		Band 8 and above	
Cambodia	50	(1.53)	14	(0.57)	14	(0.66)	10	(0.68)	7	(0.54)	3	(0.47)	1	(0.25)	**1**	**(0.18)**
Lao PDR	52	(1.56)	11	(0.87)	12	(0.82)	11	(0.83)	8	(0.73)	4	(0.41)	1	(0.25)	1	(0.34)
Malaysia	7	(0.84)	5	(0.61)	11	(0.87)	19	(1.05)	26	(1.08)	20	(1.11)	7	(0.69)	4	(0.60)
Myanmar	25	(1.74)	14	(0.91)	21	(1.31)	21	(1.07)	13	(0.84)	4	(0.41)	1	(0.23)	**0**	**(0.13)**
Philippines	45	(1.71)	12	(0.64)	15	(0.74)	12	(0.72)	9	(0.66)	4	(0.46)	1	(0.23)	1	(0.22)
Viet Nam	4	(0.63)	4	(0.41)	8	(0.62)	13	(0.67)	20	(1.13)	20	(1.01)	12	(0.67)	20	(1.12)
Average six countries	30	(0.57)	10	(0.28)	14	(0.35)	14	(0.35)	14	(0.35)	9	(0.29)	4	(0.18)	5	(0.23)

() Standard errors appear in parentheses.

In bold - results based on fewer than 30 students and/or 5 schools should be interpreted with caution.

Because results are rounded to the nearest whole number some totals may appear inconsistent.

Table 2.6 National writing average and standard deviation by participating countries

	Mean		Standard deviation	
Cambodia	285	(1.01)	27	(0.46)
Lao PDR	283	(1.04)	31	(0.69)
Malaysia	318	(0.88)	19	(0.54)
Myanmar	298	(0.89)	20	(0.55)
Philippines	288	(1.13)	28	(0.55)
Viet Nam	327	(0.89)	22	(0.54)
Average six countries	300	(0.40)	30	(0.23)

() Standard errors appear in parentheses.

Table 2.7 National percentile writing average by participating countries

	5th Percentile	10th Percentile	20th Percentile	30th Percentile	40th Percentile	50th Percentile	60th Percentile	70th Percentile	80th Percentile	90th Percentile	95th Percentile
Cambodia	237 (1.9)	248 (1.9)	261 (1.7)	271 (1.5)	280 (1.3)	287 (1.0)	294 (1.1)	300 (0.9)	308 (1.3)	318 (1.1)	326 (1.5)
Lao PDR	232 (2.1)	243 (1.4)	256 (1.3)	267 (1.6)	277 (1.4)	285 (1.2)	293 (1.2)	302 (1.4)	310 (1.2)	321 (1.3)	331 (1.8)
Malaysia	283 (2.3)	294 (1.9)	304 (1.3)	310 (1.0)	315 (0.9)	319 (0.8)	323 (0.9)	328 (0.7)	333 (0.8)	339 (1.0)	345 (1.0)
Myanmar	261 (2.1)	270 (2.0)	282 (1.6)	290 (1.2)	296 (0.9)	301 (0.9)	306 (0.8)	310 (0.6)	315 (0.6)	322 (0.7)	327 (0.8)
Philippines	240 (1.8)	250 (1.9)	263 (1.5)	274 (1.5)	283 (1.4)	291 (1.3)	298 (1.2)	304 (1.3)	312 (1.3)	322 (1.3)	330 (1.7)
Viet Nam	291 (2.1)	300 (1.5)	310 (1.1)	317 (1.0)	322 (1.0)	328 (1.0)	333 (0.8)	339 (1.0)	346 (0.9)	355 (0.8)	363 (1.0)
Average six countries	257 (0.8)	268 (0.7)	279 (0.6)	288 (0.5)	296 (0.5)	302 (0.4)	308 (0.4)	314 (0.4)	321 (0.4)	330 (0.4)	337 (0.6)

() Standard errors appear in parentheses.

Table 2.8 Proportion of children at Grade 5 by mathematics band by participating country

	Band 2 and below	Band 3	Band 4	Band 5	Band 6	Band 7	Band 8	Band 9 and above
Cambodia	16 (1.17)	20 (0.89)	25 (0.83)	21 (0.93)	12 (0.75)	5 (0.60)	1 (0.35)	**0 (0.13)**
Lao PDR	33 (1.64)	24 (1.02)	21 (0.93)	13 (0.93)	6 (0.54)	2 (0.40)	**0 (0.16)**	**0 (0.03)**
Malaysia	3 (0.48)	5 (0.70)	10 (0.94)	18 (1.21)	24 (1.17)	21 (1.18)	13 (1.10)	6 (0.84)
Myanmar	14 (1.02)	24 (1.08)	29 (1.10)	22 (0.91)	9 (0.70)	3 (0.35)	**0 (0.14)**	**0 (0.03)**
Philippines	18 (1.39)	23 (0.99)	24 (1.01)	18 (0.97)	11 (0.80)	5 (0.56)	1 (0.34)	**0 (0.9)**
Viet Nam	**0 (0.18)**	1 (0.25)	2 (0.40)	5 (0.66)	11 (0.88)	17 (1.16)	21 (1.09)	42 (1.69)
Average six countries	14 (0.45)	16 (0.35)	16 (0.37)	16 (0.39)	12 (0.34)	9 (0.32)	6 (0.27)	8 (0.32)

() Standard errors appear in parentheses.
In bold - results based on fewer than 30 students and/or 5 schools should be interpreted with caution.
Because results are rounded to the nearest whole number some totals may appear inconsistent.

Table 2.9 National mathematics average and standard deviation by participating countries

	Mean		Standard deviation	
Cambodia	289	(0.82)	21	(0.49)
Lao PDR	279	(0.82)	21	(0.48)
Malaysia	315	(1.08)	22	(0.63)
Myanmar	288	(0.61)	17	(0.33)
Philippines	288	(0.84)	20	(0.51)
Viet Nam	341	(1.04)	24	(0.64)
Average six countries	300	(0.36)	30	(0.21)

() Standard errors appear in parentheses.

Table 2.10 National percentile mathematics average by participating countries

	5th Percentile		10th Percentile		20th Percentile		30th Percentile		40th Percentile		50th Percentile		60th Percentile		70th Percentile		80th Percentile		90th Percentile		95th Percentile	
Cambodia	255	(1.2)	263	(1.2)	272	(0.9)	279	(1.0)	284	(0.8)	289	(0.9)	295	(0.8)	300	(1.0)	307	(1.1)	316	(1.3)	323	(1.5)
Lao PDR	246	(1.4)	253	(1.2)	261	(1.1)	267	(1.0)	273	(1.1)	278	(0.9)	284	(1.1)	289	(1.1)	296	(1.3)	306	(1.1)	313	(1.5)
Malaysia	276	(2.0)	286	(2.0)	297	(1.6)	304	(1.3)	311	(1.2)	316	(1.2)	321	(1.0)	326	(1.1)	333	(1.2)	342	(1.2)	349	(1.4)
Myanmar	260	(1.0)	266	(1.1)	273	(0.7)	279	(0.8)	283	(0.8)	288	(0.8)	292	(0.8)	297	(0.6)	302	(0.7)	310	(1.0)	317	(1.3)
Philippines	257	(1.0)	263	(0.9)	270	(0.9)	276	(1.0)	281	(1.0)	287	(0.9)	292	(1.2)	298	(1.1)	305	(1.2)	315	(1.4)	322	(1.7)
Viet Nam	301	(2.8)	311	(1.7)	322	(1.5)	329	(1.3)	336	(1.2)	342	(0.9)	348	(1.0)	355	(0.8)	362	(1.1)	372	(1.1)	379	(1.3)
Average six countries	266	(0.7)	274	(0.6)	283	(0.5)	289	(0.4)	295	(0.4)	300	(0.4)	305	(0.4)	311	(0.4)	318	(0.5)	327	(0.5)	334	(0.6)

() Standard errors appear in parentheses.

Table 2.11 Proportion of children' national performance in mathematics against SDG 4.1.1a and SDG 4.1.1b

	At or below Band 3 (Below SDG 4.1.1a)		Band 4 or 5 (At or above SDG 4.1.1a but below SDG 4.1.1b)		Band 6 or above (At or above SDG 4.1.1b)	
Cambodia	36	(1.49)	46	(1.19)	19	(1.34)
Lao PDR	57	(1.78)	35	(1.49)	8	(0.77)
Malaysia	8	(1.06)	28	(1.42)	64	(0.94)
Myanmar	37	(1.56)	51	(1.37)	12	(1.96)
Philippines	41	(1.74)	42	(1.42)	17	(1.38)
Viet Nam	1	(0.39)	7	(0.87)	92	(1.11)
Average six countries	30	(0.58)	35	(0.53)	35	(0.54)

() Standard errors appear in parentheses.

Table 2.12 National average student correlation between reading and mathematics

	Correlation	
Cambodia	0.76	(0.01)
Lao PDR	0.76	(0.01)
Malaysia	0.75	(0.01)
Myanmar	0.77	(0.01)
Philippines	0.91	(0.01)
Viet Nam	0.82	(0.01)
Average six countries	0.89	(0.00)

() Standard errors appear in parentheses.

Table 2.13 National average student correlation between reading and writing

	Correlation	
Cambodia	0.74	(0.01)
Lao PDR	0.63	(0.02)
Malaysia	0.75	(0.01)
Myanmar	0.68	(0.02)
Philippines	0.77	(0.01)
Viet Nam	0.55	(0.02)
Average six countries	0.78	(0.01)

() Standard errors appear in parentheses.

Table 2.14 National average student correlation between writing and mathematics

	Correlation	
Cambodia	0.62	(0.02)
Lao PDR	0.62	(0.02)
Malaysia	0.64	(0.02)
Myanmar	0.59	(0.02)
Philippines	0.77	(0.01)
Viet Nam	0.45	(0.02)
Average six countries	0.73	(0.01)

() Standard errors appear in parentheses.

Appendix 3 - Chapter3

Table 3.1: Percentage of boys and girls

Country	Girls		Boys	
Cambodia	51.3	(0.8)	48.7	(0.8)
Lao PDR	48.5	(1.1)	51.5	(1.1)
Malaysia	50.7	(1.4)	49.3	(1.4)
Myanmar	47.7	(0.9)	52.3	(0.9)
Philippines	49.2	(1.0)	50.8	(1.0)
Viet Nam	48.5	(1.2)	51.5	(1.2)
Average six countries	49.3	(0.4)	50.7	(0.4)

() Standard errors appear in parentheses.

Table 3.2: Differences in average reading, writing and mathematics scores by gender

Country	Domain	Boys		Girls		Difference between Girls and Boys	
Cambodia	Reading	286.6	(0.9)	293.5	(0.9)	**6.9**	(0.7)
	Writing	278.7	(1.1)	290.6	(1.1)	**11.9**	(0.8)
	Mathematics	287.7	(0.8)	291.1	(0.9)	**3.4**	(0.7)
Lao PDR	Reading	274.2	(0.8)	276.0	(1.0)	**1.8**	(0.9)
	Writing	279.5	(1.1)	287.7	(1.3)	**8.3**	(1.3)
	Mathematics	278.7	(0.9)	278.5	(1.0)	-0.2	(0.9)
Malaysia	Reading	314.3	(1.3)	323.4	(1.1)	**9.0**	(1.2)
	Writing	311.8	(1.0)	323.1	(0.8)	**11.3**	(0.9)
	Mathematics	313.1	(1.3)	316.3	(1.1)	**3.2**	(1.1)
Myanmar	Reading	290.3	(0.9)	293.2	(0.8)	**2.9**	(0.7)
	Writing	295.0	(1.0)	302.3	(0.9)	**7.3**	(0.8)
	Mathematics	287.7	(0.7)	288.2	(0.6)	0.4	(0.6)
Philippines	Reading	284.9	(1.1)	290.7	(1.0)	**5.8**	(1.0)
	Writing	282.8	(1.3)	294.0	(1.2)	**11.2**	(1.2)
	Mathematics	286.7	(1.0)	289.1	(0.9)	**2.3**	(0.9)
Viet Nam	Reading	334.7	(1.0)	338.3	(1.0)	**3.6**	(0.9)
	Writing	322.3	(0.9)	332.9	(1.0)	**10.6**	(0.8)
	Mathematics	341.4	(1.1)	341.5	(1.2)	0.1	(0.9)
Average six countries	Reading	297.5	(0.4)	302.5	(0.4)	**5.0**	(0.4)
	Writing	295.0	(0.4)	305.1	(0.4)	**10.1**	(0.4)
	Mathematics	299.2	(0.4)	300.8	(0.4)	**1.6**	(0.4)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.3: Proportion of boys and girls in reading against SDG 4.1.1b

Country	Band 5 and below (Below SDG 4.1.1b)				Band 6 or above (At or above SDG 4.1.1b)			
	Girls		Boys		Girls		Boys	
Cambodia	86.2	(1.5)	91.9	(0.8)	13.8	(1.5)	8.1	(0.8)
Lao PDR	97.0	(0.5)	98.0	(0.4)	3.0	(0.5)	2.0	(0.4)
Malaysia	34.1	(2.2)	49.6	(2.3)	65.9	(2.2)	50.4	(2.3)
Myanmar	87.9	(1.1)	90.5	(0.9)	12.1	(1.1)	9.5	(0.9)
Philippines	89.2	(1.4)	91.7	(1.6)	10.8	(1.4)	8.3	(1.6)
Viet Nam	15.8	(1.5)	20.3	(1.7)	84.2	(1.5)	79.7	(1.7)
Average six countries	68.4	(0.6)	73.6	(0.6)	31.6	(0.6)	26.4	(0.6)

Table 3.4: Proportion of boys and girls in mathematics against SDG 4.1.1b

Country	Band 5 and below (Below SDG 4.1.1b)				Band 6 and above (At or above SDG 4.1.1b)			
	Girls		Boys		Girls		Boys	
Cambodia	79.8	(1.8)	83.0	(1.5)	20.2	(1.8)	17.0	(1.5)
Lao PDR	91.4	(0.9)	92.1	(1.0)	8.6	(0.9)	7.9	(1.0)
Malaysia	32.2	(2.1)	39.2	(2.3)	67.8	(2.1)	60.8	(2.3)
Myanmar	87.7	(1.1)	88.0	(1.1)	12.3	(1.1)	12.0	(1.1)
Philippines	82.4	(1.6)	83.8	(1.7)	17.6	(1.6)	16.2	(1.7)
Viet Nam	8.3	(1.2)	8.6	(1.2)	91.7	(1.2)	91.4	(1.2)
Average six countries	63.6	(0.6)	65.8	(0.6)	36.4	(0.6)	34.2	(0.6)

() Standard errors appear in parentheses.

Table 3.5: Percentage of children by age group

Country	Under 10 years		10 years		11 years		12 years and over	
Cambodia	3.9	(0.5)	28.5	(0.9)	37.9	(0.9)	29.8	(1.2)
Lao PDR	8.8	(0.8)	41.6	(1.4)	27.7	(1.0)	21.9	(1.5)
Malaysia	0.0	(0.0)	26.2	(0.7)	73.8	(0.7)	0.0	(0.0)
Myanmar	24.4	(1.1)	49.8	(1.2)	16.0	(1.0)	9.8	(0.8)
Philippines	0.1	(0.0)	40.3	(0.8)	48.9	(0.8)	10.7	(0.7)
Viet Nam	0.0	(0.0)	42.5	(0.8)	54.9	(0.8)	2.6	(0.3)
Average six countries	6.2	(0.2)	38.2	(0.4)	43.2	(0.4)	12.5	(0.4)

() Standard errors appear in parentheses.

Table 3.6: Regression coefficients for the effects of age, grade repetition and SES on reading performance

Country	Age		Grade repetition (0=No, 1=Yes)		SES		Variance explained (%)	
Cambodia	-0.1	(0.4)	**-7.5**	(0.8)	**7.7**	(0.5)	**16**	(1.7)
Lao PDR	-0.1	(0.5)	**-5.3**	(1.0)	**8.4**	(0.6)	**19**	(2.4)
Malaysia	**5.4**	(1.6)	**-7.4**	(5.1)	**7.9**	(0.5)	**11**	(1.3)
Myanmar	**-1.7**	(0.5)	**-10.5**	(0.9)	**5.4**	(0.5)	**17**	(1.8)
Philippines	-0.6	(0.3)	**-9.3**	(0.7)	**10.5**	(0.6)	**36**	(2.4)
Viet Nam	0.8	(0.9)	**-12.1**	(1.9)	**9.1**	(0.7)	**19**	(1.7)
Average six countries	0.6	(0.3)	**-8.7**	(1.0)	**8.1**	(0.2)	**20**	(0.8)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.7: Regression coefficients for the effects of age, grade repetition and SES on writing performance

Country	Age		Grade repetition (0=No, 1=Yes)		SES		Variance explained (%)	
Cambodia	-0.3	(0.5)	**-7.3**	(1.2)	**6.7**	(0.5)	**8**	(1.1)
Lao PDR	-0.6	(0.8)	**-6.4**	(1.4)	**9.9**	(1.0)	**13**	(2.2)
Malaysia	**4.2**	(1.3)	-2.3	(4.2)	**5.5**	(0.4)	**9**	(1.2)
Myanmar	**-2.8**	(0.6)	**-9.7**	(1.0)	**3.3**	(0.5)	**13**	(1.8)
Philippines	**-2.8**	(0.6)	**-11.7**	(1.1)	**11.5**	(0.6)	**28**	(2.1)
Viet Nam	1.7	(1.2)	**-12.4**	(2.3)	**7.2**	(0.6)	**13**	(1.6)
Average six countries	-0.1	(0.4)	**-8.3**	(0.9)	**7.4**	(0.3)	**14**	(0.7)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.8: Regression coefficients for the effects of age, grade repetition and SES on mathematics performance

Country	Age		Grade repetition (0=No, 1=Yes)		SES		Variance explained (%)	
Cambodia	**0.8**	(0.4)	**-6.7**	(0.9)	**7.7**	(0.5)	**16**	(2.0)
Lao PDR	0.5	(0.5)	**-5.7**	(0.9)	**8.7**	(0.6)	**19**	(2.5)
Malaysia	**6.3**	(1.3)	-1.6	(4.6)	**8.8**	(0.5)	**16**	(1.6)
Myanmar	**-1.0**	(0.4)	**-7.6**	(0.8)	**5.2**	(0.5)	**16**	(1.9)
Philippines	-0.6	(0.3)	**-10.3**	(0.7)	**9.0**	(0.5)	**32**	(2.3)
Viet Nam	**2.8**	(1.0)	**-15.4**	(2.3)	**9.0**	(0.7)	**17**	(1.9)
Average six countries	**1.5**	(0.3)	**-7.9**	(0.9)	**8.1**	(0.2)	**20**	(0.8)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.9: Average reading scores by socio-economic index quartiles and differences between top quarter and bottom quarter

Country	Bottom quarter of SES		Second quarter of SES		Third quarter of SES		Top quarter of SES		Difference in scores between students in the top quarter and students in the bottom quarter of SES	
Cambodia	282.6	(1.0)	285.8	(0.9)	290.5	(1.0)	301.2	(1.3)	**19.0**	(1.6)
Lao PDR	265.8	(1.2)	271.2	(0.9)	275.8	(0.9)	287.9	(1.2)	**22.0**	(1.7)
Malaysia	308.6	(1.3)	315.7	(1.6)	323.3	(1.0)	328.4	(1.2)	**20.0**	(1.7)
Myanmar	286.8	(1.1)	287.8	(1.0)	291.8	(1.0)	301.3	(1.1)	**14.0**	(1.6)
Philippines	274.7	(0.8)	283.6	(0.8)	288.2	(0.7)	304.2	(1.4)	**30.0**	(1.6)
Viet Nam	323.9	(1.7)	334.2	(0.9)	339.1	(0.8)	348.9	(0.8)	**25.0**	(1.9)
Average six countries	290.4	(0.5)	296.4	(0.4)	301.5	(0.4)	312.0	(0.5)	**22.0**	(0.7)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.10: Average writing scores by socio-economic index quartiles and differences between top quarter and bottom quarter

Country	Bottom quarter of SES		Second quarter of SES		Third quarter of SES		Top quarter of SES		Difference in scores between students in the top quarter and students in the bottom quarter of SES	
Cambodia	277.6	(1.3)	281.7	(1.2)	285.3	(1.2)	294.4	(1.5)	**17.0**	(2.0)
Lao PDR	271.3	(1.9)	278.2	(1.4)	285.6	(1.5)	299.1	(1.6)	**28.0**	(2.5)
Malaysia	311.0	(1.1)	314.9	(1.2)	319.8	(0.8)	324.5	(0.9)	**14.0**	(1.5)
Myanmar	295.3	(1.3)	295.0	(1.3)	298.4	(1.2)	305.7	(1.0)	**10.0**	(1.6)
Philippines	272.0	(1.5)	284.7	(1.2)	290.7	(0.9)	305.9	(1.3)	**34.0**	(2.0)
Viet Nam	317.1	(1.6)	326.8	(0.8)	328.9	(0.9)	337.3	(1.1)	**20.0**	(1.9)
Average six countries	290.7	(0.6)	296.9	(0.5)	301.5	(0.4)	311.1	(0.5)	**20.0**	(0.8)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.11: Average mathematics scores by socio-economic index quartiles and differences between top quarter and bottom quarter

Country	Bottom quarter of SES		Second quarter of SES		Third quarter of SES		Top quarter of SES		Difference in scores between students in the top quarter and students in the bottom quarter of SES	
Cambodia	282.2	(1.0)	285.4	(0.9)	289.3	(0.9)	300.4	(1.4)	**18.0**	(1.7)
Lao PDR	269.5	(1.3)	274.3	(1.0)	278.8	(1.0)	292.2	(1.2)	**23.0**	(1.7)
Malaysia	303.4	(1.2)	311.4	(1.5)	319.1	(1.1)	325.4	(1.0)	**22.0**	(1.6)
Myanmar	283.4	(0.9)	284.1	(0.8)	288.2	(0.7)	296.5	(0.9)	**13.0**	(1.3)
Philippines	275.7	(0.8)	284.7	(0.8)	289.0	(0.7)	302.1	(1.3)	**26.0**	(1.5)
Viet Nam	329.5	(1.9)	339.1	(0.9)	343.9	(1.0)	353.6	(1.1)	**24.0**	(2.2)
Average six countries	290.6	(0.5)	296.5	(0.4)	301.4	(0.4)	311.7	(0.5)	**21.0**	(0.7)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.12: Regression coefficients for the effects of gender, school location and SES on reading performance

Country	Gender (0=Boys, 1=Girls)		School location (Rural=0, Urban=1)		SES		Variance explained (%)	
Cambodia	**7.1**	(0.7)	**12.8**	(3.7)	**7.1**	(0.6)	18	(2.1)
Lao PDR	**2.5**	(0.8)	2.9	(3.5)	**9.1**	(0.6)	19	(2.4)
Malaysia	**8.6**	(1.0)	- 0.8	(1.9)	**7.8**	(0.5)	14	(1.6)
Myanmar	**2.5**	(0.6)	**6.2**	(1.8)	**5.7**	(0.5)	12	(1.8)
Philippines	**6.8**	(0.7)	**7.9**	(1.8)	**10.6**	(0.5)	36	(2.9)
Viet Nam	**3.6**	(0.8)	**2.7**	(1.3)	**9.0**	(0.7)	18	(1.8)
Average six countries	**5.2**	(0.3)	**5.3**	(1.0)	**8.2**	(0.2)	20	(0.9)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.13 Regression coefficients for the effects of gender, school location and SES on writing performance

Country	Gender (0=Boys, 1=Girls)		School location (Rural=0, Urban=1)		SES		Variance explained (%)	
Cambodia	**12.1**	(0.8)	**13.5**	(4.6)	**6.1**	(0.6)	13	(1.4)
Lao PDR	**9.0**	(1.2)	8.5	(4.4)	**11.1**	(1.0)	15	(2.1)
Malaysia	**11.0**	(0.8)	-1.9	(1.5)	**5.6**	(0.4)	17	(1.6)
Myanmar	**7.0**	(0.8)	4.0	(2.4)	**4.2**	(0.6)	9	(1.5)
Philippines	**12.2**	(0.9)	**6.5**	(1.9)	**12.5**	(0.6)	28	(2.3)
Viet Nam	**10.6**	(0.7)	1.9	(1.2)	**7.3**	(0.6)	17	(1.7)
Average six countries	**10.3**	(0.4)	**5.4**	(1.2)	**7.8**	(0.3)	17	(0.7)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.14 Regression coefficients for the effects of gender, school location and SES on mathematical performance

Country	Gender (0=Boys, 1=Girls)		School location (Rural=0, Urban=1)		SES		Variance explained (%)	
Cambodia	**3.7**	0.7	**19.5**	2.8	**6.2**	0.5	19	2.8
Lao PDR	0.4	0.8	6.2	3.5	**9.2**	0.7	19	2.5
Malaysia	**2.7**	0.9	3.9	2	**8.3**	0.5	17	1.9
Myanmar	0.2	0.5	**4.5**	1.2	**5.4**	0.4	12	1.9
Philippines	**3.1**	0.7	**5.6**	1.6	**9.5**	0.5	28	2.7
Viet Nam	0	0.8	1.3	1.4	**9.2**	0.7	15	1.9
Average six countries	**1.7**	0.3	**6.9**	0.9	**7.9**	0.2	18	0.9

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.15: Percentage of children by preschool education

Country	Attended for 2 years or more		Attended for 1 year		Did not attend	
Cambodia	17.8	(1.2)	38.9	(2.0)	43.3	(2.2)
Lao PDR	36.6	(2.1)	22.0	(1.6)	41.4	(2.1)
Malaysia	78.8	(1.2)	19.6	(1.1)	1.6	(0.2)
Myanmar	18.4	(1.4)	20.7	(1.4)	60.9	(2.1)
Philippines	54.2	(1.4)	40.6	(1.3)	5.2	(0.4)
Viet Nam	85.7	(1.3)	10.7	(1.3)	3.6	(0.5)
Average six countries	48.6	(0.6)	25.4	(0.6)	26.0	(0.6)

() Standard errors appear in parentheses.

Table 3.16: Differences in average reading, writing and mathematics scores by preschool education

Country	Attended Preschool	Average reading performance by preschool attendance			Average writing performance by preschool attendance			Average mathematics performance by preschool attendance		
		Did not attend preschool	Attended preschool	Score difference (attended - did not attend)	Did not attend preschool	Attended preschool	Score difference (attended - did not attend)	Did not attend preschool	Attended preschool	Score difference (attended - did not attend)
Cambodia	56.7 (2.2)	287 (0.9)	293 (1.1)	**6.1** (1.3)	281 (1.3)	288 (1.3)	**7.0** (1.6)	286 (0.9)	292 (1.1)	**6.1** (1.2)
Lao PDR	58.6 (2.1)	271 (1.0)	279 (1.0)	**8.2** (1.3)	278 (1.5)	288 (1.3)	**10.4** (1.9)	275 (1.1)	282 (1.1)	**7.2** (1.4)
Malaysia	98.4 (0.2)	305 (3.8)	319 (1.2)	**14.1** (3.6)	305 (2.7)	317 (0.9)	**11.9** (2.6)	302 (3.3)	315 (1.1)	**12.6** (3.2)
Myanmar	39.1 (2.1)	290 (0.8)	297 (1.4)	**6.5** (1.3)	297 (1.0)	302 (1.4)	**4.4** (1.4)	287 (0.7)	291 (1.1)	**4.6** (1.1)
Philippines	94.8 (0.4)	279 (1.5)	289 (0.9)	**10.0** (1.6)	277 (2.2)	289 (1.2)	**12.4** (2.2)	279 (1.3)	289 (0.8)	**9.8** (1.4)
Viet Nam	96.4 (0.5)	330 (2.6)	335 (1.0)	**5.1** (2.4)	321 (2.8)	327 (1.0)	**6.0** (2.6)	334 (3.1)	341 (1.2)	**6.4** (2.8)
Average six countries	74.0 (0.6)	294 (0.9)	302 (0.4)	**8.3** (1.0)	293 (0.8)	302 (0.5)	**8.7** (1.0)	294 (0.8)	302 (0.4)	**7.8** (0.9)

Significant differences (p<0.05) indicated in bold

() Standard errors appear in parentheses.

Table 3.17: Differences in average reading, writing and mathematics scores by capacity to perform early language and mathematical tasks prior to primary education

Country	10 tasks or more	Average reading performance by number of tasks			Average writing performance by number of tasks			Average mathematics performance by number of tasks		
		Fewer than 10 tasks	10 tasks or more	Score difference (10 or more - less than 10)	Fewer than 10 tasks	10 tasks or more	Score difference (10 or more - less than 10)	Fewer than 10 tasks	10 tasks or more	Score difference (10 or more - less than 10)
Cambodia	50.9 (2.0)	287 (1.0)	293 (0.9)	**6.4** (1.0)	281 (1.3)	289 (1.1)	**7.6** (1.3)	286 (1.0)	293 (0.9)	**6.1** (1.0)
Lao PDR	67.2 (1.9)	276 (1.3)	276 (0.8)	-0.7 (1.2)	284 (1.7)	284 (1.1)	-0.6 (1.8)	280 (1.3)	279 (0.8)	-0.9 (1.3)
Malaysia	85.4 (0.9)	304 (1.5)	321 (1.1)	**16.5** (1.3)	306 (1.3)	319 (0.8)	**12.8** (1.0)	301 (1.5)	317 (1.1)	**15.8** (1.3)
Myanmar	73.1 (2.2)	291 (1.3)	293 (1.0)	3.0 (1.5)	297 (1.7)	300 (1.1)	3.3 (1.8)	287 (1.1)	289 (0.8)	2.0 (1.2)
Philippines	79.7 (0.9)	279 (1.0)	291 (1.0)	**11.6** (1.2)	277 (1.7)	292 (1.2)	**14.9** (1.7)	279 (0.9)	291 (0.9)	**11.2** (1.0)
Viet Nam	67.6 (2.0)	329 (1.8)	338 (0.8)	**8.4** (1.7)	323 (1.8)	329 (0.9)	**6.3** (1.7)	336 (2.2)	343 (1.0)	**6.4** (2.0)
Average six countries	70.6 (0.7)	294 (0.6)	302 (0.4)	**7.5** (0.7)	295 (0.6)	302 (0.4)	**7.4** (0.8)	295 (0.6)	302 (0.4)	**6.8** (0.7)

Significant differences (p<0.05) indicated in bold

() Standard errors appear in parentheses.

Table 3.18: Percentage of children by language of instruction spoken at home

Country	Children speak the language of instruction at home most of the time		Children don't speak the language of instruction at home most of the time	
Cambodia	94.0	(0.6)	6.0	(0.6)
Lao PDR	59.5	(2.1)	40.5	(2.1)
Malaysia	80.0	(1.6)	20.0	(1.6)
Myanmar	76.2	(2.1)	23.8	(2.1)
Philippines	7.1	(0.6)	92.9	(0.6)
Viet Nam	90.0	(1.6)	10.0	(1.6)
Average six countries	67.8	(0.6)	32.2	(0.6)

() Standard errors appear in parentheses.

Table 3.19: Differences in average reading, writing and mathematics scores by whether the language of instruction is spoken at home

Country	Domain	Children don't speak the language of instruction at home most of the time		Children speak the language of instruction at home most of the time		Difference between children speak the language at hone and children don't speak the language at home most of the time	
Cambodia	Reading	280.3	(2.5)	290.7	(0.8)	**10.4**	(2.3)
	Writing	272.3	(3.5)	285.6	(0.9)	**13.3**	(3.2)
	Mathematics	278.8	(2.4)	290.1	(0.8)	**11.3**	(2.2)
Lao PDR	Reading	267.6	(0.9)	280.1	(0.9)	**12.5**	(1.2)
	Writing	272.5	(1.5)	291.0	(1.3)	**18.5**	(2.0)
	Mathematics	271.6	(1.0)	283.4	(1.0)	**11.7**	(1.3)
Malaysia	Reading	309.2	(1.5)	321.4	(0.7)	**12.2**	(1.9)
	Writing	311.9	(2.0)	318.9	(0.6)	**7.0**	(1.5)
	Mathematics	310.0	(1.1)	315.9	(0.6)	**5.9**	(1.7)
Myanmar	Reading	279.7	(1.8)	295.5	(1.2)	**15.7**	(1.5)
	Writing	284.6	(1.5)	302.8	(0.9)	**18.2**	(1.9)
	Mathematics	280.5	(1.5)	290.2	(1.2)	**9.7**	(1.2)
Philippines	Reading	287.7	(0.9)	287.7	(3.4)	**0.0**	(3.2)
	Writing	288.7	(1.1)	283.3	(3.3)	**-5.3**	(3.1)
	Mathematics	288.1	(0.8)	285.4	(3.0)	**-2.7**	(2.9)
Viet Nam	Reading	317.1	(3.3)	338.6	(0.7)	**21.5**	(3.2)
	Writing	311.4	(3.2)	329.2	(0.7)	**17.8**	(3.1)
	Mathematics	324.1	(3.9)	343.4	(0.8)	**19.2**	(3.8)
Average six countries	Reading	290.3	(0.8)	302.3	(0.6)	**12.1**	(1.0)
	Writing	290.2	(0.9)	301.8	(0.7)	**11.6**	(1.0)
	Mathematics	292.2	(0.8)	301.4	(0.6)	**9.2**	(1.0)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.20: Differences in average reading, mathematics and writing scores by grade repetition

Country	Did not repeat grade	Average reading performance by grade repetition			Average writing performance by grade repetition			Average mathematics performance by grade repetition		
		Repeated grade	Did not repeat	Score difference (Did not repeat - repeated)	Repeated grade	Did not repeat	Score difference (Did not repeat - repeated)	Repeated grade	Did not repeat	Score difference (Did not repeat - repeated)
Cambodia	67.0 (1.2)	284 (0.9)	294 (0.8)	**9.2** (0.8)	280 (1.3)	288 (1.1)	**8.7** (1.1)	285 (1.0)	292 (0.9)	**7.6** (1.0)
Lao PDR	67.4 (1.5)	271 (1.0)	279 (0.8)	**8.4** (1.1)	277 (1.5)	288 (1.1)	**11.2** (1.5)	274 (1.1)	282 (0.9)	**8.4** (1.1)
Malaysia	99.5 (0.1)	307 (6.1)	319 (1.2)	11.4 (6.0)	311 (5.8)	317 (0.9)	6.2 (5.8)	308 (5.8)	314 (1.1)	6.2 (5.7)
Myanmar	73.5 (1.2)	282 (1.2)	296 (0.7)	**14.4** (1.0)	289 (1.4)	302 (0.7)	**13.4** (1.2)	281 (0.9)	291 (0.7)	**10.0** (0.9)
Philippines	67.2 (1.6)	278 (0.6)	293 (1.1)	**14.7** (1.0)	276 (1.1)	295 (1.2)	**18.6** (1.2)	279 (0.7)	293 (1.0)	**14.9** (1.0)
Viet Nam	93.5 (0.7)	320 (2.1)	336 (0.9)	**16.9** (2.0)	312 (2.2)	328 (0.9)	**15.9** (2.2)	323 (2.4)	342 (1.1)	**18.4** (2.2)
Average six countries	78.0 (0.5)	290 (1.1)	303 (0.4)	**12.5** (1.2)	291 (1.1)	303 (0.4)	**12.3** (1.2)	292 (1.1)	303 (0.4)	**10.9** (1.1)

Significant differences (p<0.05) indicated in bold

() Standard errors appear in parentheses.

Table 3.21: Percentage of children attending by schools type

Country	Public		Private	
Cambodia	92.1	(2.2)	7.9	(2.2)
Lao PDR	94.0	(1.2)	6.0	(1.2)
Malaysia	99.3	(0.0)	0.7	(0.0)
Myanmar	95.9	(1.5)	4.1	(1.5)
Philippines	90.4	(1.9)	9.6	(1.9)
Viet Nam	100.0	(0.0)	0.0	(0.0)
Average six countries	95.3	(0.6)	4.7	(0.6)

() Standard errors appear in parentheses.

Table 3.22: Percentage of children attending schools by school size

Country	Less than 200		200-499		500-999		1000 and over	
Cambodia	15.3	(1.8)	40.4	(2.8)	29.1	(2.9)	15.1	(2.3)
Lao PDR	74.4	(2.7)	19.8	(2.6)	5.8	(1.1)	0.0	(0.0)
Malaysia	12.9	(1.9)	22.7	(2.6)	34.1	(3.5)	30.3	(2.7)
Myanmar	40.7	(3.3)	29.5	(3.5)	12.3	(2.4)	17.5	(2.6)
Philippines	12.4	(2.4)	34.4	(3.5)	17.8	(2.8)	35.4	(3.0)
Viet Nam	1.4	(0.5)	31.9	(2.0)	36.2	(3.3)	30.5	(2.8)
Average six countries	15.2	(0.9)	29.8	(1.2)	22.6	(1.1)	21.5	(1.0)

() Standard errors appear in parentheses.

Table 3.23: Differences in average reading by school size

Country	Bottom quarter of SCHSIZE		Second quarter of SCHSIZE		Third quarter of SCHSIZE		Top quarter of SCHSIZE		Difference in scores between students in the top quarter and students in the bottom quarter of SCHSIZE	
Cambodia	284.5	(1.2)	285.8	(1.8)	292.4	(1.1)	297.7	(2.2)	**13.0**	(2.5)
Lao PDR	270.0	(1.6)	273.4	(1.6)	275.9	(1.8)	281.0	(2.1)	**11.0**	(2.6)
Malaysia	315.3	(2.0)	317.0	(2.3)	321.0	(3.0)	322.2	(2.1)	**7.0**	(2.9)
Myanmar	293.0	(1.5)	291.0	(2.1)	288.9	(2.3)	294.3	(1.6)	1.0	(2.2)
Philippines	283.5	(1.9)	283.6	(1.8)	288.9	(2.2)	294.7	(2.3)	**11.0**	(3.0)
Viet Nam	329.1	(2.1)	336.3	(1.6)	335.2	(2.5)	344.8	(1.5)	**16.0**	(2.6)
Average six countries	295.9	(0.7)	297.9	(0.8)	300.4	(0.9)	305.8	(0.8)	**10.0**	(1.1)

Significant differences (p<0.05) indicated in bold

() Standard errors appear in parentheses.

Table 3.24: Differences in average writing by school size

Country	Bottom quarter of SCHSIZE		Second quarter of SCHSIZE		Third quarter of SCHSIZE		Top quarter of SCHSIZE		Difference in scores between students in the top quarter and students in the bottom quarter of SCHSIZE	
Cambodia	278.8	(1.4)	280.2	(2.3)	288.4	(1.5)	291.8	(2.5)	**13.0**	(2.8)
Lao PDR	275.6	(2.4)	282.0	(2.7)	285.3	(2.5)	290.7	(3.1)	**15.0**	(3.9)
Malaysia	315.8	(1.6)	315.9	(1.7)	319.6	(2.4)	318.7	(1.5)	3.0	(2.2)
Myanmar	301.0	(1.4)	297.5	(2.1)	294.9	(2.7)	300.1	(1.8)	-1.0	(2.3)
Philippines	283.7	(2.4)	283.9	(2.2)	288.9	(2.8)	296.3	(2.3)	**13.0**	(3.3)
Viet Nam	322.5	(2.1)	327.6	(1.6)	327.4	(2.3)	332.1	(1.3)	**10.0**	(2.5)
Average six countries	296.2	(0.8)	297.8	(0.9)	300.8	(1.0)	304.9	(0.9)	**9.0**	(1.2)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.25: Differences in average mathematics by school size

Country	Bottom quarter of SCHSIZE		Second quarter of SCHSIZE		Third quarter of SCHSIZE		Top quarter of SCHSIZE		Difference in scores between students in the top quarter and students in the bottom quarter of SCHSIZE	
Cambodia	284.0	(1.2)	285.4	(1.7)	291.8	(1.1)	296.4	(2.3)	**12.0**	(2.6)
Lao PDR	273.0	(1.5)	276.9	(1.6)	279.0	(1.8)	285.5	(2.3)	**12.0**	(2.7)
Malaysia	309.3	(1.7)	313.1	(2.3)	315.7	(2.8)	320.6	(2.1)	**11.0**	(2.7)
Myanmar	288.6	(1.1)	287.5	(1.8)	286.0	(1.8)	289.9	(1.2)	1.0	(1.7)
Philippines	283.9	(1.8)	284.7	(1.6)	288.8	(2.1)	293.9	(2.0)	**10.0**	(2.7)
Viet Nam	336.2	(2.5)	341.9	(1.6)	339.4	(2.9)	348.1	(1.7)	**12.0**	(3.0)
Average six countries	295.8	(0.7)	298.2	(0.7)	300.1	(0.9)	305.7	(0.8)	**10.0**	(1.1)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.26: Percentage of children by school location

Country	Village		Small town		Town		City		Large city	
Cambodia	48.4	(3.6)	28.4	(3.6)	17.0	(2.6)	4.8	(1.9)	1.4	(0.9)
Lao PDR	75.4	(2.9)	11.8	(2.2)	8.6	(2.1)	2.8	(1.2)	1.4	(0.7)
Malaysia	30.6	(2.7)	16.3	(2.9)	13.6	(2.8)	29.9	(3.5)	9.7	(1.9)
Myanmar	65.8	(2.5)	8.6	(2.1)	10.1	(1.7)	12.9	(2.2)	2.6	(1.2)
Philippines	40.8	(3.4)	16.8	(2.9)	18.7	(3.1)	17.0	(2.6)	6.7	(2.1)
Viet Nam	53.1	(2.8)	18.9	(3.2)	5.8	(1.9)	15.1	(1.7)	7.0	(1.8)
Average six countries	52.3	(1.2)	16.8	(1.2)	12.3	(1.0)	13.7	(0.9)	4.8	(0.6)

() Standard errors appear in parentheses.

Table 3.27: Percentage of children attending a school where the principal reported that these resources were available in their school's local area

Country	Public libraries		Cinema		Theatre, music hall		Foreign language school		Museum or Art Gallery		Playgrounds		Public gardens, parks		Religious centres		Sports facilities		Shopping centres or market place		Youth cultural centres		Hospital or clinic	
Cambodia	22.2	(3.4)	4	(1.5)	4	(1.6)	27.0	(3.3)	5	(1.4)	68	(4.0)	20.2	(3.0)	47	(3.7)	28	(3.1)	37.5	(3.6)	4.3	(1.7)	44.1	(3.8)
Lao PDR	29.6	(3.1)	1	(0.6)	1	(0.6)	11.8	(2.3)	3	(1.6)	78	(2.9)	16.8	(2.7)	27	(3.1)	41	(3.3)	16.0	(2.4)	5.0	(1.8)	30.3	(3.4)
Malaysia	56.1	(4.1)	34	(3.2)	11	(2.7)	30.6	(3.8)	24	(3.3)	77	(2.7)	69.5	(2.9)	96	(1.5)	82	(3.1)	79.1	(3.0)	35.5	(3.7)	86.0	(2.6)
Myanmar	45.8	(3.4)	11	(2.1)	5	(1.3)	8.1	(2.2)	5	(1.6)	57	(4.1)	20.8	(2.5)	88	(2.5)	69	(4.0)	43.2	(3.6)	27.2	(3.3)	69.7	(3.2)
Philippines	30.4	(3.3)	20	(2.6)	12	(2.3)	10.5	(2.1)	16	(2.6)	80	(2.9)	58.5	(3.6)	95	(1.5)	79	(3.1)	60.2	(3.2)	24.3	(2.9)	80.3	(2.9)
Viet Nam	42.8	(3.9)	17	(2.0)	9	(2.2)	17.8	(2.6)	22	(3.0)	78	(3.5)	42.9	(3.3)	75	(2.9)	74	(3.2)	77.9	(3.6)	47.4	(3.5)	80.0	(3.6)
Average six countries	37.8	(1.5)	14	(0.9)	7	(0.8)	17.6	(1.1)	13	(1.0)	73	(1.4)	38.1	(1.2)	71	(1.1)	62	(1.4)	52.3	(1.3)	24.0	(1.2)	65.1	(1.3)

() Standard errors appear in parentheses.

Table 3.28: Differences in average reading scores by school area resources

Country	Bottom quarter of RESOU		Second quarter of RESOU		Third quarter of RESOU		Top quarter of RESOU		Difference in scores between students in the top quarter and students in the bottom quarter of RESOU	
Cambodia	284.7	(1.5)	286.3	(1.4)	290.2	(1.7)	296.5	(1.7)	**12.0**	(2.3)
Lao PDR	269.4	(1.3)	275.5	(1.8)	274.9	(2.5)	283.0	(2.0)	**14.0**	(2.4)
Malaysia	314.5	(2.3)	316.3	(2.7)	318.5	(2.3)	324.5	(1.6)	**10.0**	(2.8)
Myanmar	288.4	(1.1)	285.2	(2.3)	293.4	(1.5)	295.3	(1.8)	**7.0**	(2.1)
Philippines	278.6	(1.6)	286.6	(1.4)	292.8	(2.8)	296.0	(2.2)	**17.0**	(2.7)
Viet Nam	327.3	(2.7)	339.0	(2.9)	336.9	(1.1)	344.4	(1.4)	**17.0**	(3.0)
Average six countries	293.8	(0.7)	298.2	(0.9)	301.1	(0.8)	306.6	(0.7)	**13.0**	(1.0)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.29: Differences in average writing scores by school area resources

Country	Bottom quarter of RESOU		Second quarter of RESOU		Third quarter of RESOU		Top quarter of RESOU		Difference in scores between students in the top quarter and students in the bottom quarter of RESOU	
Cambodia	279.1	(1.8)	280.1	(1.7)	285.2	(2.3)	291.9	(1.8)	**13.0**	(2.6)
Lao PDR	274.1	(2.0)	285.9	(2.5)	283.2	(3.9)	296.1	(2.7)	**22.0**	(3.4)
Malaysia	313.9	(1.8)	317.8	(1.9)	317.0	(1.8)	320.5	(1.3)	**7.0**	(2.2)
Myanmar	295.9	(1.2)	295.7	(1.5)	300.3	(1.7)	300.5	(2.1)	5.0	(2.4)
Philippines	277.7	(2.6)	288.0	(1.8)	295.4	(3.0)	296.0	(2.3)	**18.0**	(3.5)
Viet Nam	319.8	(2.2)	330.6	(3.2)	328.4	(1.1)	332.6	(1.3)	**13.0**	(2.6)
Average six countries	293.4	(0.8)	299.7	(0.9)	301.6	(1.0)	306.3	(0.8)	**13.0**	(1.2)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.30: Differences in average mathematics scores by school area resources

Country	Bottom quarter of RESOU		Second quarter of RESOU		Third quarter of RESOU		Top quarter of RESOU		Difference in scores between students in the top quarter and students in the bottom quarter of RESOU	
Cambodia	284.1	(1.4)	285.0	(1.4)	289.7	(1.6)	295.8	(1.9)	**12.0**	(2.3)
Lao PDR	272.8	(1.4)	279.6	(1.8)	277.2	(2.6)	287.3	(1.9)	**14.0**	(2.3)
Malaysia	309.3	(2.3)	311.3	(2.5)	313.7	(2.3)	322.0	(1.5)	**13.0**	(2.7)
Myanmar	285.6	(0.9)	284.0	(2.5)	289.1	(1.2)	290.4	(1.3)	**5.0**	(1.6)
Philippines	279.3	(1.8)	287.5	(1.4)	293.9	(2.5)	294.3	(1.9)	**15.0**	(2.6)
Viet Nam	333.5	(3.0)	344.8	(3.6)	341.2	(1.3)	348.7	(1.6)	**15.0**	(3.4)
Average six countries	294.1	(0.8)	298.7	(0.9)	300.8	(0.8)	306.4	(0.7)	**12.0**	(1.0)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.31: Percentage of children attending schools by language textbook availability

Country	No textbooks		One per student		Two students sharing		More than two student sharing	
Cambodia	2.9	(1.3)	93.8	(2.0)	3.3	(1.5)	0.0	(0.0)
Lao PDR	4.8	(1.9)	54.7	(3.9)	25.2	(3.6)	15.3	(2.6)
Malaysia	0.0	(0.0)	100.0	(0.0)	0.0	(0.0)	0.0	(0.0)
Myanmar	0.0	(0.0)	100.0	(0.0)	0.0	(0.0)	0.0	(0.0)
Philippines	1.9	(1.1)	73.8	(3.4)	16.8	(2.7)	7.5	(2.5)
Viet Nam	1.9	(1.1)	97.5	(1.3)	0.7	(0.0)	0.0	(0.0)
Average six countries	1.9	(0.5)	86.6	(1.0)	7.7	(0.8)	3.8	(0.6)

() Standard errors appear in parentheses.

Table 3.32: Percentage of children attending schools by mathematics textbook availability

Country	No textbooks		One per student		Two students sharing		More than two student sharing	
Cambodia	1.6	(1.0)	96.4	(1.5)	2.1	(1.2)	0.0	(0.0)
Laos	2.2	(1.0)	59.7	(3.6)	23.9	(3.4)	14.2	(2.5)
Malaysia	0.0	(0.0)	98.8	(0.8)	1.2	(0.8)	0.0	(0.0)
Myanmar	1.3	(0.8)	98.7	(0.8)	0.0	(0.0)	0.0	(0.0)
Philippines	2.6	(1.1)	71.8	(3.4)	17.3	(2.6)	8.2	(2.6)
Viet Nam	0.4	(0.4)	97.5	(1.3)	2.1	(1.2)	0.0	(0.0)
Average six countries	1.3	(0.3)	87.2	(0.9)	7.8	(0.8)	3.7	(0.6)

() Standard errors appear in parentheses.

Table 3.33: Differences in average reading, writing and mathematics by language textbook availablility

Country	One mathematics textbook per student		One assessment language textbook per student		Average reading performance by assessment language textbooks			Average writing performance by assessment language textbooks			Average mathematics performance by mathematics textbooks		
					No textbook or shared	One textbook per student	Score difference (one per student - none or shared)	No textbook or shared	One textbook per student	Score difference (one per student - none or shared)	No textbook or shared	One textbook per student	Score difference (one per student - none or shared)
Cambodia	96.4	(1.5)	93.8	(2.0)	280.9 (4.5)	290.8 (0.9)	10 (4.7)	272.7 (5.4)	285.7 (1.0)	13 (5.6)	282.8 (6.5)	289.6 (0.8)	7 (6.7)
Lao PDR	59.7	(3.6)	54.7	(3.9)	272.0 (1.4)	280.1 (1.2)	8 (1.9)	279.4 (2.1)	289.4 (2.0)	10 (3.2)	275.5 (1.6)	281.7 (1.2)	6 (2.1)
Malaysia	98.8	(0.8)	100.0	(0.0)	-	-	-	-	-	-	308.9 (6.2)	314.8 (1.1)	6 (6.3)
Myanmar	98.7	(0.8)	100.0	(0.0)	-	-	-	-	-	-	284.5 (2.1)	288.1 (0.7)	4 (2.2)
Philippines	71.8	(3.4)	73.8	(3.4)	283.6 (1.6)	289.8 (1.3)	6 (2.2)	285.1 (2.5)	290.1 (1.5)	5 (3.0)	284.2 (1.6)	289.7 (1.1)	6 (2.1)
Viet Nam	97.5	(1.3)	97.5	(1.3)	339.8 (5.1)	336.2 (0.9)	-4 (5.2)	328.1 (3.0)	327.3 (0.9)	-1 (3.1)	343.5 (3.5)	341.3 (1.1)	-2 (3.6)
Average six countries	87.2	(0.9)	86.6	(1.0)	294.1 (1.2)	299.2 (0.4)	5 (1.2)	291.3 (1.2)	298.1 (0.5)	7 (1.3)	296.5 (1.7)	300.9 (0.4)	4 (1.7)

Significant differences (p<0.05) indicated in bold

() Standard errors appear in parentheses.

Table 3.34: Percentage of children by availability of school library

Country	Yes		No	
Cambodia	74.6	(2.8)	25.4	(2.8)
Lao PDR	35.1	(3.5)	64.9	(3.5)
Malaysia	100.0	(0.0)	0.0	(0.0)
Myanmar	87.9	(2.4)	12.1	(2.4)
Philippines	50.6	(3.9)	49.4	(3.9)
Viet Nam	94.6	(1.8)	5.4	(1.8)
Average six countries	73.8	(1.1)	26.2	(1.1)

() Standard errors appear in parentheses.

Table 3.35: Percentage of children by teacher specialization

Country	Generalist Grade 5 teachers (all of most of the subjects areas)		Mathematics teachers		Test language or other language teacher		Social studies teacher		Teacher of another subject	
Cambodia	51.2	(4.0)	25.8	(3.3)	17.9	(3.5)	5.1	(1.9)	0.0	(0.0)
Lao PDR	87.3	(2.3)	4.7	(1.4)	2.7	(1.1)	1.8	(0.9)	3.5	(1.2)
Malaysia	10.0	(0.9)	12.7	(0.7)	31.8	(1.3)	1.5	(0.3)	44.0	(1.5)
Myanmar	57.3	(3.7)	13.4	(1.6)	14.5	(1.9)	7.1	(1.2)	7.7	(1.4)
Philippines	39.8	(3.1)	9.1	(1.3)	11.4	(1.3)	6.0	(0.9)	33.7	(2.4)
Viet Nam	51.4	(2.4)	1.3	(0.8)	10.2	(1.6)	2.3	(1.0)	34.7	(2.7)

() Standard errors appear in parentheses.

Table 3.36: Percentage of children by teachers' highest level of education

Country	ISCED Level 7, ISCED Level 8		ISCED Level 6		ISCED Level 5		ISCED Level 4		ISCED Level 3		ISCED Level 2 or below	
Cambodia	0.0	(0.0)	0.6	(0.6)	37.5	(3.7)	2.3	(1.4)	54.5	(4.2)	5.1	(1.9)
Lao PDR	0.9	(0.8)	2.7	(1.1)	55.3	(3.2)	36.9	(3.0)	2.8	(1.1)	1.4	(0.7)
Malaysia	4.8	(1.0)	80.8	(2.1)	11.0	(1.7)	1.5	(0.7)	2.0	(0.5)	0.0	(0.0)
Myanmar	1.0	(0.7)	89.3	(2.0)	5.0	(1.3)	2.5	(1.0)	2.1	(1.0)	0.0	(0.0)
Philippines	23.7	(3.7)	76.3	(3.7)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)
Viet Nam	0.0	(0.0)	1.1	(0.8)	70.2	(4.0)	23.6	(3.7)	0.0	(0.0)	5.2	(1.5)

() Standard errors appear in parentheses.

Table 3.37: Percentage of children by teachers' training in the language of instruction

Country	Yes during pre-service training only		Yes during in-service training only		Yes during both pre- and in-service training		No training has been received	
Cambodia	24.9	(3.5)	14.5	(3.2)	41.3	(4.4)	19.3	(3.9)
Lao PDR	14.2	(2.7)	28.8	(3.6)	20.7	(3.2)	36.3	(3.6)
Malaysia	27.1	(2.7)	19.0	(2.6)	41.2	(2.7)	12.8	(1.9)
Myanmar	32.0	(3.6)	39.6	(4.2)	16.8	(3.3)	11.5	(2.8)
Philippines	2.4	(1.1)	45.1	(4.7)	33.6	(4.7)	18.9	(4.3)
Viet Nam	32.9	(4.4)	10.1	(3.0)	56.0	(5.0)	1.1	(1.1)

() Standard errors appear in parentheses.

Table 3.38: Percentage of children by teachers' training in mathematics

Country	Yes during pre service training only		Yes during in service training only		Yes during both pre and in-service training		No training has been received	
Cambodia	21.6	(3.4)	12.4	(2.7)	44.9	(4.5)	21.2	(4.0)
Lao PDR	13.0	(2.2)	33.3	(2.9)	18.1	(2.6)	35.6	(3.0)
Malaysia	18.0	(3.4)	19.6	(2.9)	55.6	(3.7)	6.7	(2.1)
Myanmar	34.9	(4.2)	38.7	(4.4)	17.5	(3.6)	8.9	(2.5)
Philippines	6.2	(2.2)	38.5	(4.7)	38.1	(4.9)	17.2	(4.1)
Viet Nam	32.3	(4.5)	9.2	(2.6)	57.9	(4.6)	0.6	(0.6)

() Standard errors appear in parentheses.

Table 3.39: Percentage of children with positive attitudes towards school

Country	Like school		Feel safe		Feel like I belong		Learn useful things		Make friends easily	
Cambodia	94.1	(0.5)	88.1	(0.6)	77.6	(0.9)	89.0	(0.7)	82.4	(0.7)
Lao PDR	92.7	(0.7)	88.1	(0.8)	81.7	(1.1)	88.5	(0.8)	84.9	(0.9)
Malaysia	90.9	(0.6)	86.2	(0.8)	79.5	(0.8)	93.8	(0.7)	89.1	(0.6)
Myanmar	96.2	(0.4)	89.3	(0.7)	88.8	(0.9)	89.2	(0.8)	86.4	(0.8)
Philippines	88.5	(0.6)	78.4	(0.9)	75.7	(0.8)	75.4	(1.1)	77.0	(0.8)
Viet Nam	94.5	(0.4)	90.6	(0.6)	84.9	(0.7)	98.2	(0.2)	94.4	(0.4)
Average six countries	92.8	(0.2)	86.8	(0.3)	81.4	(0.4)	89.0	(0.3)	85.7	(0.3)

() Standard errors appear in parentheses.

Table 3.40: Differences in average reading by children attitude toward school

Country	Bottom quarter of SCHATT		Second quarter of SCHATT		Third quarter of SCHATT		Top quarter of SCHATT		Difference in scores between students in the top quarter and students in the bottom quarter of SCHATT	
Cambodia	286.3	(1.0)	294.1	(1.4)	295.4	(1.3)	294.1	(0.9)	**8**	(1.4)
Lao PDR	273.1	(1.1)	279.4	(1.0)	277.1	(1.1)	275.2	(1.1)	2	(1.6)
Malaysia	314.8	(1.6)	321.9	(1.1)	313.2	(10.2)	320.5	(1.1)	**6**	(2.0)
Myanmar	281.5	(1.1)	293.5	(1.1)	298.8	(0.8)	295.8	(1.0)	**14**	(1.5)
Philippines	277.0	(0.8)	286.7	(0.9)	292.8	(1.3)	298.0	(1.0)	**21**	(1.3)
Viet Nam	335.5	(1.1)	337.0	(1.0)	337.1	(1.4)	337.0	(1.2)	1	(1.6)
Average six countries	294.7	(0.5)	302.1	(0.5)	302.4	(1.7)	303.4	(0.4)	**9**	(0.6)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.41: Differences in average writing by children attitude toward school

Country	Bottom quarter of SCHATT		Second quarter of SCHATT		Third quarter of SCHATT		Top quarter of SCHATT		Difference in scores between students in the top quarter and students in the bottom quarter of SCHATT	
Cambodia	280.0	(1.3)	289.1	(1.8)	291.1	(1.3)	289.7	(1.3)	**10**	(1.8)
Lao PDR	278.9	(1.6)	289.3	(1.4)	289.7	(1.7)	284.1	(1.8)	**5**	(2.4)
Malaysia	312.2	(1.2)	319.5	(0.8)	314.3	(9.1)	320.6	(0.9)	**8**	(1.5)
Myanmar	288.3	(1.4)	301.7	(1.2)	305.2	(0.7)	302.3	(1.3)	**14**	(2.0)
Philippines	276.8	(1.1)	287.8	(1.1)	293.3	(1.5)	301.0	(1.2)	**24**	(1.6)
Viet Nam	324.9	(1.0)	328.0	(1.1)	329.2	(1.4)	329.2	(1.3)	**4**	(1.7)
Average six countries	293.5	(0.5)	302.6	(0.5)	303.8	(1.6)	304.5	(0.5)	**11**	(0.8)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.42: Differences in average mathematics by children attitude toward school

Country	Bottom quarter of SCHATT		Second quarter of SCHATT		Third quarter of SCHATT		Top quarter of SCHATT		Difference in scores between students in the top quarter and students in the bottom quarter of SCHATT	
Cambodia	286.0	(1.0)	293.1	(1.4)	293.8	(1.2)	293.4	(1.0)	**7**	(1.4)
Lao PDR	276.1	(1.1)	283.0	(1.0)	280.8	(1.1)	279.0	(1.2)	3	(1.6)
Malaysia	313.8	(1.6)	317.6	(1.1)	306.8	(7.3)	313.9	(1.0)	0	(1.9)
Myanmar	280.0	(0.8)	288.8	(1.0)	293.0	(0.7)	291.4	(0.9)	**11**	(1.2)
Philippines	278.3	(0.8)	287.2	(0.9)	292.3	(1.2)	297.4	(0.9)	**19**	(1.2)
Viet Nam	338.8	(1.2)	341.5	(1.2)	342.5	(1.5)	343.8	(1.4)	**5**	(1.9)
Average six countries	295.5	(0.5)	301.9	(0.5)	301.5	(1.3)	303.2	(0.4)	**8**	(0.6)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.43: Percentage of children by regular parental engagement in children learning

Country	Do homework		Discuss school learning		Discuss school work		Check homework		Help with homework		Motivate to succeed	
Cambodia	39.6	(1.4)	37.9	(1.1)	32.5	(1.1)	40.9	(1.1)	25.2	(0.9)	50.7	(1.0)
Lao PDR	35.6	(1.8)	28.9	(1.5)	33.2	(1.6)	33.4	(1.3)	25.6	(1.4)	40.5	(1.6)
Malaysia	60.5	(1.3)	35.2	(0.9)	30.6	(1.0)	31.4	(0.8)	32.2	(0.7)	48.6	(1.0)
Myanmar	41.9	(1.7)	32.2	(1.6)	28.4	(1.7)	34.0	(1.5)	28.6	(1.5)	48.0	(1.5)
Philippines	32.7	(1.4)	29.5	(1.1)	27.0	(1.0)	33.2	(1.0)	28.1	(0.9)	36.1	(1.1)
Viet Nam	66.2	(2.3)	42.0	(1.3)	40.2	(1.2)	42.1	(1.2)	21.4	(1.2)	58.5	(1.1)
Average six countries	46.1	(0.7)	34.3	(0.5)	32.0	(0.5)	35.8	(0.5)	26.8	(0.5)	47.1	(0.5)

() Standard errors appear in parentheses.

Table 3.44: Percentage of children reporting on classroom climate

Country	Teacher late		Long time to settle class		Teacher absent	
Cambodia	50.8	(1.2)	59.4	(1.3)	50.8	(1.2)
Lao PDR	66.7	(1.8)	67.9	(1.5)	58.1	(1.7)
Malaysia	64.2	(1.0)	73.9	(0.8)	38.1	(1.0)
Myanmar	66.9	(1.5)	48.8	(1.3)	43.3	(1.4)
Philippines	58.1	(1.4)	64.9	(0.9)	43.2	(1.3)
Viet Nam	14.3	(1.3)	60.2	(2.1)	9.1	(0.8)
Average six countries	53.5	(0.6)	62.5	(0.6)	40.4	(0.5)

() Standard errors appear in parentheses.

Table 3.45: Percentage of children attending schools by principal report issues hindering school capacity

Country	Classrooms		Toilets		Instructional materials		Computers		Qualified teachers	
Cambodia	47.9	(3.8)	42.6	(3.9)	34.4	(3.8)	64.1	(3.7)	41.1	(3.8)
Laos	62.5	(3.3)	50.5	(3.5)	53.7	(3.8)	25.6	(3.2)	55.9	(3.5)
Malaysia	32.9	(3.8)	24.7	(3.1)	21.0	(3.3)	52.6	(3.4)	28.2	(3.6)
Myanmar	49.1	(3.6)	45.9	(4.0)	49.1	(4.0)	33.0	(3.7)	44.1	(3.9)
Philippines	43.0	(4.0)	36.8	(3.7)	60.7	(3.6)	66.0	(3.7)	12.4	(2.7)
Vietnam	22.6	(3.4)	24.0	(3.6)	14.6	(2.7)	37.9	(4.1)	13.4	(2.9)
SEA-PLM Average	43.0	(1.5)	37.4	(1.5)	38.9	(1.5)	46.5	(1.5)	32.5	(1.4)

() Standard errors appear in parentheses.

Table 3.46: Differences in average reading by issues hindering school capacity

Country	Bottom quarter of HINDER		Second quarter of HINDER		Third quarter of HINDER		Top quarter of HINDER		Difference in scores between students in the top quarter and students in the bottom quarter of HINDER	
Cambodia	292.4	(2.1)	287.4	(1.5)	288.0	(2.1)	290.9	(1.4)	-1	(2.5)
Lao PDR	277.4	(1.8)	269.0	(1.2)	274.1	(1.2)	273.0	(2.4)	-4	(2.9)
Malaysia	319.8	(2.2)	318.5	(2.3)	320.2	(2.9)	317.6	(2.1)	-2	(3.1)
Myanmar	296.1	(1.3)	290.1	(1.9)	289.1	(1.6)	290.9	(2.4)	-5	(2.7)
Philippines	297.4	(2.1)	285.2	(1.3)	282.9	(2.5)	282.9	(1.8)	**-14**	(2.8)
Viet Nam	338.6	(1.1)	338.6	(1.1)	335.1	(2.2)	333.6	(2.5)	-5	(2.7)
Average six countries	303.6	(0.7)	298.2	(0.7)	298.3	(0.9)	298.2	(0.9)	**-5**	(1.1)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.47: Differences in average writing bychildren attitude toward school

Country	Bottom quarter of HINDER		Second quarter of HINDER		Third quarter of HINDER		Top quarter of HINDER		Difference in scores between students in the top quarter and students in the bottom quarter of HINDER	
Cambodia	287.0	(2.2)	281.3	(2.0)	284.3	(2.7)	285.1	(1.7)	-2	(2.8)
Lao PDR	286.2	(2.5)	269.4	(4.2)	282.4	(1.9)	281.8	(3.7)	-4	(4.5)
Malaysia	318.3	(1.7)	316.4	(1.7)	319.2	(2.3)	316.7	(1.5)	-2	(2.3)
Myanmar	302.9	(1.3)	297.0	(1.9)	296.0	(1.9)	296.7	(2.5)	**-6**	(2.9)
Philippines	297.6	(2.2)	287.0	(1.6)	281.7	(3.2)	283.1	(2.7)	**-15**	(3.4)
Viet Nam	329.5	(1.1)	329.5	(1.1)	326.2	(2.1)	324.7	(1.9)	**-5**	(2.2)
Average six countries	303.6	(0.8)	296.8	(0.9)	298.3	(1.0)	298.0	(1.0)	**-6**	(1.3)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.48: Differences in average mathematics by issues hindering school capacity

Country	Bottom quarter of HINDER		Second quarter of HINDER		Third quarter of HINDER		Top quarter of HINDER		Difference in scores between students in the top quarter and students in the bottom quarter of HINDER	
Cambodia	292.1	(2.1)	287.4	(1.5)	287.2	(1.9)	289.1	(1.4)	-3	(2.5)
Lao PDR	280.0	(1.8)	269.5	(3.2)	277.9	(1.2)	277.8	(2.4)	-2	(3.0)
Malaysia	318.2	(2.2)	315.3	(2.1)	314.0	(2.6)	310.9	(2.0)	**-7**	(3.0)
Myanmar	290.5	(0.9)	287.6	(1.4)	285.4	(1.2)	288.7	(2.1)	-2	(2.3)
Philippines	296.1	(1.8)	285.7	(1.2)	284.5	(2.3)	283.2	(1.9)	**-13**	(2.6)
Viet Nam	344.1	(1.2)	344.1	(1.2)	338.8	(2.5)	338.6	(2.7)	-5	(2.9)
Average six countries	303.5	(0.7)	298.3	(0.8)	298.0	(0.8)	298.0	(0.9)	**-5**	(1.1)

Significant differences (p<0.05) indicated in bold
() Standard errors appear in parentheses.

Table 3.49: Percentage of children attending schools by teacher report report issues affecting children

Country	Lack of basic knowledge		Lack of interest		Poor health		Disruptive in class		Absent		Hungry in class		Lack of sleep	
Cambodia	82.2	(2.6)	65.7	(3.3)	47.4	(3.1)	48.1	(3.4)	56.6	(3.1)	44.5	(3.0)	46.6	(3.0)
Lao PDR	68.0	(3.2)	55.3	(3.6)	85.6	(2.4)	18.5	(2.6)	22.2	(2.6)	13.0	(1.9)	11.0	(1.9)
Malaysia	73.4	(1.1)	60.0	(1.1)	29.3	(1.0)	38.9	(1.1)	37.0	(1.2)	17.0	(0.8)	20.0	(0.9)
Myanmar	84.2	(2.4)	74.3	(2.8)	45.1	(3.2)	29.9	(2.9)	49.9	(2.9)	30.7	(2.9)	22.0	(2.6)
Philippines	68.7	(2.1)	60.1	(2.1)	52.4	(2.4)	52.3	(2.2)	54.7	(2.3)	43.5	(2.3)	37.4	(2.3)
Viet Nam	68.2	(2.9)	61.5	(3.1)	54.8	(3.2)	59.1	(3.1)	60.5	(3.0)	54.9	(3.0)	58.2	(3.1)
Average six countries	74.1	(1.0)	62.8	(1.1)	52.5	(1.1)	41.1	(1.1)	46.8	(1.1)	33.9	(1.0)	32.5	(1.0)

() Standard errors appear in parentheses.

Table 3.50: RESOU scale - Resources in the local area - items-total corections

Country	Alpha	No. of Items	SC12Q01	SC12Q02	SC12Q03	SC12Q04	SC12Q05	SC12Q06	SC12Q07	SC12Q08	SC12Q09	SC12Q10	SC12Q11	SC12Q12	No. of Valid	Missing %	SCALE mean
Cambodia	0.810	12	0.298	0.557	0.556	0.615	0.542	0.255	0.498	0.392	0.614	0.627	0.421	0.536	165	6.78	0.26
Lao PDR	0.767	12	0.374	0.431	0.354	0.526	0.596	0.239	0.456	0.467	0.436	0.553	0.555	0.428	207	10.78	0.25
Malaysia	0.787	12	0.464	0.475	0.333	0.394	0.444	0.436	0.556	0.263	0.406	0.582	0.451	0.460	193	4.46	0.37
Myanmar	0.836	12	0.436	0.577	0.398	0.483	0.518	0.612	0.627	0.268	0.478	0.503	0.586	0.448	160	0.00	0.55
Philippines	0.838	12	0.519	0.578	0.488	0.490	0.530	0.289	0.606	0.326	0.492	0.640	0.490	0.555	166	4.05	0.47
Viet Nam	0.819	12	0.295	0.525	0.396	0.520	0.554	0.273	0.619	0.478	0.501	0.501	0.647	0.401	139	7.33	0.49

Table 3.51: RESOU scale - Resources in the local area - factor loadings

	Item	Factor loadings	Item label
Ressources in the local area	SC12Q01	0.58	Public libraries
	SC12Q02	0.92	Cinema
	SC12Q03	0.86	Theatre, Music Hall
	SC12Q04	0.69	Foreign language schools
	SC12Q05	0.90	Museum or Art Gallery
	SC12Q06	0.52	Playgrounds
	SC12Q07	0.84	Public gardens/Parks
	SC12Q08	0.77	Religious centres
	SC12Q09	0.77	Sports facilities
	SC12Q10	0.91	Shopping centres or market place
	SC12Q11	0.81	Youth cultural centres
	SC12Q12	0.86	Hospital or clinic

Table 3.52: SCHATT scale - Positive attitudes towards school - item-total correlations

Country	Alpha	No. of Items	ST19Q01	ST19Q02	ST19Q03	ST19Q04	ST19Q05	No. of Valid	Missing %	SCALE mean
Cambodia	0.686	5	0.426	0.504	0.401	0.446	0.43	4752	11.93	2.23
Lao PDR	0.643	5	0.337	0.458	0.41	0.381	0.396	4122	12.26	2.32
Malaysia	0.714	5	0.422	0.500	0.513	0.49	0.45	5208	8.74	2.52
Myanmar	0.645	5	0.453	0.460	0.414	0.374	0.298	4414	1.45	2.32
Philippines	0.651	5	0.458	0.421	0.377	0.363	0.414	5338	12.25	2.12
Viet Nam	0.606	5	0.417	0.405	0.405	0.293	0.295	4722	2.38	2.45

Table 3.53: SCHATT scale - Positive attitudes towards school - factor loadings

Item		Factor loadings	Item label
Positive attitudes towards school	ST19Q01	0.63	I like being at school.
	ST19Q02	0.68	I feel safe when I am at school.
	ST19Q03	0.62	I feel like I belong to this school.
	ST19Q04	0.62	I have learnt things at school that are useful.
	ST19Q05	0.58	I make friends easily at school.

Table 3.54: PARENG scale - Parental engagement toward schooling - item-total correlations

Country	Alpha	No. of Items	ST26Q01	ST26Q02	ST26Q03	ST26Q04	ST26Q05	ST26Q06	No. of Valid	Missing %	SCALE mean
Cambodia	0.796	6	0.509	0.649	0.6	0.586	0.367	0.611	4570	15.31	1.79
Lao PDR	0.828	6	0.61	0.629	0.619	0.605	0.491	0.631	4067	13.43	1.66
Malaysia	0.845	6	0.620	0.651	0.628	0.63	0.562	0.663	4917	13.84	1.55
Myanmar	0.758	6	0.330	0.533	0.594	0.558	0.522	0.451	4351	2.86	1.83
Philippines	0.784	6	0.574	0.579	0.508	0.535	0.472	0.526	5196	14.58	1.62
Viet Nam	0.67	6	0.291	0.5	0.409	0.530	0.281	0.424	4646	3.95	2.06

Table 3.55: PARENG scale - Parental engagement toward schooling - factor loadings

Item		Factor loadings	Item label
Parental engagement toward schooling	ST26Q01	0.66	I have to do homework for school.
	ST26Q02	0.76	My parents/guardians ask me what I am learning in school.
	ST26Q03	0.71	I talk about my schoolwork with my parents.
	ST26Q04	0.73	My parents/guardians check if I do my homework.
	ST26Q05	0.54	My parents/guardians help me with my homework
	ST26Q06	0.74	My parents motivate me to succeed in school.

Table 3.56: HINDER scale - Issues hindering school capacity - item-total correlations

Country	Alpha	No. of Items	SC14Q01	SC14Q02	SC14Q03	SC14Q04	SC14Q05	No. of Valid	Missing %	SCALE mean
Cambodia	0.666	5	0.650	0.633	0.516	0.045	0.407	168	5.08	1.42
Lao PDR	0.498	5	0.435	0.473	0.367	-0.09	0.349	216	6.90	1.36
Malaysia	0.615	5	0.615	0.574	0.492	-0.098	0.464	190	5.94	1.28
Myanmar	0.750	5	0.531	0.517	0.611	0.453	0.486	160	0.00	1.04
Philippines	0.781	5	0.559	0.661	0.696	0.440	0.448	169	2.31	1.36
Viet Nam	0.746	5	0.510	0.634	0.503	0.486	0.463	149	0.67	0.72

Table 3.57: HINDER scale - Issues hindering school capacity - factor loadings

	Item	Factor loadings	Item label
Issues hindering school capacity	SC14Q01	0.84	Shortage or inadequacy of classrooms
	SC14Q02	0.81	Shortage or inadequacy of toilets
	SC14Q03	0.72	Shortage or inadequacy of instructional materials (e.g. textbooks)
	SC14Q04	0.11	Shortage or inadequacy of computers for instruction
	SC14Q05	0.61	A lack of qualified teachers

Appendix 4 - Chapter4

Table 4.1 : Content glossary for test administrators, to facilitate children's understanding of the global citizenship questionnaire

Environment	The natural world, (e.g. plants, the air we breathe, water in rivers and the sea).
Pollution	Dirty land, air, or water.
Natural resources	Something in the land that can be used for power (e.g. coal, gas, oil, forests).
Climate change	The process of the whole planet slowly heating up over a long time, caused by human actions such as cutting down forests, farming, and burning oil and coal.
Energy	Power to make things work (e.g. electricity, heat, wind, gas).
Usable land	Land for farming and living.
Vote	When many people make a choice about something or someone e.g. voting to leave the windows open in your classroom.
Candidate	A person wanting to be chosen for a position, (e.g. class captain).
Environmentally friendly	Doesn't harm nature.
Asian	A person whose family is from Asia.
Asia	The group of countries in my region (e.g. China, Indonesia, Malaysia, Viet Nam, Cambodia, Myanmar, Lao PDR, Philippines, Brunei).
In common with	Similar to.
Ethnicity/race	The customs, religion, traditions / and skin colour and facial features of a community, group or family.
Equality	Being treated the same no matter who you are.
Rich	Having lots of money or things.
Poor	Having little money or things.
Government	A group of people who make decisions for the country, state or region
Protect	Look after or care for.
Society	Communities who all live together.
Extinction	Disappearance of plants or animals from the world forever (e.g. due to hunting, over-fishing, or pollution).

Table 4.2: Percentage of children's perspectives on the frequency of global citizenship topics learnt in class (Some to A lot)

	What is happening in the country near 'country of test'		What is happening in the world		How things that happen in other countries affect 'country of test'		Understanding people that are different to you		How to solve disagreements with classmates peacefully		Solve problems		Protect environment		Pollution in 'country of test'		Pollution in places outside 'country of test'		Natural resources loss		Climate change	
Cambodia	37.8	(1.2)	44.5	(1.3)	41.8	(1.2)	48.2	(1.2)	51.8	(1.0)	45.3	(1.1)	69.4	(1.1)	42.8	(1.3)	38.5	(1.2)	49.3	(1.1)	64.6	(1.1)
Lao PDR	69.7	(1.7)	53.4	(1.8)	50.9	(1.6)	62.3	(1.6)	62.8	(1.3)	59.5	(1.5)	82.9	(1.0)	67.4	(1.4)	55.2	(1.8)	68.8	(1.3)	77.5	(1.4)
Malaysia	54.2	(1.1)	55.5	(1.1)	45.8	(1.1)	51.0	(1.0)	67.3	(0.9)	34.9	(0.8)	80.0	(0.8)	69.5	(1.0)	50.1	(1.0)	42.3	(0.9)	66.3	(1.1)
Myanmar	61.0	(1.5)	54.9	(1.6)	44.5	(1.4)	56.3	(1.4)	66.9	(1.3)	52.9	(1.5)	61.4	(1.5)	49.2	(1.6)	44.9	(1.7)	56.0	(1.5)	55.5	(1.6)
Philippines	71.9	(0.9)	62.6	(1.0)	61.1	(0.9)	59.7	(1.0)	64.2	(1.0)	62.0	(0.9)	70.0	(1.0)	65.0	(1.0)	55.9	(0.8)	61.7	(0.8)	65.3	(1.1)
Viet Nam	81.0	(1.1)	67.9	(1.6)	66.1	(1.6)	70.2	(1.5)	86.8	(0.9)	75.5	(1.3)	97.0	(0.4)	89.6	(0.9)	67.0	(1.4)	81.0	(1.0)	87.6	(0.9)
Average six countries	62.6	(0.5)	56.5	(0.6)	51.7	(0.5)	57.9	(0.5)	66.6	(0.4)	55.0	(0.5)	76.8	(0.4)	63.9	(0.5)	52.0	(0.6)	59.8	(0.5)	69.4	(0.5)

() Standard errors appear in parentheses.

Table 4.3: Percentage of children who identified the topics to be important to learn in school (very important or quite important)

	What is happening in countries near you own		What is happening in the world		How things that happen in other countries affect 'country of test'		Understanding people that have a different ethnicity/race to you		How to solve disagreements with classmates peacefully		How to protect the environment		How you can help to solve problems in you own community		Other languages spoken in your country		Languages spoken in other countries	
Cambodia	75.1	(1.1)	79.6	(1.1)	76.3	(0.9)	52.2	(1.1)	74.4	(0.8)	87.9	(0.7)	84.3	(0.8)	73.0	(1.0)	57.9	(1.2)
Lao PDR	83.2	(1.1)	78.4	(1.1)	75.2	(1.0)	76.8	(0.9)	79.2	(0.9)	87.7	(0.8)	81.7	(1.0)	73.5	(1.0)	70.5	(1.0)
Malaysia	81.9	(0.7)	87.2	(0.8)	79.1	(0.9)	74.5	(1.0)	86.0	(0.7)	93.3	(0.6)	78.1	(0.7)	70.1	(0.9)	57.8	(1.0)
Myanmar	85.2	(0.8)	84.9	(1.3)	79.2	(1.1)	81.4	(1.0)	83.6	(0.9)	87.6	(0.8)	83.8	(0.9)	78.2	(1.0)	66.3	(1.4)
Philippines	86.9	(0.6)	82.8	(0.8)	77.5	(0.9)	70.2	(1.0)	75.8	(0.9)	81.0	(0.8)	78.0	(0.9)	68.0	(0.8)	65.3	(0.8)
Viet Nam	80.2	(1.0)	79.6	(1.1)	90.6	(0.6)	65.0	(1.4)	93.7	(0.5)	98.0	(0.3)	89.4	(0.6)	76.7	(1.0)	67.5	(1.3)
Average six countries	82.1	(0.4)	82.1	(0.4)	79.7	(0.4)	70.0	(0.4)	82.1	(0.3)	89.2	(0.3)	82.5	(0.3)	73.3	(0.4)	64.2	(0.5)

() Standard errors appear in parentheses.

Table 4.4: Percentage of children who agreed with societal statements (agree or strongly agree)

	The world is a fair place		It is important that people from different ethnic/racial backgrounds get along with each other		It is important that all ethnic/racial groups are treated equally		Rich countries should control poor countries		Say what they think about the government's		It is the governments job/role to protect environment		All people in society must protect the environment	
Cambodia	79.1	(0.9)	68.9	(0.9)	78.4	(0.8)	62.1	(1.3)	70.7	(0.9)	81.9	(0.6)	88.2	(0.7)
Lao PDR	85.5	(0.8)	85.8	(0.9)	85.5	(0.8)	58.0	(1.6)	76.3	(1.4)	71.5	(1.8)	87.7	(0.9)
Malaysia	83.0	(0.7)	79.4	(1.0)	88.3	(0.8)	67.8	(1.0)	81.5	(0.8)	76.8	(1.1)	94.6	(0.6)
Myanmar	84.9	(0.9)	72.2	(1.2)	84.1	(0.8)	70.4	(1.6)	70.7	(1.2)	76.3	(1.4)	88.2	(0.8)
Philippines	70.9	(0.8)	74.0	(0.9)	68.9	(1.0)	52.7	(0.9)	66.9	(0.8)	74.6	(1.0)	72.5	(0.9)
Viet Nam	82.2	(1.5)	97.0	(0.3)	94.5	(0.4)	83.1	(1.3)	80.5	(1.2)	71.5	(1.9)	97.8	(0.3)
Average six countries	80.9	(0.4)	79.6	(0.4)	83.3	(0.3)	65.7	(0.5)	74.4	(0.4)	75.4	(0.6)	88.2	(0.3)

() Standard errors appear in parentheses.

Table 4.5: Percentage of children who were worried about environmental sustainability issues (quite worried or very worried)

	Pollution in 'country of test'		Pollution in places outside of 'country of test'		Power shortages		Extinction of plants		Extinction of animals		Loss of natural resources		Water shortages		Climate change	
Cambodia	77.2	(1.0)	59.3	(1.1)	70.5	(1.1)	75.7	(1.0)	75.1	(0.9)	77.1	(0.9)	76.7	(1.0)	74.6	(0.9)
Lao PDR	61.7	(1.5)	54.8	(1.8)	64.2	(1.3)	63.8	(1.5)	65.1	(1.4)	67.0	(1.5)	65.3	(1.6)	67.8	(1.4)
Malaysia	80.9	(0.9)	44.4	(1.0)	83.9	(0.8)	86.0	(0.9)	85.8	(0.8)	87.8	(0.8)	89.0	(0.8)	74.4	(0.8)
Myanmar	66.9	(1.4)	63.5	(1.2)	66.5	(1.3)	68.9	(1.3)	67.5	(1.2)	70.8	(1.3)	71.9	(1.2)	73.4	(1.2)
Philippines	57.5	(1.2)	51.4	(0.9)	55.0	(0.9)	58.2	(1.0)	60.1	(1.1)	61.0	(1.1)	59.9	(1.1)	62.3	(1.1)
Viet Nam	92.2	(0.6)	71.5	(1.2)	90.1	(0.6)	90.4	(0.7)	90.5	(0.6)	88.9	(0.7)	93.0	(0.5)	87.3	(0.7)
Average six countries	72.7	(0.5)	57.5	(0.5)	71.7	(0.4)	73.8	(0.5)	74.0	(0.4)	75.4	(0.4)	76.0	(0.5)	73.3	(0.4)

() Standard errors appear in parentheses.

Table 4.6: Percentage of children who agreed with statements pertaining to their national, Asian, and global identity (agree or strongly agree)

	I feel I belong to 'country of test'		I think of myself as Asian		I feel connected to the rest of the world		I feel I have a lot in common with other children in 'country of test'		I feel I have a lot in common with other children in Asia		I feel I have a lot in common with children in the world outside Asia	
Cambodia	41.6	(1.6)	38.8	(1.5)	49.5	(1.3)	80.7	(0.7)	47.1	(1.4)	50.4	(1.3)
Lao PDR	88.5	(0.9)	65.7	(1.2)	66.2	(1.6)	72.3	(1.1)	60.1	(1.4)	55.4	(1.4)
Malaysia	84.6	(0.7)	52.4	(1.4)	44.0	(1.2)	76.2	(0.9)	44.2	(1.0)	38.0	(1.0)
Myanmar	91.0	(0.6)	53.8	(1.6)	54.4	(1.5)	67.0	(1.2)	51.0	(1.6)	45.2	(1.3)
Philippines	86.7	(0.7)	59.1	(1.1)	62.5	(0.9)	71.9	(0.9)	55.1	(1.1)	49.7	(1.0)
Viet Nam	98.8	(0.2)	82.6	(1.4)	72.5	(1.4)	85.6	(0.9)	66.4	(1.6)	45.3	(1.8)
Average six countries	81.8	(0.4)	58.7	(0.6)	58.2	(0.5)	75.6	(0.4)	54.0	(0.6)	47.3	(0.5)

() Standard errors appear in parentheses.

() Standard errors appear in parentheses.

Table 4.7: Percentage of children who indicated they had participated in school activities related to global citizenship (Yes, I have done this)

	Speak in an organised debate		Present ideas to your class		Speak up in classroom discussions about problems in the world		Vote for class captain/leader/monitor		Become a candidate for class captain/leader/monitor		Participate in an activity to make the school more environmentally friendly	
Cambodia	26.9	(1.1)	74.5	(0.9)	38.0	(1.1)	64.0	(1.7)	40.2	(1.1)	71.5	(1.0)
Lao PDR	36.8	(1.7)	68.4	(1.5)	62.0	(1.7)	57.8	(1.8)	43.6	(1.7)	67.7	(1.6)
Malaysia	21.0	(1.1)	66.8	(1.1)	32.0	(1.0)	73.7	(1.3)	35.3	(0.9)	51.3	(1.2)
Myanmar	36.9	(1.3)	69.1	(1.0)	41.1	(1.5)	53.9	(1.6)	61.2	(1.1)	58.1	(1.4)
Philippines	62.0	(1.3)	79.0	(0.8)	52.8	(1.1)	80.7	(0.7)	58.7	(1.0)	74.1	(0.9)
Viet Nam	52.8	(1.8)	72.8	(1.4)	43.3	(1.9)	86.7	(1.1)	22.5	(1.0)	78.1	(1.2)
Average six countries	39.4	(0.6)	71.8	(0.5)	44.9	(0.6)	69.5	(0.6)	43.6	(0.5)	66.8	(0.5)

() Standard errors appear in parentheses.

Table 4.8: Percentage of children who were willing to participate in activities related to global citizenship (I will do this or I might do this)

	Tell someone who is littering to stop		Stand up for a classmate who is being badly treated by other students		Help other people in your community		Make friends with someone from another country		Encourage other people to help protect the environment		Join a group to help protect the environment	
Cambodia	79.9	(0.8)	75.7	(0.9)	86.4	(0.6)	65.0	(1.1)	86.0	(0.6)	86.6	(0.7)
Lao PDR	66.0	(1.2)	71.6	(1.0)	77.9	(1.0)	70.8	(1.3)	79.4	(0.9)	78.7	(1.0)
Malaysia	85.9	(0.8)	69.3	(1.1)	82.5	(0.8)	67.8	(1.0)	82.4	(0.8)	81.8	(0.9)
Myanmar	78.4	(0.9)	84.0	(0.6)	84.1	(0.8)	57.0	(1.6)	77.3	(0.9)	80.2	(0.9)
Philippines	78.6	(0.7)	69.7	(0.8)	81.8	(0.8)	74.0	(0.9)	77.6	(0.9)	78.8	(0.8)
Viet Nam	97.0	(0.3)	91.9	(0.5)	95.6	(0.4)	80.2	(1.1)	96.1	(0.3)	94.7	(0.4)
Average six countries	81.0	(0.3)	77.0	(0.4)	84.7	(0.3)	69.1	(0.5)	83.1	(0.3)	83.5	(0.3)

() Standard errors appear in parentheses.

Table 4.9: Percentage of children who indicated they were likely to participate in future school activities related to global citizenship (very likely or quite likely)

	Vote for class captain/leader/monitor		Become a candidate for class captain/leader/monitor		Join a group of students to support an issue you agree with		Speak in an organised debate		Speak up in a classroom discussion about problems in the world	
Cambodia	80.4	(0.8)	70.6	(1.0)	78.6	(1.0)	45.7	(1.1)	64.3	(1.0)
Lao PDR	79.3	(1.0)	70.9	(1.3)	80.9	(0.9)	56.5	(1.4)	78.2	(1.1)
Malaysia	82.7	(0.9)	56.6	(1.0)	75.2	(0.8)	38.7	(1.0)	59.0	(1.0)
Myanmar	77.8	(0.9)	75.5	(0.9)	80.3	(0.9)	59.8	(1.2)	65.3	(1.2)
Philippines	88.9	(0.6)	76.1	(0.7)	74.0	(1.0)	61.7	(1.0)	65.6	(0.9)
Vietnam	81.8	(1.0)	47.7	(1.3)	90.4	(0.6)	71.6	(1.3)	66.9	(1.4)
Average six countries	81.8	(0.4)	66.2	(0.4)	79.9	(0.4)	55.7	(0.5)	66.5	(0.5)

() Standard errors appear in parentheses.

Table 4.10: Percentage of teachers who felt prepared to teach global citizenship topics (very well or quite well)

Country	Local current events		Global current events		Globalisation		Children's rights		Environmental protection		Sustainable development		Respecting diversity		Conflict resolution		Inequality		Injustice		Peace and conflict		Taking action to challenge inequality	
Cambodia	95.9	(1.4)	78.6	(2.8)	79.0	(2.7)	98.5	(0.7)	97.3	(1.3)	95.4	(1.4)	90.7	(1.9)	93.1	(1.7)	87.4	(2.3)	81.0	(2.5)	86.7	(2.4)	88.9	(2.2)
Lao PDR	88.1	(2.4)	75.6	(2.9)	62.3	(3.4)	95.4	(1.5)	96.2	(1.5)	95.4	(1.5)	93.6	(1.7)	92.4	(1.7)	76.7	(2.8)	69.4	(3.4)	81.4	(2.7)	78.9	(2.7)
Malaysia	95.0	(0.5)	92.3	(0.6)	91.7	(0.6)	95.7	(0.5)	96.8	(0.4)	91.6	(0.7)	97.9	(0.3)	95.5	(0.4)	94.1	(0.5)	93.7	(0.5)	94.3	(0.5)	92.9	(0.5)
Myanmar	89.4	(2.1)	78.2	(2.8)	72.8	(3.2)	94.7	(1.4)	94.3	(1.5)	92.6	(1.7)	90.0	(2.1)	85.1	(2.4)	82.7	(2.5)	82.1	(2.4)	84.1	(2.4)	84.1	(2.4)
Philippines	98.1	(0.7)	93.6	(0.7)	94.2	(0.8)	99.8	(0.1)	99.5	(0.2)	98.6	(0.4)	99.2	(0.3)	97.4	(0.5)	97.1	(0.6)	95.5	(0.8)	96.9	(1.0)	96.6	(0.7)
Viet Nam	86.3	(2.2)	85.3	(2.2)	79.0	(2.2)	98.0	(0.4)	98.4	(0.4)	91.1	(1.7)	91.4	(1.6)	91.5	(1.5)	90.4	(1.6)	90.5	(1.6)	92.1	(1.4)	87.2	(1.8)
Average six countries	92.1	(0.7)	83.9	(0.9)	79.8	(1.0)	97.0	(0.4)	97.1	(0.4)	94.1	(0.5)	93.8	(0.6)	92.5	(0.6)	88.1	(0.8)	85.4	(0.9)	89.2	(0.8)	88.1	(0.8)

() Standard errors appear in parentheses.

Table 4.11: Percentage of teachers who were confident to teach global citizenship topics (very confident or quite confident)

Country	Local current events		Global current events		Globalisation		Children's rights		Environmental protection		Sustainable development		Respecting diversity		Conflict resolution		Inequality		Injustice		Peace and conflict		Taking action to challenge inequality	
Cambodia	93.9	(1.6)	66.5	(3.3)	68.5	(3.0)	98.4	(0.7)	96.9	(1.2)	87.3	(2.3)	91.1	(2.2)	91.9	(1.9)	86.1	(2.2)	85.0	(2.2)	90.2	(1.9)	83.6	(2.6)
Lao PDR	84.7	(2.4)	65.1	(2.9)	57.4	(3.1)	95.9	(1.4)	98.8	(0.6)	95.0	(1.4)	89.2	(2.1)	90.3	(1.9)	81.8	(2.5)	79.5	(2.9)	86.7	(2.4)	80.2	(2.9)
Malaysia	95.0	(0.4)	86.6	(0.7)	84.4	(0.7)	95.0	(0.4)	98.1	(0.3)	85.7	(0.7)	97.4	(0.3)	91.8	(0.5)	92.1	(0.5)	92.8	(0.5)	92.0	(0.6)	89.8	(0.6)
Myanmar	86.1	(2.2)	67.4	(3.0)	65.9	(3.0)	94.4	(1.5)	94.8	(1.5)	89.3	(2.0)	87.4	(2.1)	86.8	(1.9)	82.4	(2.4)	83.8	(2.4)	77.9	(2.6)	74.7	(3.1)
Philippines	97.7	(0.6)	90.6	(1.6)	90.6	(1.3)	99.2	(0.4)	99.3	(0.3)	98.6	(0.4)	98.2	(0.6)	95.4	(1.0)	97.2	(0.7)	96.6	(0.8)	97.6	(0.7)	95.8	(1.0)
Viet Nam	98.0	(0.5)	87.3	(1.7)	83.0	(1.6)	99.5	(0.3)	99.8	(0.1)	93.8	(1.3)	94.7	(1.1)	95.9	(0.9)	95.6	(1.1)	95.4	(1.0)	93.6	(1.3)	91.9	(1.4)
Average six countries	92.6	(0.6)	77.2	(1.0)	75.0	(1.0)	97.1	(0.4)	97.9	(0.3)	91.6	(0.6)	93.0	(0.7)	92.0	(0.6)	89.2	(0.7)	88.9	(0.8)	89.7	(0.7)	86.0	(0.9)

() Standard errors appear in parentheses.

Table 4.12: Percentage of teachers who considered that children's global citizenship skills, values and characteristics are important (very important or quite important)

Country	Feeling connected to other people outside their family, community or country		Being interested in the world		Caring about the problems of people outside their community or country		Wanting to make the world a better place		Acting to make the world a better place		Encouraging others to act to make the world a better place		Thinking that all people should be treated equally		Willing to challenge injustice		Acting to address inequality		Accepting that people are different		Seeing how local problems have global consequences		Valuing traditional histories and cultures other than their own	
Cambodia	95.9	(1.2)	88.5	(2.0)	78.0	(2.5)	87.4	(2.3)	90.5	(1.9)	88.6	(2.0)	97.7	(1.0)	99.5	(0.5)	96.2	(1.3)	87.8	(1.8)	84.9	(2.3)	36.2	(3.2)
Lao PDR	95.1	(1.4)	96.7	(1.2)	79.1	(2.6)	98.2	(0.8)	96.3	(1.2)	94.6	(1.5)	99.7	(0.2)	99.4	(0.3)	96.9	(1.1)	91.8	(1.7)	81.8	(2.4)	97.0	(1.1)
Malaysia	97.6	(0.3)	94.6	(0.5)	90.9	(0.7)	95.6	(0.4)	94.5	(0.4)	95.0	(0.4)	95.9	(0.4)	86.9	(0.6)	90.4	(0.5)	96.6	(0.3)	95.0	(0.3)	97.7	(0.3)
Myanmar	91.8	(1.8)	91.2	(1.9)	76.0	(2.7)	93.0	(1.3)	89.2	(1.8)	87.8	(2.1)	99.1	(0.5)	90.9	(1.6)	91.3	(1.4)	92.0	(1.7)	86.0	(2.4)	97.7	(1.0)
Philippines	98.1	(0.6)	97.5	(0.7)	93.1	(1.2)	98.5	(0.5)	97.8	(0.7)	97.7	(0.6)	99.5	(0.2)	95.7	(0.9)	96.0	(0.7)	98.7	(0.4)	97.9	(0.6)	96.7	(0.7)
Viet Nam	97.8	(0.6)	92.2	(1.5)	90.4	(1.7)	97.3	(0.8)	97.4	(0.7)	97.9	(0.5)	99.7	(0.2)	98.1	(0.6)	97.1	(0.8)	86.3	(1.5)	94.4	(1.1)	99.0	(0.4)
Average six countries	96.1	(0.5)	93.4	(0.6)	84.6	(0.8)	95.0	(0.5)	94.3	(0.5)	93.6	(0.6)	98.6	(0.2)	95.1	(0.4)	94.6	(0.4)	92.2	(0.6)	90.0	(0.7)	87.4	(0.6)

() Standard errors appear in parentheses.

Table 4.13: Percentage of teachers who considered that children's global citizenship learning at school is important (very important or quite important)

Country	What is happening in countries near their own		What is happening in the world		How things that happen in other countries affect 'country of test'		Understanding people that have a different ethnicity/race to them		How to solve disagreements with classmates peacefully		How to protect the environment		How they can help to solve problems in their own community		Other languages spoken in their country		Languages spoken in other countries	
Cambodia	79.9	(2.3)	76.2	(2.4)	87.4	(2.1)	76.9	(2.6)	97.7	(0.8)	99.5	(0.5)	93.6	(1.7)	88.1	(2.3)	75.7	(3.0)
Lao PDR	87.8	(2.0)	89.2	(2.1)	78.4	(2.8)	85.4	(2.4)	96.1	(1.2)	99.5	(0.5)	94.1	(1.5)	92.8	(1.7)	85.0	(2.2)
Malaysia	92.5	(0.6)	92.7	(0.6)	93.8	(0.5)	98.1	(0.3)	98.5	(0.2)	98.8	(0.2)	95.9	(0.4)	83.3	(0.7)	71.5	(0.9)
Myanmar	84.5	(2.3)	86.4	(2.1)	90.6	(1.6)	89.6	(2.0)	97.7	(0.7)	97.6	(1.0)	86.2	(2.1)	75.6	(2.8)	64.3	(3.0)
Philippines	96.6	(0.8)	96.7	(0.8)	97.2	(0.8)	97.5	(0.6)	97.9	(0.7)	99.2	(0.4)	97.9	(0.6)	87.3	(1.5)	80.7	(1.8)
Viet Nam	73.8	(2.7)	68.1	(2.9)	77.7	(2.3)	56.7	(3.2)	97.8	(0.7)	98.9	(0.5)	94.2	(1.1)	81.7	(2.0)	62.1	(2.8)
Average six countries	85.9	(0.8)	84.9	(0.8)	87.5	(0.8)	84.0	(0.9)	97.6	(0.3)	98.9	(0.2)	93.6	(0.6)	84.8	(0.8)	73.2	(1.0)

() Standard errors appear in parentheses.

Table 4.14: Percentage of teachers who reported that global citizenship activities took place in a regular school year (Yes)

Country	Activities related to environmental sustainability		Activities to help poor or under-privileged people or groups		Activities working with students from other schools in 'country of test'		Activities working with students from another country		Activities related to improving facilities for the local community	
Cambodia	60.6	(3.2)	44.3	(2.6)	20.0	(2.5)	8.9	(2.1)	54.6	(3.2)
Lao PDR	30.0	(3.0)	32.8	(3.3)	40.3	(3.3)	12.1	(2.2)	41.4	(3.8)
Malaysia	83.0	(1.0)	74.1	(1.3)	53.5	(1.5)	16.4	(1.4)	46.8	(1.4)
Myanmar	50.3	(3.6)	56.1	(3.2)	46.1	(3.5)	4.4	(1.3)	49.8	(3.8)
Philippines	94.3	(1.1)	67.0	(2.4)	44.7	(2.1)	10.7	(1.5)	63.1	(2.2)
Viet Nam	94.9	(1.1)	96.9	(1.0)	63.3	(3.0)	6.7	(1.7)	87.2	(1.9)
Average six countries	68.9	(1.0)	61.9	(1.0)	44.6	(1.1)	9.9	(0.7)	57.2	(1.2)

() Standard errors appear in parentheses.

Table 4.15: GCEXPOS index - Perception of global citizenship related topics learned at school - item-total correlations

Country	Alpha	No. of Items	GC01Q01	GC01Q02	GC01Q03	GC01Q04	GC01Q05	GC01Q06	GC01Q07	GC01Q08	GC01Q09	GC01Q10	GC01Q11	No. of Valid	Missing %	SCALE mean	Student WLEs MATH	Student WLEs READ	Student WLEs WRITE
Cambodia	0.708	11	0.373	0.376	0.384	0.316	0.279	0.422	0.425	0.397	0.291	0.349	0.257	4324	19.87	1.5	-0.034	-0.041	-0.026
Lao PDR	0.773	11	0.401	0.437	0.442	0.383	0.373	0.445	0.486	0.455	0.428	0.457	0.344	3765	19.86	1.86	0.037	0.049	0.039
Malaysia	0.767	11	0.4	0.46	0.408	0.331	0.293	0.488	0.503	0.47	0.376	0.422	0.428	4459	21.87	1.7	-0.1	-0.073	-0.068
Myanmar	0.708	11	0.389	0.398	0.383	0.299	0.286	0.418	0.387	0.347	0.339	0.327	0.305	4271	4.64	1.69	0.127	0.148	0.175
Philippines	0.62	11	0.319	0.27	0.25	0.227	0.229	0.345	0.274	0.28	0.304	0.252	0.312	4987	18.02	1.82	0.233	0.253	0.222
Viet Nam	0.692	11	0.348	0.343	0.367	0.279	0.283	0.372	0.373	0.373	0.371	0.381	0.247	4476	7.46	2.2	0.101	0.096	0.123

() Standard errors appear in parentheses.

Table 4.16: GCEXPOS index - Perception of global citizenship related topics learned at school - factors loading

Item	Factor loadings	Item label
GC01Q01	0.52	What is happening in countries near <Country of test>
GC01Q02	0.5	What is happening in the world
GC01Q03	0.51	How things that happen in other countries affect <Country of test>
GC01Q04	0.41	Understanding people that are different
GC01Q05	0.44	How to solve <disagreements> peacefully
GC01Q06	0.63	Pollution in places outside <country of test>
GC01Q07	0.57	Loss of natural resources, for example water, energy and useable land
GC01Q08	0.56	<Climate change>
GC01Q09	0.49	How you can help to solve problems with your classmates
GC01Q10	0.51	Pollution in <country of test>
GC01Q11	0.51	Protect the environment

GCEXPOS index - Perception of global citizenship related topics learned at school

Table 4.17: GLOBCON index - Children's attitudes toward environmental sustainability - item-total correlations

Country	Alpha	No. of Items	GC06Q01	GC06Q02	GC06Q03	GC06Q04	GC06Q05	GC06Q06	GC06Q07	GC06Q08	No. of Valid	Missing %	SCALE mean	Student WLEs		
														MATH	READ	WRITE
Cambodia	0.832	8	0.583	0.326	0.507	0.63	0.644	0.67	0.62	0.487	4527	16.1	1.98	0.332	0.349	0.337
Lao PDR	0.867	8	0.616	0.408	0.603	0.668	0.667	0.703	0.687	0.595	3961	15.69	1.88	0.296	0.282	0.253
Malaysia	0.862	8	0.633	0.57	0.498	0.625	0.598	0.638	0.661	0.647	4826	15.44	1.9	0.339	0.373	0.39
Myanmar	0.759	8	0.503	0.227	0.476	0.562	0.534	0.544	0.518	0.349	4356	2.75	2.24	0.273	0.375	0.335
Philippines	0.751	8	0.507	0.351	0.388	0.465	0.483	0.467	0.496	0.405	5105	16.08	1.69	0.422	0.431	0.414
Viet Nam	0.842	8	0.575	0.327	0.589	0.675	0.659	0.609	0.664	0.524	4619	4.51	2.43	0.131	0.109	0.113

Table 4.18: GLOBCON index - Children's attitudes toward environmental sustainability - factor loadings

	Item	Factor loadings	Item label
GLOBCON index - Children's attitudes toward environmental sustainability	GC06Q01	0.71	Pollution in <country of test>
	GC06Q02	0.44	Pollution in places outside of <country of test>
	GC06Q03	0.67	<Power> shortages
	GC06Q04	0.79	Extinction of plants
	GC06Q05	0.78	Extinction of animals
	GC06Q06	0.76	Loss of natural resources
	GC06Q07	0.79	Water shortages
	GC06Q08	0.61	<Climate change>

Table 4.19: EXPBEHA index - Likelihood of participation in activities related to global citizenship education - item-total correlations

Country	Alpha	No. of Items	GC07Q01	GC07Q02	GC07Q03	GC07Q05	GC07Q06	No. of Valid	Missing %	SCALE mean	Student WLEs		
											MATH	READ	WRITE
Cambodia	0.703	6	0.427	0.397	0.498	0.256	0.539	0.523	4740	12.16	0.229	0.273	0.235
Lao PDR	0.782	6	0.416	0.498	0.554	0.497	0.614	0.623	4052	13.75	0.172	0.156	0.088
Malaysia	0.697	6	0.395	0.484	0.514	0.2	0.502	0.516	4985	12.65	0.197	0.217	0.196
Myanmar	0.606	6	0.377	0.231	0.385	0.264	0.402	0.402	4378	2.25	0.148	0.209	0.226
Philippines	0.546	6	0.121	0.202	0.358	0.318	0.362	0.396	5443	10.52	0.267	0.31	0.325
Viet Nam	0.6	6	0.344	0.25	0.361	0.255	0.438	0.404	4697	2.89	0.081	0.088	0.089

Table 4.20: EXPBEHA index - Likelihood of participation in activities related to global citizenship education - factor loadings

	Item	Factor loadings	Item label
EXPBEHA index - Likelihood of participation in activities related to global citizenship education	GC07Q01	0.55	Tell someone who is littering to stop.
	GC07Q02	0.51	<Stand up> for a classmate who is being badly treated by other students.
	GC07Q03	0.67	Help other people in your <community>.
	GC07Q05	0.73	Encourage other people to help protect the environment.
	GC07Q06	0.72	Join a group to help protect the environment.

Table 4.21: GCINTEN index - Expected participation in activities related to global citizenship education - item-total correlations

Country	Alpha	No. of Items	GC07Q01	GC07Q02	GC07Q03	GC07Q05	GC07Q06	No. of Valid	Missing %	SCALE mean	Student WLEs		
											MATH	READ	WRITE
Cambodia	0.703	6	0.427	0.397	0.498	0.256	0.539	0.523	4740	12.16	0.229	0.273	0.235
Lao PDR	0.782	6	0.416	0.498	0.554	0.497	0.614	0.623	4052	13.75	0.172	0.156	0.088
Malaysia	0.697	6	0.395	0.484	0.514	0.2	0.502	0.516	4985	12.65	0.197	0.217	0.196
Myanmar	0.606	6	0.377	0.231	0.385	0.264	0.402	0.402	4378	2.25	0.148	0.209	0.226
Philippines	0.546	6	0.121	0.202	0.358	0.318	0.362	0.396	5443	10.52	0.267	0.31	0.325
Viet Nam	0.6	6	0.344	0.25	0.361	0.255	0.438	0.404	4697	2.89	0.081	0.088	0.089

Table 4.22: GCINTEN index - Expected participation in activities related to global citizenship education - factor loadings

Item	Factor loadings	Item label
GC07Q01	0.55	Tell someone who is littering to stop.
GC07Q02	0.51	<Stand up> for a classmate who is being badly treated by other students.
GC07Q03	0.67	Help other people in your <community>.

Table 4.23: GCLEARN index - Attitudes toward topics related to global citizenship education - item-total correlations

Country	Alpha	No. of Items	GC10Q01	GC10Q02	GC10Q03	GC10Q04	GC10Q05	GC10Q06	GC10Q07	GC10Q08	GC10Q09	No. of Valid	Missing %	SCALE mean	Student WLEs		
															MATH	READ	WRITE
Cambodia	0.697	9	0.304	0.397	0.367	0.32	0.37	0.387	0.426	0.384	0.377	4488	16.83	1.06	0.091	0.125	0.127
Lao PDR	0.745	9	0.36	0.431	0.415	0.442	0.443	0.386	0.465	0.408	0.443	3919	16.58	1.21	0.071	0.06	0.08
Malaysia	0.776	9	0.337	0.478	0.453	0.474	0.468	0.519	0.528	0.499	0.383	4855	14.93	1.35	0.122	0.168	0.203
Myanmar	0.701	9	0.365	0.356	0.339	0.41	0.371	0.364	0.423	0.392	0.352	4325	3.44	1.21	0.143	0.194	0.185
Philippines	0.705	9	0.317	0.424	0.405	0.363	0.359	0.433	0.409	0.331	0.361	5105	16.08	1.21	0.336	0.374	0.4
Viet Nam	0.659	9	0.373	0.355	0.283	0.268	0.303	0.246	0.393	0.379	0.419	4609	4.71	1.27	0.022	0.04	0.077

Table 4.24: GCLEARN index - Attitudes toward topics related to global citizenship education - item-total correlations - factor loadings

	Item	Factor loadings	Item label
GCLEARN index - Attitudes toward topics related to global citizenship education	GC10Q01	0.47	What is happening in countries near your own
	GC10Q02	0.55	What is happening in the world
	GC10Q03	0.54	How things that happen in other countries affect <Country of test>
	GC10Q04	0.54	Understanding people that have a different <ethnicity / race> to you
	GC10Q05	0.56	How to solve <disagreements> with classmates peacefully
	GC10Q06	0.58	How to protect the environment
	GC10Q07	0.6	How you can help to solve problems in your own <community>
	GC10Q08	0.55	Other languages spoken in your country
	GC10Q09	0.53	Languages spoken in other countries

Appendix 5

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Inception and implementation stages of SEA-PLM

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Can Grade 5 students in the region understand simple texts? Are Grade 5 students able to write their thoughts in a structured way? What percentage of children can perform complex mathematical operations? Do students think that climate change or injustice is important for their lives? These are among the questions addressed in the *SEA-PLM 2019 Main Regional Report, Children's learning in 6 Southeast Asian countries*.

The Southeast Asia Primary Learning Metrics (SEA-PLM) is a new regional large-scale student learning assessment programme, designed by and for countries in Southeast Asia. The programme aims to generate reliable data and evidence for monitoring learning outcomes across and within countries, and to understand what factors facilitate or hinder effective learning of children along their school journey. By doing so, each participating country can develop and implement policies and programmes to improve students' learning outcomes. SEA-PLM 2019 is the first round of this regional assessment.

6 countries from the region participated in SEA-PLM 2019: Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam. This first round focused on Grade 5 students, and on 3 learning domains: reading, writing and mathematics. A global citizenship questionnaire module was also developed as an experimental exercise in comparative large-scale assessment at primary education level. In addition, SEA-PLM 2019 used a series of background questionnaires to collect extensive information about children, classrooms, schools, teachers, head teachers, parents and communities.

SEA-PLM 2019 was conducted with a sample of children that is representative of the entire school population enrolled at Grade 5 in each country. Tests and questionnaires were administered in the official language(s) of instruction in Grade 5. SEA-PLM 2019 data were collected towards the end of the 2018–2019 school year, just before the COVID-19 pandemic. Therefore, SEA-PLM 2019 provides a solid picture of the situation of children's learning before 2020 and could serve as an authentic baseline for future monitoring and trend analysis. The SEA-PLM programme is co-chaired by the SEAMEO Secretariat and UNICEF EAPRO.