



KINGDOM OF CAMBODIA
NATION RELIGION KING

Ministry of Education, Youth and Sport

SNAPSHOT

PISA 2025 RESULTS **FOR CAMBODIA**



READING



MATHEMATICS



SCIENCE



September 2026

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FOREWORD

Over the past decade, Cambodia has undertaken comprehensive reforms in the education sector, beginning with the development of teachers' competencies, curricula, and learning materials, and extending to improvements in school governance, learning assessment, and accountability. These reforms have placed student learning outcomes at the center of education-sector priorities.

The Kingdom of Cambodia officially participated in the Programme for International Student Assessment (PISA) for the first time in 2022, together with 81 countries and economies, and participated in the second cycle in 2025, together with 91 countries and economies. PISA assesses the competencies of 15-year-old students in reading, mathematics, and science against international educational standards. It also provides relevant information on the universal basic skills of secondary students in relation to the global education target SDG 4.1.1c. Cambodia's participation in PISA is intended to assess the extent to which 15-year-old students are prepared to apply their knowledge and skills to continue their education at the next level, as well as to address challenges encountered in everyday life.

The PISA-2025 results demonstrate remarkable progress in the competencies of Cambodia's 15-year-old students, which has been recognized at the international level. This achievement represents a historic success worthy of international recognition. It demonstrates the tangible results arising from the strong commitment of all stakeholders and from Cambodia's continued progress along the right path in implementing education-sector reforms.

The Ministry of Education, Youth and Sport expresses its sincere appreciation to the leadership and education officials at all levels, as well as to all relevant stakeholders. The Ministry is committed to using the results of PISA-2025 as a foundation for further improving education policies, education strategies, curricula, teacher development teaching and learning, and school governance, with particular emphasis on ensuring the readiness of Cambodia's education system for PISA-2029. ✓



Phnom Penh, 8th September 2026

Dr. HANG CHUON NARON
Deputy Prime Minister
Ministry of Education, Youth and Sport

1. INTRODUCTION

1.1. Overview of PISA

The Programme for International Student Assessment (PISA) is an international assessment conducted by the Organization for Economic Co-operation and Development (OECD) every three years to evaluate the knowledge and skills of 15-year-old students worldwide. Rather than focusing primarily on students' ability to recall curriculum content, PISA assesses how effectively students can apply their knowledge and skills to real-life situations, solve problems, think critically, and use what they have learned in unfamiliar contexts.

PISA was launched in 1997, and the first assessment was conducted in 2000 with 32 countries and economies. PISA assesses three core domains—reading, mathematics, and science. In addition to measuring student performance, PISA collects extensive information on students' backgrounds, learning experiences, attitudes, and school environments. This allows participating countries and economies to examine not only what students know and can do, but also the factors associated with learning outcomes.

PISA 2025 is the ninth cycle of PISA, involving 91 countries and economies. The assessment continues to focus on reading, mathematics, and science while examining students' ability to reproduce and apply knowledge and to extrapolate from what they have learned when facing unfamiliar problems and situations, both inside and outside the school environment. First-time participants in PISA 2025 include Armenia, Ecuador, Egypt, Kenya, the Kurdistan Region of Iraq, Kyrgyzstan, Mauritius, Rwanda, Tajikistan, and Zambia.

Cambodia participated in full PISA for the second time, following its participation in PISA for Development (PISA-D) in 2017¹ and PISA 2022. These previous assessments provided Cambodia with important experience and strengthened the country's capacity to participate in large-scale international assessments.

The content

The PISA 2025 assessment focused on science, along with reading, mathematics and computational problem solving. In each round of PISA, one subject is tested in detail among the core subjects of science, reading and mathematics. The main subject in 2025 was science, as it was in 2006 and 2015. Reading was the main subject in 2000, 2009 and 2018. Mathematics was the main subject in 2003, 2012 and 2022.

The assessment

PISA 2025 retained a paper-based version of the assessment that included only trend items for science, reading and mathematics. This paper-based assessment was implemented in six countries and economies: Cambodia, Dushanbe (Tajikistan), Kurdistan Region (Iraq), Mauritius, Rwanda and Zambia.

¹ In the description below, PISA-D 2017 was replaced by PISA 2018 because Cambodia's PISA-D 2017 data was included in the PISA 2018 international database.

Test items were a mixture of multiple-choice questions and questions requiring students to construct their own responses. The items were organised in groups based on a passage setting out a real-life situation.

The questionnaires

Students answered a background questionnaire, which took about 35 minutes to complete. The questionnaire sought information about the students' attitudes, dispositions and beliefs, their homes, and their school and learning experiences. School principals completed a questionnaire that covered school management and organisation, and the learning environment. Countries/economies could also choose to add an optional questionnaire for students: a questionnaire about students' familiarity with computers.

Some countries/economies also distributed additional questionnaires to elicit more information. These included: a questionnaire for teachers asking about themselves and their teaching practices; and a questionnaire for parents asking them to provide information about their perceptions of and involvement in their child's school and learning.

1.2. Assessment methodology

1.2.1. Sampling procedure

The sampling process follows a two-stage random sampling method. In the first stage, schools are randomly selected from the national population of eligible schools. In the second stage, 15-year-old students are randomly selected from within each sampled school. This approach ensures that the selected sample is representative of the target population of 15-year-old students nationwide.

School sampling

For the first stage of sampling, Cambodia used two explicit stratification variables: geographical region and school location (urban and rural). The five geographical regions are Phnom Penh, Plains, Tonle Sap, Plateau, and Coastal. These variables resulted in nine school strata: Urban–Phnom Penh, Urban–Plains, Urban–Tonle Sap, Urban–Plateau, Urban–Coastal, Rural–Plains, Rural–Tonle Sap, Rural–Plateau, and Rural–Coastal. There are no schools classified as Rural–Phnom Penh.

Cambodia had a total population of 2,186 schools enrolling 15-year-old students that were eligible for PISA 2025. From this population, 186 schools were randomly selected for the assessment. The allocation of sample schools across the nine strata was designed to be equal or approximately proportional to the distribution of schools in the national population. Schools were selected using the Probability Proportional to Size (PPS) method, in accordance with OECD technical sampling standards. This approach helps ensure that schools with larger numbers of eligible 15-year-old students have a proportionately greater probability of selection while maintaining appropriate representation across geographical regions and urban–rural locations. Moreover, this approach produces reliable and internationally comparable estimates of student performance.

Table 1: The number of sampled schools across regions, geographical zones, school types, and school management

Characteristics	PISA 2022		PISA 2025	
	N	%	N	%
Region				
Urban	47	25.7	49	26.3
Rural	136	74.3	137	73.7
Geographical zone				
Phnom Penh*			23	12.4
Plains	86	47.0	67	36.0
Tonle sap	56	30.6	56	30.1
Plateau	26	14.2	27	14.5
Coastal	15	8.2	13	7.0
School type				
College G7-G9	90	49.2	88	47.3
Lycee G7_G12	89	48.6	94	50.5
Lycee G10_G12	4	2.2	4	2.2
School administration				
Public	172	93.9	172	92.5
Private	11	6.1	14	7.5
Total	183		186	

** Phnom Penh was separated from the Plains geographical zone in PISA 2025.*

Student sampling

Second-Stage Sampling is the selection of students. Following the selection of approximately 186 sample schools, each school prepared a complete list of all eligible students whose dates of birth fell between 1 March 2009 and 28 February 2010. Based on these student lists, the technical team selected the sample students and generated a Student Tracking Form for each participating school.

The student selection followed a standardized procedure:

- If a selected school had fewer than 35 eligible 15-year-old students, all eligible students were selected.
- If a school had more than 35 eligible students, the sampling program randomly selected 35 students.

This two-stage sampling approach ensures that the PISA sample represents the target population of 15-year-old students while maintaining a manageable assessment size within each participating school.

For PISA 2025, Cambodia initially selected a sample of 5,572 students from the 186 sampled schools. Of these, 5,464 students completed the assessment in at least two of the three core domains—mathematics, reading, or science.

Table 2: The number of assessed students by grade, gender, region, geographical zones, and school administration

Characteristics	PISA 2022		PISA 2025	
	N	%	N	%
Grade				
7	238	4.5	224	3.2
8	612	11.6	644	8.9
9	1499	28.4	2166	29.4
10	2228	42.2	1949	46.5
11	660	12.5	456	11.4
12	42	0.8	25	0.7
Gender				
Female	2812	53.3	2969	54.3
Male	2467	46.7	2495	45.7
Region				
Urban	1438	27.2	1546	28.3
Rural	3841	72.8	3918	71.7
Geographical zone				
Phnom Penh*			762	13.9
Plains	2530	47.9	1955	35.8
Tonle sap	1667	31.6	1645	30.1
Plateau	718	13.6	795	14.5
Coastal	364	6.9	307	5.6
School administration				
Public	4960	94.0	5101	93.4
Private	319	6.0	363	6.6
Total assessed students	5279		5464	

** Phnom Penh was separated from the Plains geographical zone in PISA 2025.*

1.2.2. Data collection

The official PISA 2025 data collection was conducted from 23 to 28 June 2025 across all 186 sample schools. Data collection results were:

- 186 schools participated, representing a 100% school participation rate.
- 186 school principals completed the school questionnaire, also representing a 100% participation rate.
- Of the 5,572 sampled students, 5,464 students participated in the assessment, including 2,995 female students, while 108 students were absent.
- The overall student participation rate was 98.1%.

The high school and student participation rates demonstrate the strong implementation of the PISA 2025 assessment in Cambodia and provide a strong basis for producing reliable and nationally representative results.

1.2.3. Data Analysis and Reporting

PISA reports student performance in mathematics, reading, and science using scaled scores that place student performance on a common measurement scale. This enables meaningful comparisons of student performance across countries and economies and allows countries to monitor trends in performance over successive PISA cycles.

In addition to mean scores, PISA reports the proportion of students performing at each proficiency level. Student performance is described across six proficiency levels, with Level 2 generally considered the baseline level of proficiency. Students performing at Level 2 demonstrate the capacity to apply their knowledge and skills in mathematics, reading, and science to everyday and real-life situations.

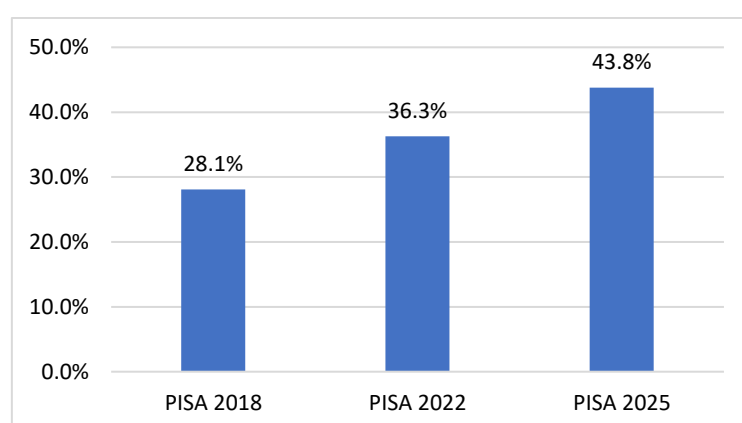
PISA also places strong emphasis on equity in education, examining differences in student performance associated with socioeconomic background, gender, school characteristics, and other student and family factors. In addition, information related to schools, teachers, students, and parents is analyzed to better understand learning environments and the factors associated with student performance.

2. CAMBODIA'S PISA 2025 PERFORMANCE

2.1. Percentage of 15-year-old students in Cambodia who are in school

PISA data show that Cambodia has substantially expanded the coverage of its PISA assessment, from 28.1% of the national 15-year-old population in 2018 to 36.3% in 2022 and 43.8% in 2025. Between 2018 and 2025, this 15.7-percentage-point increase reflects a significant expansion in the proportion of 15-year-olds remaining in school and participating in secondary education. As a result, PISA 2025 captures the learning outcomes of nearly half of Cambodia's 15-year-olds, making it increasingly representative of the national cohort. The improvement in coverage itself represents an important system-level achievement, reflecting greater access and retention in secondary education.

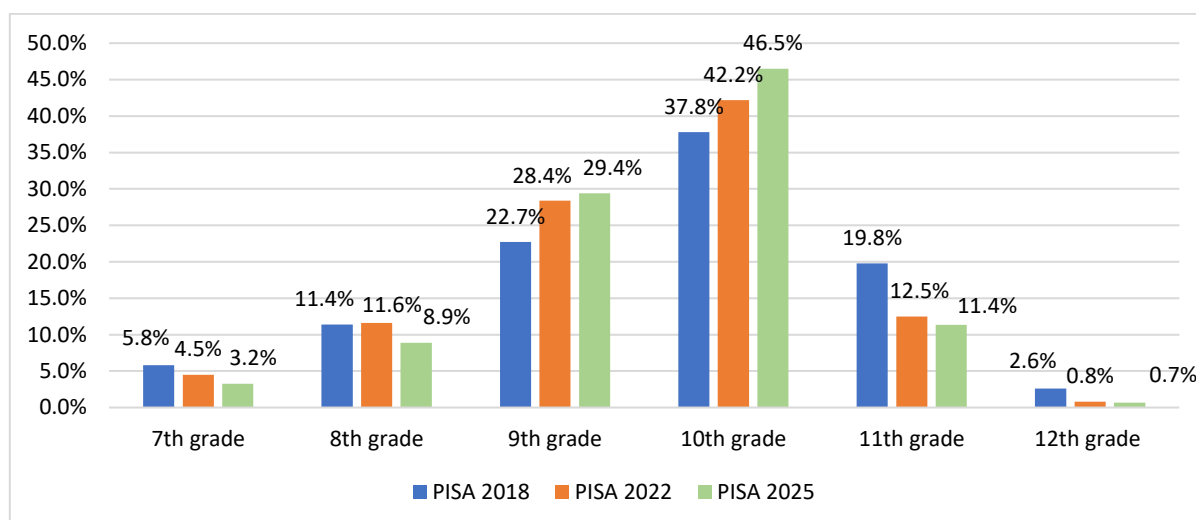
Figure 1: Coverage index of 15-year-old students in Cambodia who are in school



2.2. Percentage of students at age 15 across grade levels

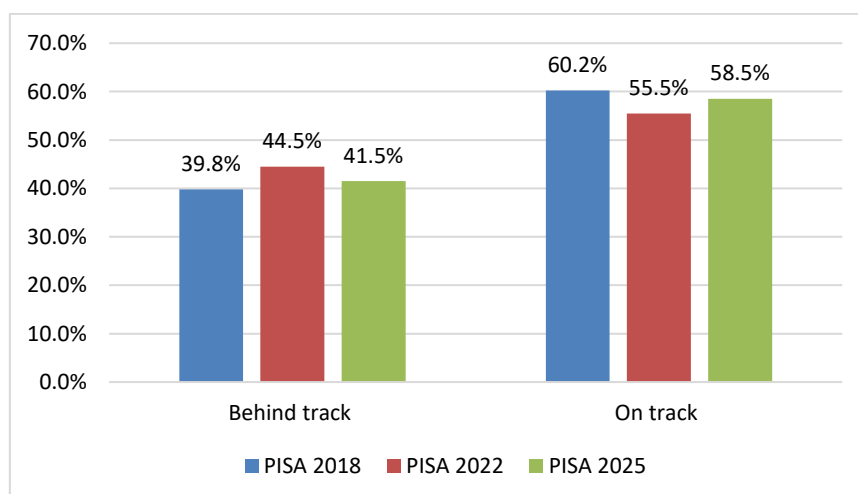
Between 2018 and 2025, Cambodia made significant progress in improving the age-grade alignment of its 15-year-old students. The proportion enrolled in Grade 10 increased from 37.8% in 2018 to 42.2% in 2022 and 46.5% in 2025, while the share in Grade 9 rose from 22.7% in 2018 to 29.4% in 2025. At the same time, the percentages of 15-year-olds remaining in lower grades declined markedly, with Grade 7 falling from 5.8% in 2018 to 3.2% in 2025 and Grade 8 from 11.4% in 2018 to 8.9% in 2022. These shifts demonstrate that more Cambodian students are progressing through school on time, reflecting improvements in access, retention, and reduced grade repetition. As a result, PISA 2025 captures a more age-appropriate and representative cohort of Cambodian students, strengthening the credibility of Cambodia's learning outcomes and providing more robust evidence to guide education policy and reform.

Figure 2: Percentage of students at age 15 across grade levels in Cambodia



This result means that Cambodia has maintained a relatively high proportion of 15-year-old students on track (Grade 10 and above) while gradually reducing the number who are substantially behind. The share of students on track declined temporarily from 60.2% in 2018 to 55.5% in 2022, before recovering to 58.5% in 2025. Conversely, the proportion of students behind track (Grades 7–9) increased from 39.8% to 44.5% between 2018 and 2022, then improved to 41.5% in 2025. Overall, nearly six in ten Cambodian 15-year-olds were enrolled in Grade 10 or above in 2025, demonstrating continued progress in age-grade alignment and providing a stronger, more representative foundation for interpreting Cambodia's PISA 2025 results.

Figure 3: Percentage of students behind and on track

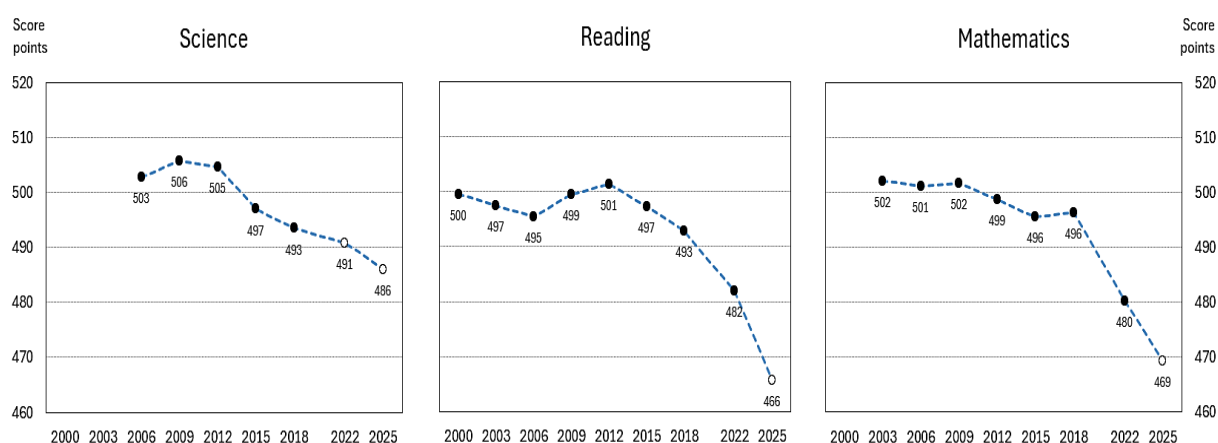


2.3. Cambodian students' performance in PISA

2.3.1. Results in scaled scores

The average trend across OECD countries is negative. Performance in PISA 2025 was the lowest in all subjects, significantly below the mean performance observed in any earlier assessment (except PISA 2022, in science).

Figure 4: Trends in performance over time in science, reading and mathematics



While global PISA performance has generally declined, Cambodia has achieved sustained and accelerating improvements in learning outcomes across all three PISA domains since the PISA-D baseline. Reading performance increased from 321 points in PISA-D to 329 in PISA 2022 and 347 in PISA 2025, representing an overall gain of 26 points. Mathematics increased from 325 to 336 and then to 366 points, a gain of 41 points, while science recorded the largest improvement, rising from 330 to 347 and 382 points—a remarkable 52-point gain.

Importantly, the pace of improvement accelerated substantially between 2022 and 2025. Reading increased by 18 points between 2022 and 2025, compared with 8 points between PISA-D and PISA 2022; mathematics increased by 30 points, compared with 11 points; and science increased by 35 points, compared with 17 points. This acceleration demonstrates that Cambodia is not only sustaining progress but is increasingly translating education reforms into improved student learning outcomes, with particularly strong momentum in science.

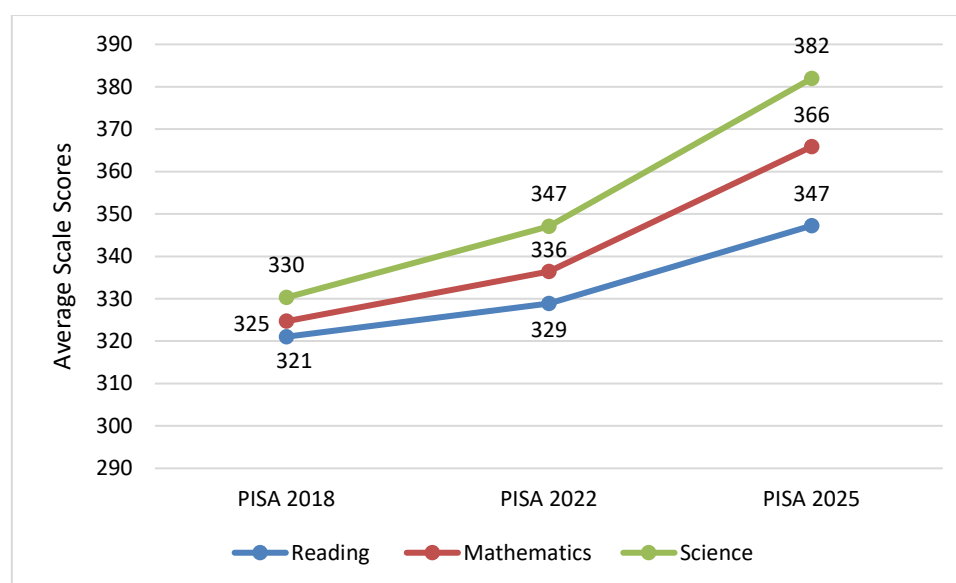
With these substantial score gains, Cambodia stands out as one of the most impressive improvers between PISA 2022 and 2025. This places Cambodia second in science after Georgia (+38), first in Mathematics, and among the top performers in reading, alongside the Philippines (+20) and Jordan (+20).

Using the OECD benchmark of 20 PISA points as approximately one year of typical learning at age 15², these gains represent roughly 1.8 years of learning in science, 0.9 years in reading, and 1.5 years in mathematics.

² [Changes in performance and equity in education between 2018 and 2022: PISA 2022 Results \(Volume I\) | OECD](#)

The PISA 2025 results, therefore, provide compelling evidence of a significant and accelerating improvement trajectory in Cambodia’s education system. They suggest that recent reforms—including efforts to strengthen teaching and learning, expand access and participation, improve school quality, and promote stronger learning outcomes—are beginning to translate into measurable gains in student achievement.

Figure 5: Cambodia’s PISA performance over time

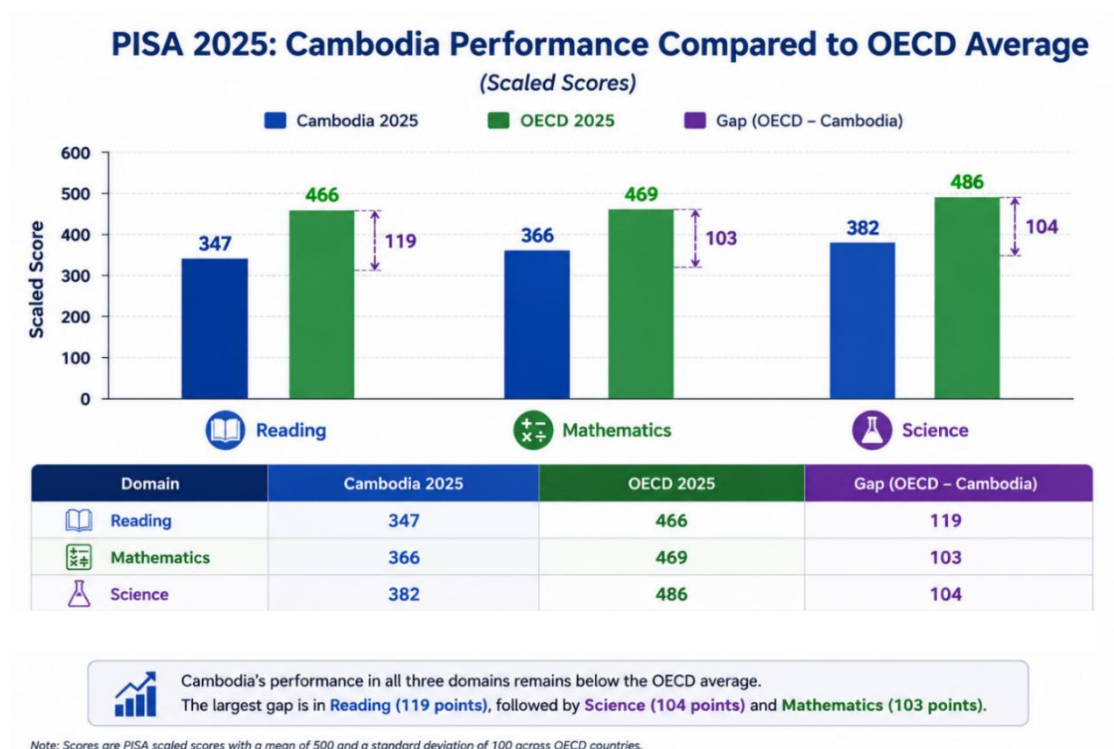


The scale of improvement is particularly significant when considered against the national policy targets. Cambodia has already exceeded the education performance indicator established under the Pentagonal Strategy—Phase I, which targeted a 10-point increase in reading, mathematics, and science by 2028. By 2025, Cambodia had achieved gains of 26 points in reading, 41 points in mathematics, and 52 points in science compared with the PISA-D baseline, substantially surpassing the 2028 target well ahead of schedule.

These results mark an important milestone for Cambodia’s education reform agenda. The challenge now is to consolidate these gains, ensure that improvements are sustained across all student groups and regions, and accelerate progress toward higher levels of proficiency and stronger foundational competencies.

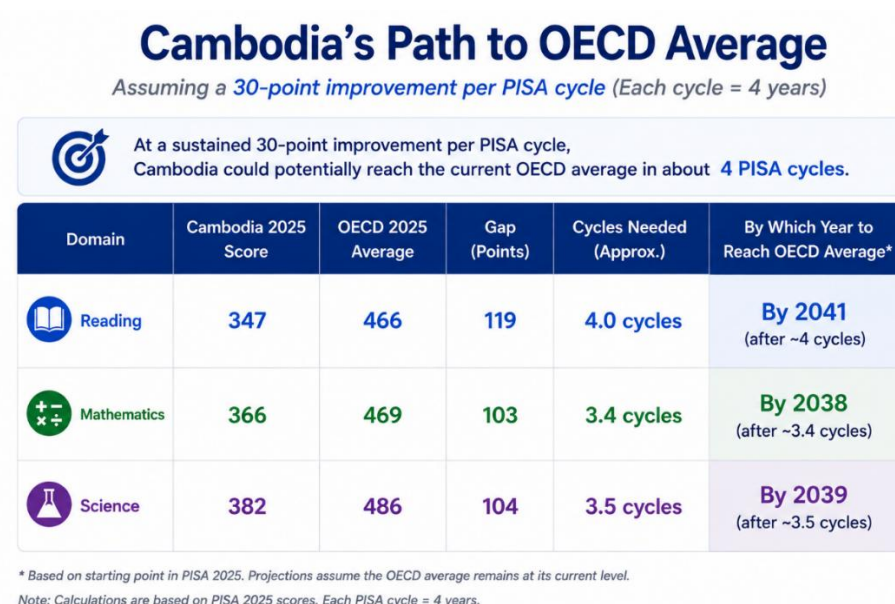
However, compared with the OECD 2025 averages of 466, 469, and 486, Cambodia remains 119 points behind in Reading, 103 points behind in Mathematics, and 104 points behind in science. These findings suggest that Cambodia has entered a phase of accelerated learning improvement, but sustained efforts to strengthen foundational literacy, improve teaching quality, expand competency-based learning, and provide targeted support for struggling students will be essential to further narrow the remaining gap and move toward OECD-level performance.

Figure 6: Cambodia performance compared to OECD average



Between 2022 and 2025, Cambodia gained 18 points in reading, 30 points in mathematics, and 35 points in science. At that pace, mathematics and science are placed on a promising trajectory toward the current OECD average within approximately three to four PISA cycles. Reading, however, will require a faster pace of improvement—around 30–40 points per cycle, depending on the target timeline. Achieving this will require sustained investment in foundational literacy, high-quality teaching, competency-based instruction, and targeted support for low-performing students.

Figure 7: Required improvement per PISA cycle to reach OECD average



Among the 91 countries that participated in PISA 2025, Cambodian students' learning outcomes ranked 75th in science, 81st in reading, and 77th in mathematics.

Among ASEAN countries, Cambodian students scored higher than the Philippines in science, and higher than Indonesia in mathematics.

Figure 8: Reading performance of top five countries/economies, ASEAN countries, and countries/economies below Cambodia

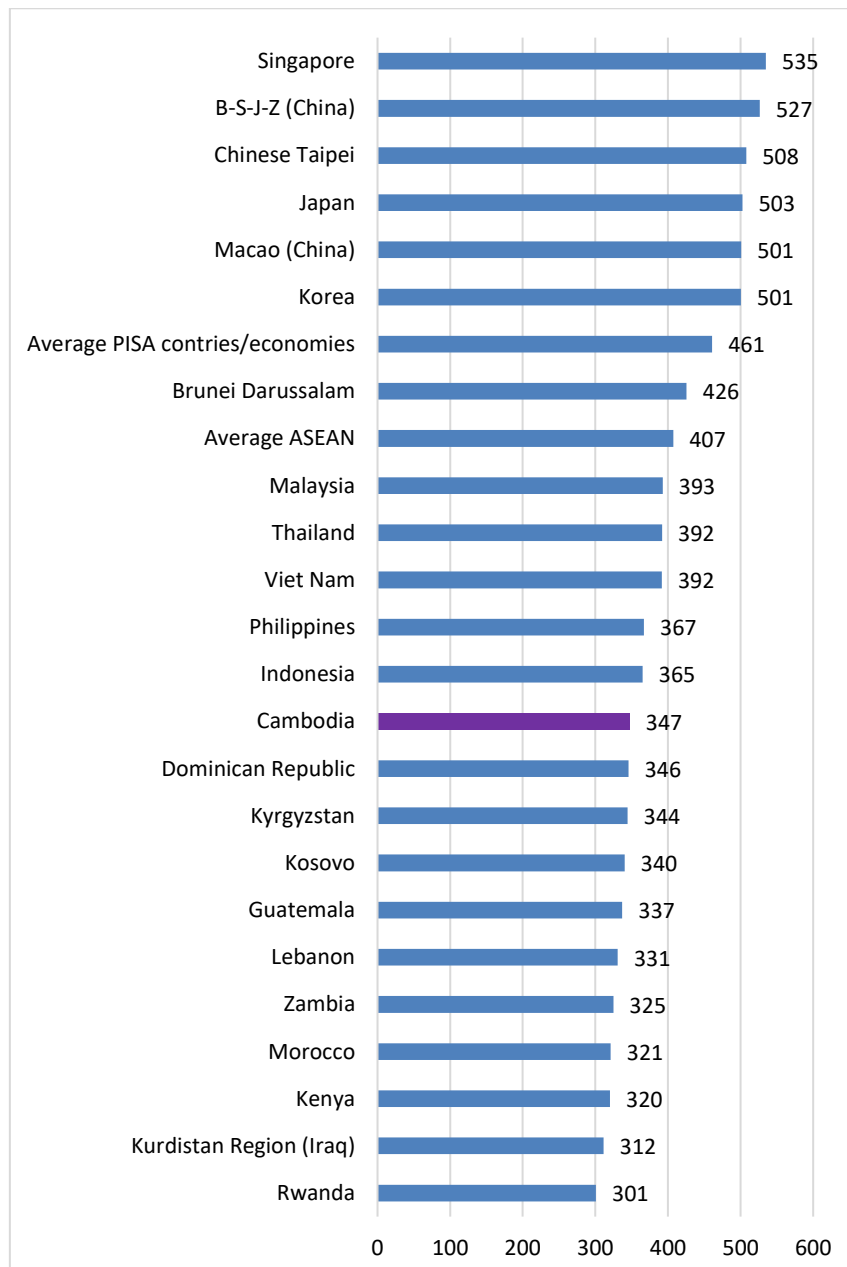


Figure 9: Mathematics performance of top five countries/economies, ASEAN countries, and countries/economies below Cambodia

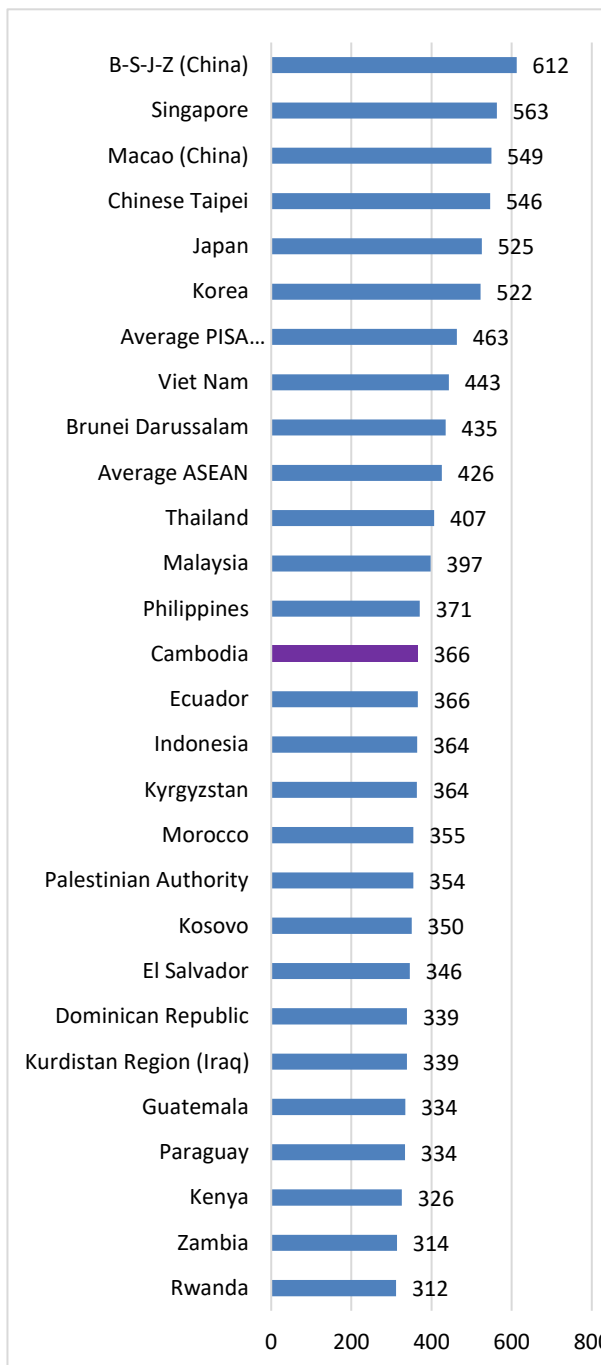
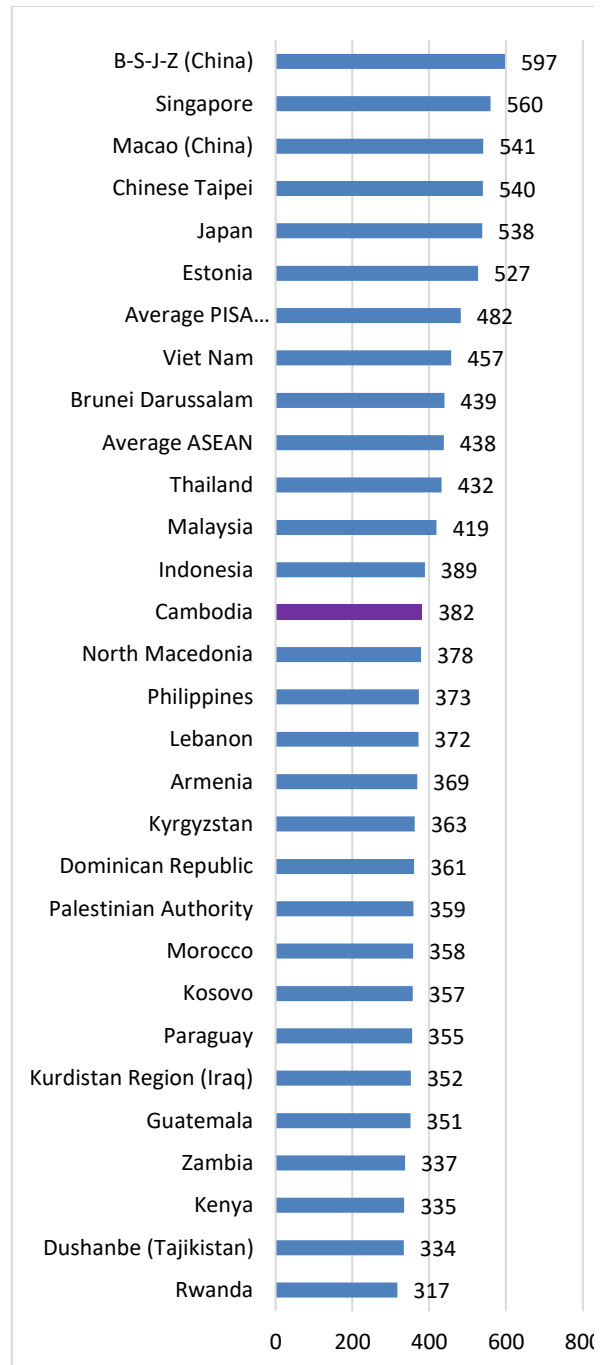


Figure 10: PISA science performance of top five countries/economies, ASEAN countries, and countries/economies below Cambodia



2.3.2. Results in Proficiency levels

Science proficiency levels

Cambodia's science performance shows the strongest improvement among the three PISA domains between 2018 and 2025, with a particularly dramatic acceleration between 2022 and 2025.

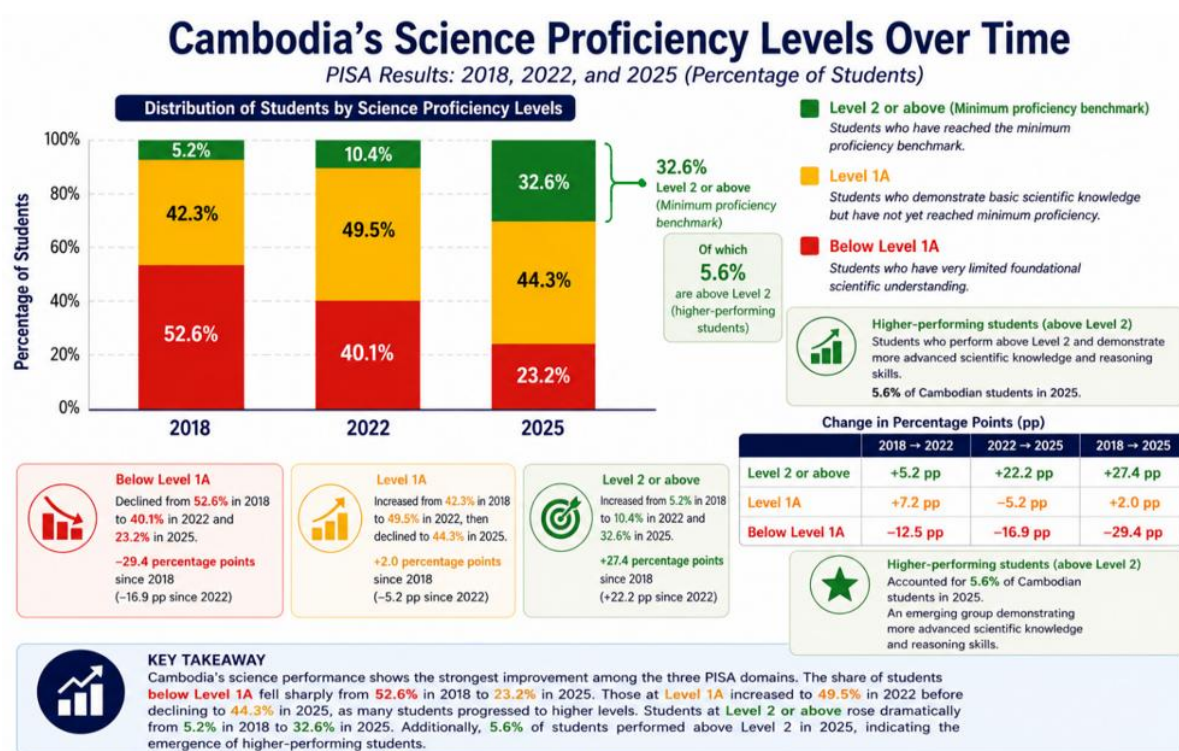
Students below Level 1A, who demonstrate very limited foundational scientific understanding, declined sharply from 52.6% in 2018 to 40.1% in 2022 and just 23.2% in 2025.

Students at Level 1A, who demonstrate basic scientific knowledge but have not yet reached minimum proficiency, increased from 42.3% in 2018 to 49.5% in 2022, before declining to 44.3% in 2025. This shift suggests that between 2022 and 2025, a substantial number of students progressed beyond Level 1A into higher proficiency levels.

Students achieving Level 2 or above, the minimum PISA proficiency benchmark, increased dramatically from just 5.2% in 2018 to 10.4% in 2022 and 32.6% in 2025. This represents an exceptional gain of 22.2 percentage points between 2022 and 2025 and 27.4 percentage points between 2018 and 2022, meaning that the proportion of students reaching minimum proficiency increased more than sixfold.

Higher-performing students, including those performing above Level 2, accounted for 5.6% of Cambodian students in 2025. This emerging group demonstrates that Cambodia's progress in science is extending beyond minimum proficiency, with an increasing number of students beginning to demonstrate more advanced scientific knowledge and reasoning skills.

Figure 10: Science proficiency levels



Mathematics proficiency levels

Cambodia's mathematics performance has improved substantially across all proficiency groups between 2018 and 2025, with particularly strong progress occurring between 2022 and 2025.

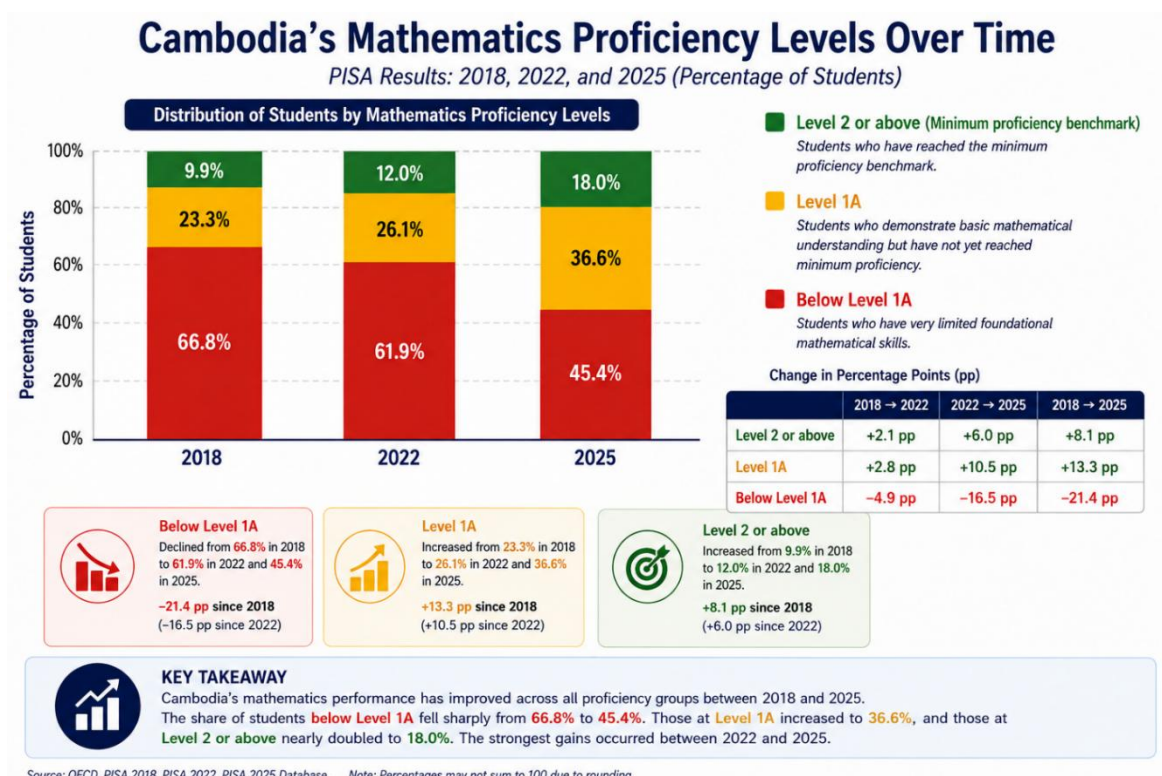
Students below Level 1A, who demonstrate very limited foundational mathematics skills, declined from 66.8% in 2018 to 61.9% in 2022 and 45.4% in 2025. This represents a substantial reduction of 21.4 percentage points since 2018, including a sharp 16.5 percentage-point decline between 2022 and 2025.

Students at Level 1A, who demonstrate basic mathematical understanding but have not yet reached minimum proficiency, increased from 23.3% in 2018 to 26.1% in 2022 and 36.6% in 2025. The largest gain occurred between 2022 and 2025 (+10.5 percentage points), indicating a significant movement of students out of the lowest proficiency group.

Students achieving Level 2 or above, the minimum PISA proficiency benchmark, increased from 9.9% in 2018 to 12.0% in 2022 and 18.0% in 2025. This represents a gain of 6.0 percentage points between 2022 and 2025 and 8.1 percentage points between 2018 and 2025, nearly doubling the proportion of students reaching minimum mathematical proficiency.

High-performing students, defined as those achieving above Level 2, also emerged as an important positive development, reaching 2.7% of Cambodian students in 2025. This indicates that improvement is not only occurring among lower-performing students but is also beginning to extend to the higher end of the performance distribution.

Figure 11: Mathematics proficiency levels



Reading proficiency levels

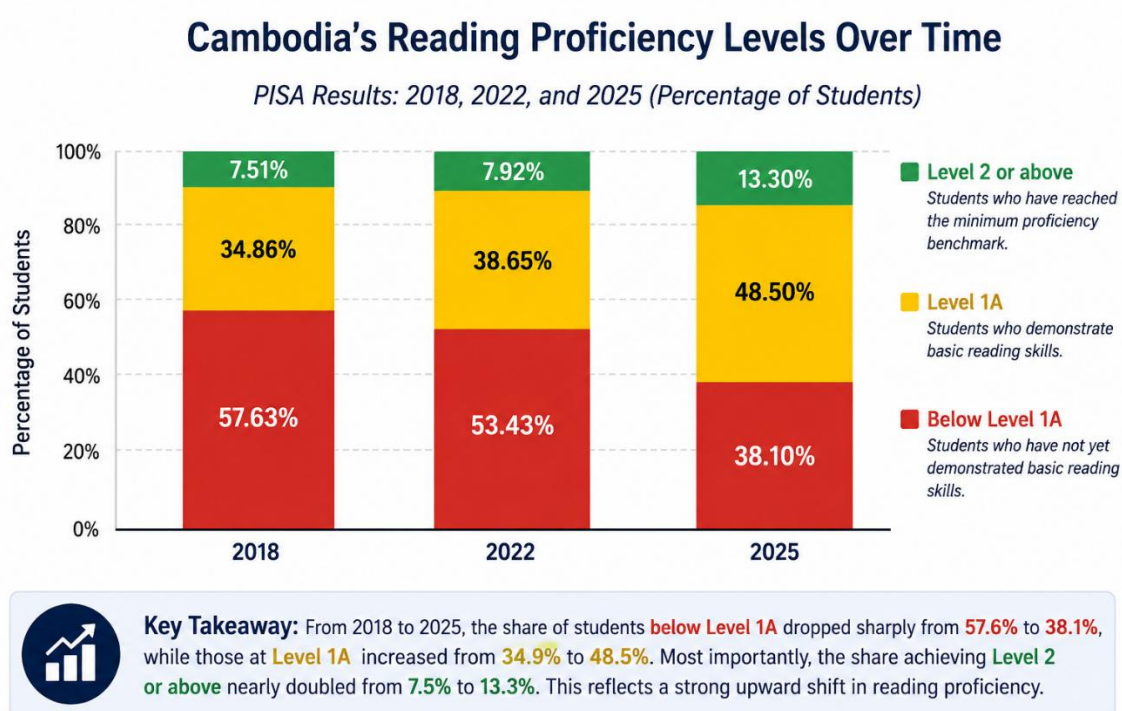
Cambodia's reading performance has improved across all proficiency groups between 2018 and 2025, with the strongest gains occurring between 2022 and 2025.

Students below Level 1A, who have not yet acquired basic reading skills, declined substantially from 57.6% in 2018 to 53.4% in 2022 and 38.1% in 2025. This represents a reduction of 19.5 percentage points since 2018, with most of the improvement occurring after 2022.

Students at Level 1A, who demonstrate basic reading skills but have not yet reached minimum proficiency, increased from 34.9% in 2018 to 38.7% in 2022 and 48.5% in 2025. The sharp rise of 9.9 percentage points between 2022 and 2025 suggests a significant upward movement from the lowest proficiency group.

Students achieving Level 2 or above, the minimum PISA proficiency benchmark, increased from 7.5% in 2018 to 7.9% in 2022 and 13.3% in 2025. While progress was limited between 2018 and 2022, the share increased by 5.4 percentage points between 2022 and 2025, nearly doubling compared with 2018.

Figure 12: Reading proficiency levels



2.4. Equity comparison

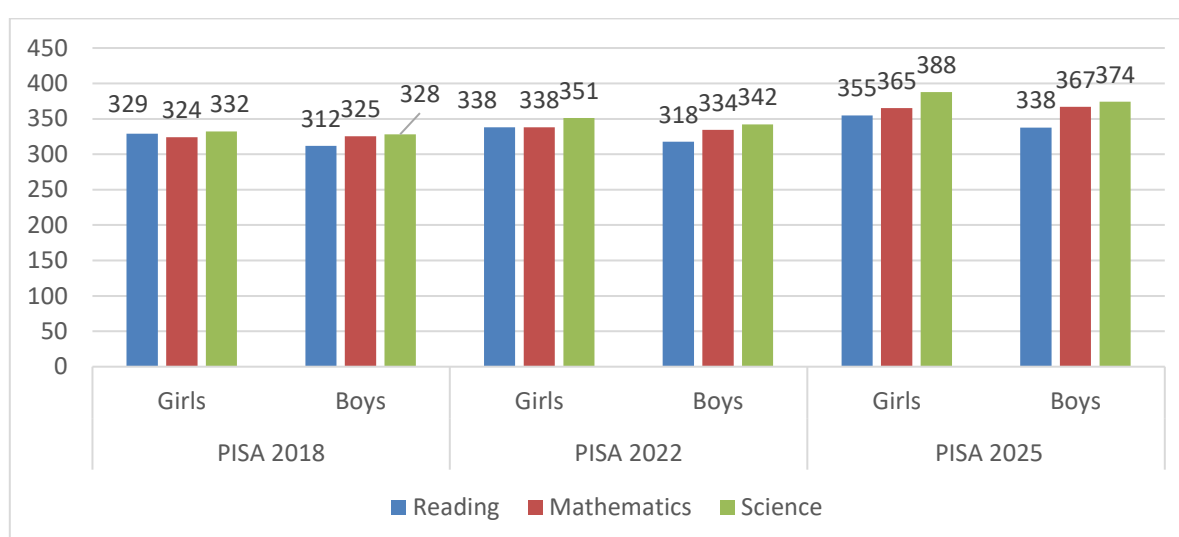
2.4.1. Performance by gender

In Cambodia, girls continue to outperform boys in reading and science, while mathematics has reached near gender parity. In reading, the girls' advantage was 17 points in 2018, 20 points in 2022, and 17 points in 2025, showing a persistent but slightly reduced gap from 2022. In science, the gap widened from 4 points in 2018 to 9 points in 2022 and 14 points in 2025,

reflecting the stronger improvement among girls. In contrast, mathematics shifted from a 4-point advantage for girls in 2022 to a 2-point advantage for boys in 2025, indicating that Cambodia has essentially achieved gender parity in mathematics.

Overall, the results are highly encouraging: the rapid improvement from 2022 to 2025 has benefited both boys and girls, and the mathematics results demonstrate that gender disparities can be substantially narrowed. The next priority should be to sustain the accelerated gains while addressing the remaining gaps, particularly the persistent reading advantage among girls and the widening science gap. Targeted strategies to strengthen boys' reading engagement and science learning, while maintaining girls' strong performance and ensuring equal opportunities for both genders, can help Cambodia achieve higher and more equitable learning outcomes.

Figure 13: Gender gap



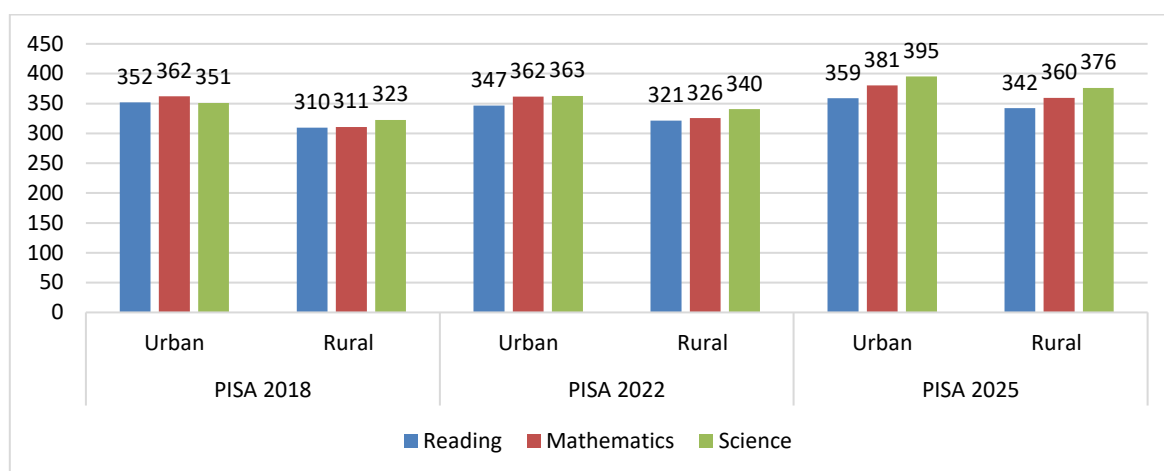
2.4.2. Performance by region

Cambodia's PISA results show a clear and sustained narrowing of the urban–rural learning gap across all three domains, indicating that improvements are increasingly reaching students outside urban schools. From 2018 to 2025, the reading gap narrowed from 42 to 17 points, mathematics from 51 to 21 points, and science from 28 to 19 points.

The most substantial improvement occurred in mathematics, where the gap was reduced by 30 points, while reading saw a 25-point reduction. Importantly, rural students improved strongly over the period: rural reading increased from 310 to 342, mathematics from 311 to 360, and science from 323 to 376. By 2025, the remaining gaps had become considerably smaller, particularly in reading and mathematics. These results suggest that Cambodia's recent reforms are helping to reduce geographic disparities in learning opportunities and outcomes, with rural students increasingly catching up with their urban peers. The progress is especially significant given Cambodia's historically large differences in school resources and learning conditions between urban and rural areas. The challenge now is to sustain this momentum and ensure that continued improvements in rural schools are strong enough to

eliminate the remaining gaps, making location less of a determinant of student learning outcomes.

Figure 14: Urban-rural gap

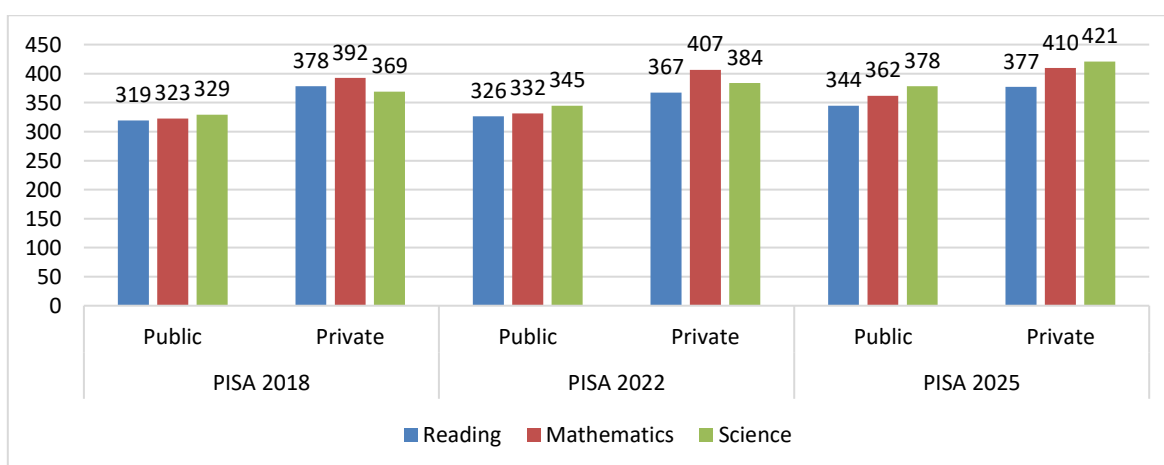


2.4.3. Performance by school type

The PISA 2018–2025 results reveal a remarkable transformation in the performance of Cambodia’s public schools, with substantial gains across all three domains. Between 2018 and 2025, public-school students increased their scores by 25 points in reading (319 to 344), 39 points in mathematics (323 to 362), and 49 points in science (329 to 378).

At the same time, private schools continue to perform at a higher level, reaching 377 in reading, 410 in mathematics, and 421 in science in 2025. However, the story is not simply one of private-school advantages. The gap between public and private schools has changed considerably over time. In mathematics, for example, the gap increased from 69 points in 2018 to 75 points in 2022 but narrowed dramatically to 48 points in 2025. In science, the gap narrowed from 40 points in 2018 to 39 points in 2022 and 43 points in 2025, while in reading it narrowed from 59 points in 2018 to 41 points in 2022 and 33 points in 2025.

Figure 15: Performance by school type



2.4.4. Performance by family background

Cambodia's PISA 2018–2025 results are particularly significant when considered against the country's economic development and the resources available to its education system. As a lower-middle-income economy with a GDP per capita of approximately USD 2,872 in 2025, Cambodia has achieved remarkable improvements in student learning despite a relatively constrained resource base. Between 2018 and 2025, students in the Bottom ESCS group gained 58 points in science, 54 points in mathematics, and 34 points in reading, while the Top ESCS group gained 70, 54, and 37 points, respectively. These are exceptionally large gains over a relatively short period and demonstrate that Cambodia's progress is broad-based rather than confined to students from more advantaged socioeconomic backgrounds.

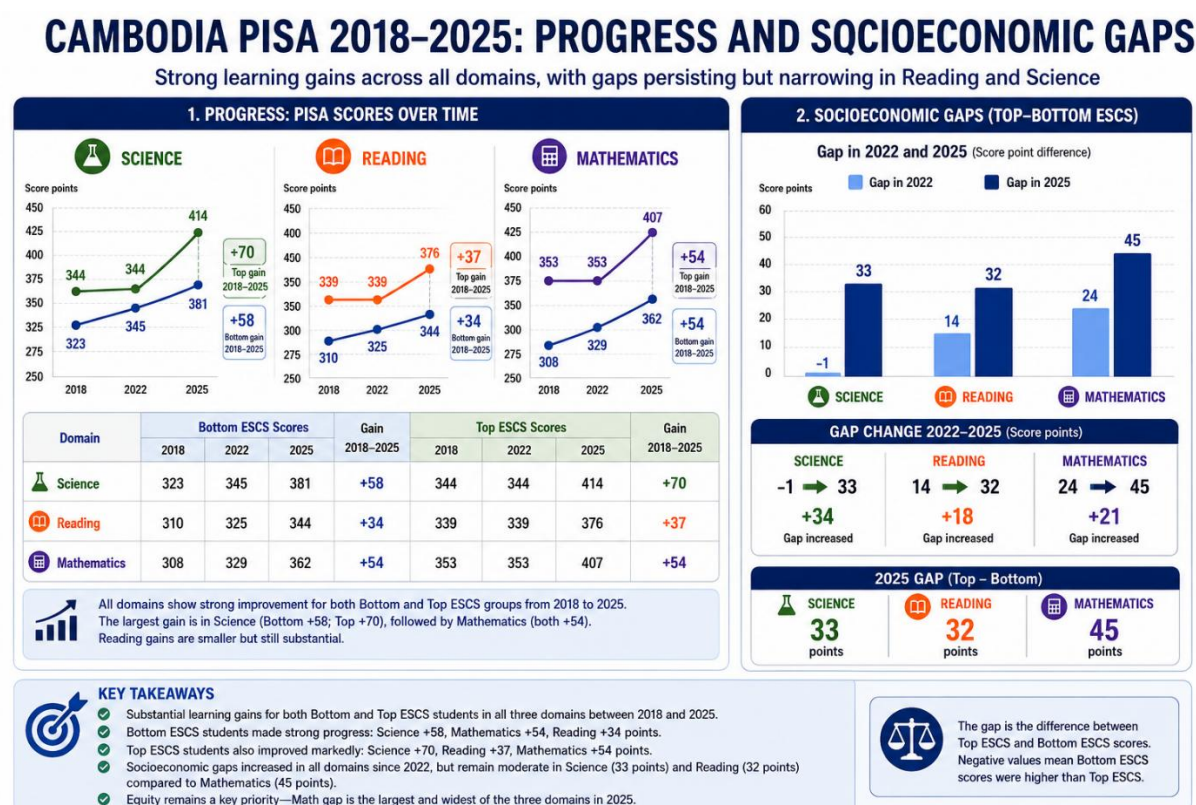
The magnitude of the gains among disadvantaged students is particularly encouraging. Bottom ESCS students increased from 323 to 381 in science, 308 to 362 in mathematics, and 310 to 344 in reading. Science is especially striking, with a 58-point gain among the Bottom ESCS group. Mathematics also shows a remarkable pattern: both Bottom and Top ESCS students gained exactly 54 points between 2018 and 2025. These results provide strong evidence that Cambodia's recent education improvements are reaching students across the socioeconomic spectrum.

At the same time, the results reveal an even more powerful message about Cambodia's untapped potential: 400+ PISA performance is already achievable within the Cambodian education system. In 2025, Top ESCS students reached 414 points in science and 407 points in Mathematics. This is not an external benchmark or theoretical possibility; it is a level of performance already demonstrated by Cambodian students. The challenge is, therefore, no longer simply whether Cambodian students can achieve higher performance, but whether Cambodia can scale the conditions that enable 400+ performance to a much larger share of students, particularly those from disadvantaged backgrounds. This provides a compelling case for moving from pockets of excellence toward system-wide excellence.

However, the results should not be interpreted as evidence that Cambodia can achieve future progress without greater investment. Rather, they provide a strong argument for investing more and investing better. Cambodia has demonstrated that its reforms can generate strong returns; the next step is to provide those reforms with greater scale, resources, and targeting. As the economy continues to develop, increased investment in teachers, instructional quality, secondary education, learning environments, school leadership, and targeted support for disadvantaged students will be essential to consolidate the gains and accelerate progress.

The equity dimension requires particular attention. Although both socioeconomic groups improved substantially, the Top–Bottom ESCS gap increased between 2022 and 2025—from approximately -1 to 33 points in science, 14 to 32 points in Reading, and 24 to 45 points in Mathematics. This widening gap does not mean that disadvantaged students are falling behind in absolute terms; they are making strong gains. Rather, it indicates that higher-ESCS students have improved even faster. Mathematics presents the clearest equity challenge, with a 45-point gap in 2025 despite the Bottom ESCS group achieving a substantial 54-point gain since 2018.

Figure 16: Socio-economic gaps



The policy message is therefore twofold: Cambodia must protect and accelerate the overall learning momentum while making the next wave of improvement more equitable. The country has shown that it can achieve more with limited resources; it now has an opportunity to use economic growth and increased education investment to achieve more at greater scale. The objective should be to transform the 400+ performance already demonstrated by some Cambodian students into a realistic and increasingly common outcome across the education system.

2.4.5. Resilient students

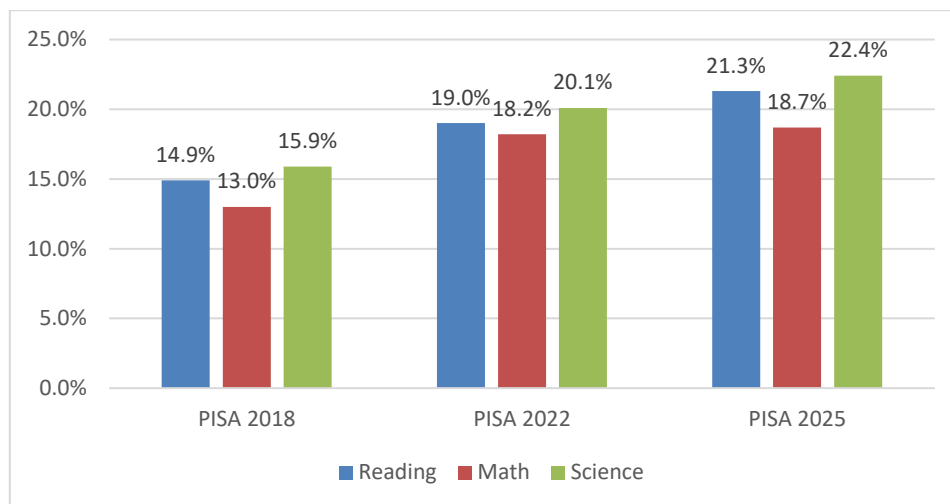
Cambodia's PISA 2018–2025 results show that the country is not only improving average learning outcomes but is also increasing the share of disadvantaged students who succeed despite socioeconomic barriers.

The percentage of resilient students increased across all three domains from 2018 to 2025. Reading increased from 14.9% in 2018 to 21.3% in 2025, while mathematics increased from 13.0% to 18.7%. Science showed the largest increase, rising from 15.9% to 22.4%.

By 2025, more than one in five Cambodian students was resilient in science and reading, demonstrating that strong learning outcomes are becoming increasingly achievable even among students facing socioeconomic disadvantage.

This progress is particularly significant because resilience represents more than simply higher test scores. It reflects the growing capacity of Cambodia's education system to help students overcome the disadvantages associated with their socioeconomic circumstances. The increase in resilient students suggests that improvements in teaching, school quality, learning opportunities, and student support are beginning to create pathways for disadvantaged learners to succeed.

Figure 17: Percentage of resilient students



3. EDUCATION SPENDING AND STUDENT PERFORMANCE

3.1 Science performance and cumulative education expenditure

The comparison of science performance and cumulative education expenditure suggests a promising level of efficiency in Cambodia's education investment. Cambodia records a science mean score of 382 with cumulative expenditure of 5,294, achieving higher science performance than several systems with substantially greater cumulative expenditure, including the Philippines (373; 12,845), North Macedonia (378; 8,833), Guatemala (351; 10,418), and Dominican Republic (361; 48,996). Cambodia also performs relatively close to Indonesia (389 points), while achieving this with cumulative education expenditure of only 5,294 compared with 19,700 for Indonesia—a difference of 14,406 expenditure units, or about 73% lower cumulative expenditure. This suggests that higher spending alone does not automatically translate into higher learning outcomes, and Cambodia has a strong foundation on which to further improve the effectiveness of its education investment.

At the same time, there is considerable room to achieve more through additional and better-targeted investment. Cambodia's science score of 382 remains below Malaysia (419), Thailand (432), and Viet Nam (443), with gaps of 37, 50, and 61 points, respectively. Importantly, these higher-performing ASEAN systems have also accumulated substantially greater education expenditure—Malaysia (56,031) and Viet Nam³ (approximately 13,800)—highlighting both the remaining performance gap and the opportunity for Cambodia to improve outcomes through progressively greater and more effectively targeted investment.

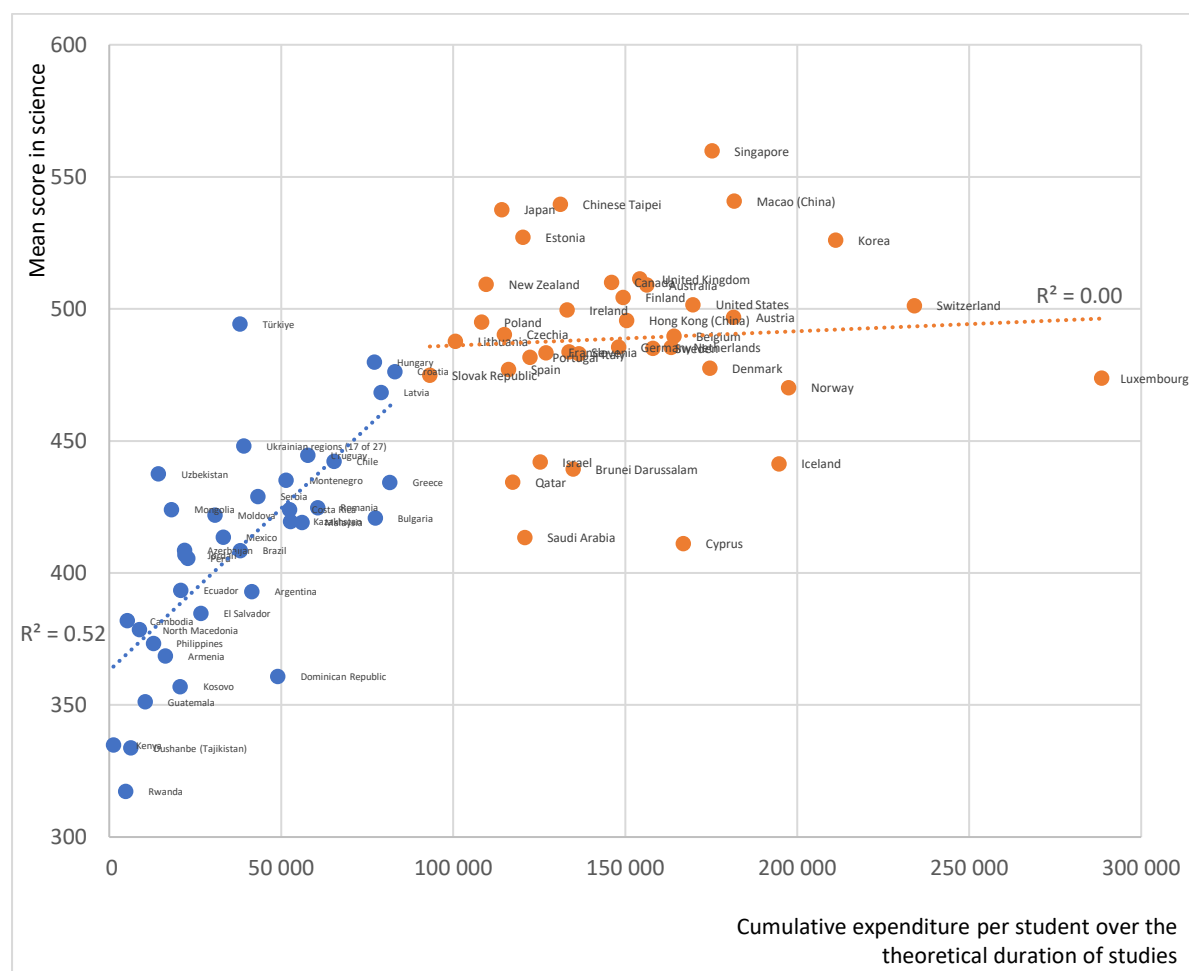
3.2. Share of GDP on education

Cambodia's broader economic context makes this performance particularly encouraging. With nominal GDP per capita of approximately US\$2,870 (about US\$8,650 PPP) and public education spending of around 2.18% of GDP, Cambodia operates with considerably fewer resources than most OECD economies. Compared with the broader ASEAN region, where education spending is typically around 2.8–3.0% of GDP, Cambodia's investment level remains relatively modest. OECD economies, by contrast, combine much higher income levels—generally above US\$40,000–50,000 GDP per capita—with education spending averaging around 4.9% of GDP⁴, providing substantially greater fiscal capacity to invest in education and student learning. This highlights both the resource constraints under which Cambodia is achieving its current results and the significant opportunity to accelerate learning outcomes as Cambodia's economy and fiscal space continue to grow.

³ [PISA 2022 Results \(Volume I and II\) - Country Notes: Viet Nam | OECD](#)

⁴ [Data | OECD](#)

Figure 18: Education spending and science performance



The key policy message is, therefore, “*spend better while progressively investing more.*” Cambodia should preserve its relative efficiency while gradually increasing investment and directing additional resources toward high-impact interventions—teacher quality, instructional time, practical and inquiry-based science learning, formative assessment, quality learning materials, effective school leadership and targeted support for disadvantaged students. As fiscal space expands, strategically increasing education investment toward ASEAN levels could help Cambodia convert additional resources into faster learning gains. The ambition should be not simply to spend more, but to invest more strategically and translate greater investment into stronger student learning outcomes, particularly in reading, while sustaining the encouraging progress already achieved in mathematics and science.

4. SCHOOLS WITH AN ENABLING LEARNING ENVIRONMENT IN CAMBODIA

4.1. Characteristics of high-performing schools

4.1.1. Student population

High-performing schools are characterized by stronger student progression. Across the 34 schools, 80.2% of students had never repeated a grade, compared with an estimated 72% nationally, while only 19.8% had repeated a grade at least once, compared with the national average of 28%. This suggests that students in high-performing schools are more likely to progress through school without interruption.

Similarly, the student population in high-performing schools is more concentrated in Grade 10, which accounts for 60.5% of students, compared with 46.5% nationally. In contrast, high-performing schools have smaller shares of students in the lower grades, including Grade 7 (1.1% compared with 3.2% nationally), Grade 8 (4.8% compared with 8.9%), and Grade 9 (21.0% compared with 29.4%).

The data also shows that 73% of students are on track or ahead of their expected grade level, substantially higher than the national average of 58.5%. Only 21% are one year behind track and 6% are two or more years behind. These patterns suggest that students in high-performing schools are more likely to progress through the education system without significant interruption or delay.

This pattern may reflect stronger student progression and retention into upper secondary education among high-performing schools. The larger concentration of students in Grade 10, combined with the higher proportion of students on track and lower grade repetition rates, suggests that these schools may be more effective in supporting students to progress through the education system without falling behind.

4.1.2. School location and size

School-level data suggest that high performance is shaped less by location or school size than by how effectively schools are led and how they organize teaching and learning. Strong-performing schools are found across diverse provinces, including Phnom Penh, Kandal, Kampong Cham, Kampong Thom, Takeo, Siem Reap, Kratie, and Mondulkiri. This geographical diversity—including relatively remote and rural provinces—demonstrates that strong learning outcomes are possible across very different contexts.

Both small and large schools, as well as urban and rural schools, are represented among the strongest performers. The small difference in average performance between urban and rural schools further suggests that location and enrollment size alone do not determine learning outcomes.

Instead, high-performing schools tend to share common characteristics: clear academic priorities, strong instructional leadership, effective use of learning time, regular monitoring of student progress, targeted support for struggling students, teacher collaboration, and additional learning opportunities beyond regular classroom instruction. Where these

conditions are in place, schools in provinces such as Battambang, Kampong Thom, Kratie, and even remote Monduliri can perform as well as schools in major urban centers such as Phnom Penh and Kandal, and achieve results comparable to those of some private schools.

Overall, the evidence suggests that high-performing schools are not defined by a single advantage, but by a combination of mutually reinforcing practices. Strong school leadership and effective organization of teaching and learning are central to translating available resources into improved student outcomes.

4.2. Enabling learning environments among high-performing schools

4.2.1. Experiences shared by school principals

Findings from focus group discussions (FGDs) with school principals provide valuable insights into the practices that principals believe contribute to stronger student performance. The discussions show that high-performing schools share a strong commitment to student achievement, particularly success in the Grade 12 national examination, while increasingly recognizing the importance of developing the broader competencies measured by PISA. Although public and private schools operate in different contexts and have different levels of resources and autonomy, principals in both sectors described a common focus on effective curriculum implementation, quality teaching, regular assessment, strong school management, sufficient learning time, student support, and the effective use of digital education.

Curriculum and instructional time

Public-school principals emphasized the importance of implementing the national curriculum effectively, with strong attention to core subjects such as Khmer, mathematics, physics, chemistry, and STEM. Several principals described efforts to implement full-day schooling or provide additional learning hours to give students more time to master these subjects. Some schools aim for around 35 hours of instruction per week, based on the view that a half-day school schedule does not provide sufficient time for students to achieve the expected learning outcomes.

Principals also described efforts to make better use of learning time through study clubs, additional learning activities, and support during small and major school vacations. Some schools provide additional learning for students who are struggling and subsequently ask them to sit for an assessment to determine whether they are ready to progress to the next grade.

A recurring point from the FGDs was that PISA preparation should be connected to normal classroom teaching. Principals noted that PISA questions are not necessarily difficult, but Cambodian teachers and students are often less familiar with questions that require students to apply knowledge, interpret information, reason, and solve problems in unfamiliar situations.

Private-school principals described greater flexibility in organizing curriculum and instructional time. Some schools implement full-day schooling using both national and international curricula, allowing students to study certain subjects more than once—for

example, science in both Khmer and English. This provides additional exposure to subject content, terminology, and learning resources. Principals also described efforts to connect learning with global issues and real-world contexts, helping students understand how knowledge is applied beyond the classroom.

Private schools also place considerable emphasis on reading skills. Rather than focusing only on traditional stories and folktales, schools explicitly teach skills such as skimming, scanning, reading comprehension, identifying information, and interpreting different types of texts. Some schools provide as many as 20 different study clubs, giving students opportunities to pursue additional learning and develop interests beyond regular classroom instruction.

Private schools also reported using test blueprints and aligning learning materials closely with textbooks and curriculum standards. Principals explained that because the national curriculum framework is relatively broad, schools need to translate it into clearer learning objectives, teaching materials, and assessment expectations.

Teaching and teacher professional development

The FGDs showed that high-performing schools place strong emphasis on teacher collaboration and professional learning.

In public schools, principals described establishing technical groups organized around teachers' subject expertise. These groups provide a structure for teachers to support one another, discuss teaching challenges, share effective practices, and improve lesson delivery. In some schools, technical teams meet once a month to share experiences and discuss student learning.

Principals also described study clubs led by teachers and senior students, sometimes with senior students participating voluntarily to support younger learners. These activities provide additional opportunities for students to practice and receive help outside regular lessons.

Teacher support is also provided through professional development and peer learning. Rather than relying entirely on external training, high-performing schools make use of school-based professional learning, including technical meetings, peer support, lesson study, and professional learning communities.

In private schools, principals described a more structured teacher development system. This includes teacher orientation, teaching plans, professional development, peer observation, lesson study, teacher evaluation, and PLCs. These mechanisms allow school leaders to monitor teaching quality and provide feedback to teachers on a regular basis.

Some private schools also organize AI-learning support three to four times per year, helping teachers explore how emerging technologies can support lesson preparation, teaching, and student learning. The FGDs suggest that professional development is most effective when it is connected directly to teachers' classroom practice and student learning needs.

Assessment and support for struggling learners

Assessment is used by high-performing schools not only to measure achievement but also to identify learning gaps and provide targeted support.

In public schools, principals described particular efforts to support slow learners. Some schools provide additional instruction during small and major school vacations and then assess students to determine whether they have acquired the competencies needed to progress to the next grade. This reflects an effort to ensure that students do not simply move through grades without mastering essential knowledge and skills.

Schools also provide students with additional opportunities to practice PISA-type assessment tasks. Principals emphasized that students need to become familiar with the format and cognitive demands of these tasks. Additional practice helps students become more comfortable with interpreting information, applying concepts, reasoning, and solving problems rather than simply recalling facts.

In private schools, assessment tends to be more structured and standardized. Principals described the use of test blueprints, standardized testing, regular examinations, and systematic monitoring of student progress. These tools allow schools to identify weaknesses at the student, subject, and school levels.

Some private schools have established in-house quality assurance systems specifically focused on learning outcomes. Assessment results are reviewed to determine whether teaching is producing the expected improvements and where additional interventions are required.

School leadership and management

Across the FGDs, strong and visible school leadership emerged as one of the most important characteristics of high-performing schools.

Public-school principals emphasized the importance of making the school vision clear to teachers, students, and parents. The principal's role is not simply administrative; principals actively communicate priorities, organize teachers around common goals, monitor implementation, and follow up on student performance.

Principals also emphasized taking MoEYS guidelines seriously and participating actively in MoEYS workshops and PISA-related activities. Participation in these activities enables principals and teachers to understand national priorities and bring new approaches back to their schools.

High-performing public schools also use clear school plans and monitoring and evaluation (M&E) systems. Principals described setting priorities, monitoring implementation, and reviewing progress rather than treating the school plan as an administrative document only.

Student attendance and discipline were repeatedly identified as essential conditions for learning. Principals described closely monitoring attendance and following up with parents when students are repeatedly absent or arrive late. In some schools, if students arrive after

the expected 7:00 a.m. start, parents may be asked to communicate with the school. Such practices demonstrate the importance placed on establishing a culture of punctuality, responsibility, and regular participation in learning.

Some public schools also use community resources to recognize and reward good teachers, showing how principals and communities can work together to motivate teachers even when school resources are limited.

In private schools, principals described more formal management systems, supported by greater institutional autonomy. These include teacher evaluation, performance monitoring, standardized assessment, student management systems, learning management systems, internal quality assurance, and incentives for effective teachers. Competition for students and teachers also creates incentives for schools to maintain strong teaching quality and demonstrate learning outcomes.

Digital education

Digital education is becoming an increasingly important part of the practices of high-performing schools.

In public schools, principals described increasing use of digital learning platforms and learning materials, including MoEYS-supported resources. Digital tools provide students with additional opportunities to practice and access learning materials beyond the regular classroom. They can also help teachers provide additional support to students who require more practice.

In private schools, digital education is generally more extensive and systematically integrated into school management and teaching. Some schools use learning management systems (LMS) to monitor student progress and provide teachers and parents with information about students' learning.

Students may receive two to four hours of computer classes per week, including coding. Schools also provide opportunities for students to explore digital learning resources and PISA-related materials. Some schools have begun providing structured opportunities for teachers and students to explore AI-supported learning three to four times per year.

Quality assurance and continuous improvement

The FGDs suggest that high-performing schools have developed a stronger culture of continuous improvement and accountability for learning outcomes.

In public schools, this culture is built through school plans, M&E, technical groups, PLCs, monthly technical meetings, teacher collaboration, and close attention to MoEYS guidance. Principals use these structures to identify challenges and encourage teachers to work collectively to address them.

In private schools, internal quality assurance is generally more formalized. Schools use standardized assessments, teacher evaluation, student-progress monitoring, LMS data, and internal quality assurance processes to examine whether teaching and learning are producing

measurable results. Schools may also recognize high-performing teachers and students as part of their efforts to build a positive culture of achievement.

The experiences shared by principals suggest that high performance is built through a combination of mutually reinforcing practices rather than a single intervention. Public schools demonstrate how strong leadership, teacher collaboration, MoEYS engagement, community support, student discipline, and targeted support for struggling learners can generate improvement even within resource constraints. Private schools demonstrate the potential benefits of greater flexibility, longer learning time, structured assessment, intensive teacher development, broader reading practices, digital learning systems, and internal quality assurance.

Importantly, principals did not describe these practices simply as programmes; they described them as part of the everyday culture and routines of their schools. The common message from the FGDs is that schools improve when principals and teachers have a clear focus on learning, work together around student needs, use evidence to identify problems, and continuously adjust their practices. For Cambodia, the key policy challenge is to identify which of these practices can be adapted, supported, and scaled across public schools, while recognizing that implementation will need to reflect differences in school context, resources, leadership capacity, and community support.

4.2.2. Experiences shared by science teachers

Based on focus group discussions, Cambodia's improved PISA 2025 performance appears to be associated with a gradual shift from content transmission and memorization towards more active, applied, and student-centered teaching. Science teachers in the six high-performing schools identified several mutually reinforcing changes in classroom practice.

Clear learning objectives and student-centered pedagogy

Teachers reported setting clear learning objectives, adapting teaching approaches to students' ability levels, and scaffolding learning from simple to complex concepts. They increasingly connected scientific knowledge with practical applications and everyday life, using approaches such as inquiry-based learning, the 5E model, problem-based learning, experiments, educational games, group work, and other interactive activities.

Active learning and higher-order thinking

A particularly important shift has been towards active learning and deeper thinking. Rather than focusing primarily on knowledge recall, teachers encouraged students to explain their reasoning, interpret information, solve problems, and apply scientific concepts to real-life situations. These approaches are closely aligned with the competencies assessed by PISA and may have better prepared students to respond to unfamiliar and contextualized questions.

Continuous assessment and feedback

Continuous formative assessment has also become an important part of teaching. Teachers used oral questioning, short tests, presentations, homework, and worksheets to monitor student progress and adjust instruction. Assessment results helped teachers identify learning

gaps, revisit difficult concepts, provide immediate feedback, and offer additional support to students who were falling behind.

Differentiated student support

Teachers emphasized the importance of responding to different learning needs. Students experiencing difficulties received additional explanations, learning materials, and supplementary or small-group support. This targeted approach may help reduce learning gaps and ensure that weaker students are not left behind.

Supportive and participatory learning environment

Teachers also highlighted the importance of creating classrooms where students feel comfortable asking questions, expressing ideas, and making mistakes. Group work and active participation were encouraged, while mistakes were treated as part of the learning process. Such an environment can help build students' confidence in reasoning, experimentation, and problem solving.

PISA-informed teaching practices

PISA-related professional development also appears to have influenced classroom practice. Teachers reported greater familiarity with the PISA framework and incorporated real-life contextual questions, reasoning, interpretation, and PISA-style tasks into classroom assessment. This strengthened the alignment between classroom teaching and the broader competencies assessed by PISA.

Taken together, these experiences suggest an important pedagogical shift: from teaching primarily for knowledge acquisition and recall towards teaching for understanding, application, reasoning, and problem solving. Reinforced by continuous assessment, targeted student support, teacher collaboration, and professional development, these changes provide a plausible explanation of how improvements in classroom practice may have contributed to Cambodia's stronger performance in PISA 2025, although the focus group evidence alone cannot establish a causal relationship.

4.2.3. Experiences shared by students

Focus group discussions with 13 students from two high-performing secondary schools provide an important student perspective on the learning practices that may contribute to stronger outcomes. Students' experiences broadly reinforce the findings from school principals and teachers, particularly regarding the importance of clear instruction, extensive practice, continuous feedback, collaborative learning, supplementary support, and a positive learning environment. Their responses also show how students increasingly extend their learning beyond the classroom through digital resources and additional study.

Clear explanations and extensive practice

Students emphasized the importance of teachers providing detailed and step-by-step explanations when introducing difficult concepts. Teachers frequently used questions to help students focus on key points and provided examples linked to the topics being studied. In

science, students described reviewing formulas and concepts, studying relevant phenomena, and then practicing exercises to reinforce their understanding.

Practice appears to be a particularly important feature of students' learning experiences. In both science and mathematics, students reported completing exercises from teachers and textbooks and seeking additional practice materials independently. This combination of explanation, guided practice, and repeated application may help students consolidate foundational knowledge before moving to more complex tasks.

Practical and experiential Learning

Students also reported opportunities for practical learning, particularly in science. Some described conducting simple experiments under teachers' guidance in the classroom, while others participated in laboratory experiments. These activities help connect scientific concepts with observable phenomena and provide opportunities for students to move beyond theoretical learning.

The use of examples and phenomena related to everyday life was also highlighted by students. This is consistent with teachers' accounts of efforts to connect theory with practical contexts and may be particularly relevant to PISA, which requires students to apply knowledge to real-world situations rather than simply reproduce information learned in class.

Collaborative learning and student participation

Students reported regularly engaging in discussion and sharing ideas with classmates. Group activities provide opportunities for students to explain their thinking, compare different approaches, and learn from peers. Students also described classroom activities in which teachers asked groups to discuss tasks before presenting and explaining their ideas to the class.

Such practices suggest a learning environment in which students are expected to participate actively rather than simply listen to teachers. Collaborative learning may also strengthen communication, reasoning, and confidence in explaining ideas—competencies that are relevant to the more open-ended and contextualized demands of PISA.

Continuous assessment and immediate feedback

Students described regular use of questions and learning tasks by teachers to check whether they understood lessons. When students experienced difficulties, teachers often provided similar tasks and explained solutions in greater detail and step by step.

Feedback was also described as immediate and practical. Students reported that teachers corrected mistakes in the classroom and explained errors to those who had answered incorrectly. Students considered this useful because it helped them identify weaknesses and understand how to improve. These experiences reinforce the teachers' accounts of formative assessment being used not simply to evaluate achievement, but to support learning during the instructional process.

Targeted support for students facing difficulties

Students reported that schools provide additional support for those experiencing learning difficulties. This included peer-support programs, in which students help one another, as well as additional teaching outside regular class hours. Some students also described being invited to meet with teachers or school staff for further explanation and guidance.

These practices suggest that high-performing schools do not rely solely on regular classroom instruction. Instead, they create multiple opportunities for students who are struggling to receive additional assistance. Such targeted support may be particularly important in preventing learning gaps from accumulating over time.

A supportive and motivating learning environment

Students generally described positive relationships with their teachers and reported feeling comfortable asking questions. Teachers were seen as open and approachable and encouraged students to seek clarification when they did not understand a lesson.

Students also highlighted the role of encouragement. Teachers motivated them to work harder, focus on their weaknesses, and continue searching for solutions when facing difficult tasks. Some schools also used competition in exercises and student ranking as additional sources of motivation. Together, these practices appear to contribute to a culture in which effort, persistence, and improvement are valued.

Learning beyond the classroom through digital resources

An important finding is the growing role of self-directed learning beyond the classroom. Students reported using the internet and YouTube to find additional explanations, summaries, exercises, and learning materials. In mathematics and science, students searched for additional exercises and explanations, while in Khmer they used online resources to access summaries, audio explanations, and examples of writing.

This suggests that digital resources are increasingly extending learning opportunities beyond formal instruction. Students are not relying exclusively on teachers and textbooks but are beginning to use online resources to review difficult concepts and practice independently. However, the effectiveness of this approach may depend on students' ability to identify appropriate and reliable learning materials.

5. FACTORS THAT LEAD TO AN INCREASE IN PISA 2025 RESULTS FOR CAMBODIA

5.1. Structural changes driving better learning outcomes

Cambodia's improved learning outcomes between 2018 and 2025 appear to reflect a decade of structural transformation in the education system, beginning with reforms implemented from 2014 and accelerating through 2025. The transformation has gradually shifted the system from expanding basic access toward improving learning quality, student progression, school effectiveness, equity, and future-oriented competencies.

A major driver has been the expansion and strengthening of the education pipeline. Between 2014–15 and 2025–26, enrolment of children aged 3–5 increased from 310,000 to 440,000, while participation of 5-year-olds increased from 61.4% to 77.9%. At primary level, net enrolment increased from 97.9% to 101.6%, promotion from 86.5% to 90.5%, and dropout declined from 6.2% to 4.4%. At secondary level, lower-secondary enrolment increased from 55.1% to 79.0%, with completion rising from 42.0% to 63.6%; upper-secondary enrolment increased from 25.3% to 46.6%, with completion rising from 20.9% to 41.7%. These changes mean that more students are entering school, staying in school longer, and reaching the age at which PISA measures their competencies.

A particularly important structural improvement has been better age–grade alignment. The proportion of 15-year-olds in Grade 10 increased from 37.8% in 2018 to 46.5% in 2025, while those in Grade 9 increased from 22.7% to 29.4%. At the same time, the proportion in Grade 7 declined from 5.7% to 3.2%. This indicates that more students are progressing through the system closer to the expected age and grade, reflecting improvements in retention and reduced repetition. Together with the expansion of PISA coverage from 28.1% in 2018 to 36.3% in 2022 and around 43% in 2025, PISA 2025 provides a substantially stronger picture of system-level learning outcomes.

The improvement also appears to be broad-based across socioeconomic groups and increasingly resilient. Between 2018 and 2025, the bottom ESCS group gained 58 points in science, 34 in reading and 54 in mathematics, while the top group gained 70, 37 and 54 points, respectively. The share of resilient students also increased from 15.9% to 22.4% in science, 14.9% to 21.3% in reading, and 13.0% to 18.7% in mathematics. These trends suggest that disadvantaged students are increasingly able to overcome socioeconomic barriers and succeed academically, although significant socioeconomic gaps remain.

The transformation is also visible in public-school performance. From 2018 to 2025, public-school scores increased by 25 points in reading, 39 in mathematics and 49 in science, with particularly strong gains between 2022 and 2025. The public–private gap in reading narrowed from 59 points in 2018 to 33 points in 2025, while the mathematics gap narrowed substantially between 2022 and 2025. This suggests that improvements are increasingly reaching the mainstream public education system, rather than being concentrated in a small number of higher-performing schools.

Importantly, improvements in foundational learning at primary level provide another plausible contributor to the stronger PISA results. SEA-PLM scores increased from 290 to 296 in reading and from 289 to 301 in mathematics between 2019 and 2024. More importantly, the proportion of high-performing students increased while the share of low-performing students declined. The improvement was especially pronounced in mathematics, where the high-performing group increased from 17% to approximately 40%, while the low-performing group declined from 36% to approximately 20%. This indicates that the improvement is not simply an increase in the average score but a substantial strengthening of the distribution of foundational learning.

5.2. Sustained education reforms

These structural gains are largely the result of decades of sustained school and teacher reforms, curriculum modernization, strengthened foundational learning, and better harmonization of education interventions. Together, these efforts have increasingly aligned policies, resources, teachers, curricula, assessment, and school-level support around a common objective: improving teaching quality and student learning outcomes at the school level.

5.2.1. School Reform

New Generation Schools

In the 2014–2015 academic year, the Ministry established and implemented the New Generation School (NGS) programme, focusing on granting schools greater autonomy in curriculum implementation to develop students' 21st-century competencies. The reform strengthened school-level capacity by emphasizing:

- High ethical standards and professional standards among school leaders and teachers;
- Accountability and innovation in school management and teaching;
- Effective use of information technology in learning and teaching; and
- Adoption of new teaching methodologies.

This reform is particularly important in understanding Cambodia's recent learning gains because it represents a shift from a centrally driven model toward greater school autonomy, professional accountability, innovation, technology use, and modern pedagogy—all aimed at improving teaching and learning directly at the school level.

New Generation Schools implement innovative teaching approaches, including constructivist learning, project-based learning, the use of technology, assessment based on Bloom's Taxonomy, and skills development, as well as library and textbook management. Community of Practice (CoP) is also enhanced.

Model schools

The Ministry also started to pilot a range of school-level reforms and innovations to identify effective approaches for improving school quality and student learning. These included 100

school-based management schools piloted, with spillover effects reaching approximately 500 additional schools, as well as 67 Resource Secondary Schools established across all capitals and provinces to promote science, technology and STEM education. The Resource Secondary Schools also support approximately 3–9 network schools each, creating a mechanism for sharing expertise, professional development and innovative practices.

The Ministry has progressively scaled up the Model School initiative as part of a broader whole school reform agenda, designed to institutionalize effective school practices and strengthen school quality across the education system. Since 2023, the Model School Standards have provided a systematic framework for school reform around five key areas: student learning outcomes, teaching and learning, community engagement, school operations and administration, and school accountability. To date, 434 schools have achieved the Model School Standards, including 49 Resource Preschools, 173 public primary schools (including 41 under the relevant school cluster initiative), and 205 public secondary schools, comprising 32 lower-secondary and 173 upper-secondary schools. This expansion demonstrates a clear shift from piloting innovative approaches toward scaling and institutionalizing effective school-level practices, creating a common framework for improving school quality from early childhood through secondary education.

At the school level, the Ministry is strengthening school governance, leadership, accountability, and performance through the Model School Standards, school self-assessment, regular inspection, and school improvement planning. Schools are increasingly expected to use evidence on student learning to identify weaknesses and develop targeted improvement measures. At the same time, efforts are being made to strengthen community participation and reduce disparities between urban and rural schools.

The Ministry is also strengthening the assessment and inspection system so that assessment is used not only to measure learning, but also to improve teaching and school performance. National and school-level assessments are increasingly aligned with competency-based learning and international assessments such as SEA-PLM and PISA. A new school inspection approach is being developed in which schools conduct self-assessment against the Model School Standards.

5.2.2. Teacher Reform

Reform of Teacher Training Institutions

The Ministry has strengthened teacher quality, teacher education, and professional standards as a central pillar of education reform. Teacher preparation has progressively moved from the 12+2 basic teacher training programme toward 12+4 and Bachelor's-level pathways, while the BA+2 framework for upper-level teacher training has also been approved. Teacher education programmes increasingly incorporate Early Grade Literacy (EGL) and Early Grade Mathematics, modern teaching methodologies, classroom management, and 21st-century pedagogy.

The Ministry has also strengthened the teacher education institutions. The Phnom Penh Teacher Education College (PTEC) and Battambang Teacher Education College (BTEC) have

been established to provide 12+4 teacher training, while four regional pedagogical centres are being transformed into teacher education institutes. Five institutions have been recognized as Model Teacher Education Schools:

- National Institute of Education (NIE)
- Phnom Penh Teacher Education College (PTEC)
- Battambang Teacher Education College (BTEC)
- Faculty of Education, Royal University of Phnom Penh (RUPP)
- Siem Reap Provincial Teacher Education and In-Service Training School

Professional development is also being institutionalized through Professional Learning Communities (PLCs) and continuous professional development (CPD). Five institutions have been recognized as CPD providers and have opened 48 courses covering different areas. The Ministry has also selected five outstanding teacher educators, based on self-assessment, evidence, and teaching videos, while developing principles for evaluating and recognizing lecturer status and a master's-level specialized education programme for teacher educators.

At the same time, the Ministry is upgrading teacher education infrastructure and learning resources, including digital libraries, and strengthening links between teacher education institutions, New Generation Schools (NGS), and Model Schools. Scholarships equivalent to 70% of the basic teacher salary have helped attract stronger candidates into teaching, with candidates achieving grades A, B, and C.

Teacher Development

The Ministry is strengthening teacher quality, professional development, and strategic teacher management as a central pillar of education reform.

Teacher professional development is being strengthened through a continuous professional development (CPD) platform, linked to TQU and the HRCPD programs, allowing education personnel to undertake training and earn credits.

The Ministry is also addressing teacher shortages and unequal teacher deployment, particularly in rural and disadvantaged schools, while strengthening career pathways and professional development to improve teacher motivation, performance, and retention. In 2025, 1,351 primary and lower-secondary teachers completed training and were deployed to target schools, while 4,946 teachers employed under work agreements were recruited for target provinces. Beginning in 2024–25, teacher trainees and teacher students also received a government allowance equivalent to 70% of the salary of teachers in the relevant cadre. Together, these measures represent a shift toward a more professional, better-supported, evidence-informed, and strategically managed teaching workforce, which is essential for sustaining and accelerating Cambodia's recent improvements in student learning.

5.2.3. Curriculum reform

The Ministry has strengthened the implementation of the curriculum—not only by revising the content, but also by effectively increasing learning hours, reducing instructional time loss,

addressing learning gaps, and providing additional opportunities for students to apply and utilize their knowledge.

The implementation of Model School Standards, school-community strategies, full-day schooling, and New Generation Schools has reduced lost instructional time and ensured that teaching hours are effectively utilized for teaching and learning. These efforts have been further complemented by investments under the SEIP, GEIP, and continuing into the BEIP projects to support slow-learning students.

Some schools are utilizing extra instructional hours to reinforce Khmer language, mathematics, and science, while other schools are establishing study clubs that provide additional opportunities for students to read, practice mathematics exercises, engage in science activities, and conduct self-study.

Digital technology is also being used to extend learning beyond regular classroom hours. Platforms such as the Primary Learning Platform (PLP), Sala Digital, Secondary Learning Platform, and MoEYS eLearning provide additional learning materials, practice exercises, and tasks that students can use at school or independently at home.

5.2.4. Pedagogy and assessment reform

The Ministry is strengthening assessment and digital learning systems through the Primary Learning Platform (PLP). These platforms support standardized monthly and semester assessments, including assessments of approximately 40 items aligned with the Global Competency Framework, enabling more regular monitoring of student learning and identification of learning gaps. The Ministry is also developing item banks with PISA-style tasks to strengthen students' ability to apply knowledge, interpret information, reason, and solve problems, moving beyond an overreliance on memorization.

At the same time, the Ministry is expanding competency-based and student-centered learning through project-based learning, self-directed learning, research skills, and digital skills through the implementation of School-Level STEM framework (SLSF) and Competency-Based Assessment (CBA), particularly in New Generation Schools, Model Schools, and teacher education institutions, including NIE, PTEC, and BTEC. Across Resource Schools, competency-based assessment in science is also being strengthened to promote scientific inquiry, experimentation, problem-solving, and the practical application of scientific knowledge.

Together, these reforms represent a shift from assessment primarily as a measure of learning toward assessment as a tool for improving learning. By combining more frequent evidence on student performance, digital platforms, competency-based assessment, and PISA-style tasks, Cambodia is building a stronger data-driven learning system capable of identifying gaps earlier and supporting more targeted improvements in teaching and student achievement.

5.2.5. Strengthening the learning ecosystem

The Ministry is implementing a comprehensive set of reforms to improve student learning outcomes, spanning early childhood, foundational learning, curriculum and instruction, secondary education, teachers, schools, assessment, digital learning, and equity. These

reforms respond directly to evidence from SEA-PLM and PISA, while building on structural reforms implemented over the past decade.

At the early childhood level, the Ministry is expanding access through community, public, private, and other providers to strengthen children's readiness for primary school, with greater emphasis on preschool participation and strengthening preschool teachers' capacity in play-based teaching and childcare.

At the primary education level, the Ministry is strengthening foundational learning through early grade reading and early grade mathematics. These efforts include developing reading and mathematics material packages, such as teacher guides, student support books, reading/writing and exercise workbooks, and short storybooks.

Meanwhile, teachers in Grades 1 through 3 receive training on implementing these early reading and math packages, supported by pedagogical advisors during classroom implementation. To ensure sustainability, the Ministry has integrated the early reading and mathematics packages into the 12+2 and 12+4 teacher training programs. In addition, the Ministry has implemented the Personalized Teaching to Overcome Marginalization (PTOM) program to support slow-learning students.

The Ministry is also strengthening the learning ecosystem beyond the classroom by promoting storybook reading, repeated reading, school libraries, learning materials, and guidance on effective reading practices. Recognizing that foundational skills require continuous practice and reinforcement, the Ministry is investing in teacher guides, school-level technical support, and regular classroom-based pedagogical coaching, including in remote areas. These measures create more opportunities for students to practise and reinforce foundational skills both inside and outside the classroom.

Across grade levels, the Ministry is strengthening curriculum, instructional time, and classroom practice, including expanded full-day teaching and increased learning time in Khmer, mathematics, and science. Study clubs and digital platforms provide additional opportunities for self-directed learning. Textbooks and learning materials are being progressively reviewed to move students from memorization toward understanding, application, inquiry, critical thinking, problem-solving, and real-world use of knowledge.

At the secondary level, the Ministry is strengthening competency-based education and aligning curriculum and classroom practices more closely with the competencies measured by PISA. Project-based, inquiry-based, and problem-solving learning are being promoted, while science education is strengthened through experimentation, data interpretation, scientific reasoning, and real-world application. Additional learning time, reading support, and remedial assistance are also being expanded for students who need additional support.

Cambodia has progressively expanded investment in STEM education through USESDP-II, STEP UP, SE4HC, and GEIP/GEIP-AF, moving from infrastructure provision towards a more integrated model combining teacher capacity, school-level implementation, learning resources, and competency-based assessment.

USESDP-II established an initial network of 50 resource schools and 87 network schools. Each resource school received 2 ICT rooms with 50 computers, while 64 tablets. The project established 50 libraries and converted classrooms into libraries in 87 schools, while providing 2 science laboratories in each of the 50 resource schools and laboratory facilities in the 87 network schools. It also trained 198 science teachers, 2,022 teachers and school leaders in resource schools, and 3,340 teachers in network schools on STEM-related approaches.

STEP UP expanded STEM infrastructure to 118 schools with 2 science laboratories each, upgraded 370 ICT rooms in 157 schools, and provided 150 tablets for digital assessment. It installed solar systems in 102 schools, introduced smart classroom packages across 50 resource schools, 102 network schools, and 103 general secondary schools, and supported 118 schools with 21st-century libraries and 25 resource schools with multipurpose rooms. The project also developed 28 science laboratory guidance documents and 72 experiment videos, covering 18 videos each in physics, chemistry, biology, and earth science.

Importantly, STEP UP introduced the School-Level STEM Framework (SLSF) in 2025 and the Competency-Based STEM Assessment (CBA) framework in 2026, shifting attention from STEM inputs towards how schools organize STEM learning and assess student competencies. The SLSF and CBA was initially piloted in 30 high schools and is now being expanded to 150 high schools, providing a framework for scaling a more coherent and sustainable approach to STEM and competency-based education.

MoEYS has shifted its education reform focus from access to education towards quality and institutional competence, supported by SEIP, GEIP/GEIP-AF, and BEIP. GEIP/GEIP-AF focuses on School-Based Management (SBM), curriculum modernization, teacher and school leader professional development, and standardized student assessment.

GEIP/GEIP-AF expanded nationwide to 3,213 schools—293 preschools, 2,000 primary schools, and 920 secondary schools—with a budget of USD 150.35 million. Its framework evolved from the 3As (Assessment, Autonomy, Accountability) to 3As+3, adding teacher development, mutual learning and sharing, and early childhood education.

Together, these investments are creating the foundations for a school-level STEM ecosystem. The key opportunity is to connect infrastructure—including laboratories, libraries, ICT rooms, smart classrooms, and digital resources—with effective teaching through the SLSF, while using CBA to shift assessment towards inquiry, application, reasoning, and problem solving. The priority now is not simply to provide more inputs, but to ensure that these substantial investments are regularly and effectively used to improve STEM teaching and student learning.

The Ministry is also expanding digital education and learning technology through digital content, digital skills, learning platforms, and applications that support teaching, learning, assessment, and self-directed learning. The existing Primary Learning Platform (PLP) and Secondary Learning Platform (MoEYS EdTech) are being modernized to provide stronger digital learning and assessment support and to extend learning opportunities beyond the classroom.

5.2.6. Strengthening learning environment and student welfare

The Ministry is strengthening the physical and learning environment through major education investments, including the construction of childcare centers, preschools, primary schools, and secondary schools to address overcrowding and expand access to adequate learning spaces.

By 2024, 4,582 school buildings comprising 30,135 classrooms had been constructed through contributions from Samdech Akka Moha Sena Padei Techo Hun Sen, Samdech Kittiprittbandit Bun Rany Hun Sen, and Samdech Moha Borvor Thipadei Hun Manet. Over the past decade, government and development-partner financing also supported 1,262 new school buildings (5,065 classrooms), 436 renovated buildings (1,754 classrooms), 131 teacher houses, 9 student dormitories, 21 administration buildings, 2 libraries, and 371 new toilet facilities (1,895 rooms). In addition, 1,100 schools received essential administrative equipment, including computers, printers, photocopiers, projectors, and teacher document cabinets.

The Ministry is also improving the quality and equity of learning environments by upgrading libraries, developing electronic libraries, and providing digital technology and teaching and learning equipment. Infrastructure investment is increasingly being directed toward student demand and learning gaps, with priority given to underserved and disadvantaged areas and facilities that have a direct connection to learning, including classrooms, science laboratories, libraries, ICT infrastructure, and STEM and practical-learning facilities.

At the same time, the Ministry is strengthening student welfare, attendance, retention, and equity through school feeding, scholarships, health and nutrition programs, clean water and sanitation, inclusive education, accelerated learning, and targeted support for vulnerable and disadvantaged students. In particular, the school meal program helps reduce barriers to regular attendance by providing students with a reliable meal at school, helping address lateness and absenteeism. The Ministry is also strengthening parent and community engagement, encouraging families to support children's learning at home and participate in school development.

These investments are creating safer, more inclusive and more conducive learning environments, while addressing both the physical and socioeconomic barriers that can prevent students from attending regularly and learning effectively and healthily.

6. REFLECTION AND LESSONS LEARNT

6.1. Reflection on Cambodia's PISA 2025 performance

1. Cambodia's Rising PISA Performance

Cambodia's strong PISA results suggest that its education reform strategies are moving in the right direction. Key contributing reforms include: expansion of early childhood education and preschool; strengthening foundational skills, particularly early-grade reading and mathematics; teacher reform; school reform; development of Model Schools; upgrading teacher qualifications through the 12+4 teacher education programs and improving teacher salaries.

2. A Remarkable Improvement

Cambodia's PISA improvement represents a “Fantastic Improvement”, particularly at a time when learning performance in many education systems worldwide has declined.

- Cambodia recorded particularly strong improvement in science and significant gains in reading.
- Reading remains fundamental because “reading is the mother of all skills.” Better reading supports learning across other subjects.
- However, the growing use of technology among students also presents challenges and reinforces the need to continue strengthening foundational skills.
- Cambodia's recent improvement is equivalent to approximately two years of schooling.

3. A School System on the Move

Education reform is not simply about increasing expenditure; it is an investment in Cambodia's future. The education system must prepare young people to become highly skilled workers, researchers, innovative entrepreneurs, and responsible citizens.

Since 2017–2018, Cambodia has introduced and piloted important school reforms, including:

- School-Based Management (SBM).
- School communities.
- Model Schools.
- New Generation Schools (NGS).

4. Reforming Pre-Service and In-Service Teacher Education

Teacher quality remains central to education improvement.

- Cambodia is strengthening both pre-service and in-service teacher education.
- Significant investments are being made in Teacher Education Institutions, including new teacher education institutes and the modernization of existing institutions.
- Continued investment in teacher training and qualifications is essential because stronger teachers contribute directly to improved student learning.
- Approximately US\$10 million has been invested across programmes in supplementary learning and teacher and school leader development.

- Around 6,000 teachers and school leaders have completed training through credit-based professional development.
- An important lesson is that training should not only transfer knowledge but also require teachers to apply what they have learned in practice.
- PISA analysis shows that schools participating in education reform programmes generally achieved stronger results, with some performing better than private schools.

5. Quality Improvement Must Go Together with Equity

Improving average performance alone is insufficient. Education reform must also reduce inequality.

- Cambodia invests approximately US\$9 million annually in school feeding programmes.
- Approximately US\$30 million has been invested in scholarship programmes.
- Student learning is influenced by family background, socioeconomic conditions, parental education, home environments, and learning opportunities.
- PISA results indicate that the learning gap between advantaged and disadvantaged students can be equivalent to approximately two to three years of schooling.

6. Strong Schools Can Be Found in Both Urban and Rural Areas

One distinctive feature of Cambodia's results is that the gap between urban and rural schools is relatively small when schools benefit from effective reforms.

- Schools in rural and border areas can achieve results comparable to urban schools and private schools.
- Some provincial schools have performed at levels comparable to schools in major cities.
- Schools without reform interventions and whose leaders have not received leadership development tend to perform less well.
- School improvement, teacher and principal training, stronger management, investment in laboratories and computer rooms, and greater parent and community participation all contribute to improved learning outcomes.

7. School Reform Can Create Excellence at Scale

School reform can improve education quality across the system rather than benefiting only a small number of schools.

- Teacher salaries for secondary and lower-secondary teachers have approximately doubled, while primary teacher salaries have increased by around three times.
- Scholarships equivalent to 70% of the basic salary have helped attract high-achieving students, including those with grades A, B, and C, into teacher education.
- Approximately 75% of teacher trainees come from these higher-performing student groups, helping strengthen the future teaching workforce.

8. Investment Efficiency Matters

Although Cambodia's education budget has increased substantially, education spending remains lower than in OECD countries because Cambodia's income level is significantly lower.

- Cambodia's GDP per capita is approximately US\$3,000, compared with around US\$40,000 in higher-income OECD economies.

- Despite this difference, the learning outcome gap is much smaller than the income gap.
- Some high-performing Cambodian schools already achieve results comparable to OECD averages.
- Continued improvement over approximately 12 years, or around three PISA cycles, could enable Cambodia to approach OECD performance levels.

9. Continue Reforming Teacher Education Institutions

Cambodia should continue strengthening the 12+4 teacher education system as a key quality reform.

- Investing in high-quality teacher preparation today will shape the education system for decades.
- While student quality is important, teacher quality is even more critical for sustaining long-term education improvement.
- Short-term cost-saving should not compromise the quality and foundations of future teachers.

10. Strengthen Whole-School Reform

Whole-school reform should remain a central strategy.

Key actions include:

- Establishing Professional Learning Communities (PLCs).
- Expanding remedial and supplementary classes.
- Addressing the challenges of limited instructional time and part-day schooling.
- Strengthening parental engagement.
- Promoting teaching as a collaborative profession in which teachers continuously learn from one another.

11. Leverage Technology and AI Responsibly

Technology and AI will play an increasingly important role in education, but they present both opportunities and risks.

- AI can support learning and teaching when used effectively, but inappropriate use may negatively affect learning.
- Schools and families will need to guide and monitor students' technology use.
- Cambodia should develop a Secondary Learning Platform to strengthen secondary education.
- AI can help teachers improve efficiency and support better teaching.
- PISA and SEA-PLM results also show gender differences in learning outcomes, requiring appropriate policy attention and responsible technology use.

12. Cambodia's Progress Demonstrates High Efficiency of Education Investment

Cambodia's previous low PISA ranking should be interpreted within its development context.

- Cambodia spends considerably less per student than higher-income countries.
- Although education expenditure has increased significantly, it remains below OECD levels in absolute terms.

- Cambodia's results nevertheless suggest that its education investments are generating relatively strong returns.
- This reflects effective collaboration between the Ministry of Education, Youth and Sport and the Ministry of Economy and Finance.

13. Cambodia Has Made Smart and Strategic Choices

Cambodia's education progress reflects several strategic policy choices:

- Increasing salaries for teachers and school leaders.
- Strengthening teaching quality, particularly in foundational reading and mathematics.
- Improving school quality and expanding access to education.
- Prioritizing investment despite continuing resource constraints.

14. Expand the Model School Standard

The next stage should focus on scaling effective practices through Model Schools.

Priority actions include:

1. Continue motivating and supporting teachers to improve teaching quality.
2. Strengthen parent and community participation through School Management Committees.
3. Continue early-grade reading and mathematics programmes, standard libraries, and coaching and mentoring systems.
4. Expand New Generation School approaches that develop 21st-century skills, including critical thinking, problem solving, and teamwork.
5. Develop teacher guides for STEM subjects and continue documenting effective practices.
6. Review and modernize textbooks, including science and social science, and align them with clear standards and international approaches.
7. Develop a Secondary Learning Platform using digital technology and artificial intelligence, including mobile access.
8. Strengthen school management, including teacher and student discipline, and monitoring teacher and student attendance.

Cambodia's improved PISA performance is the result of collective and sustained efforts involving the Ministry of Education, Youth and Sport, the Ministry of Economy and Finance, development partners, and education projects. The experience demonstrates that sustained investment in early learning, teachers, school reform, equity, infrastructure, and innovation can produce significant improvements. The next challenge will be to consolidate these reforms, scale successful practices, and ensure that improvements in learning reach all schools and students across Cambodia.

6.2. Lessons learnt

Cambodia's improved performance in PISA provides several important lessons for future education reform. The experience suggests that significant improvements in learning outcomes can be achieved even in a resource-constrained system when reforms are sustained, mutually reinforcing, and focused on improving teaching and learning.

Sustained reform can produce significant improvements in learning

Cambodia's experience demonstrates that education improvement requires sustained effort rather than isolated interventions. Investments in early childhood education, foundational learning, teacher development, school reform, and learning resources have accumulated over time and are beginning to translate into measurable improvements in student outcomes. The scale of Cambodia's recent PISA gains shows that rapid progress is possible when reforms are consistently implemented.

Improving teaching quality is central to better learning outcomes

Teacher quality remains one of the most important determinants of student learning. Cambodia's reforms in pre-service teacher education, professional development, teacher salaries, and teacher qualifications demonstrate the importance of investing in the teaching profession. However, training alone is insufficient; the key lesson is that professional development must translate into changes in classroom practice.

School-level reform is critical for translating policies into learning

National policies and investments ultimately affect learning through schools. Reforms such as School-Based Management, model schools, and New Generation Schools demonstrate the importance of strong school leadership, teacher collaboration, accountability, and a focus on student learning. High-performing schools show that effective school-level practices can make a significant difference regardless of location or school size.

High performance is possible beyond major urban centers

The experience of high-performing schools demonstrates that geography does not determine educational success. Schools in provinces and rural areas can achieve results comparable to those in Phnom Penh and other urban centers when they have effective leadership, capable teachers, sufficient learning time, strong student support, and access to quality learning resources. This provides an important lesson for reducing rural–urban disparities.

Improving quality and equity must go together

Learning outcomes are strongly influenced by students' socioeconomic backgrounds and home environments. Investments in school feeding, scholarships, and targeted support, therefore, complement investments in teaching and infrastructure. Cambodia's experience shows that improving national averages alone is insufficient; reforms must also address the large learning gaps between advantaged and disadvantaged students.

Whole-school approaches are more effective than isolated interventions

Successful schools and reform programs tend to combine multiple interventions: leadership development, teacher professional learning, continuous assessment, supplementary support, parent engagement, learning resources, and effective use of instructional time. This suggests that isolated interventions are less likely to produce sustained improvement than coherent whole-school approaches.

Professional collaboration helps sustain improvements in teaching

Teaching should increasingly be viewed as a collaborative profession. Professional Learning Communities (PLCs), peer learning, mentoring, and collaborative lesson improvement can help teachers continuously improve their practice. Cambodia's experience suggests that creating opportunities for teachers to learn from one another is essential for sustaining reforms beyond one-off training programs.

Infrastructure matters when it is connected to pedagogy

Investments in laboratories, libraries, ICT facilities, and digital resources can improve learning, but infrastructure alone does not guarantee better outcomes. The key lesson is that resources must be actively integrated into teaching. Science laboratories should support experimentation and inquiry; libraries should promote reading and research; and technology should strengthen—not replace—teaching and independent learning.

Assessment can drive improvements in teaching and learning

The growing emphasis on formative and competency-based assessment offers an important opportunity to shift teaching away from memorization towards understanding, application, reasoning, and problem solving. International assessments such as PISA can also provide useful insights into whether students can apply knowledge in unfamiliar and real-world contexts. Assessment reform should, therefore, be closely connected with curriculum and pedagogy reform.

Investment efficiency matters as much as investment levels

Cambodia has achieved notable improvements despite having substantially fewer resources than many higher-income education systems. This suggests that strategic targeting and effective implementation can generate significant returns. The lesson is not that additional investment is unnecessary, but that future investments should focus on interventions with the greatest potential impact on teaching and learning.

Strong foundations remain essential in the age of technology and AI

Digital technology and artificial intelligence offer new opportunities for education, but they also reinforce the importance of strong foundational skills. Students need to be able to read, think critically, reason independently, and solve problems before they can effectively benefit from advanced technologies. Technology should, therefore, complement, rather than substitute for, foundational learning.

Successful reforms need to be scaled systematically

Cambodia now has examples of high-performing schools, effective reform programs, and promising teaching practices. The next challenge is to identify what works, adapt these practices to different contexts, and scale them systematically. This requires clear implementation frameworks, sustained financing, teacher support, monitoring, and continuous learning.

The central lesson from Cambodia's recent progress is that education improvement does not result from a single reform. It emerges from the interaction of multiple, mutually reinforcing investments in teachers, school leadership, foundational learning, equity, infrastructure, assessment, and innovation.

Cambodia's experience demonstrates that even with limited resources, a coherent and sustained reform strategy can produce significant improvements in learning. The challenge ahead is to consolidate these gains, address persistent inequalities, and scale successful practices so that every school—not only a small number of high-performing schools—can provide students with the knowledge, skills, and competencies needed for the future.

7. POLICY ACTIONS

Building on Cambodia's improved PISA 2025 performance, this part outlines policy actions to sustain learning gains through whole-school reform, teacher development, curriculum and assessment reform, stronger learning foundations, digital technology, and equity. The actions aim to scale effective practices while providing targeted support to lower-performing schools, translating recent gains into sustained system-wide improvements in student learning.

1. Learn from High-Performing PISA Schools and Scale Effective School Models

The ministry will study high-performing PISA schools to identify effective practices in teaching, assessment, leadership, student support, and school management, and use the findings to continuously strengthen and improve our school reform models.

The ministry will continue to scale up Model Schools and New Generation Schools (NGS), strengthening School-Based Management, instructional leadership, accountability, community engagement, STEM, and 21st-century learning, while enabling them to serve as hubs for spreading effective practices to surrounding schools.

2. Expand Secondary Education Enrollment and Retention

The ministry will continue expanding secondary education enrollment and retention, with the ambition of reaching an optimal regional level, including 60–70% participation in upper secondary education.

The Ministry will increase learning opportunities through whole-day and supplementary programs, strengthen remedial and targeted support for disadvantaged and struggling students, and reduce repetition and dropout through early identification of learning gaps and timely intervention. These efforts will help ensure that more students progress through school at the appropriate age and grade level, complete secondary education successfully, and are better prepared for PISA and further learning.

3. Improve Schools and Learning Environments

The ministry will expand schools and improve learning environments, particularly in underserved areas, through additional classrooms, laboratories, libraries, digital infrastructure, and other learning facilities under BEIP and GEIP.

The ministry will ensure these investments directly improve teaching and learning by strengthening science laboratories, libraries, digital access, and learning resources, while providing additional support to rural, remote, and disadvantaged schools to promote greater equity.

4. Leverage AI and Digital Technology to Extend Learning

The ministry will leverage AI and digital technology to extend learning beyond the classroom, providing additional learning hours, personalized learning, self-directed practice, feedback, and targeted support.

The ministry will expand PLP and SLP with curriculum-aligned digital resources and assessments, use technology to monitor learning gaps and strengthen STEM, progressively introduce AI in schools and teacher education, and connect rural schools with universities and high-performing schools through digital learning and collaboration.

5. Implement a Coherent Whole-School Reform Pathway

The ministry will implement whole-school reform from early childhood to secondary education, creating a coherent learning pathway from play-based early childhood education, EGL and PTOM in primary education, to STEM-oriented teaching and learning in secondary education.

The ministry will strengthen foundational literacy and numeracy, establish clear competency standards and learning progression, use diagnostic assessments to address learning gaps early, and expand reading, STEM, remedial, supplementary, peer-learning, and enrichment opportunities.

6. Strengthen Student Pathways and Career Guidance

The ministry will strengthen the education pathway system to retain students in school and guide them into appropriate educational and career pathways according to their interests, abilities, learning outcomes, and aspirations.

The ministry will strengthen academic and career guidance, create clearer pathways across general, STEM, technical and vocational education, and use learning data to support progression, reduce dropout and repetition, and prepare students for further education, skills development, and employment.

7. Modernize Curriculum and Textbooks

The ministry will continue modernizing textbooks from primary through secondary education to strengthen conceptual understanding, application of knowledge, critical thinking, problem-solving, scientific reasoning, and global competencies. Greater attention will be given to reading, mathematics, science, STEM, and skills needed for students to succeed in a rapidly changing world.

The ministry will align curriculum, textbooks, pedagogy, and assessment with clear competency standards, learning progression, PISA, and international frameworks. Textbooks and learning materials will promote deeper learning through real-life and contextualized problems, inquiry, reasoning, data interpretation, experimentation, project-based learning, and competency-based tasks that enable students to apply what they learn in different contexts.

8. Transform Teacher Education and Strengthen Teacher Quality

The ministry will continue reforming teacher education and strengthening teacher quality through the 12+4, BA+1, and BA+2 pathways, while attracting, developing, and retaining high-quality teachers. Teacher education institutions will be strengthened, with clear professional

and competency standards and greater emphasis on selecting capable candidates and preparing them for modern classroom practice.

The ministry will strengthen career pathways, incentives, and continuous professional development, while equipping teachers with modern pedagogy, competency-based assessment, foreign languages, digital and AI competencies, research, and data skills. Professional support will be expanded through PLCs, mentoring, coaching, peer observation, and demonstration lessons, with stronger links between teacher development, classroom practice, and improved student learning outcomes.

9. Strengthen School Accountability and Performance

The ministry will strengthen performance-based school inspection and accountability using school self-assessment, student learning outcomes, teaching quality, school leadership, and Model School Standards.

The ministry will use inspection and performance data to identify improvement needs, strengthen accountability and targeted support, monitor key aspects of school performance, recognize effective practices, and promote stronger collaboration among schools, parents, communities, universities, and the private sector.

10. Strengthen PISA-Style and Competency-Based Assessment

The ministry will strengthen PISA-style assessment alongside robust formative assessment, including item banks and tasks that assess critical thinking, problem-solving, scientific reasoning, application of knowledge, and global competencies.

The ministry will progressively shift assessment from knowledge recall towards the application of knowledge, analysis, reasoning, and real-life problem-solving. We will strengthen continuous assessment through projects, experiments, presentations, and investigations; develop standardized competency-based assessments and item banks from Grades 4–12; and use assessment results and digital systems to monitor learning progress, identify gaps, improve classroom instruction, and provide targeted support.



READING



MATHEMATICS



SCIENCE

