



Equity and equality in learning in Asia-Pacific: What do results from large-scale assessments tell us?

SOCIO-ECONOMIC BACKGROUND IN FOCUS

POLICY BRIEF

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Chapter 1: Introduction

Equality in learning by socio-economic status matters for a multitude of reasons, primarily revolving around the foundational role of education as a driver of social mobility, economic prosperity, and social opportunities. Socio-economic background is one of the most used predictive factors of academic achievement as it reflects the segregation, differences or inequalities among students belonging to different socio-economic contexts (Eryilmaz, et al., 2020). Equity in education entails ensuring that every student has an equal chance to learn and succeed, regardless of their socio-economic status. This approach resonates with Sustainable Development Goal 4 (SDG4), which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (UNESCO, 2016). Equity does not imply equal education outcomes, but it does mean that disparities in students’ achievements are not influenced by their backgrounds or economic and social circumstances they can’t control (OECD, 2018a).

Large-scale assessments generally use indices as proxies for measuring socio-economic status. Most international assessment tools have attempted to define socio-economic status based on 1) parental characteristics (occupation, income, education), 2) home resources and 3) neighborhood including school characteristics (Kim et al, 2019). For example, in the OECD Program for International Student Assessment (PISA), a student’s socio-economic status is measured by the PISA index of economic, social and cultural status (ESCS). The ESCS is a composite measure that is calculated into a single score - the financial, social, cultural and human-capital resources available to students (OECD, 2018b). It includes such variables as parents’ highest level of education, parents’ highest occupational status, and home possessions index, which includes country-specific household items, the number of books at home and other educational resources. The ESCS has been designed to ensure comparability on an international scale. Another example is the socio-economic status (SES) index used by the Southeast Asia Primary Learning Metrics Program (SEA-PLM). It features three parameters: the highest parental occupation of either parent, the highest educational level of either parent, and the home resources of the children’s family through the home resources scale. As this scale was derived nationally, students’ scores are not comparable across countries, but rather used nationally (UNICEF & SEAMEO, 2020).

Measuring socio-economic background in large-scale assessments can be challenging. Some researchers have questioned the reliability and validity of the current socio-economic status measurement, advocating for potential revisions and extensions of the available indices (Rutkowski & Rutkowski, 2013). Other scholars concluded that the validity and international comparability of the components in such indices are reasonably strong and offered suggestions for further enhancements (Avvisati, 2020). It’s essential to be aware of the potential limitations of the methods used in its measurement to ensure a comprehensive approach to promoting equity and equality in learning.

Chapter 2: What large-scale assessment data tell us and factors that explain it

2.1 Trends in reading, math and writing outcomes by socio-economic status

2.1.1 Learning outcomes over time and across the region by socio-economic status

The Asia-Pacific region is home to both the largest share of top performers and low achievers globally. Evidence indicates that socio-economic status is a strong predictor of academic achievement in the region. In most Asia-Pacific countries, no notable shifts were detected over time in socio-economic disparities in learning outcomes.

The Asia-Pacific region is home to PISA 2018 top performing education systems in terms of learning outcomes in reading, mathematics and science. While fifteen-year-old students in Beijing, Shanghai, Jiangsu and Zhejiang (China), Singapore, Macao (China), Hong Kong (China), Korea, Chinese Taipei and Japan demonstrate the highest share of top performers in at least one subject (Level 5 or 6) globally, the share of low achievers in all three subjects (below Level 2) reached 71.8% in the Philippines and 51.7% in Indonesia (OECD, 2019a).

Students' socio-economic background is a strong predictor of learning outcomes in both high performing and low performing education systems in Asia-Pacific. Among the twelve Asia-Pacific countries participating in PISA 2018 mathematics test, there is a measurable correlation between the educational achievement and socio-economic status within these Asia-Pacific nations (Bayirli and co, 2023). At primary level, socio-economic status was also a statistically strong predictor of students' performance in reading, writing and mathematics at Grade 5 across all six Southeast Asian countries in the SEA-PLM 2019 data (Table 1). There were significant differences between scores of students who were in the bottom quartile of socio-economic status and those who were in the highest quartile. Students in the upper quartile performed significantly better in reading, writing and mathematics than their less advantaged peers, with the Philippines and Lao PDR showing particularly large performance gaps (Table 1).

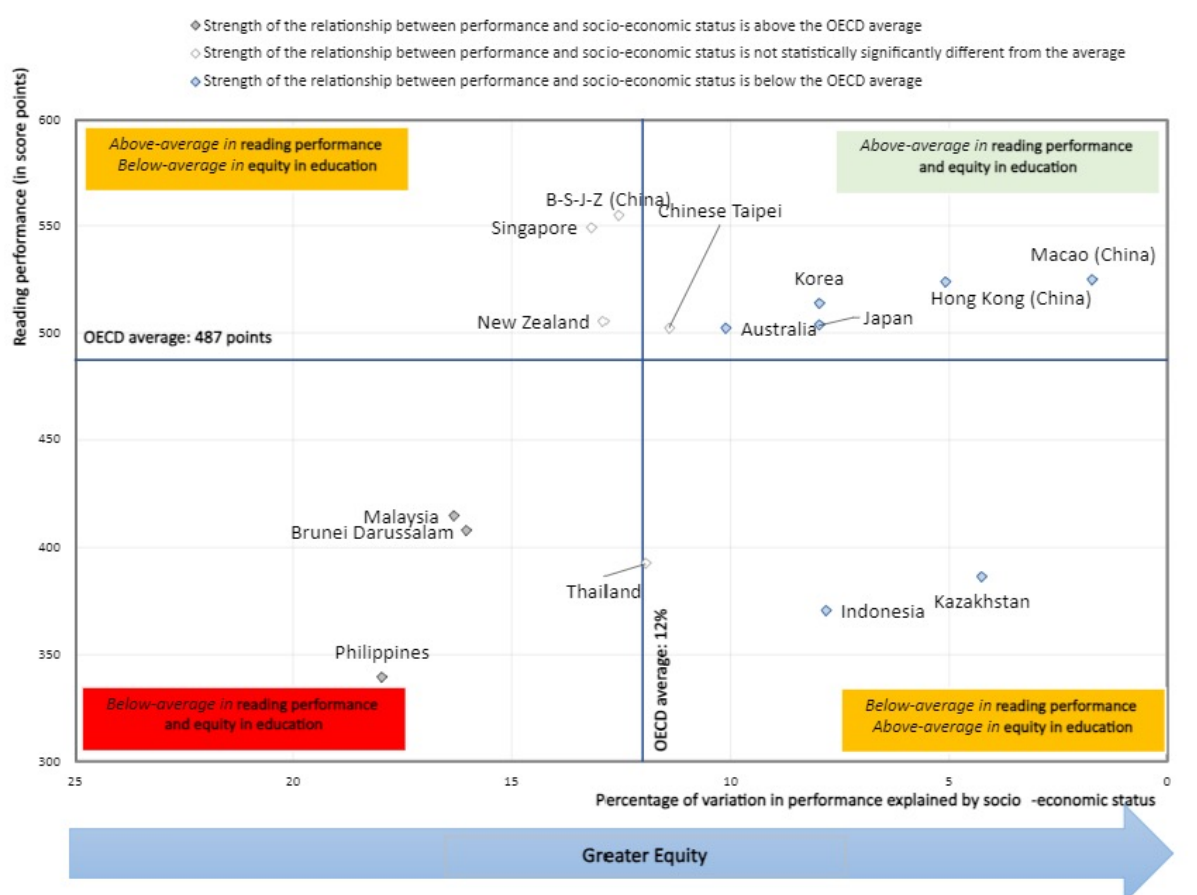
Table 1. Regression coefficients for the effects of socio-economic status (SES) on reading, writing and mathematics performance among SEA-PLM 2019 participating countries (Grade 5)

Country	Effect of SES on Reading		Effect of SES on Writing performance		Effect of SES on Mathematics performance	
Cambodia	7.7	(0.5)	6.7	(0.5)	7.7	(0.5)
Lao PDR	8.4	(0.6)	9.9	(1.0)	8.7	(0.6)
Malaysia	7.9	(0.5)	5.5	(0.4)	8.8	(0.5)
Myanmar	5.4	(0.5)	3.3	(0.5)	5.2	(0.5)
Philippines	10.5	(0.6)	11.5	(0.6)	9.0	(0.5)
Viet Nam	9.1	(0.7)	7.2	(0.6)	9.0	(0.7)
Average six countries	8.1	(0.2)	7.4	(0.3)	8.1	(0.2)

Note: () Standard errors appear in parentheses. Significant differences ($p < 0.05$) indicated in bold. Source: SEA-PLM 2019, Table 3.6, Table 3.7, Table 3.8.

However, the equity gap varies greatly between countries. For example, five countries/economies in the region have demonstrated both greater equity in education (as measured by the percentage of variation in performance explained by PISA index of economic, social and cultural status) and above the OECD average reading performance (in score points) among fifteen-year-olds: Macao (China), Hong Kong (China), Korea, Japan and Australia (Figure 1). While socio-economic status was less predictive of performance than average in Kazakhstan and Indonesia, both countries' reading performance was among the lowest in the region. The Philippines, Malaysia and Brunei Darussalam demonstrated below-average reading performance with the highest percentage of the variation in students' reading performance being accounted for by students' socio-economic status (OECD, 2019b).

Figure 1. Strength of the socio-economic gradient and reading performance among 15-year-olds in PISA 2018



Note: Socio-economic status is measured by the PISA index of economic, social and cultural status (ESCS). Source: OECD, PISA 2018 Database, Table II.B1.2.3.

Over the past decade, the learning gap between students from high socio-economic background and those from low socio-economic background has not decreased on average across the region. Comparing results from 2009 and 2018, the learning outcome gap between students of high socio-economic background and those of low socio-economic background remained stable or increased in eleven out of the twelve Asia-Pacific countries participating in PISA. In Malaysia, the socio-economic gap in reading widened significantly. Even though its advantaged students' performance improved, the performance of disadvantaged students declined at a faster rate. In Kazakhstan, the only country where the gap decreased overtime, the observed narrowing was driven by a substantial decrease in the performance of advantaged students alongside a notable improvement in the performance of disadvantaged students (Table 2).

Table 2: Change between PISA 2009 and PISA 2018 in reading performance related to socio-economic status among 15-year-old students

	Advantaged students' performance declined and ...	Advantaged students' performance did not change and ...	Advantaged students' performance improved and...
...disadvantaged students' performance declined	Japan		Malaysia
	Australia		
	Korea		
	New Zealand		
	Thailand		
	Indonesia		
...disadvantaged students' performance did not change		Hong Kong (China) *	Chinese Taipei
...disadvantaged students' performance improved	Kazakhstan		Macao (China)
			Singapore

Source: OECD, PISA 2018 Database, Table II.B1.2.5. Blue – The socio-economic gap in reading widened significantly between 2009 and 2018. White - The socio-economic gap in reading did not change significantly between 2009 and 2018; Gray – The socio-economic gap in reading narrowed significantly between 2009 to 2018; *Hong Kong (China): Data did not meet the PISA technical standards but were accepted as largely comparable.

2.1.2 Resilient students: who they are and why they outperform

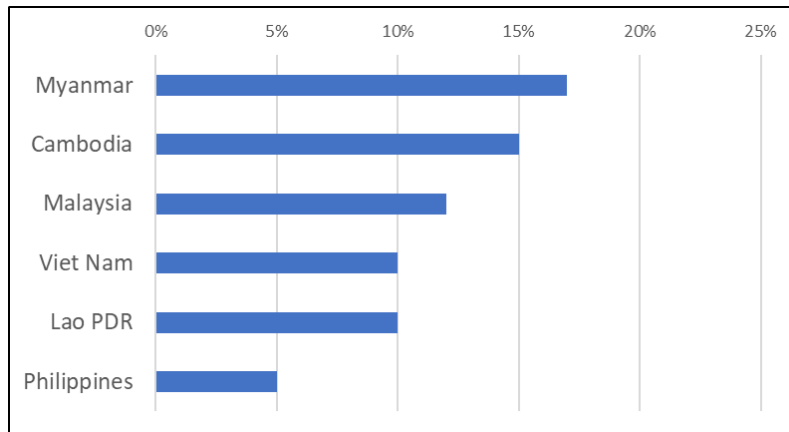
The prevalence of academically resilient students varies widely across countries in the region, linked to specific student, family and school-level factors. Analyzing resilience is crucial for policymaking as it sheds light on the effectiveness of interventions and support structures in nurturing academic success among disadvantaged students.

While socio-economic disadvantage frequently predicts poor learning outcomes, some students from disadvantaged socio-economic background excel academically regardless. These students are referred to as “resilient.” Both SEA-PLM and PISA define academically resilient students as those “who are among the 25% most socio-economically disadvantaged, who also perform within the top 25% of scores in their country” (UNICEF, 2021; OECD, 2019b).

The proportion of academically resilient children varies significantly by country. Among Grade 5 children in Southeast Asia, Myanmar (17%) and Cambodia (15%) have the largest percentage of academically resilient children, which is three times higher than in the Philippines (5%) (Figure 2). Among 15-year-old students participating in PISA in Macao (China), Hong Kong (China), Kazakhstan, Indonesia, Korea, Australia, Thailand, Chinese Taipei, Japan, B-S-J-Z (China) and New Zealand, more than 11%

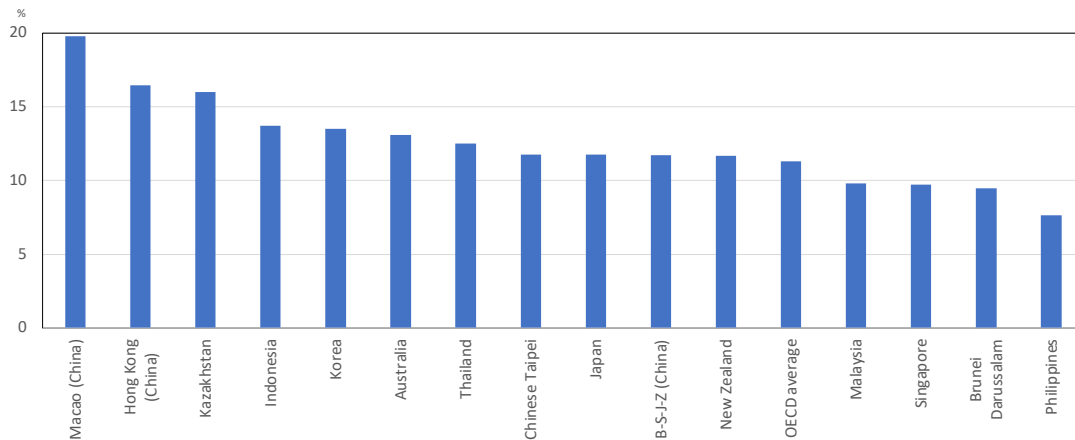
of disadvantaged students were academically resilient. Malaysia (10%), Singapore (10%), Brunei Darussalam (9%) and the Philippines (8%) had lower than OECD average proportion of academically resilient students (Figure 3).

Figure 2. Percentage of children who are academically resilient readers (Grade 5) in SEA-PLM 2019



Source: UNICEF. (2021). SEA-PLM 2019 latest evidence in basic education: Low-performing readers in 6 Southeast Asian countries. United Nations Children's Fund (UNICEF).

Figure 3. Academic resilience: Percentage of 15-year-old disadvantaged students who scored in the top quarter of reading performance in their own country in PISA 2018



Note: Countries and economies are ranked in descending order of the percentage of academically resilient students.

Source: OECD, PISA 2018 Database, Table II.B1.3.1.

There are student-level and school-level attributes that have been associated with an increased likelihood of academic resilience within specific contexts. In SEA-PLM 2019, significant student-level characteristics include being female (in Cambodia, Malaysia and the Philippines), attending an urban education institution (specifically in the Philippines), using the language of instruction as the primary language at home (applies to all countries except the Philippines, where Grade 5 instruction and testing are conducted in English), having no household responsibilities (significant in Cambodia, Lao PDR, Myanmar, and the Philippines) and not experiencing grade repetition (this holds true across all the mentioned countries). School-level factors associated with

academic resilience include higher language lesson frequency in four out of six countries, the presence of a school library (in Myanmar and the Philippines) and teacher development (in Lao PDR) (UNICEF, 2021). Academic resilience had a positive correlation with teacher enthusiasm, students' attitudes and dispositions, positive disciplinary climate at school and parental support (OECD, 2019b).

2.2 Disparities in school and home environment and learning outcomes

The variations in school and home environments have a significant impact on learning outcomes. Key factors, including the availability of learning resources for students, the qualifications of teachers, and parental engagement, are crucial in shaping the educational journey of learners. These elements establish a foundational understanding of the disparities observed in learning outcomes.

2.2.1 Learning resources

In most Asia-Pacific countries, disadvantaged students face a higher shortage of educational materials than their advantaged peers, with exceptions in Macao (China).

Across the majority of PISA 2018 participating countries in the region, school principals from schools with a high share of socio-economically disadvantaged fifteen-year-old students reported a higher shortage of essential educational material, such as textbooks, laboratory equipment, instructional materials, and computers, compared to their advantaged counterparts. Noteworthy disparities are evident, with the proportion of disadvantaged students in schools lacking educational materials peaking at 84% in Thailand, 70% in the Philippines, and 69% in Indonesia. Macao (China), on the other hand, demonstrated a more equitable distribution of learning materials (Table 3). Scarcity of educational resources in disadvantaged schools prompts the practice of resource sharing, particularly when it comes to textbooks. For example, in the Philippines about a quarter of students in Grade 5 share their language or mathematics textbooks with at least two other students (Table 4). In Lao PDR these numbers reach 41% and 38%, respectively (UNICEF, 2021).

Some of the earlier studies clearly showed that there was a systematic and positive relationship between educational resources and student outcomes (Hedges et al, 1994; Murillo & Roman, 2011). Murillo and Roman revealed that school infrastructure and resources like number of books in the library and computers in the school had an effect on the achievement of primary education students, but also established that their significance varied from country to country.

Such shortages of necessary educational materials limit learning opportunities for students from low socio-economic background. For example, in Lao PDR, significant differences in average score performance in reading, writing and mathematics in SEA-PLM tests were observed between Grade 5 students who had textbooks to themselves and those who either did not have a textbook at all or had to share it. Similar disparities were demonstrated in reading and writing performance in Cambodia and in reading and mathematics in the Philippines (Table 5).

Table 3. Proportion of fifteen-year-old students in schools whose principal reported a lack in educational material, PISA 2018

Country/Economy	Proportion of students in schools whose principal reported a lack in educational material		
	Advantaged students (top quarter of ESCS index), %	Disadvantaged students (bottom quarter of ESCS index), %	Difference between advantaged and disadvantaged students, % dif.
Thailand	23.9	84.3	-60.4
Philippines	15.9	70.0	-54.1
Indonesia	36.9	69.4	-32.5
Japan	42.2	67.4	-25.2
Kazakhstan	35.2	57.4	-22.2
B-S-J-Z (China)	12.5	32.4	-19.9
Australia	1.3	20.9	-19.6
Hong Kong (China)	6.5	24.1	-17.6
Malaysia	13.5	27.8	-14.3
New Zealand	4.4	16.7	-12.4
Korea	41.8	53.7	-11.9
Chinese Taipei	5.5	15.7	-10.3
Brunei Darussalam	37.8	44.0	-6.1
Singapore	0.0	0.0	0.0
Macao (China)	16.2	10.6	5.6

Note: Values that are statistically significant are marked in bold.

Table 4. Percentage of Grade 5 children attending schools by language and mathematics textbooks availability in SEA-PLM 2019

Country	Textbook availability							
	No textbooks		One per student		Two students sharing		More than two student sharing	
	Language	Math	Language	Math	Language	Math	Language	Math
Cambodia	2.9	1.6	93.8	96.4	3.3	2.1	0.0	0.0
Lao PDR	4.8	2.2	54.7	59.7	25.2	23.9	15.3	14.2
Malaysia	0.0	0.0	100.0	98.8	0.0	1.2	0.0	0.0
Myanmar	0.0	1.3	100.0	98.7	0.0	0.0	0.0	0.0
Philippines	1.9	2.6	73.8	71.8	16.8	17.3	7.5	8.2
Viet Nam	1.9	0.4	97.5	97.5	0.7	2.1	0.0	0.0
Average six countries	1.9	1.3	86.6	87.2	7.7	7.8	3.8	3.7

Source: SEA-PLM 2019, Table 3.31, 3.32

Table 5. Score difference in average reading, writing and mathematics by textbook availability

Country	Score difference (one per student - none or shared)		
	Average reading performance by assessment language textbooks	Average writing performance by assessment language textbooks	Average mathematics performance by mathematics textbooks
Cambodia	10	13	7
Lao PDR	8	10	6
Malaysia	-	-	6
Myanmar	-	-	4
Philippines	6	5	6
Viet Nam	-4	-1	-2
Average six countries	5	7	4

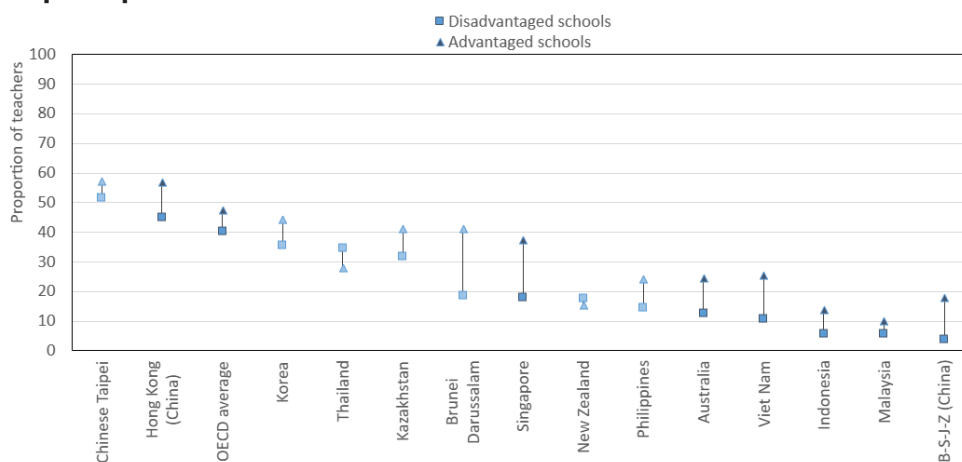
Note: Significant differences ($p < 0.05$) indicated in bold. Source: SEA-PLM 2019, Table 3.33 SEA-PLM 2019, Table 3.31, 3.32

2.2.2 Teachers' qualifications

In general, across the Asia-Pacific region, the proportion of teachers with at least a master's degree grew with the average socio-economic profile of the schools.

Notably, research indicates a positive correlation between each additional year of teaching experience and higher student achievement (OECD, 2019b). Thus, ensuring that highly qualified teachers are not concentrated in advantaged schools, is among the key levers to ensure equity in learning. Surpassing the OECD average, only Chinese Taipei and Hong Kong (China) stand out across the region in the percentage of teachers with a master's degree. Conversely, a significant disparity between disadvantaged and advantaged schools is evident in seven countries and economies, including Hong Kong (China), Singapore, Australia, Viet Nam, Indonesia, Malaysia and Beijing, Shanghai, Jiangsu and Zhejiang (China). In these cases, the proportion of highly qualified teachers in disadvantaged schools is notably smaller than that in advantaged schools, emphasizing the need for a more equitable distribution of qualified educators (Figure 4).

Figure 4. Percentage of teachers with at least a master's degree, by schools' socio-economic profile in PISA 2018, based on principals' reports



Note: Statistically significant differences are shown in a darker tone. Education levels correspond to level 5A master's degree and level 6 of the International Standard Classification of Education (ISCED-1997). The socio-economic profile is measured by the school's average PISA index of economic, social and cultural status (ESCS). Source: OECD, PISA 2018 Database, Table II.B1.5.4.

2.2.3 Parental engagement

Higher levels of parental engagement are associated with higher reading, writing and mathematics scores in children. While half of the children reported that their parents motivate them to succeed in school, a large proportion suggested that their parents rarely or never engage in school-related activities.

Ensuring parental engagement is another key lever for reducing socio-economic inequity in learning. Lara & Saracostti (2019) showed that there are variations in children's academic achievement having different levels of parental involvement, indicating children whose parents showed lower involvement had performed poorer when compared to their counterparts.

Duan et al. (2018) showed that SES negatively moderated the relationship between parental involvement and school students' performance, thereby implying parental involvement initiatives benefit students in families of low SES. Turhan (2022) similarly established that SES mediated the relationship between parental involvement and children's school success. Due to financial and other barriers, parents with low SES tended to be less engaged in the education of their children. However, if involved, their impact can be greater and enhance their children's academic achievement.

In all six countries that took part in the SEA-PLM 2019 (Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam), increased parental involvement correlated with higher academic achievement in Grade 5 children, specifically in the areas of reading, writing and mathematics (UNICEF, 2021). On average, almost half of the children surveyed indicated that their parents motivate them to excel in school (47%). Around one-third stated that their parents verify the completion of their homework (36%) and inquire about their school learning experiences (34%), engaging in discussions about their schoolwork (32%). Approximately a quarter mentioned that their parents assist them with their homework (27%). Nevertheless, a considerable portion of children conveyed that their parents infrequently or never participate in these activities (UNICEF, 2021).

2.3 System level policies

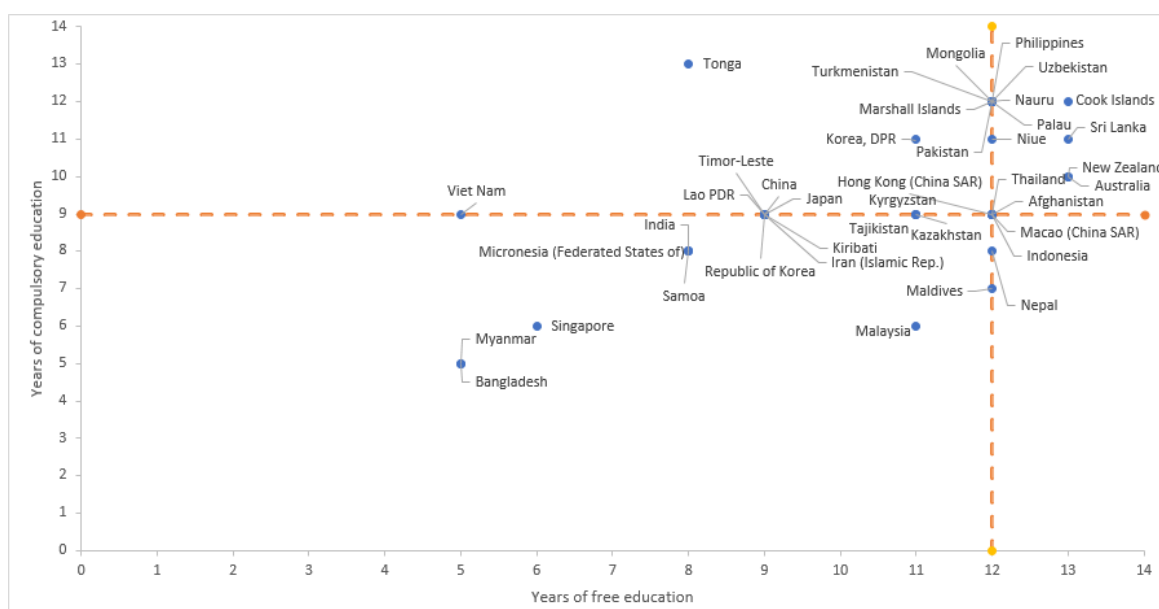
2.3.1 Free compulsory education

The majority of Asia-Pacific countries have adopted nine years of free and compulsory primary and secondary education which remains below the SDG 4 target of 12 years of free primary and secondary education. Only seven countries in the region have a minimum of one year of free and compulsory pre-primary education in legal frameworks.

For students to improve their learning outcomes, they must first attend school. As outlined in the Incheon Declaration on education, a unanimous agreement among member states in the Asia-Pacific region, there is a mandate for providing 12 years of primary and secondary education that is both cost-free and publicly funded (UNESCO, 2016). Among these 12 years, at least nine are to be compulsory. Nonetheless, certain nations do not adhere to either the 12-year cost-free education or the nine-year mandatory education standards (Figure 5). The duration of free primary and secondary education ranges from five to 13 years.

Furthermore, member states advocated for the implementation of a minimum of one year of free and compulsory high-quality pre-primary education. Evidence indicates that there is a positive relationship between attendance at pre-primary education and student achievement at age 15 (OECD, 2020). However, only seven countries in the region have implemented a minimum of one year of free and compulsory education by 2022. Namely, Kyrgyzstan, Macao (China SAR), the Philippines, Nepal, Nauru, Marshall Islands and Democratic People’s Republic of Korea (UNESCO, 2022). Some countries in the region provide at least one year of free pre-primary education but do not make it compulsory. For example, Mongolia, Tajikistan, Uzbekistan, Kazakhstan, Republic of Korea, Thailand, Turkmenistan, Cook Islands, New Zealand, Afghanistan, Australia and Niue (UNESCO, 2022). Other countries, like Viet Nam and Tonga, make at least one and two years respectively of pre-primary education compulsory but do not offer it for free.

Figure 5. Number of years of free and compulsory primary and secondary education guaranteed in legal frameworks, 2022



Note: Japan data is based on 2020. **Source:** UNESCO Institute for Statistics, <https://apiportal.uis.unesco.org/bdds>

2.3.2 Education systems segregation

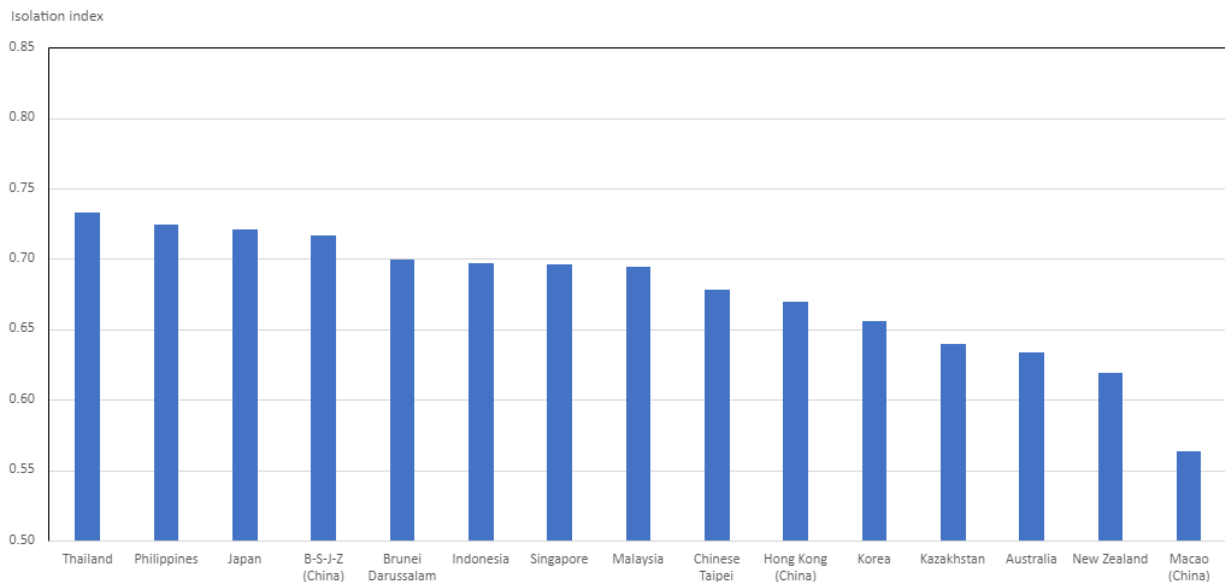
Social segregation between schools is likely to reinforce the link between socio-economic disadvantage and poor academic achievement.

Social stratification can arise among schools due to income-based residential segregation, perceptions of school quality and reputation, school fees and admissions policies, and ability-based allocation of students into different streams. Schools characterized by a substantial number of disadvantaged students might encounter challenges in attracting highly experienced teachers. These factors can significantly influence the learning prospects accessible to students, consequently shaping the education outcomes (OECD, 2019b).

Unless socio-economically disadvantaged schools receive resources to adequately provide quality education to their students, the divide between schools in terms of socio-economic status and academic performance may continue to widen, leading to even

more pronounced disparities in educational outcomes (OECD, 2019b). In Thailand, the Philippines, Japan and China (B-S-J-Z), the isolation index was higher than 0.70, meaning that disadvantaged students were more often concentrated in schools with a small proportion of high achievers (Figure 6). By contrast, in Macao (China), New Zealand and Australia the index was the lowest in the region, meaning that disadvantaged students were comparatively more likely to be enrolled in schools with high achievers.

Figure 6. Isolation of 15-year-old disadvantaged students from high-achieving students in reading in PISA 2018



Note: The isolation index ranges from 0 to 1, with 0 corresponding to no segregation and 1 to full segregation. A socio-economically disadvantaged student is a student in the bottom quarter of the PISA index of economic, social and cultural status (ESCS) in his or her own country/economy. High-achieving students are students who scored amongst the top 25% of students within their country or economy on the PISA test.

Source: OECD, PISA 2018 Database, Table II.B1.4.8.

Across the Asia-Pacific region, there are large differences in school enrollment policies (the policies for allocating students' populations to specific schools), particularly across public schools. For instance, in Brunei Darussalam and Australia more than 70% of students in public schools were enrolled in a school that relies, at least partially, on residence-based assignment (OECD, 2019b). In contrast, in Macao (China) and Singapore fewer than one in ten students were enrolled in a public school according to this criterion. Strict geographical assignment may have the unintended consequence of reinforcing patterns of residential segregation. Student's record of academic performance, including placement tests, are often considered for admission to public schools in Japan, Hong Kong (China), Singapore, Thailand and Viet Nam (OECD, 2019b). Since most students in the region are enrolled in public schools, the contribution of public schools to overall segregation is greater (OECD, 2019b). The exceptions are Hong Kong (China) and Macao (China), where the share of private schools is particularly large and the segregation across private schools accounted for more than half of the overall level of segregation (OECD, 2019b).

2.3.3 Grade repetition

Grade repetition, a practice where students are held back for an additional year due to academic struggles, is associated with poorer academic performance, negative attitudes toward education, and a heightened risk of high school dropout. Students from low socio-economic background are more likely to repeat a grade than those from high socio-economic background (OECD, 2020).

In the Asia-Pacific region, approximately ten percent of fifteen-year-old students participating in PISA 2018 reported experiencing grade repetition at least once during their primary, lower secondary, or upper secondary education (OECD, 2020). Notably, Macao (China) and the Philippines had the highest rates of grade repetition in the region, standing at 30% and 21%, respectively. They were followed by Hong Kong (16%), Indonesia (15%), and Brunei Darussalam (12%). Across all PISA 2018 participating countries, students attending socio-economically disadvantaged schools were more likely to have repeated a grade than their counterparts in advantaged schools. The exceptions in the region were New Zealand, Chinese Taipei, and Viet Nam, where no disparities in grade repetition based on schools' socio-economic profiles were observed (OECD, 2020).

Chapter 3. Promising policies and practices to mitigate or prevent socio-economic disparities in academic achievement

Policies and practices designed to mitigate or prevent socio-economic disparities can be put into action at different levels. In this section, we present a set of recommendations at the system and school levels, drawn from the findings in this report, which countries can use as a guide to select the most suitable strategies to enhance equity in learning and social mobility in their specific contexts.

3.1. System level policies and practices

Close/minimize the socio-economic gap/disparities at the initial stages of education by providing at least one year of free and compulsory high-quality pre-primary education and 12 years of free and compulsory primary and secondary education. The presence of laws on a national level that secure the right to education for specific age groups or grade levels reflects governments' dedication to ensuring regular school attendance among children and youth. When minimum number of years of pre-primary education is assured either through subsidizing the costs or providing free education, it increases the likelihood that all children regardless of their socio-economic background will be adequately prepared to start primary education at the right age.

Offer additional support to schools with high concentrations of students from low socio-economic backgrounds. Make school funding strategies responsive to students' needs by implementing a weighted funding formula, that acknowledges the potentially higher instructional expenses associated with disadvantaged students (OECD, 2011). Distribute extra resources, including teaching materials and more qualified personnel to schools, where a significant majority of students come from economically disadvantaged backgrounds. For instance, the New Zealand government has implemented the Equity index (EQI) as a replacement for the decile system, offering a more nuanced approach to allocate additional equity funding to schools that cater to communities experiencing higher levels of socio-economic deprivation (Ministry of Education, New Zealand). Another example is the Primary Education for Disadvantaged Children (PEDC) project (2004–2010) in Viet Nam, which targeted resource allocation and service delivery in schools located in disadvantaged areas to meet new school-based standards, or the Fundamental School Quality Level (FSQL) (Attfield & Vu, 2013).

Promote teacher training and incentivize the most experienced teachers to work at schools with high concentrations of students from disadvantaged socio-economic backgrounds. As most experienced teachers are less likely to work in challenging schools, policies need to be in place to get the best teachers where they are needed most. Comprehensive policy solutions to entice and retain teachers in such schools encompass material and professional benefits, including financial incentives, hardship pay, housing, moving expenses, travel allowances, an accelerated path to promotion,

additional training, reduced hiring requirements, and study leave with pay. Additional strategies involve mandatory rotations, local hiring initiatives, and behavioral nudges (Evans & Acosta, 2023). For example, in Korea, a combination of higher salaries, smaller class sizes, and faster promotions means that disadvantaged students are more likely to be taught by high-quality math teachers compared to more fortunate peers. Using national-level data to formulate frameworks for in-service professional development programs, as practiced in Australia, can assist in improving school and teacher quality (Tobin et al., 2015). Professional development for inclusive models of education should be an area of focus during the pre-service and in-service teacher education programs.

Ensure integration between different socio-economic groups, since children from disadvantaged backgrounds tend to do better in more socially mixed schools.

Socio-economic segregation can be mitigated by offering families a choice to select a school other than the one in their neighborhood. Financial incentives can be provided to pay tuition at any “approved” school. Alternatively, measures can be introduced to make it harder for rich parents to buy access to better schools by widening catchment areas and providing transport for children who live further away. Furthermore, a lottery system can be implemented for allocating places in oversubscribed schools.

Continue to support international, regional and national monitoring efforts.

Prioritize monitoring efforts in underserved areas, such as rural communities and those with concentrations of students from disadvantaged socio-economic backgrounds. This targeted approach will not only enhance the identification of educational disparities but also enable the development of tailored interventions to address specific challenges faced by students in these marginalized settings. By investing in comprehensive monitoring strategies, policymakers can lay the groundwork for evidence-based policies that promote equity and equality in learning.

3.2. School level policies and practices

Implement strategies that provide practical solutions for better parental engagement with children’s learning. Establish effective communication channels between parents and teachers, provide accessible learning resources, and encourage parents to actively participate in school activities. Additionally, offering parental training and creating supportive networks can contribute to a collaborative and informed education environment, where parents can actively support and reinforce their children’s learning experiences both at home and in the classroom.

Avoid segregating students by ability as it has a negative impact on the lowest performing and often most disadvantaged children. Early tracking and streaming of students can perpetuate low achievement. Instead, introduce a comprehensive school model where children of different abilities attend the same schools and avoid separating by ability until a later age. In 2019, the Singapore Ministry of Education unveiled its initiative to discontinue secondary school streaming, which categorizes students into Express, Normal (Academic) and Normal (Technical) streams, by 2024. Instead, a comprehensive transition to full subject-based banding (SBB) across all schools is planned, granting students greater flexibility to tailor their learning experiences according to their individual needs and preferences (Ministry of Education, Singapore).

Avoid implementing grade repetition for children who have fallen behind. Grade repetition fails to support learning and attainment. Instead, schools should consider alternative strategies such as remedial classes, tutoring programs, and differentiated instruction to address individual learning needs. Summer school programs and early intervention strategies can provide timely support, preventing the need for grade repetition. Flexible grading systems, emphasizing competency-based progression, and implementing learning support teams contribute to a more adaptive and personalized approach. For example, India adopted the policy of non-detention and continues to practice it in selected states to prevent students at the primary level from repeating or being detained at the same level. The policy primarily aimed to shield students from the stigma associated with grade repetition. Schools can foster a supportive learning environment by avoiding grade repetition and embracing these alternatives, prioritizing each student's progress and success.

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