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Recent Developments in Basic Education in Thailand

Issues and Challenges

Wannaphong Durongkaveroj

Over the past few decades, Thailand has made progress in expanding access to basic education, increasing literacy rates and narrowing gaps in school attendance between socio-economic groups. This paper surveys recent developments in Thailand's basic education with an emphasis on the learning outcomes of Thai students, the determinants of such outcomes, and the challenges faced by the basic education system. The study finds that, despite the significant amount of resources spent on education and the fact that the quality of the workforce is crucial for the country's current stage of economic development, students' learning outcomes are low and have not improved significantly in both national and international assessments. The performance of junior secondary school students in the national examinations has declined, especially in Mathematics and Science. While the performance of senior secondary school students has improved slightly over the same period, the mean results for core subjects were less than 50 per cent. This worrying figure is worsened by inequality in education quality across regions since the performance of secondary school students is lower in poorer, remote regions. According to the results of the international assessments, Thai students are performing below the international average in core subjects. This paper argues that such poor learning outcomes are presumably due to two main reasons: (1) differentiated management of small versus large schools and (2) inefficient resource allocation in public spending on education. This is a pivotal period in Thailand's economic development. And substantial reforms are needed to ensure high-quality basic education for all.

Keywords: Basic education; learning outcomes; Thailand

1. Introduction

Despite the sizeable public resources allocated to Thailand's basic education system, academic performance among primary and secondary school students in both national and international assessments remains

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poor. In fact, it has not improved markedly in the past decade. Over the years, numerous studies have established that this worrying trend is primarily driven by a large disparity in the quality of education between urban and rural areas, which in turn adversely affects other development indicators such as economic growth and income inequality (Lounkaew 2013; Paweenawat and McNown 2014; Lathapipat 2016; Wasi et al. 2019). The slowing economic growth and growing concern about the middle-income trap have spawned debate on equity in basic education among scholars and policymakers. This paper sets out to contribute to the debate by examining academic performance among primary and secondary school students, analysing the forces driving it, and attempting to identify critical challenges for Thailand's basic education system.

In recent decades, access to basic education has expanded remarkably in the country. Even though early studies (e.g., Sirilaksana 1993; Warr 2007) found progress in basic education unsatisfactory because secondary school participation rates were low and did not improve significantly during the late 1980s, this was no longer the case after 2000. Lower secondary enrolment rates increased from 77 per cent in 1995 to 95 per cent in 2020. Upper secondary enrolment rates rose from 41 to 81 per cent in the corresponding years. Primary and secondary school participation rates have also improved significantly, thanks to the first education reform implemented in 1999 and the Constitution, which guarantees equal rights to basic education among Thai citizens. This expansion of Thailand's education is the result of sustained public spending on education. Thailand has consistently allocated a significant share of government expenditure to education each year. In 2020, the government spent about 12 per cent of its budget on basic education.

However, it is unclear whether the substantial investments that Thailand has undertaken in education have led to improved learning outcomes. Data from the 2018 Programme for International Student Assessment (PISA) reveal that Thai students scored lower than the OECD average in Reading, Science and Mathematics. In addition, research over the years has established that large disparities in learning achievement exist between Bangkok and elsewhere in Thailand (Chiengkul 2019; Lathapipat 2016; Lounkaew 2013; Pattaravanich et al. 2005). Moreover, the distribution of learning in Bangkok is as good as in high-income countries such as the United States. This means that students in Bangkok are receiving high-quality education like in other advanced countries. The World Bank (2012) called for improvements to the distribution of learning among rural areas for the country to have equal education quality.

This study aims to review recent developments in Thailand's basic education system, focusing on students' learning outcomes, and attempts to identify critical factors that explain such outcomes. While there is a growing body of research on basic education in other developing countries (e.g., Suryadarma et al. 2006; Ryan et al. 2009; Hanushek 2009; Asadullah, Perera, and Xiao 2020), to the best of my knowledge, this is the first paper that provides a comprehensive review of the Thai basic education system using a new dataset. The data used in this paper are obtained from several sources, for instance, the Ministry of Education, the National Institute of Educational Testing Service (NNIETS) and the National Statistical Office (NSO).

The next section provides a brief overview of the Thai education system. The third section briefly summarizes progress in expanding access to basic education over the past two decades. The subsequent section discusses students' learning outcomes. Issues and challenges in Thailand's basic education system are identified in the fifth section. The final section concludes.

2. Thailand's Education System

This section provides a brief account of the Thai education system, which consists of three main levels: early education, basic education and higher education.

Enrolment in the basic education system begins at the age of six. Basic education in Thailand is divided into six years of primary schooling (*Prathom* 1 to 6), three years of lower secondary schooling

(*Mattayom* 1 to 3), and three years of upper secondary schooling (*Mattayom* 4 to 6). Compulsory education in Thailand covers the first nine years of basic education. This means that attending preschool and upper secondary schooling is not mandatory. After completing lower secondary education, students can enrol in vocational and technical education as an alternative to a general academic path (upper secondary school programme).

Based on the 2007 Constitution and the 1999 National Education Act (with a 2010 amendment), all Thai citizens have equal rights to receive free basic education for at least twelve years. This free basic education provision covers pre-primary, primary and lower-secondary education. The Ministry of Education is responsible for overseeing all levels of education and formulating education policies. The Office of the Basic Education Commission (OBEC), founded in 2003, is responsible for formulating basic education policies, core curriculum and standards. It also monitors and evaluates teaching promotion in schools. Public basic education is also administered within schools as each school is responsible for its own administration, while management in several areas such as academic matters and general affairs is monitored by local administrative offices (LAO) (UNICEF 2017; Ministry of Education 2008).

In summary, Thailand implemented the first education reform in 1999, thanks to the 1999 National Education Act. This led to significant changes in the structure of management and administration, with an emphasis on the decentralization of administrative responsibilities to the local level. The Thai government also invests a significant amount of its resources into this section to support the initiative. Spending on basic education is about 15 to 20 per cent of national expenditure each year. The next section explains whether the reforms and increased spending have led to greater access to basic education in the country.

3. Progress in the Basic Education System

Over the past few decades, Thailand has made significant progress in increasing access to basic education. Table 1 shows enrolment rates (gross) in basic education from 1995 to 2020.

As shown in Table 1, primary school enrolment is always high due to the Primary Education Act, which was first promulgated in 1921. From 1995 to 2020, lower secondary school enrolment increased from 77 to 95 per cent. Over the same period, the upper secondary enrolment rate doubled. This rise in enrolment rates across the three basic education levels indicates success in expanding access to basic education to Thai citizens. Another improvement in basic education is reflected by the falling school dropout rates, as displayed in Table 2.

TABLE 1
Gross Enrolment Rate in Basic Education, 1995–2020

	1995	2000	2005	2010	2015	2020
Primary	110	106	104	104	102	101
Lower secondary	77	87	95	98	99	95
Upper secondary	41	58	64	72	78	81

Notes: Gross enrolment rate is the number of students enrolled in a given level, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education. A high enrolment rate generally indicates a high degree of participation in a given education level. However, the number can exceed 100 per cent due to the inclusion of over-aged and under-aged students as a result of early and/or late entrants and grade repetition.

Source: Ministry of Education (2021).

TABLE 2 Number of School Dropouts in Basic Education, 2005–19

	2005	2010	2015	2019
Primary	29,703	6,786	1,313	121
	(0.69)	(0.19)	(0.04)	(0.00)
Lower secondary	48,777	20,155	2,837	681
	(2.11)	(0.94)	(0.16)	(0.04)
Upper secondary	20,775	10,886	1,417	1,045
	(2.21)	(1.03)	(0.13)	(0.11)

Note: School dropout rates (the number of school dropouts in a given level of education as a percentage of all students) are in parentheses.

Source: Ministry of Education (2021).

Previously, the number of school dropouts was high, especially among students in upper secondary schools. Note that attending upper secondary education, *Mattayom* 4 to 6, is not compulsory. There has been some progress in reducing school dropouts in the past two decades. In 2002, more than 100,000 students dropped out of schools across all education levels. This figure was less than 2,000 in 2019. In the past, poverty was the most cited reason among students who left school. Now, family problems play a key role. Students drop out of school at the upper secondary level because they need to support their families. This means that economically disadvantaged students are more likely to drop out of school than their affluent classmates.

There have been other significant improvements in the basic education system. Over time, the student-teacher ratio has declined, falling from 20.23 in 2005 to 13.75 in 2019 (Ministry of Education 2019). Data from World Bank (2021) reveal that there are 16.64 students per teacher in the primary education segment and 25.95 students per teacher in secondary education. Such figures are relatively low compared to the world average and even other developing countries in Asia, such as the Philippines and Vietnam.

In addition, the literacy rate for the population aged six and above is very high; the total literacy rate was 93.9 in 2018. There was a moderate increase in the literacy rate between 2000 and 2018. Note, however, that more men than women are literate. The gender gap in the literacy rate is about 3 percentage points, and the gap has been relatively constant over time. Moreover, the average years of schooling have also increased over the past two decades in all age groups (see Table 3). Mean years of schooling stands at about eight for the population above twenty-five. Nevertheless, this figure is still lower than other developed countries and neighbouring countries like Singapore, Malaysia and Vietnam.

4. Students' Learning Outcomes

This section discusses students' learning outcomes. Thailand's national examination is known as "The Ordinary National Education Test" (O-NET). It includes a series of written examinations administered face-to-face and delivered through paper-pencil tests. The O-NET is mandatory for all students and serves as a selection tool for higher education programmes. It is administered annually by the National Institute of Educational Testing Services (NIETS) to Grade 6 (*Prathom* 6), Grade 9 (*Mattayom* 3), and Grade 12 (*Mattayom* 6) students in both public and private schools. The O-NET was first administered to Grade 12 students in 2005, then expanded to Grade 6 students in 2007, and since 2008 Grade 9 students have taken the test. Table 4 reports the O-NET results for Grade 6 students between 2011 and 2020.

TABLE 3							
Average	Years o	f Scho	oling,	2005-2	0		

Age Group	2005	2010	2015	2016	2017	2018	2019	2020
15–39	9.9	10.6	10.6	10.7	10.8	10.8	10.8	11.0
40-59	6.9	7.4	7.8	7.9	8.1	8.2	8.3	8.6
15-59	8.6	9	9.3	9.4	9.5	9.6	9.7	9.9
15+	7.8	8.2	8.5	8.6	8.6	8.6	8.7	8.9
60+	4.1	4.6	5.0	5.0	5.1	5.1	5.2	5.4

Source: Ministry of Education (2021).

TABLE 4
O-NET Results for Grade 6 Students (*Prathom* 6), 2011–20

	2011	2015	2020	Δ2011–20	Δ2015–20
Overall	49.36	44.97	42.13	-7.23	-2.84
Thai language	50.04	49.33	56.20	6.16	6.87
English	38.37	40.31	43.55	5.18	3.24
Math	52.40	43.47	29.99	-22.41	-13.47
Science	40.82	42.59	38.78	-2.04	-3.81
Social studies	52.22	49.18	N/A	N/A	N/A

Note: Maximum score for each subject is 100.

SOURCE: NIETS (2021).

According to Table 4, the overall scores of Grade 6 students have fallen over the past decade. The average score for all subjects except the Thai language stood below fifty (out of 100). In addition, the average scores for English, Maths and Science have declined over the past five years. Table 5 reports the O-NET score for Grade 9 students.

Table 5 shows a worrying trend in the performance of Grade 9 students over the past ten years. The average scores for all subjects are lower than fifty and have fallen continually. In addition, average scores for Maths and Science have decreased consistently, especially over the past five years. Note that English is the only subject that saw an increase in the average score between 2017 and 2020. Table 6 shows performance in the O-NET for Grade 12 students (*Mattayom* 6).

As shown in Table 6, the average O-NET scores for Grade 12 students were below 50 in all tested subjects. And these scores have not changed significantly over the past decade. However, there was a slight improvement in the average scores for Maths and Science between 2011 and 2020, with a slight decrease between 2015 and 2020.

It is important to note that the O-NET has long been criticized for its failure to assess students' academic proficiency and for not testing students' use of knowledge and critical thinking. There have been attempts to replace the O-NET with a more relevant academic proficiency test, but progress has stalled. Therefore, this paper presents Thai students' performance in the OECD's Programme for International Student Assessment (PISA).

Thailand has participated in PISA since 2000. In 2018, about 70 per cent of the country's fifteenyear-olds were covered. Students in Thailand scored lower than the OECD average in all subjects (see

TABLE 5
O-NET Results for Grade 9 Students (*Mattayom* 3), 2011–20

	2011	2015	2020	Δ2011–20	Δ2015–20
Overall	40.91	37.91	36.03	-4.88	-1.88
Thai language	48.11	42.64	54.29	6.18	11.65
English	30.49	30.62	34.38	3.89	3.76
Math	32.08	32.40	25.46	-6.62	-6.93
Science	32.19	37.63	29.89	-2.30	-7.74
Social studies	42.73	46.24	N/A	N/A	N/A

Note: Maximum score for each subject is 100.

Source: NEITS (2021).

TABLE 6
O-NET Results for Grade 12 Students (*Mattayom* 6), 2011–20

	2011	2015	2020	Δ2011–20	Δ2015–20
Overall	34.95	34.81	33.78	-1.17	-1.03
Thai language	41.88	49.36	44.36	2.48	-5.00
English	21.80	24.98	29.94	8.14	4.96
Math	22.73	26.59	26.04	3.31	-0.55
Science	27.90	33.40	32.68	4.78	-0.72
Social studies	33.39	39.70	35.93	2.54	-3.77

Note: Maximum score for each subject is 100.

Source: NEITS (2021).

Figure 1). In addition, Thai students underperformed their peers in several Southeast Asia countries (see Table A1 in the Appendix).

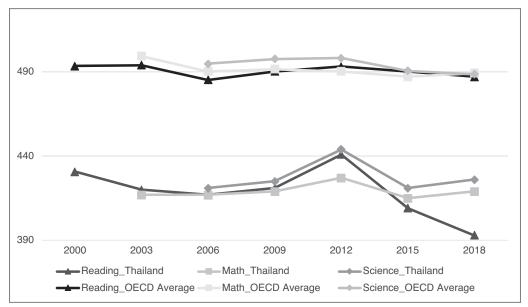
According to Figure 1, scores for all subjects (Reading, Maths and Science) have dropped significantly. In 2018, scores kept falling for Reading, while there was a slight increase in scores for Maths and Science. Between 2015 and 2018, the share of students who performed below the proficiency level for reading increased by 10 per cent while the shares for the other two subjects remained constant.

In addition, there is a wide gap in reading scores between economically disadvantaged and economically advantaged students and between urban and rural students. Those who study in private independent schools—schools that receive less than 50 per cent of their core funding from the government—perform better than those in public and private schools.

While low and declining average scores in both national and international examinations among Thai students are disappointing and worrying, it is important to note that such scores hide vast differences in academic performance between students in urban and rural areas. This inequality in education has long been raised by scholars (Sirilaksana 1993; Pattaravanich et al. 2005; World Bank 2012; Lounkaew 2013). Figure 2 compares learning achievement measured by national examination (O-NET) for three subjects between Bangkok and other regions.

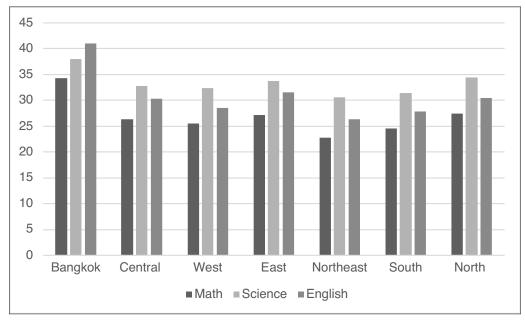
As demonstrated in Figure 2, large disparities exist in learning achievement between Bangkok and other areas in Thailand. Students in Bangkok outperformed students in other regions in Maths, Science

FIGURE 1
PISA Scores of Thai Students versus OECD Average, 2000–18



SOURCE: OECD, PISA 2018 database.

FIGURE 2
O-NET Scores by Region (Grade 12, *Mattayom* 6)



Source: NIETS (2021).

and English. The average scores among students in other regions except the northeast are fairly similar. However, the average scores of the northeast students were the lowest in all subjects. These urban-rural learning outcomes differentials are not surprising due to differences in the quality of teachers and infrastructure across regions. Such vast disparities in learning achievement are also found among Grade 6 and 9 students (see Table A2 in the Appendix).

Large gaps in learning outcomes also exist across provinces. Thanks to available data at the provincial level, it is found that only twenty-four out of seventy-seven provinces achieved 2018 O-NET average scores higher than the country average. Consistent with an analysis at the regional level, most of them are in the central region of Thailand, while none are in the northeast region. A few northern (e.g., Chiang Mai and Phrae) and southern (Phuket and Trang) provinces are in this group. Table A3 in the Appendix reports average scores in the O-NET in the top-five-scoring provinces and the bottom-five-scoring provinces in 2014 and 2018. High-performing provinces are richer and more developed, measured by their income per capita. The low-performing provinces are remote and poorer. Moreover, average scores decreased between 2014 and 2018 in all provinces, but the poor-performing provinces (Yala, Pattani and Narathiwat) saw bigger declines in average scores. Out of the seventy-seven provinces, Bangkok registered the lowest drop in the average score of O-NET (by 0.43 percentage points). Nong Bua Lamphu, one of the northeast provinces, saw the biggest drop (by 4.48 percentage points). This is a worrying trend in academic performance among secondary students living in different areas and could worsen Thailand's education inequality.

5. Issues and Challenges

Over the past few decades, Thailand has made significant progress in increasing access to basic education. Primary and secondary enrolment has improved remarkably, with a notable increase in the adult literacy rate. However, students' learning outcomes from both national and international assessments are low and have not improved greatly. This suggests that the problem lies in the quality of education at primary and secondary levels, given the impressive number of total school enrolments. Warr (2019) argues that a backward and under-resourced educational system has caused Thailand to be caught in a middle-income trap.

Recent studies (e.g., Lounkaew 2013; Prasartpornsirichoke and Takahashi 2013; Wittayasin 2017; Lathapipat 2016) suggest that low learning outcomes and rising inequalities in students' academic performance in standardized assessments are central to the current debate in Thailand's basic education landscape. Lathapipat (2018) describes that students' educational quality in rural and urban areas is vastly different. This is primarily because students in rural areas often attend small schools (with fewer than 120 students), which lack high-quality teachers and infrastructure. Table 7 shows the number of small schools administered by the Office of the Basic Education Commission (OBEC) in 2020.

In 2020, approximately half of the 29,642 schools in Thailand were classified as small schools. About 970,000 students are currently enrolled in these small schools. In addition, more than two-thirds of primary schools have fewer than 120 students.

Closing or merging small schools is a controversial subject in Thailand. Several studies suggest that small schools are not cost-effective and have limited ability to deliver high-quality education (Strike 2008; Halsey 2011; Panpinya et al. 2021). Yet, it is argued that these schools provide learning opportunities, especially for poor students in rural areas, and that guardians and community representatives should play a role in dealing with this issue (Choomponla, Phongpinyo, and Larsak 2014; Wannagatesiri et al. 2014). According to the executive meeting at the Office of Permanent Secretary, Ministry of Education, out of 14,976 small schools across the country, 8,375 (56 per cent) need reform. About 200 small schools are planned to close soon.

TABLE 7 Small Schools in 2020

Level	Schools with More Than 120 Students	Schools with Fewer Than 120 Students (Small Schools)	Total
Primary school	6,251	13,962	20,213
	(31%)	(69%)	(100%)
Secondary school	2,186	171	2,357
	(93%)	(7%)	(100%)
Opportunity expansion school	6,136 (88%)	837 (12%)	6,973 (100%)
Special education school	93 (94%)	6 (6%)	99 (100%)
Total	14,666	14,976	29,642
	(49%)	(51%)	(100%)

Source: Ministry of Education (2020).

Another issue related to the gap in education quality between urban and rural areas is linked to resource endowment. Sizeable public investment is required to reduce the disparity in endowment between schools by solving problems of teacher shortages and poor infrastructure. Given the sheer amount of public investment each year in primary and secondary schools, greater educational resources are necessary but insufficient to reduce inequality in education. Intangible aspects of education such as accountability, autonomy, management and perception of staff and students are also important in increasing education quality. Lounkaew (2013) utilized the Thai PISA 2009 literacy test to find that these intangible school characteristics can explain achievement gaps between students in urban and rural areas. Therefore, an increase in educational investment alone may not necessarily reduce student academic performance differentials.

Limited improvements in learning levels could have detrimental effects on the Thai economy, given the country's current stage of economic development. In the decades since the Second World War, Thailand has structurally transformed from a low-income, agriculture-based, closed economy to a middle-income, industrial-based and export-oriented economy. Sustained economic growth has resulted in large-scale poverty reduction. However, given the slowing economic growth since the 2000s, there is growing concern among policymakers and scholars that Thailand is caught in a middle-income trap. Several studies describe that both the quantity and quality of the workforce are central to the debate on Thailand's economic performance in the past few decades (Coxhead and Plangpraphan 1999; Warr 2005; Warr and Suphannachart 2020). And expanding the supply of human capital is viewed as an important tool to escape the trap (Jitsuchon 2012; Riedel 2019). Warr (2018) suggests that upgrading the quality of human resource through massive public investment and reform of the education curriculum is required to overcome the trap. Given poor learning outcomes among students and disparity in academic performance among students across the country, it is critical for Thailand to put more effort to raise the quality of its educational system.

Another issue is that the Thai population is ageing, driven by low fertility rates and long life expectancy. Thailand's births decreased from 796,091 in 2011 to 587,368 in 2020, the lowest birth rate in history. In addition, the total fertility rate stands at 1.51, lower than the replacement-level fertility (Department of Provincial Administration 2021). This has resulted in a declining student population. The

number of students enrolled in primary schools fell from about 6 million in 2002 to 5 million in 2010, and there were close to 4.7 million students in 2020. Over the same period, the number of students enrolled in pre-primary schools decreased from 2 to 1.64 million. However, the number of educational institutions and teachers in these schools has stayed relatively constant over the past two decades (Ministry of Education 2021). Thus, demographic change, resulting in decreased demand for basic education, seems to pose another challenge to the effective mobilization of resources in the educational system.

6. Discussion and Conclusion

As one of the upper-middle-income countries in the world, Thailand's remarkable economic development over the past few decades has been accompanied by startling improvements in indicators of well-being such as life expectancy, sanitation and adult literacy. Unsurprisingly, the sustained economic growth has been in line with the expansion of total school enrolments. However, given the slowing economic growth over the past two decades, many would argue that Thailand needs to undertake major reforms in education aimed at improving the quality of the workforce to overcome the middle-income trap. This paper constitutes the first step in understanding issues and key challenges in the basic education system in Thailand, with a focus on the recent decade.

A considerable amount of public and private investment in basic education has successfully increased school enrolment rates at both the primary and secondary levels. Nevertheless, this paper finds that students' learning outcomes are not satisfactory and have not improved significantly. Academic performance, especially for Grades 6 and 9 students in national examinations, remains low in Maths, Science and English. PISA scores of Thai students fall short of international standards and have not improved over the past ten years. More importantly, there is a significant disparity in learning outcomes between students in urban and rural areas. This achievement gap has not narrowed over time, which casts doubt on the current policy emphasis on providing equal access and quality of education to Thai citizens.

Differences in learning quality between urban and rural areas are due to insufficient educational resources and physical infrastructure in rural areas. Higher and better distribution of public education expenditure is necessary to narrow these differences. Recently, the Equitable Education Fund (EEF) was established under the Equitable Education Act 2018—with the objectives of providing financial support for children and youth who are in greatest need, and reducing inequality in education by forming partnerships with relevant stakeholders. In 2021, the EEF received a budget of THB6.08 billion, up from THD2.54 billion in 2018. The EEF provides financial support to extremely poor students to increase access to basic education and prevent school dropout. Students receive financial support on the condition that they maintain a school attendance record of more than 80 per cent; in addition, their weight and height are monitored to detect malnutrition. More than a million students nationwide receive this support (EEF 2021). It is recommended that the government add learning-related accountability measures to this programme to ensure improved student learning outcomes.

Many studies describe the lack of qualified teachers in rural areas as one of the key factors explaining inequality in basic education (Vandeweyer et al. 2021; World Bank Group 2015). Another issue, however, is the lack of school administrative staff, especially in small schools. Small schools receive relatively low budgets, but they are subject to the same key performance indicators as larger schools. Therefore, teachers in these small schools have to allocate time to perform administrative tasks themselves, which precludes them from focusing on teaching. Increasing the supply of administrative staff in small schools, especially in rural areas, could allow teachers to focus on improving students' learning outcomes.

Future research could shed light on factors that explain low student outcomes and inequality in education and the mechanisms through which these are influenced. In addition, it would be interesting to see whether differences exist in the quality of education between big, full-resourced and small, under-

resourced schools, and how local administrative offices could play a role in closing such gaps. Finally, it is also important to expand studies on the effects of educational inequality on other aspects, for instance, income, health and life satisfaction.

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APPENDIX

TABLE A1
2018 PISA Performance in Reading, Mathematics, and Science among
Southeast Asian Countries

	Mathematics	Reading	Science
Brunei	430.11	408.07	430.98
Indonesia	378.67	370.97	396.07
Malaysia	440.21	414.98	437.62
Philippines	352.57	339.69	356.93
Singapore	569.01	549.46	550.94
Thailand	418.56	392.89	425.81
Vietnam	495.68	504.51	543.38
Average	440.68	425.80	448.82
Average	417.13	404.61	431.96
(Developing SEA countries)			

SOURCE: OECD, PISA 2018 database.

TABLE A2 2020 Regional O-NET Performance by Education Level

	Grade	Grade 12 (Mattayom 6)		Grade	Grade 9 (Mattayom 3)			Grade 6 (Prathom 6)		
	Maths	Science	English	Maths	Science	English	Maths	Science	English	
Bangkok	34.35	37.94	40.97	31.61	33.02	43.87	34.76	42.48	57.22	
Central	26.33	32.76	30.27	25.81	30.12	35.19	30.47	39.07	45.43	
West	25.50	32.31	28.51	25.32	30.09	33.74	29.54	38.28	42.29	
East	27.19	33.73	31.50	26.59	30.61	37.17	31.00	40.18	48.03	
Northeast	22.83	30.64	26.31	23.82	28.99	31.92	28.33	37.35	38.71	
South	24.61	31.42	27.86	25.04	29.46	33.61	29.41	38.25	41.43	
North	27.44	34.37	30.45	26.99	31.00	35.75	31.29	40.07	45.60	

Source: NIETS (2021).

TABLE A3
2018 O-NET in Top- and Bottom-scoring Provinces

		2014	2018	Change
Who	le country	37.56	35.02	-2.54
1	Bangkok (Central)	42.94	42.51	-0.43
2	Nakhon Prathom (Central)	41.01	39.60	-1.41
3	Phuket (South)	41.21	39.34	-1.87
4	Nakhon Nayok (Central)	40.02	38.66	-1.37
5	Nonthaburi (Central)	40.99	38.62	-2.37
72	Kalasin (Northeast)	34.19	30.34	-3.85
73	Nong Bua Lamphu (Northeast)	34.53	30.06	-4.48
74	Yala (South)	30.61	28.50	-2.11
75	Pattani (South)	29.50	28.04	-1.46
76	Narathiwat (South)	29.71	27.14	-2.57

SOURCE: NEITS (2021).

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