



VIETNAM'S

HUMAN CAPITAL:

Education Success & Future Challenges

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Abstract

Education policy makers around the world marvel at Vietnam’s success in access to general education and learning outcomes. Despite the country’s relatively low level of economic development, Vietnamese students outperform students in OECD countries on average in the Programme for International Student Assessment. What are the factors that have allowed Vietnam to achieve such success? This note shows that Vietnam’s education system shares common characteristics with other successful education systems in East Asia. While some of these factors are sociocultural—which may not be easily replicable in other countries—others are policy decisions from which leaders of other countries may learn. Following the evolution of education in postwar Vietnam, from 1975 to the present, this note highlights the key reforms pursued by the government and the resulting achievements, as well as the obstacles encountered along the way. The note also discusses challenges that Vietnam’s education system faces today in reaching its full potential as a knowledge-based economy.

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Vietnam's Human Capital: Remarkable Education Success and Future Challenges

Executive Summary

Education policy makers around the world marvel at Vietnam's success in providing access to general education¹ and in boosting learning outcomes. Despite its relatively low level of economic development, Vietnamese students outperform students in Organisation for Economic Co-operation and Development (OECD) countries on average in the Programme for International Student Assessment (PISA). What are the secrets to this success? Following decades of colonization and conflict, Vietnam has transformed into an “emerging dragon” across multiple social and economic sectors, including education. This note follows the evolution of postwar Vietnam's education system and highlights some of the key reforms implemented from 1975 to the present. It provides the Vietnamese government's rationale for the reforms it pursued, the primary reasons for their success, and the challenges encountered along the way.

This note illustrates that Vietnam's education system shares common characteristics with other successful education systems in East Asia, including the government's strong commitment to educational development, supported by high accountability mechanisms; relatively high public spending with a focus on investing in general education, basic inputs, and equity, together with high household investment in education; attracting and supporting qualified teachers; strong investment in preschool education; and strategic use of assessments. The Vietnamese government's unshakable commitment to improving people's learning, together with high accountability and autonomy for schools, supported by a strong internal and external monitoring and reporting mechanism, have driven the continuous expansion and improvement of the education system.

1. General education in Vietnam consists of primary, lower secondary, and upper secondary school.

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- Vietnam has always prioritized investment in primary and basic literacy education. Spending is also directed toward equity, which is an important factor contributing to Vietnam’s high and relatively equitable learning outcomes. High household spending contributes to further investment in education.
 - The government has implemented policies to attract and support qualified teachers through incentives and continuous professional development.
 - Targeted public spending on preschool enabled the government to achieve universal preschool education for five-year-old children. To increase access, the government has also mobilized communities and the private sector in the provision of preschool education.
 - Vietnam has effectively benchmarked its student assessment system against international good practices and used assessment results to improve the system. For instance, in response to PISA 2012 results, Vietnam changed the legal framework for large-scale exams to diversify testing methods, improve item quality, and pave the way for competency-based assessment.

The country also benefits from cultural aspects such as placing a high value on education, high parental expectations, and highly disciplined environments for teachers and students. Although some of these factors are sociocultural—which may not be easily replicable in other countries—others are policy decisions from which leaders of other countries may learn.

Despite its impressive success in achieving strong performance to date, Vietnam’s education system faces critical challenges as the country strives to move toward a knowledge-based economy. First, access to secondary education is low and inequitable. Second, although the government is committed to improving education quality by enhancing competency-based teaching practices and reforming school curriculum and textbooks, clear guidance on and facilitation of enabling conditions for competency-based teaching are still needed. Third, as Vietnam’s economy grows, it needs to invest more in higher levels of education and lifelong learning to ensure students exit the system with the knowledge and skills relevant to labor market needs. The tertiary system suffers from structural deficiencies, including lack of funding and a weak sector strategy. The government is aware of these weaknesses and is committed to overcoming them so that the country can continue strengthening its human capital as a way to further spur economic growth.



Introduction

The World Bank’s Human Capital Project recognizes that investing in the health and skills of human beings is central to development and delivers substantial economic benefits. The Bank’s Changing Wealth of Nations report also sheds light on human capital as the most important component of a country’s wealth globally (Lange, Wodon, and Carey 2018). Vietnam’s impressive success story in access to general education² and learning outcomes is a case in point, offering economic security and the opportunity to join the rapidly growing middle class (World Bank 2018a). Education policy makers around the world marvel at Vietnam’s education success.

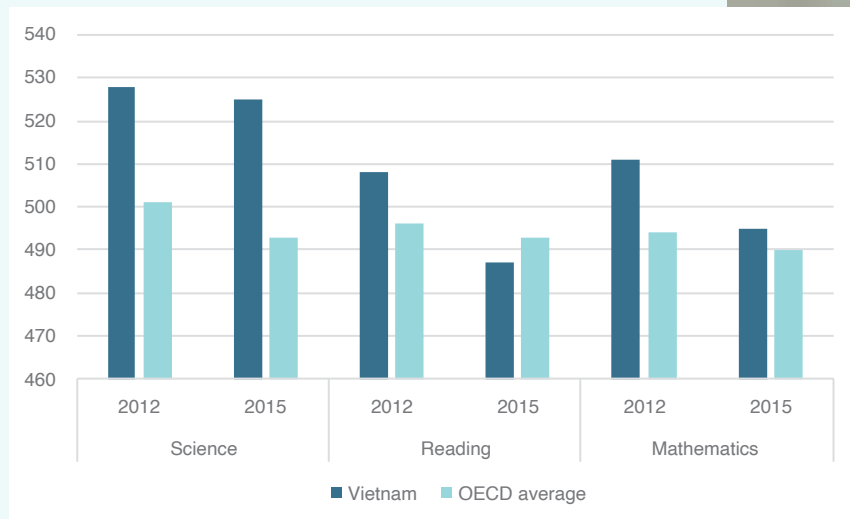
Indeed, its progress in education has been a major contributor to Vietnam’s impressive ranking on the Human Capital Index (HCI), 48 out of 157 countries. One of the three components of HCI, Learning-Adjusted Years of School, refers to the quantity of education a child can expect to obtain by age 18, combined with a measure of quality—how much children learn in school based on countries’ relative performance on international student achievement tests. Vietnam’s striking results, compared with other countries with a similar level of national average income (table 1), can be attributed to the government’s consistent efforts to improve the education system to increase educational access, inclusion, and attainment by implementing reforms based on evidence-based decision-making.

Table 1 Human Capital Index and Components: Income Group Benchmarks, Male and Female Combined, 2018

Indicator	Vietnam	Low income	Lower middle income	Upper middle income	High income
HCI Component 1: Survival					
Probability of Survival to Age 5	0.979	0.929	0.961	0.983	0.995
HCI Component 2: School					
Expected Years of School	12.3	7.8	10.4	11.7	13.3
Learning-Adjusted Years of School	10.2	4.5	6.6	8.1	10.8
Harmonized Test Scores	519	363	391	428	506
HCI Component 3: Health					
Survival Rate from Age 15 to Age 60	0.878	0.745	0.807	0.863	0.923
Fraction of Children under 5 Not Stunted	0.754	0.658	0.730	0.869	0.935
Human Capital Index (HCI)	0.67	0.38	0.48	0.58	0.74

Source: Human Capital Index (HCI), World Bank.

Figure 1 PISA scores, 2012 and 2015



Source: Analysis based on PISA database.

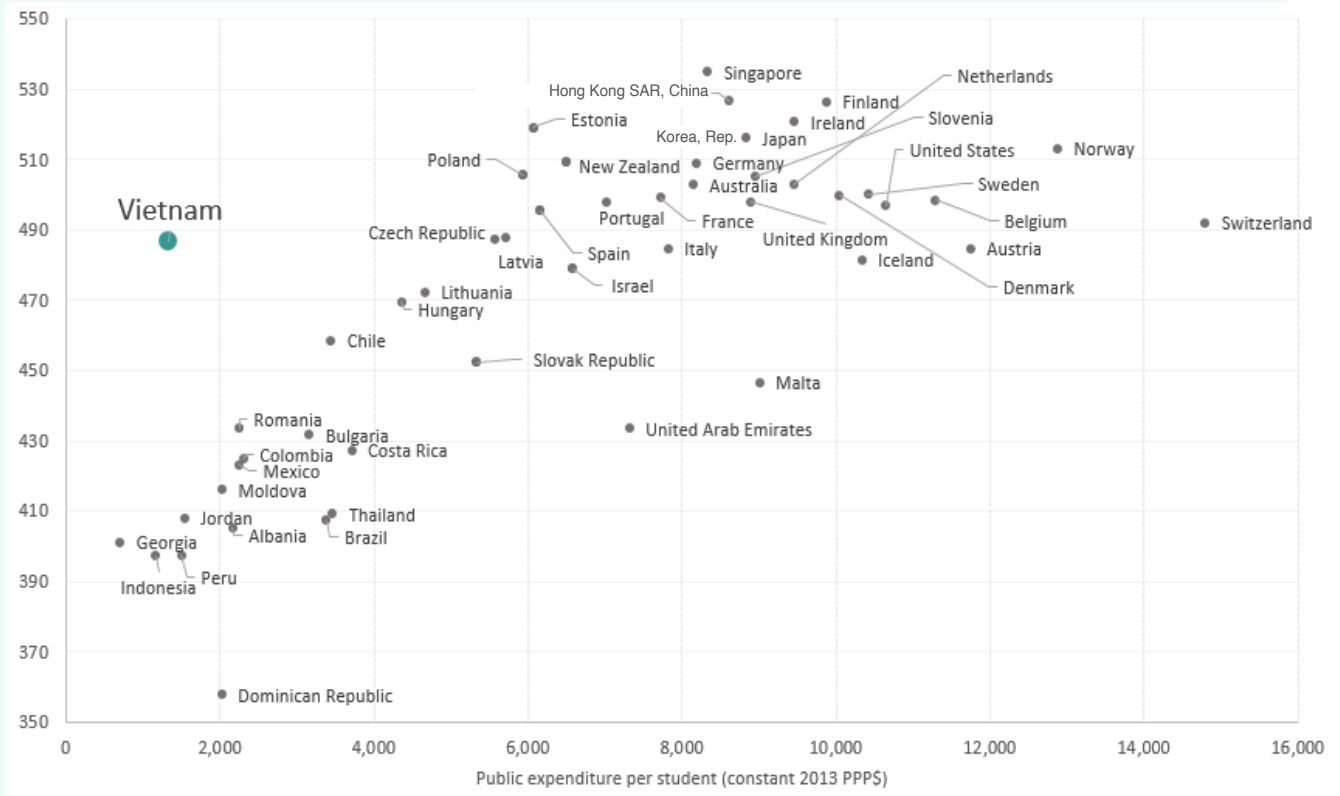
Note: OECD = Organisation for Economic Co-operation and Development; PISA = Programme for International Assessment.

Despite its relatively low level of economic development (GDP per capita of \$2,170 in 2016), Vietnamese students outperform students in OECD countries, on average, in the PISA (figures 1 and 2).³ In 2012 (Vietnam’s first time participating in the PISA), Vietnamese youth ranked 8th in science, 17th in mathematics, and 19th in reading out of 65 countries. Three years later, in 2015, Vietnam ranked 8th in science, 22nd in mathematics, and 32nd in reading out of 72 countries. Vietnam’s average score for science was 32 points higher than the OECD average—equivalent to about one year of schooling (see annex A for a detailed analysis of PISA 2015 results). Although Vietnam’s low coverage of 15-year-olds in PISA may have resulted in inflated national average scores, Vietnam remains an outlier relative to its GDP per capita when taking into account the low enrollment (see annex B for a caveat about PISA results).



3. Vietnam participated in PISA 2018 but the results were not reported with those from other countries. The OECD noted that “the data for Viet Nam have not yet been fully validated. Due to a lack of consistency in the response pattern of some performance data, the OECD cannot yet assure full international comparability of the results” (OECD 2019, 210).

Figure 2 Average PISA 2015 reading score vs. public expenditure per student



Source: Author's analysis based on PISA database.

Note: PISA = Programme for International Assessment; PPP\$ = purchasing-power-parity dollars.

The rest of this note is composed of three parts. The first part summarizes some of the factors contributing to Vietnam's success. It shows that Vietnam's education system shares common characteristics with other successful education systems in East Asia, as identified in the recent Regional Flagship Report titled *Growing Smarter: Learning and Equitable Development in East Asia and Pacific* (World Bank 2018b). The second part provides historical context by following the evolution of Vietnam's education system and the major reforms from 1975 to the present. This part is presented in three phases. Phase I (1975–85) reviews the legacy of colonization and the immediate postwar priorities of the government; Phase II (1986–2010) examines the main Doi Moi reforms; and Phase III (2011 to the present) examines the most recent policy changes and reforms aimed at creating a highly skilled labor force. The third part of this note lays out remaining challenges facing Vietnam as it seeks to prepare its citizens for the new knowledge-based economy.



Part I: Success factors

Government's strong and continuous commitment to educational development

With the philosophy that “an illiterate nation is a powerless one,”⁴ in 1945, the newly independent government immediately started offering literacy classes for all people. Since then, literacy and the improvement of people’s educational qualifications has been a national priority in Vietnam. The government’s commitment to improving people’s learning, together with regular monitoring of reforms and realignment of policy and implementation, has driven the continuous expansion and improvement of the education system in Vietnam (Fredriksen and Tan 2008).

The value that society attaches to education has been translated into concrete actions. To ensure basic inputs for schools, the Ministry of Education and Training (MOET) developed and monitored minimum standards for physical facilities, school organization and management, teaching materials and teacher support, and school-parent links for primary schools through the Fundamental School Quality Level program. Over time, the program was used to create an input index that serves not only to monitor progress but to assess whether inputs lead to learning (World Bank 2018b).

4. Originally from The Works of Ho Chi Minh, Volume IV. 1984. Hanoi: Su That, as cited in Fredriksen and Tan (2008).

Strong accountability mechanisms

One of the factors leading to successful school performance is strong accountability and autonomy for schools in Vietnam, supported by a robust internal and external monitoring and reporting system. Using panel data from Young Lives, a multicountry longitudinal study of child poverty in four developing countries,⁵ Singh (2016) explores factors contributing to differences in PISA performance between Vietnam and Peru. Overall, the two countries exhibit little difference in per student spending, pupil-teacher ratios, the proportion of qualified teachers, or total hours spent on academic activities per day. There is also little difference between the ability of Vietnamese and Peruvian students before they enter school at age five. However, by the time these students are eight years old (in Grade 2 or 3), a massive gap, equivalent to about two years of schooling (0.75 standard deviations), emerges. The paper states that this gap arises because of differences in schooling productivity, which can be partially explained by differences in accountability mechanisms.

In Peru, de facto accountability is poor; salary, promotions and transfers are not based on performance; teachers are often absent at the time of surprise inspections; they spend less time-on-task in the classroom than expected; teacher feedback is infrequent and sometimes incorrect; and the cognitive demand of tasks is low. In contrast, these concerns seem to be much less prevalent in Vietnam, which—for example—runs an extensive teacher recognition scheme relying on peer evaluations of teachers based on classroom evaluations right from communes to the national level. (Singh 2016)

Glewwe et al. (2017) find that the gap in average PISA scores between Vietnam and other participating countries is not due to differences in students' and schools' observable characteristics; instead, the gap is due to greater productivity of those characteristics in Vietnam relative to other countries. Greater productivity means the Vietnamese education system is more effective in transforming observable factors into test scores. In other words, virtually all of Vietnam's strong performance on PISA 2012 and 2015 comes from the “unexplained” portion of the decomposition method that the authors used,⁶ which may include the accountability mechanisms that Singh (2016) points out.

5. Young Lives is an international study of childhood poverty following the lives of 12,000 children in Ethiopia, India, Peru, and Vietnam over 15 years (<http://www.younglives.org.uk/>). The Young Lives data sets from rounds of household and child surveys and school surveys are publicly archived and available to download from the UK Data Archive (<https://discover.ukdataservice.ac.uk/series/?sn=2000060>).

6. Glewwe et al. (2017) use the Blinder-Oaxaca decomposition method, which is used to decompose the difference in a distributional statistic between two groups, or its change over time, into various explanatory factors. The method has become a standard tool for applied economics (Fortin, Lemieux, and Firpo 2011).



Prioritizing public spending on general education and on equitable access

Vietnam has been a consistently high spender on education and has always prioritized investment in primary and basic literacy education. This investment has paid off given that the overall rate of return to schooling in Vietnam is higher than in most countries in the region (Patrinos, Thang, and Thanh 2018). In 2002, the government spent 3.9 percent of GDP on education, increasing to 6.3 percent in 2014. In 2012, 14.3 percent of education spending was allocated to preprimary and 50.4 percent to primary and lower secondary education. Even when the government faced severe budget constraints in the mid-1980s and introduced tuition fees for secondary education, primary education remained free. The government established a policy of universal five years of compulsory primary education in 1991, which was fully achieved in 2000. It began expanding primary education from half-day schooling to full-day schooling in 2008. As of 2016, 74 percent of primary schools offered full-day schooling. In 2013, the government decided to further extend compulsory education to four years of lower secondary education after 2020.⁷

Spending is also directed toward equity. A focus on equity is an important factor contributing to Vietnam’s high learning outcomes. The central government allocates more per capita to geographically disadvantaged provinces and districts (table 2) and, through various types of allowances, pays teachers serving in disadvantaged areas higher salaries than teachers in cities.

Using data from Young Lives, Glewwe, Krutikova, and Roleston (2017) assess intraschool differences in learning in Vietnam and Peru. They find that schools in Vietnam support learning achievement equally for disadvantaged and advantaged students. This finding bears witness to the Vietnamese government’s policy of investing in education quality with a focus on equity, emphasizing that all pupils should attain minimum standards. In contrast, Peru’s schools suffer from low average quality and high inequality in student learning, even among students attending the same school. More advantaged students learn more than less advantaged students in Peru, even after controlling for many student characteristics.

Table 2 Recurrent budget allocation per person for general education by geographic area, 2011–15

Geographic area	VND million
Urban	1.24
Delta	1.46
Mountainous areas, ethnic minority areas in plains and remote areas	1.99
Highland, island	2.78

Source: World Bank and Government of Vietnam 2017.

High household spending

Even though the government spends a relatively large share of the country's wealth on education, private spending is important in Vietnam. Vietnamese households contribute a high proportion of total education spending, even at general education levels—higher than the OECD average and some non-OECD comparator countries. Table 3 compares per student public and household spending on education by level of education. The proportion of household spending was highest for upper secondary at 34 percent, and lowest for primary at 17 percent. High household spending illustrates the strong priority Vietnamese families place on education.

Table 3 Proportion of household spending on preprimary and general education relative to public spending in Vietnam, 2012

Education level	Per student spending (thousand VND)			Proportion (%)	
	Public	Household	Total	Public	Household
Preprimary	7,558	2,192	9,751	77.5	22.5
Primary	7,265	1,475	8,739	83.1	16.9
LS	8,570	2,361	10,932	78.4	21.6
US	7,366	3,863	11,229	65.6	34.4

Source: World Bank and Government of Vietnam 2017.

Note: LS = lower secondary; US = upper secondary.



Attracting and supporting qualified teachers

The promotion of learning and respect for teachers are traditional values of the Vietnamese people. Through the centuries, the perception among intellectuals in Vietnamese society has been that a teacher's position was higher than that of parents and lower only than that of the king. This high social status of teachers has helped attract qualified teachers (Fredriksen and Tan 2008).

The government has also implemented policies to attract and support qualified teachers. Trainees at teacher training institutions are exempted from tuition fees and given scholarship priorities. There are clear expectations for teachers, and they are regularly evaluated and provided with constructive feedback. Teachers receive allowances and other preferential rewards while working in areas with extreme socioeconomic difficulties, in specialized schools, in schools for gifted students, in boarding schools for ethnic minorities, and in schools for students with disabilities. Teachers are required to complete 120 hours of government-provided continuing professional development per year, and professional development includes collaborative and practice-based activities. Teachers are provided with access to online resources where more than 5,000 quality lectures are regularly updated. Teacher clusters play a prominent role in supporting professional development for early childhood teachers and in introducing new teaching techniques (World Bank 2015, 2018b).



The quality of teachers in Vietnam is relatively high in the region, which contributes to learning outcomes (World Bank 2018b). For instance, a secondary professional diploma is required for preschool and primary teachers, a college degree for lower secondary, and a university degree for upper secondary.⁸ Schools do not suffer from the same level of teacher absenteeism that many countries at a similar level of economic development do. An in-depth analysis of PISA 2015 (World Bank 2017) finds that teacher quality—as measured by how often the teacher explains scientific ideas, demonstrates them, discusses students’ questions, and promotes classroom discussions—is the most important factor contributing to better student performance in Vietnam.

Equitable access to early childhood care and education (ECCE)

Over the past two decades, the government has focused on investing in preprimary education. In the early 2000s, every commune was required to have at least one preschool, and the government fully subsidized public preschools in disadvantaged communes from the state budget. The MOET, in collaboration with UNICEF, implemented a mother tongue–based bilingual education program for schools with a large number of ethnic minorities. To increase access to ECCE, the government also encouraged communities⁹ and the private sector to participate in the provision of ECCE services. Private ECCE units enjoyed financial incentives such as subsidized land and physical facilities. Residents in the community contributed toward operating costs, while local authorities have been responsible for providing resource-related assistance (Fredriksen and Tan 2008). In the Education Law 2009, the government aimed at achieving universal preschool education for five-year-old children. In 2017, the country fulfilled the goal of providing all five-year-old children access to a preschool education. This success is largely due to the government’s targeted spending on preschool. East Asian and Pacific economies typically allocate a small proportion of GDP to preprimary education, but Vietnam is an exception. The Vietnamese government spends 0.62 percent of GDP on preprimary education, which is above the OECD average of 0.54 percent (World Bank 2018b).

Strategic use of assessments

Vietnam has used the World Bank’s Systems Approach for Better Education Results (SABER) Student Assessment benchmarking tool (World Bank 2009)¹⁰ to spur policy changes, and moved from “emerging” to “established” status in SABER for both classroom assessment and exams between 2009 and 2014. The first Early Grade Reading Assessment was administered at the end of school year 2012–13. The country participated in PISA in 2012 and the PASEC (Programme for the Analysis of Education System) by Confemen (Conference of the Ministers of Education of French-speaking countries) in school year 2011–12. Participation in PISA and PASEC led the government to acknowledge the weakness of its national assessments and helped strengthen large-scale assessments in Vietnam. In response to the 2012 PISA results, Vietnam changed the legal framework for large-scale exams to diversify testing methods, improve item quality, and pave the way for competency-based assessments (Ha 2014). Broadening the sample-based national diagnostic assessment of reading, math, and Vietnamese language was also a key part of curriculum reform. Portfolio-based formative assessment was also introduced under the Vietnam Escuela Nueva initiative and institutionalized in 2014 for primary schools. The new guidance removed continuous testing and indicated that teachers should use observation and communicate with parents. Teachers were trained in these methods, which were built into training for school principals and education administrators at the district and provincial levels (World Bank 2018b).

Summary of success factors

This section unveils some of the factors that explain Vietnam’s education sector success. It shows that Vietnam’s education system shares common characteristics with other successful education systems in East Asia: the government’s strong commitment to educational development supported by robust accountability mechanisms; relatively high public spending with a focus on investing in general education, basic inputs, and equity, together with high household investment in education; attracting and supporting qualified teachers through adequate incentives and continuous professional development; strong investment in preschool education; and strategic use of assessments. It also describes cultural factors such as the high value placed on education, high parental expectations, and a highly disciplined environment for teachers and students. These findings are similar to those of Parandekar and Sedmik (2016), who find that Vietnam’s high performance compared with a group of seven developing countries¹¹ was partly explained by greater student diligence and discipline, higher parental expectations and interactions with teachers, a more disciplined working environment for teachers, and investments in preschool education and in school infrastructure that are disproportionately larger when compared with Vietnam’s per capita income level. A further analysis of PISA 2015 results using the Fryer Levitt methodology reveals that one or more years of preschool education, the share of fully certified teachers, the disciplinary climate in the classroom, and the availability of educational materials and teachers are the most important factors explaining Vietnam’s success compared with Indonesia (World Bank 2017). Hence, while some of these factors are sociocultural—which may not be easily replicable in other parts of the world—others are policy decisions from which leaders of other countries could learn.

10. The SABER is an initiative to produce comparative data and knowledge on education policies and institutions, with the aim of helping countries systematically strengthen their education systems and the ultimate goal of promoting Learning for All. See <http://saber.worldbank.org/index.cfm> for more details.

11. Albania, Colombia, Jordan, Indonesia, Peru, Thailand, and Tunisia.





Part II: The evolution of Vietnam’s education system from 1975 to the present

This section outlines the trajectory of the education system since 1975 over three phases and includes the main achievements and challenges faced. Phase I (1975–85) provides background on the legacy of colonization and the efforts made to consolidate the country’s education system and address the problem of illiteracy. Phase II (the Doi Moi reforms of 1986–2010) describes the major accomplishments of the 1986 reform in education over the 25-year period following the war during which Vietnam continued to address pervasive issues such as illiteracy and the universalization of primary education. It should be noted that data availability is scarce until 2010. Phase III (2011 to the present) summarizes some promising achievements and current strategies.

This section includes some of the policies and reforms that the MOET has considered most important and transformational in its path toward creating an equitable and inclusive education system. Although several other initiatives were put in place during these phases, the goal of this section is to highlight the MOET’s perspective on the complexity of the wide-ranging reform process. This section also reviews some of the challenges that the government has faced, and continues to grapple with, in its efforts to prepare its citizens to participate more fully in a knowledge-based economy.

The legacy of colonization: Phase I Reforms, 1975–85

April 30, 1975, marked the end of a three-decade war in Vietnam. Two main challenges facing the country in the education sector were (1) to remove the influences of the previous regime and unify the national education system, and (2) to eradicate illiteracy, especially for people ages 12–50 (Fredriksen and Tan 2008).

The post-1975 years witnessed the integration of all public and private schools in the South into a unified 12-grade school system. More than 1,000 private schools or schools founded by religious organizations were shut down or nationalized. As part of the implementation of the new unified education system, the MOET developed and distributed 20 million new textbooks to replace the old textbooks in the South. Thousands of teachers from the North were deployed to assist with the transition process and train their Southern colleagues to teach under the new unified system (Fredriksen and Tan 2008).

The second priority following the national restructuring of the education system was to eradicate illiteracy for adolescents and adults through complementary education. Millions of people were involved in the teaching and learning process, which was also considered a way to express patriotism. In 1978, three years after the anti-illiteracy plan was initiated, the whole Southern area was declared to have basically eliminated illiteracy, with 94.14 percent of people identified as being able to read and write in Vietnamese (Fredriksen and Tan 2008). However, this achievement proved to be unsustainable. A high percentage of people regressed to illiteracy because the program was implemented on a large scale with learners attending short-term classes without regular posttraining practice to achieve proficiency. “Even though enrollment rates in anti-illiteracy classes were high, most people only attended the course for a short time and were not taught by professional teachers. They also had few opportunities to use the skills afterwards. In addition, the assessment criteria were unclear about what it really meant to be literate. As a result, people had not learnt enough to retain their skills later on,” commented Dr. Nguyen Minh Tuan, Chief of Department of Continuing Education Research, Vietnam National Institute of Educational Sciences (telephone interview, November 11, 2019).

Recognizing that the education system needed to be more relevant to the country’s socioeconomic development requirements, the Vietnamese government passed Resolution No. 14-NQ/TW in 1979, which resulted in the third education reform of 1981. This reform included comprehensive changes to the structure of the sector, such as educational objectives, principles, and content. The primary objectives of the education system in Vietnam at this time focused on the development of well-rounded youth, the universalization of education, and the provision of relevant training to create a skilled workforce. The main principles were to link education to societal needs by balancing educational theory and practical application. Education content focused on creating workers who could promote the concept of “socialism construction” (Fredriksen and Tan 2008).

The structure of the education system also underwent a major revision. By 1985, Northern and Southern schools were integrated into one system. Elementary and lower secondary schools were combined into a compulsory nine years of general education, with specialization in specific subject

areas beginning at the upper secondary level. This restructuring was supported by the implementation of an updated and uniform national curriculum and a new textbook series that was completed in 1996. Specialized universities were also founded during this 10-year period, aiming to create highly skilled labor for specific fields (Fredriksen and Tan 2008).

Despite the temporary achievements of the anti-illiteracy plan and the implementation of a consistent national curriculum for the first time, the reform faced several obstacles. These hurdles were primarily due to the reform's unrealistic and overambitious goals, including overexpansion of the system in spite of the financial and human resource shortages caused by economic stagnation and the aftermath of the Sino-Vietnamese war. The lack of highly skilled school teachers and managers, as well as inadequate infrastructure and equipment, rendered the combination of elementary and lower secondary schools into a compulsory nine years of education unsuccessful (Fredriksen and Tan 2008). School and university teachers were underpaid and had to rely on alternative sources of livelihood, which led to low morale (Cima 1989). Additionally, there was an expectation that the government would provide education subsidies for all students, which was unrealistic given the limited state budget for education (Fredriksen and Tan 2008).

At the secondary and tertiary levels, the reform prioritized vocational and professional training to provide alternatives for students who could not access higher education opportunities such as universities. In 1980, 70 percent of primary school students and 85 percent of secondary school students did not matriculate because of low expectations that their investment in a degree would lead to employment, or because of the very low admission rates of higher education institutions (which accepted only 10 percent of applicants). However, attracting students to vocational schools was challenging given the general perception that only the traditional general educational path would lead to skilled and “high-status” employment (Cima 1989). All these factors led to a decline in the scale and quality of education in Vietnam, and the dropout rate escalated (Pham and Fry 2004). It became clear that a major and more comprehensive reform was critical if the country was to escape from this downward cycle.

Doi Moi: Phase II Reforms, 1986–2010

By the mid-1980s, the reforms initiated in 1979 had led to some tangible improvements. In 1986, there were reportedly 3 million children in preschool and kindergarten, 12 million in the general education system, and more than 300,000 in vocational and professional institutions. However, the quality of education remained low and the system still had to address various deficiencies caused by insufficient investment in education and the inefficient management of resources. Educational objectives, curricula, and content of both general education and higher education institutions were still focused on theory and were not relevant to the practical needs of the workforce. In addition to the insufficient physical and technical support for education, teachers continued to face financial challenges, and the rates of student absenteeism and drop out were high (Cima 1989).

In December 1986, the Sixth National Congress of the Communist Party of Vietnam approved the historic Doi Moi (meaning “renovation” or “reconstruction” in Vietnamese), a comprehensive national reform that

aimed to shift the country from a centrally planned system to a socialist, market-oriented economy. Its primary goal was to liberalize the economy to better position the country in the worldwide shift toward globalization.

Under Doi Moi, the education reform aimed to alter outdated perceptions regarding the role of the state in education. The reforms revolved around the following objectives: (1) socialization of education, (2) comprehensive access to and quality of education, and (3) vocational education and streaming of the upper secondary level of education. Other key transformational improvements were made in the areas of curriculum and textbook reform, university entrance examinations, and information management and the development of the Education Management Information System (EMIS).

Socialization of education

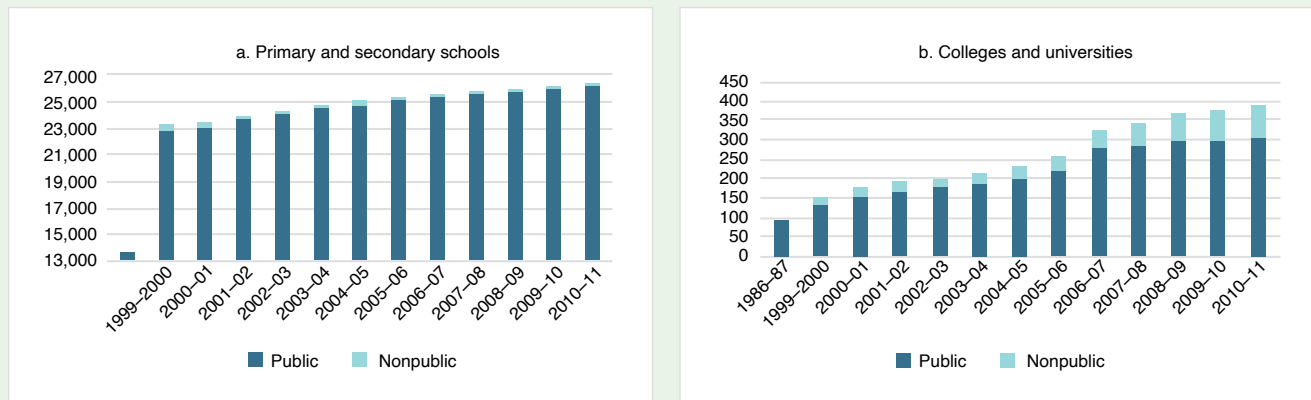
Although the Doi Moi reforms included a greater percentage of public funding for educational institutions, there was a significant shift toward the socialization of education. In the Vietnam context, the socialization of education refers to the concept that it is everyone's responsibility to contribute to the development of the education sector.¹² Private sector actors were given permission to open educational institutions at all levels, including kindergarten, and were granted autonomy for recruitment and management. Although the first few years following the reform were mired in financial struggles, the scale and scope of the school network in the country expanded rapidly, with the number of schools doubling from 1986 to exceed 26,000 in 2010 (figure 3).

¹² . Apart from supporting private sector enterprises, citizens can pay to support optional services and programs at public institutions.



At the tertiary level, educational socialization was also enforced through the mobilization of resources from all sources and was not limited to the state budget. However, not until 1988 was the first private university established. The percentage of private sector institutions in higher education only really increased toward the end of this phase. The total number of universities and colleges increased four-fold between 1986 and 2010, with 20 percent of these institutions being nonpublic as of 2010.

Figure 3 Number of general education schools and colleges and universities, 1986–2011

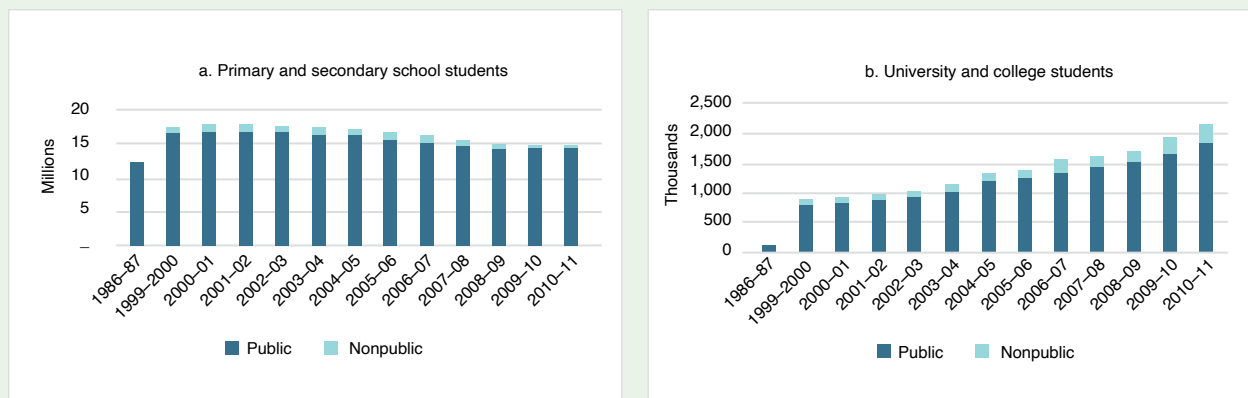


Source: General Statistics Office.

Note: In both panels, 1986 figures are totals for public and nonpublic because disaggregated data were not available at that time.

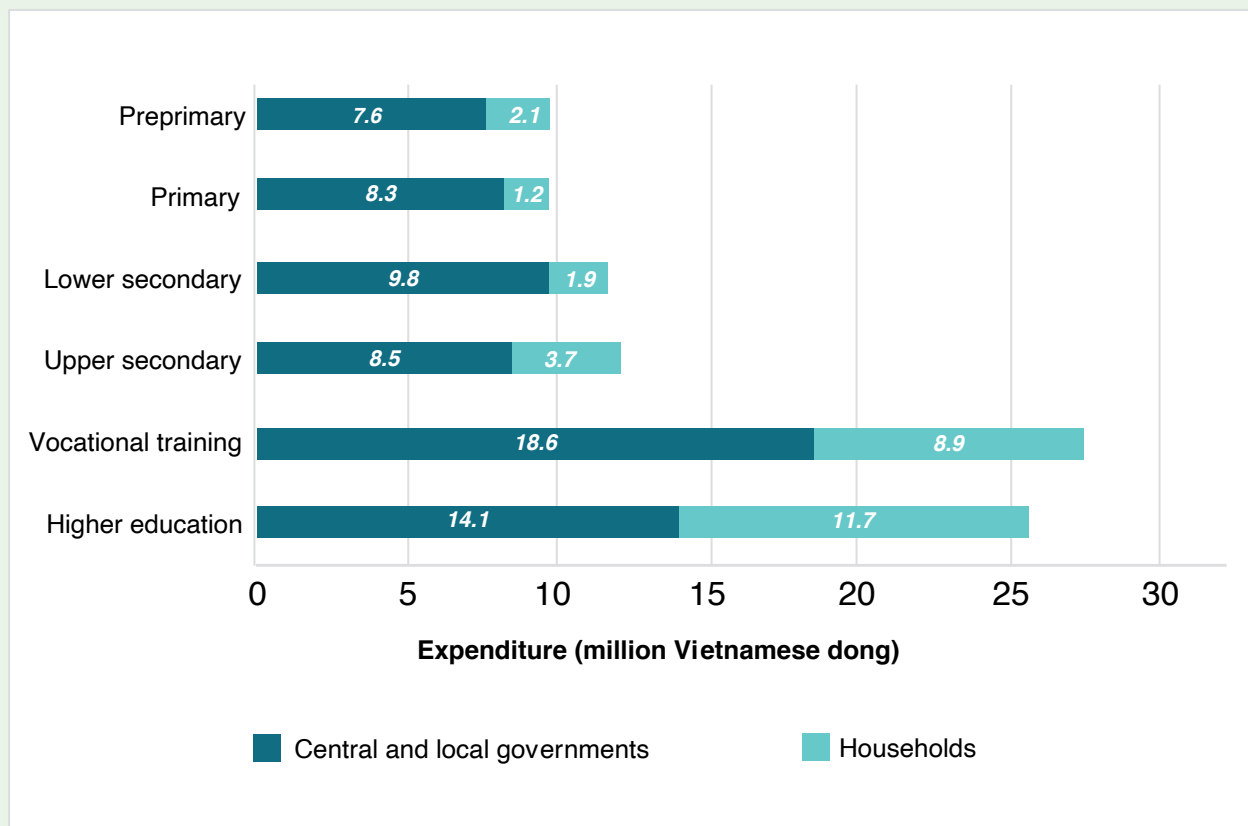
The expansion of the system through privatization resulted in an increase in the number of students. The universalization of the first nine years of general education yielded positive outcomes, with participation rates of 98 percent for primary- and 84 percent for lower secondary-age children in 2004 (Fredriksen and Tan 2008). Regarding higher education, training was extended to a wide variety of economic constituents instead of relying exclusively on state organizations to cover societal demands. The number of postsecondary students tripled from 760,000 in 1999 to more than 2 million in 2011, with nearly 17 percent at nonpublic institutions (figure 4).

Figure 4 Number of students in general and higher education, 1986–2011



Source: General Statistics Office.

Figure 5 Expenditure by level of education and source of funding, 2013



Source: General Statistics Office.

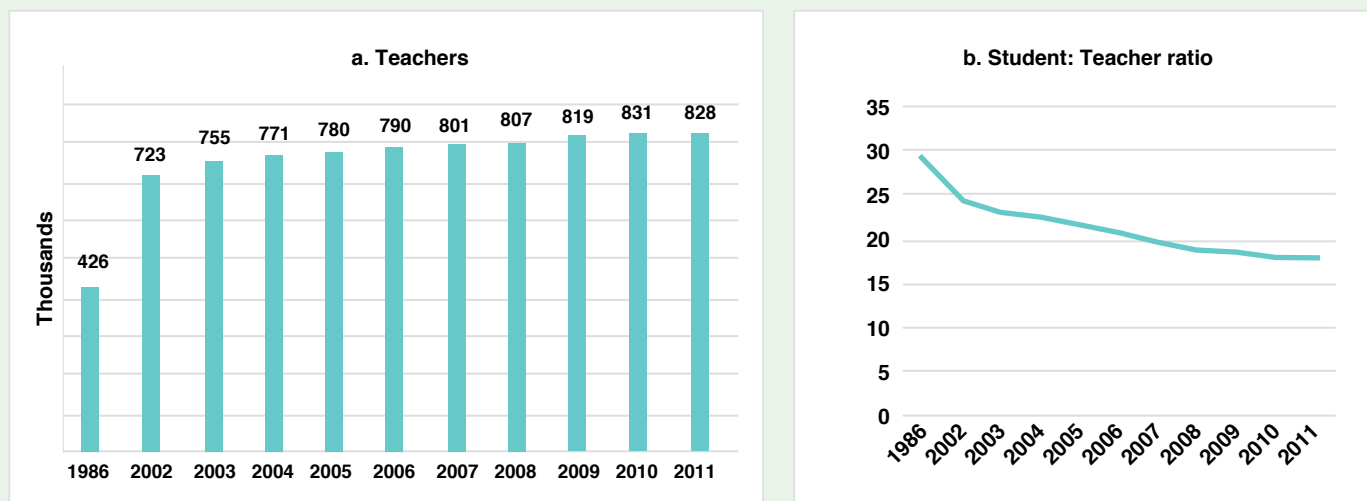
Along with the expansion of private and semi-public schools and colleges, the collection of tuition fees was also approved except for public elementary schools (because of the universalization of education at that level). Families were asked to contribute to the system through tuition fees and by self-financing their practical training sessions and internships. The state budget was spent on infrastructure, capacity building, and teacher training activities. Tuition fees did not vary widely between state and private schools from the late 1980s through the early 1990s (Glewwe and Patrinos 1998). Despite the extremely low average tuition fee (Fry and Pham 2011), the addition of household contributions helped boost spending on the sector noticeably, and at the higher education level, household spending reached 80 percent of public expenditure by 2013 (figure 5).

Comprehensive access to and quality of education

During this period, great efforts were made toward improving inclusive access to and the quality of education by investing in teachers and focusing on education for disadvantaged children, including those from ethnic minority groups and children with disabilities.

Investment in teachers. The supply of teaching staff increased greatly during this period.¹³ The government made concerted efforts to secure welfare and other benefits for teaching staff. Between 1986 and 2011, both the number of teachers and the student-teacher ratio at the K-12 level improved significantly (figure 6).

Figure 6 Number of K-12 school teachers and student:teacher ratio, 2002–11



Source: General Statistics Office.

Note: 1986 figures are provided for comparison.

13. General Statistics Office, Major socioeconomic index in 2005 and 1986 (<https://www.gso.gov.vn/default.aspx?tabid=418&ItemID=4326>); MOET, Vietnam Education Statistics across All Levels (<https://moet.gov.vn/thong-ke/Pages/thong-ke.aspx>).

However, the investment in teachers was insufficient in both quantity and quality to meet the demand of institutions and students. Even though staff compensation consumed the largest share of government expenditure on education (Vietnam Ministry of Education and Training, General Statistics Office, and UNESCO/IIEP 2016) (which is common in the education sector, where teachers account for the largest percentage of state officials and are prioritized by the government for welfare and benefits), the average monthly salaries of educators were not competitive with that of workers from other sectors (Vietnam Ministry of Planning and Investment 2016) (figure 7). Additionally, inappropriate recruitment policies meant that teaching vacancies were not efficiently filled across the country, leading to high unemployment rates of teacher graduates in certain areas and deficits of teachers in other regions.¹⁴ As a result, during the 1990s and 2000s, teaching was no longer viewed as a popular career choice. Quality was even more of an issue in higher education faculties; in 2004, only 13.8 percent of teachers held a doctorate and 56.6 percent had only an undergraduate degree (Pham and Fry 2004). Some young, capable lecturers were lured away from universities by higher benefits in the private sector, resulting in an aging teaching population. The average age of academic professors was 56, and most well-trained lecturers were approaching retirement age (Pham and Fry 2002).



Figure 7 Average monthly income by occupation, 2011

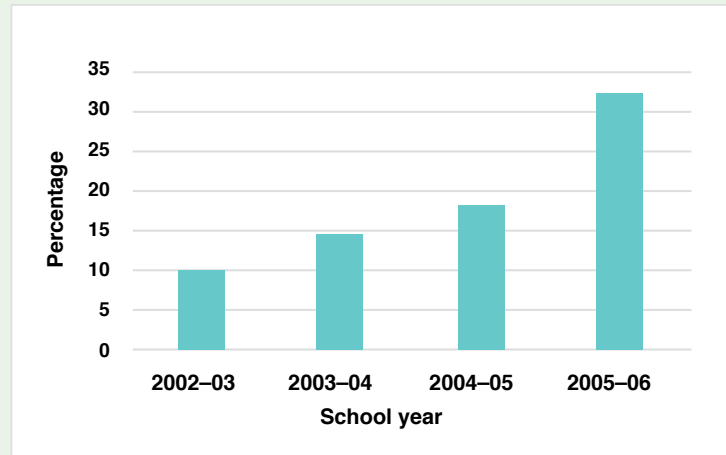


Source: General Statistics Office.

Equity and inclusion in education. The government prioritized equitable and inclusive education for disadvantaged children. In 2006, the MOET, with financial support from the World Bank, launched the Primary Education for Disadvantaged Children Project to improve school attendance and the quality of education for disadvantaged pupils at the primary level. Under this project, schools are monitored under the Fundamental School Quality Levels, which are measured by the minimum package of inputs—physical facilities, school organization and management, teaching materials and teacher support, and school-parent links necessary for providing quality education at school—and the expected basic outcomes. This has been used for monitoring progress and assessing the impact of the program on learning. As of the 2007–08 school year, 278 schools served primarily ethnic minorities, with a total of 86,000 students. These schools were considered equivalent to mainstream schools as measured by their credentials (Brock and Symaco 2011). In these schools, the government covered expenses for lunch, tuition, uniforms, and textbooks. Certain boarding schools also served children from ethnic minority groups. Nonetheless, there remained a gap in the net enrollment rates and educational attainment between Kinh children and those of ethnic minority groups.

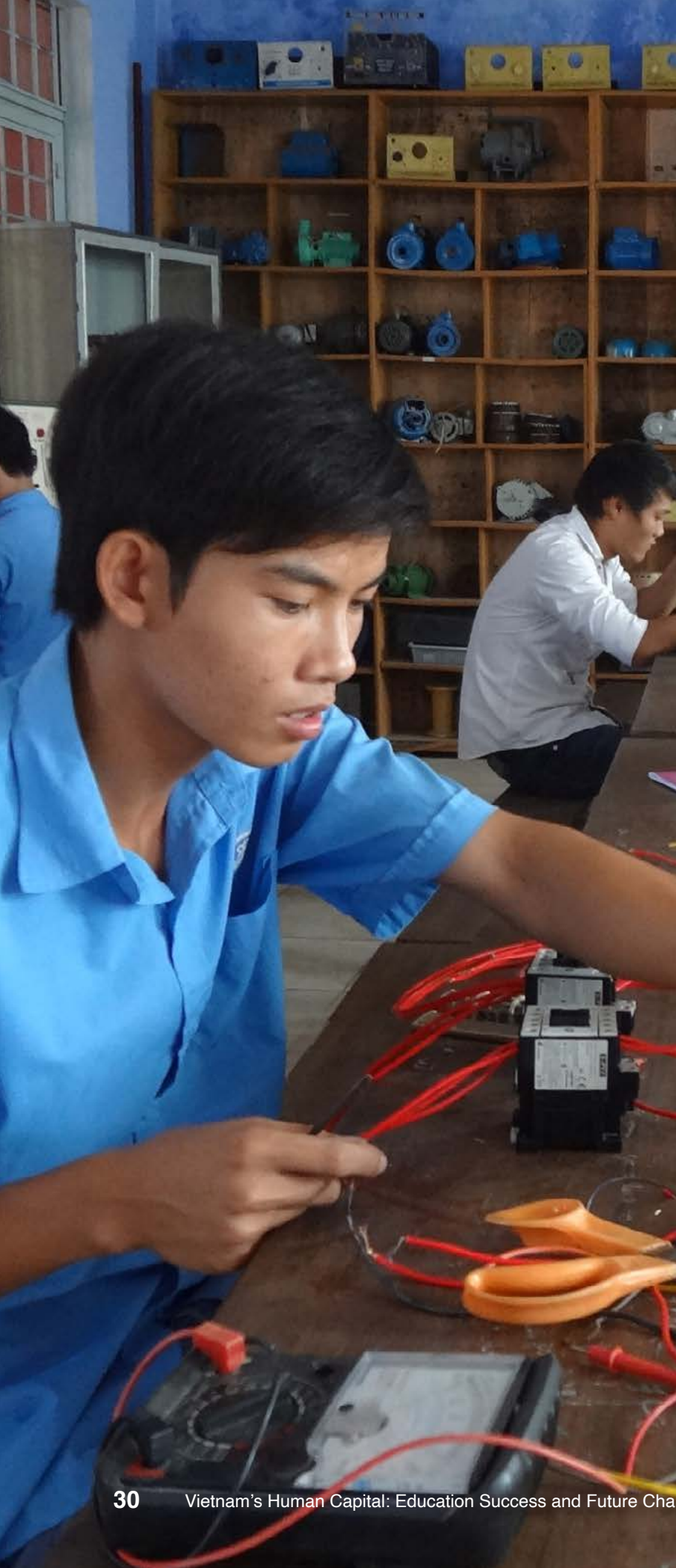
Figure 8 Share of children with disabilities enrolled in inclusive and special education at primary level, 2002–06

Source: Ministry of Education and Training.



By 1991, 36 schools for children with special learning needs had been founded throughout the country. In 2003, nearly two decades after the Doi Moi reform, 6,000 students with learning disabilities were included in special schools, with the annual expense of \$400 per child paid by the government (Villa et al. 2003). The percentage of disabled children enrolling in inclusive or special primary education tripled from 2000 to 2006 (figure 8). However, these figures are modest compared with the 1.1 million disabled children in Vietnam at the time.



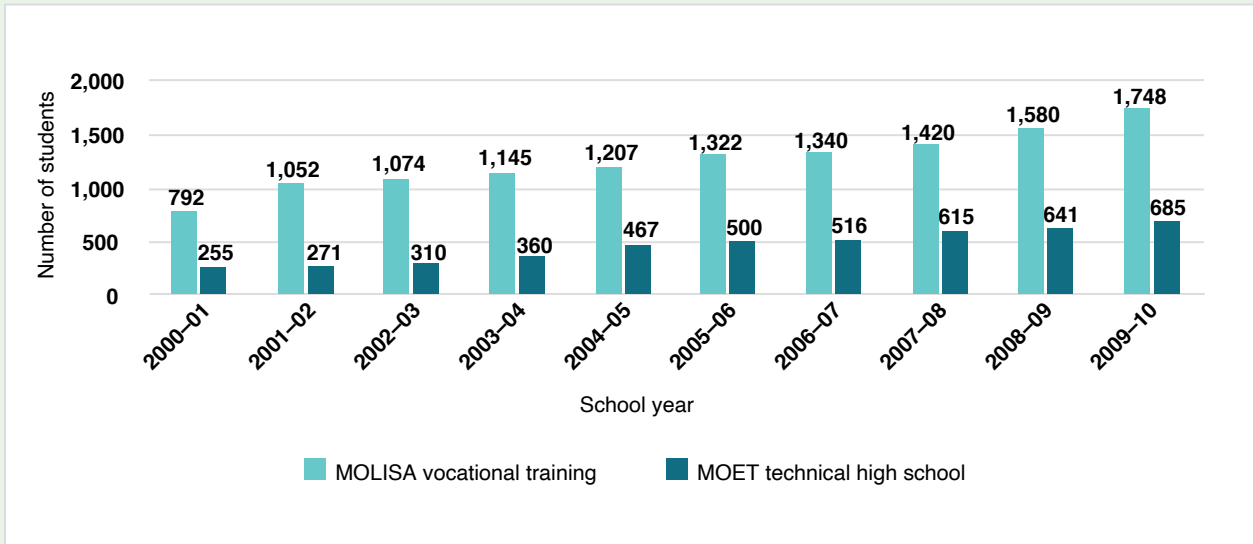


Enhancement of vocational training and streaming at the upper secondary education level

To address the mismatch between university training and market needs, and the resulting high unemployment rates, the government attempted to restructure the focus of vocational education and strengthen streaming at the upper secondary level. After nine years of general education, students entered upper secondary schools, choosing one of the following streams: technology, natural science, and social sciences and foreign languages. In addition to mainstream academic schools, elementary graduates could attend short-term vocational certificate programs, or longer programs of up to three years were available for lower secondary school leavers at vocational training centers under the Ministry of Labour, Invalids, and Social Affairs. Those who completed lower secondary education could also opt for programs in more academic vocational and technical high schools under MOET that lasted three to four years and combined vocational training and general education. These institutions are comparable to mainstream high schools and allow for access to higher education, although students on this track would more often continue to junior colleges. The solution was considered effective, with an increase of 132 percent in the number of students attending vocational training schools and professional secondary programs between 2000 and 2010 (Trines 2017)

(figure 9). The option was meant to ease the burden on mainstream upper secondary institutions by subsidizing vocational education. Students entering the vocational education system were provided tuition subsidies, with those enrolled in full-time vocational education being fully exempted from tuition fees.

Figure 9 Number of students in vocational education institutions sponsored by MOLISA and MOET, 2000-10



Source: Asian Development Bank 2014, 23.

Note: MOET = Ministry of Education and Training; MOLISA = Ministry of Labour, Invalids, and Social Affairs.

Despite these measures, the quality of vocational training remained deficient, and there was a disconnect between the training at schools and market needs. The rapidly changing economic model demanded corresponding changes in labor force capabilities, which the vocational education system was unable to deliver (Holsinger 2003). “The Vietnamese culture highly values academics, which negatively influences the general public’s perception towards vocational education. Furthermore, the transition and transferring within the different levels and types of education are not straightforward so the policy has not brought in remarkable changes in enrollments of students. More recent policies that support direct transition from vocational system are expected to improve the situation,” pointed out Dr. Le Dong Phuong, Director of the Center for Research in Higher Education, Vietnam National Institute of Educational Sciences (personal interview, September 19, 2019).

Selected key transformations

During the last 10 years of the Doi Moi phase, the government considered three reforms particularly transformational, dealing with education content, assessment, and information management. These reforms included curriculum and pedagogical reform, changes in the university entrance examinations, and the adoption of the EMIS.

Curriculum and pedagogical reform. During this period, curriculum objectives were re-identified and reframed to be more relevant to the requirements of the market economy. Renovation of the national general education curriculum began in 2000. The revised national programs, curriculum, and textbooks were officially launched in the 2002–03 school year and were completed six years later at all levels of study. This was the first unified national general education curriculum implemented in all regions of Vietnam. A notable new feature of the program was the possibility of specialization at the upper secondary level whereby advanced programs in selected subjects were offered to students starting from Grade 10, depending on whether they opted for the natural sciences or social sciences paths. Early specialization was expected to better prepare students for university entrance examinations and higher education. The revised textbooks were updated in line with global movements and promoted consistency, continuation, and development in learning at all levels. The newly implemented curriculum also served as a common platform for the synchronization of subject content, teaching and learning methods, and equipment, which enhanced the connection between education theory and practice.

In parallel with curriculum reform, changes in pedagogical methods were also introduced, focusing on practical, student-centered approaches to knowledge and interdisciplinary integration. Teachers were encouraged to cut down on lecture time, to motivate students to become more active in class, and to make use of information and communication technology (ICT) facilities in their lesson planning and classroom activities. However, the outcomes achieved were not comprehensive—the integration of science subjects into the overall category of “natural sciences” was available only at the primary level. Classroom activities were still heavily teacher led, with students taking notes and memorizing information. ICT use by teachers was limited to planning lessons on word processing software and preparing slides for presentations. According to Associate Professor Pham Duc Quang, Vice Director of the Centre for Sustainable Development of the National Quality of General Education, Vietnam National Institute of Educational Sciences, these shortcomings were due to insufficient training of teachers on the successful integration of technology into innovative pedagogical methodology.

University entrance examinations and assessments. Until 2003, examinations and assessments for higher education had been administered and monitored by universities and other tertiary institutions. Since 2004, admission to tertiary education has been centrally administered by the MOET. The “three common” policy was promoted for all universities and colleges: common examination papers, common organization, and common results. This policy was the foundation for the establishment of a central examination board and subsequently a national university entrance examination. Before use of the exam, students were required to submit a university wish list, and their admittance to an institution was determined based

on their exam results. Because of the “three common” policy, the Department for Examination and Expertise of Education Quality (now known as the General Department of Quality Management) was founded to specialize in the field of assessment and testing, particularly the “three common” model. Overall, the newly implemented national examination was well received as a result of its effectiveness and transparency, and the exam was extended until 2015.

Education Management Information

System. This phase also saw significant strides in educational information storage and management with the adoption of the EMIS. The system was welcomed by leaders of provincial departments of education and training given its potential to provide data on various aspects of the sector, from graphing the comparative outcomes of different regions to verifying the demand for training of teachers at each level of education to avoid over- and undertraining. However, the system did not operate at the level anticipated. The various components were not synchronized, and the system was lacking in validation and cleaning tools, and was operated by insufficiently trained staff. Nevertheless, even though improvements were necessary, the EMIS was still considered a major step toward evidence-based policy making.



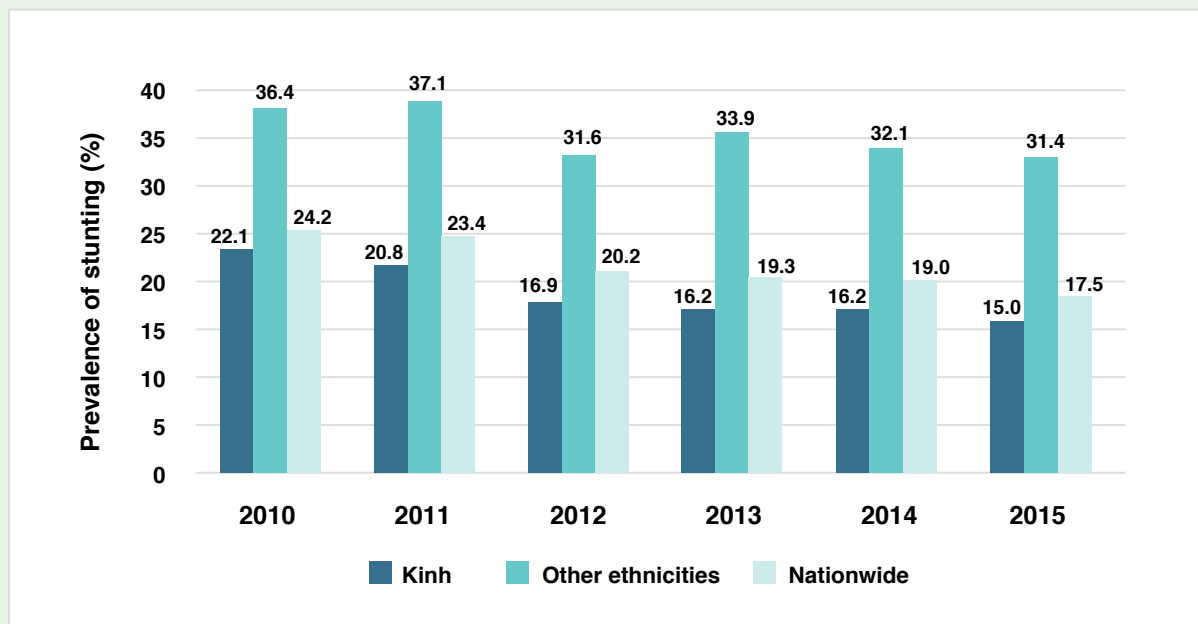
Improving Education Quantity and Quality: Phase III Reforms, 2011 to the Present

The most recent phase of education reform in Vietnam has centered around the 2011–2020 Education Development Strategic Plan. The strategic plan aimed to improve access to and the quality of all levels of education, including preschool, general education, vocational education, and continuing education. Eight key solutions were proposed to address the main challenges identified: (1) renovating education management and administration; (2) promoting teachers and education managers’ development; (3) renovating content and teaching methods, examination, testing, and education assessment; (4) increasing investment of resources and renewing education finance distribution mechanisms; (5) strengthening the link between universities and the labor market as well as scientific research and technology transfer to meet societal needs; (6) fostering educational development for disadvantaged areas, ethnic minorities, and social policy beneficiaries; (7) promoting education science; and (8) expanding and improving the effectiveness of international cooperation in education. Throughout these areas, the government has focused on equitable access to education.

Equity—Equal access to education

The government has made concerted efforts to address equal access to education for ethnic minorities, children with disabilities, and female students. However, these groups continue to face very specific obstacles, despite the government’s strong commitment to their inclusion in education.

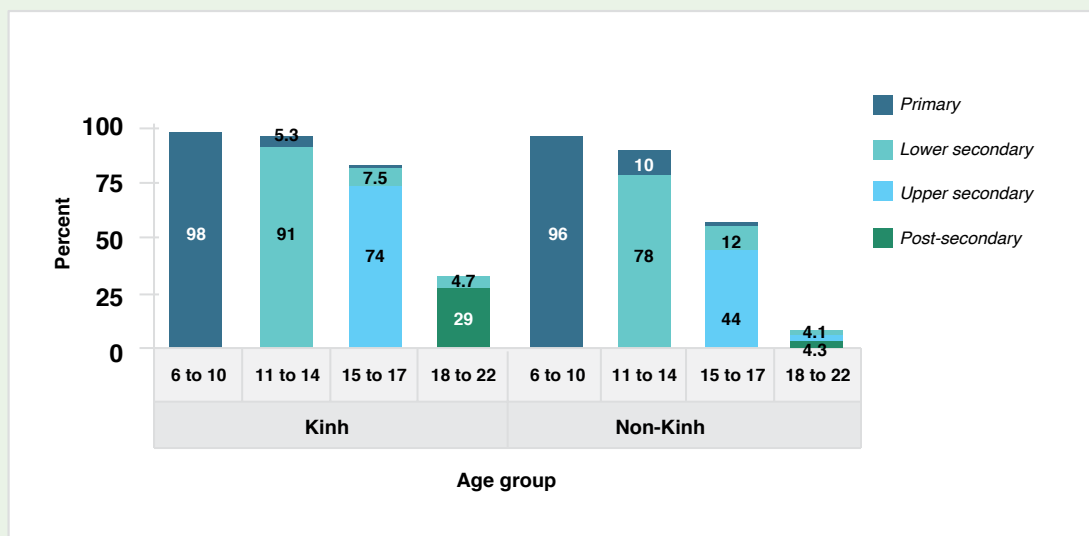
Figure 10 Stunting rates by ethnicity



Source: National Institute of Nutrition of the Ministry of Health.

Ethnic minorities. Ethnic minority children lag behind majority ethnic groups in education access and attainment for a number of reasons. Disparities in human capital accumulation early in life among ethnic minorities results in their falling behind Kinh majority children later on with regard to overall education achievement and economic prosperity. Minority groups were found to lag behind in both school readiness and learning-adjusted years of schooling. For example, stunting among ethnic minorities has remained high despite an overall decrease in the national stunting figures. By 2015, the prevalence of stunting among ethnic minorities was more than twice as high as among the Kinh (see figure 10). The reasons include nutrition-specific causes, such as inadequate nutrition, and nutrition-sensitive causes, such as poor water, sanitation, and hygiene practices, which have led to chronic illnesses, which in turn have affected the ability of children to attend and achieve in school (World Bank 2019).

Figure 11 Share of age group attending each level of education



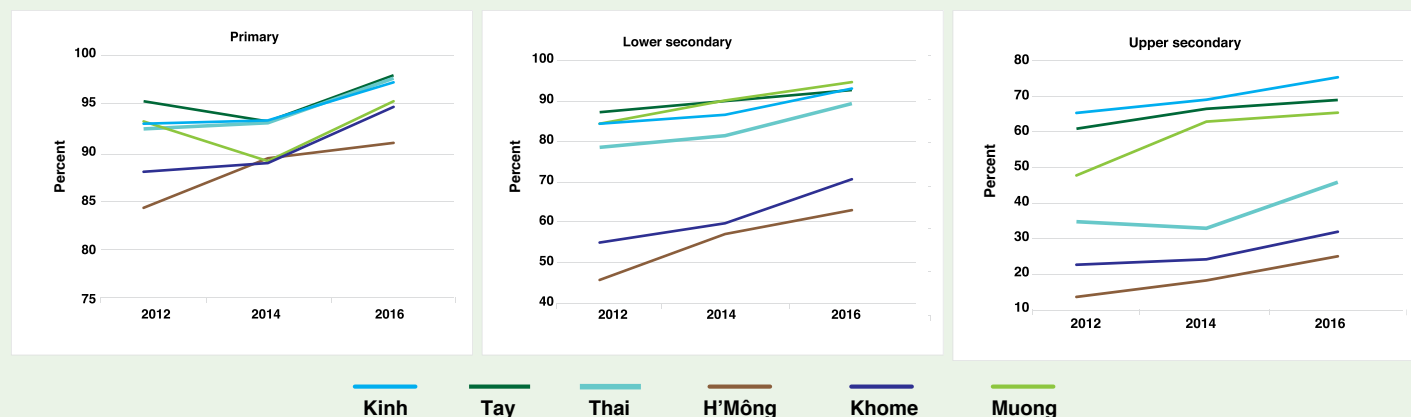
Source: Multiple Indicator Cluster Survey 2013–14.

Ethnic minority children also have their own customs and languages and require special supportive policies to increase their school attendance and quality of learning. This factor has been addressed by strengthening current government initiatives such as high-quality early childhood education programs, assigning teaching assistants proficient in the local mother-tongue languages in the early years of primary school to facilitate the transition for children who do not speak Vietnamese at home, and providing financial support (including cash transfer programs to households, subject to school attendance) to encourage children to attend upper secondary school. Despite these measures, the enrollment ratio of ethnic minorities in school showed a dramatic decrease from the primary to the tertiary level (figure 11).

The low net enrollment rates at higher levels of study also seemed to be more prominent for certain groups of ethnic minorities, as shown in figure 12 (Le and Nguyen 2016). There was almost no significant variation across ethnic groups in the rates of primary school enrollment, and at the lower secondary level, the Tay, Muong, and Thai groups performed very similarly to the Kinh in net enrollment rates. The

differentiation between ethnic groups was most visible at the upper secondary level. Reports indicate that ethnic minority children are more likely to drop out because they were needed for agricultural work. On the supply side, the lower quality of education available to ethnic minority groups was another reason cited for dropout (World Bank 2019).

Figure 12 Net enrollment rates of children in the six most populous ethnic groups, 2012, 2014, 2016



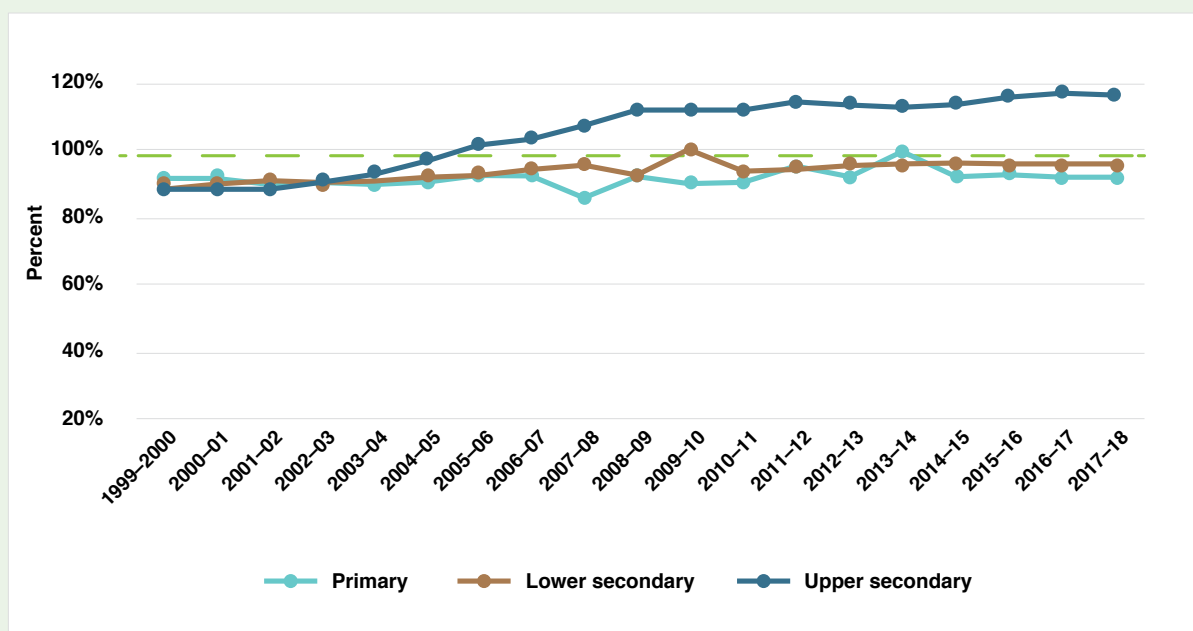
Source: Vietnam Household Living Standards Survey.

Children with disabilities. Despite efforts made to support students with disabilities, the outcomes have been less than ideal, with enrollment numbers decreasing at higher education levels. In the 2017–18 academic year, there were 52,244 disabled students at the primary level, but only 17,034 at the lower secondary and 2,887 at the upper secondary levels, according to the MOET. Based on 2016–17 statistics from UNICEF (2018), only 1.0 percent of children with disabilities are in a special school or classroom. The percentage of schools with suitable infrastructure and sanitation facilities for students with disabilities are 2.9 percent and 9.9 percent, respectively. A quarter of children with disabilities ages 2–17 live in poor households, with 21 percent fewer schooling opportunities than those without disabilities. Of these children, only 55.5 percent receive benefits such as tuition fee reductions or exemptions.

In recent years, the government has made concerted efforts to improve access to education for these children. These efforts have included the issuance of guidelines and policies to mobilize resources for education for children with disabilities. For example, Decision No. 1438/QĐ-TTg by the Prime Minister specified that, by 2025, children with disabilities should have access to protection, care, and education services in their community with opportunities to fully practice their rights. In addition, according to Joint Circular No. 42/2013/TTLT-BGDĐT-BLDTBXH-BTC by the MOET, MOLISA, and the Ministry of Finance, learners with disabilities are allowed to register for school attendance three years later than the general population. Additionally, they are eligible for prioritization for upper secondary school, university, and college entrance, as well as tuition fee waiver and reduction programs. There are now significantly more experts in special education, and the majority of teaching staff in specialized schools and institutions have undergone training in special education (Nguyen, forthcoming).

Gender equity. Vietnam has made impressive advances in gender equity in education. Female students' participation rates have always approximated those of their male counterparts at all education levels, but over the past few years, researchers have even found reverse gender gaps in enrollment and attainment rates, particularly for upper secondary completion rates (Dang and Glewwe 2018; Mergoupis, Phan, and Sessions 2018). Figure 13 shows the enrollment ratio by gender since 1999, when girls were slightly behind at the upper secondary level. However, from 2004 onward, the number of girls has caught up with and exceeded the number of boys, even creating a small gap in 2018. In general, Vietnamese parents still favor sons over daughters and tend to invest more in their sons' education. However, even though enrollment rates at the primary level are lower for girls than for boys, the attainment level reveals a reverse gender gap in which girls are as or even more academically capable than boys as measured by test scores and transition to higher education (Mergoupis, Phan, and Sessions 2018; Rolleston and Iyer 2019), resulting in higher enrollment rates at the upper secondary level. Boys face higher pressure to find a job during adolescence because they are expected to bear the financial responsibility in the family. Gender norms also suggest that boys are better positioned to find well-paid jobs such as drivers or in construction compared with employment opportunities such as sewing for girls. This could explain the greater academic aspirations of female students, as demonstrated by their better performance in test results in some national assessments (Azubuike and Little 2019).

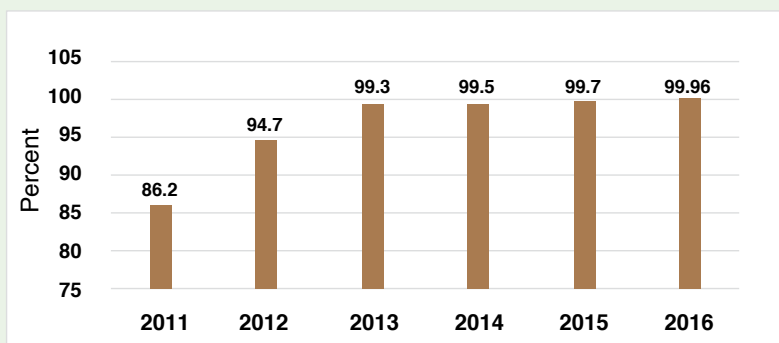
Figure 13 Enrollment ratio by gender (female:male) in primary and secondary education, 1999–2018



Source: Ministry of Education and Training.



Figure 14 Enrollment rates of five-year-olds in kindergarten, 2011 to 2016



Source: Ministry of Education and Training.

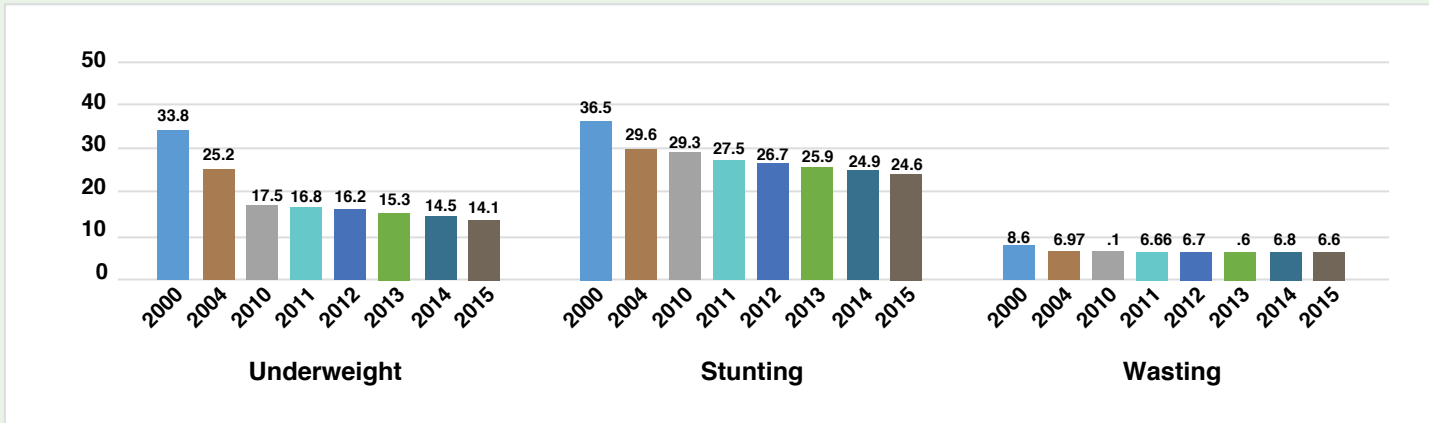
Early childhood education. To ensure equal access to educational opportunities, it is important to promote education at the preschool level, which helps improve attainment and performance at later levels of education. The government issued Decision No. 239/QĐ-TTg approving the universalization of kindergarten for five-year-old children between 2010 and 2015, which was prescribed in the 2009 Education Law. As of 2017, significant improvements had been noted. The network of kindergarten schools expanded from 10,570 in 2010 to 14,637 in the 2016–17 school year (An 2017), with the enrollment rates of five-year-old children rising by 13 percentage points to reach 99.96 percent in 2016 (figure 14).

One of the policies that has contributed to these achievements is the Free and Reduced Lunch Program to encourage disadvantaged children to attend preschool. By the beginning of 2017, 80.2 percent of preschool children (and 85.5 percent of five-year-old children in particular), had benefited from the program (An 2017). The goal of universalization across all economic regions has also been completed, with achievement rates of 99.1 percent at the ward level, 100 percent at the district level, and 100 percent at the provincial level.¹⁵ Another critical source of support was the Vietnam School Readiness Promotion Project supported by the World Bank. The US\$100 million project aimed to improve school readiness of the most vulnerable groups of children, especially those from ethnic minorities, by facilitating selected components of Vietnam’s Early Childhood Education Program.

To improve the physical health of young children and improve their quality of learning, the government has promoted various campaigns and projects to enhance their nutrition and health care. These efforts included the 1981 Expanded Programme on Immunization to ensure free immunization for infants under one year old; Project 641, which aims to enhance the physical development of five-year-old children; and the School Milk Programme, which offers reduced-price milk plans for children from less economically advantaged families. As a result of these initiatives, malnutrition among children decreased significantly, especially between 2000 and 2010. However, from 2010 to 2015 there was a plateau in national malnutrition indicators (figure 15) (World Bank 2019).

15. From “63 provinces completed universalization of kindergarten for 5-year old children,” by T. Nguyen, Vietnamnet 2017. See Vietnamnet for more information at <https://english.vietnamnet.vn/>.

Figure 15 Malnutrition indicators, national average, 2000–15



Source: National Institute of Nutrition of the Ministry of Health.

A framework has been established to implement standard assessment criteria and indicators for schools, facilities, management staff, and teachers. The universalization of kindergarten has also helped to reinforce social awareness of the advantages of preschool education, the role of central and local authorities, and the responsibilities of parents in the development of young children.

Despite these gains, the quality of preschool education in Vietnam still faces significant regional gaps. The shortage of preschool institutions in certain industrial zones leaves workers with no option but to send their children to nonlicensed private nursery classes. In mountainous and remote areas, prevalent issues include a lack of standard schools and classrooms and insufficient water, sanitation, and hygiene facilities. According to Associate Professor Nguyen Ba Minh, Director General of Early Childhood Education Department, MOET, this is because “early childhood education has been neglected for a long time without sufficient investment due to budget constraints. The country is currently lacking in support policies for the non-public sector: organizations and individual investors in early childhood education are not given ample support in terms of loans and land use, resulting in their noncompetitiveness with the public sector” (telephone interview, October 17, 2019).

Full-day schooling. In keeping with the goal of promoting equitable education, the MOET issued Circular 59/2012/TT-BGDĐT on full-day schooling (FDS) at the primary education level. A full school day allows for the implementation of various innovative educational methods and subjects such as project-based experiential learning and life skills, and also reduces the afterschool workload. This policy not only leads to better student learning outcomes but also encourages disadvantaged families to send their children to school when they do not have the time and resources for childcare at home.

Given the potential benefits of FDS in reducing the inequitable distribution of school resources, particularly for disadvantaged students, the government of Vietnam and the World Bank have advanced the School Education Quality Assurance Program to enhance the quality of primary education by providing resources for FDS. The program specifically targets disadvantaged groups to help them optimize the positive effects of the extended school day. The program takes a holistic approach to cover different components of FDS, including consolidating the policy framework; boosting professional development of teachers, school leaders, and state managers; upgrading infrastructure and school facilities; and supporting the MOET as well as strengthening the financial resources of authorities at decentralized levels.

With cooperation and support from the government and international organizations, the first six years of the project have shown positive results. Commenting on the effectiveness of FDS, Dr. Ta Ngoc Tri, Deputy Director General of Primary Education Department, MOET, said, “Currently there are about 75 percent of primary students attending whole day school with some provinces (particularly those in the Northern Delta) achieving 100 percent rates of FDS. Regarding the new national education curriculum in 2018, which is designed for FDS, local authorities are on track for preparation of comprehensive implementation of FDS from Grade 1 as scheduled, approved by the National Assembly” (telephone interview, October 17, 2019). Longer instructional time has proved to be one of the most influential school-related factors affecting student performance, along with teacher qualifications, subject knowledge, and training; improvements in school infrastructure conditions and facilities; and parental involvement. Tran (2014) finds that math and Vietnamese language scores were better in schools with a higher proportion of students on FDS.

Selected key transformations

Competency-based curriculum. The main milestones during this period include the approval of a new competency-based curriculum, which was supported by the World Bank. It was launched in 2016 and approved in 2018, and will be officially implemented beginning in 2020.¹⁶ This revised national curriculum aims to replace outdated teaching and learning methods based on transmission of knowledge and memorization of facts with technology-based education to equip students with hands-on skills essential for the twenty-first century. Compulsory subjects have been reduced and are complemented with optional and integrated subjects and themed activities. For example, at the primary level, 59 percent of students in Grades 3, 4, and 5 opted to take ICT, and in 22 cities, this subject was chosen by 70 percent of students. ICT skills were also strengthened through the organization of ICT and robotic clubs.¹⁷

Education assessment. The education assessment mechanism also underwent major reforms, including the removal of continuous assessment at the primary level and the combination, in 2016, of the high school graduation and university entrance examinations into a National High School Examination. These changes in criteria, forms, and organization of the assessments aimed to relieve students and teachers from unnecessary stress and pressure, as well as enhance students’ interest and autonomy in learning.

The education system structure was consolidated and standardized with the release of Decision 1981/QĐ-TTg on the National Education System Framework, with eight levels from preschool to doctorate. Within this framework, the titles and expected outcomes at all levels have been revised and are based on a national qualifications framework that allows for transfer and cross-comparison between national and international systems.

16. See Circular 32/2018/TT-BGDĐT on implementation of the national general education curriculum.

17. Central Propaganda and Training Commission: Report on 5-year implementation of Resolution 29-NQ/TW, 2018: Hanoi. Available upon request.



Part III: Remaining challenges

Despite its impressive success in achieving high performance to date, Vietnam's education system faces critical challenges as the country strives to become a knowledge-based economy. This section addresses those remaining challenges and discusses policy reform directions.

Improving secondary education enrollment and equalizing opportunities for schooling and learning¹⁸

Having accomplished universal primary education in 2000, the government's current education sector priority is to achieve universal lower secondary education, in which the gross enrollment rate remained about 93.5 percent in 2014–15. The gross enrollment rate for upper secondary education in the same year was much lower, at 63.4 percent. For Vietnam to continue competing regionally and globally, attaining universal lower secondary education should remain a short-term national priority, and universal upper secondary a long-term goal as stated in the Vietnam 2035 Report (World Bank and Government of Vietnam 2016). To achieve these goals, inequities in access to secondary education must be addressed. Improving the quality of vocational education could be one way to attend to the issue.

18. The primary source for this section is Vietnam Ministry of Education and Training (2016).



Although the Vietnamese education system is relatively equitable with regard to access at the general education level, there are gaps between disadvantaged and advantaged students—especially in secondary and higher education. Disadvantaged groups include ethnic minorities, internal migrants, those from economically poor households, those in remote and mountainous areas, and those with disabilities. Gaps are observed in access indicators such as enrollment rate, dropout rate, repetition rate, and completion rate as well as in learning outcomes. The government has introduced many policies to address these issues and made progress in narrowing the gaps, but further improvements in policy implementation are needed.

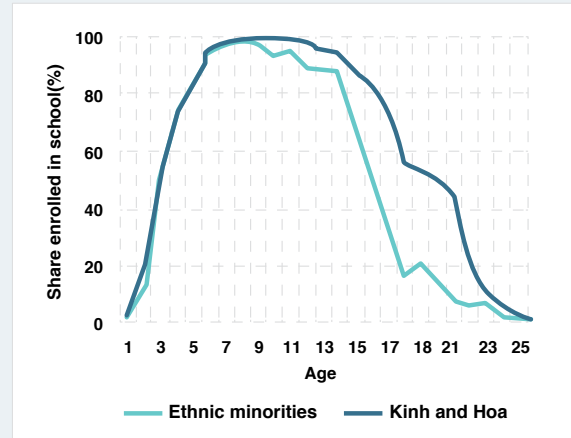
Ethnic minorities and the socioeconomically disadvantaged

In Vietnam, the Kinh ethnic group makes up of 86 percent of the total population; 53 ethnic minority groups, including H'Mong, Cham, Khmer, and JaRai, make up the rest. The gap in the enrollment rate by ethnic group at primary level is minimal, but it grows at the lower secondary level, and is particularly pronounced at the upper secondary level. The gross enrollment rate for lower secondary is 92–94.5 percent for Hoa, Tay, and Kinh students, but only about 65 percent for Khmer and H'Mong students. At the upper secondary level, the gap further widens, with an enrollment rate of 29.5 percent and 20.4 percent for Khmer and H'Mong, respectively, but about 78 percent for Kinh, Tay, and Hoa. Figure 16 illustrates gaps in the net enrollment rate by ethnicity, starting during lower secondary and demonstrating continuing widening after lower secondary. Figure 17 shows wider gaps in the net enrollment rate by income quintile; the gap starts in early childhood education, narrows during the first years of primary education, and widens again during and after lower secondary.



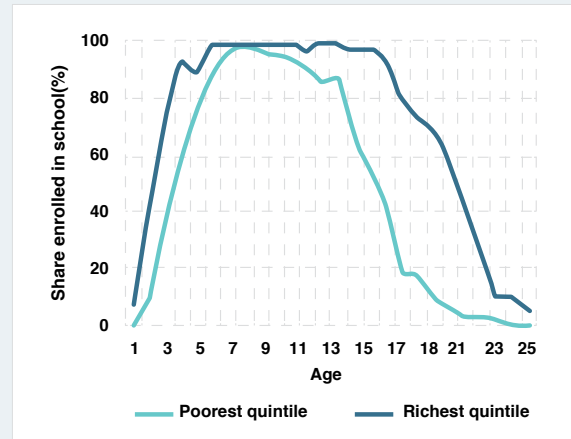


Figure 16 Net enrollment by ethnicity and age, 2016



Source: World Bank 2018a.

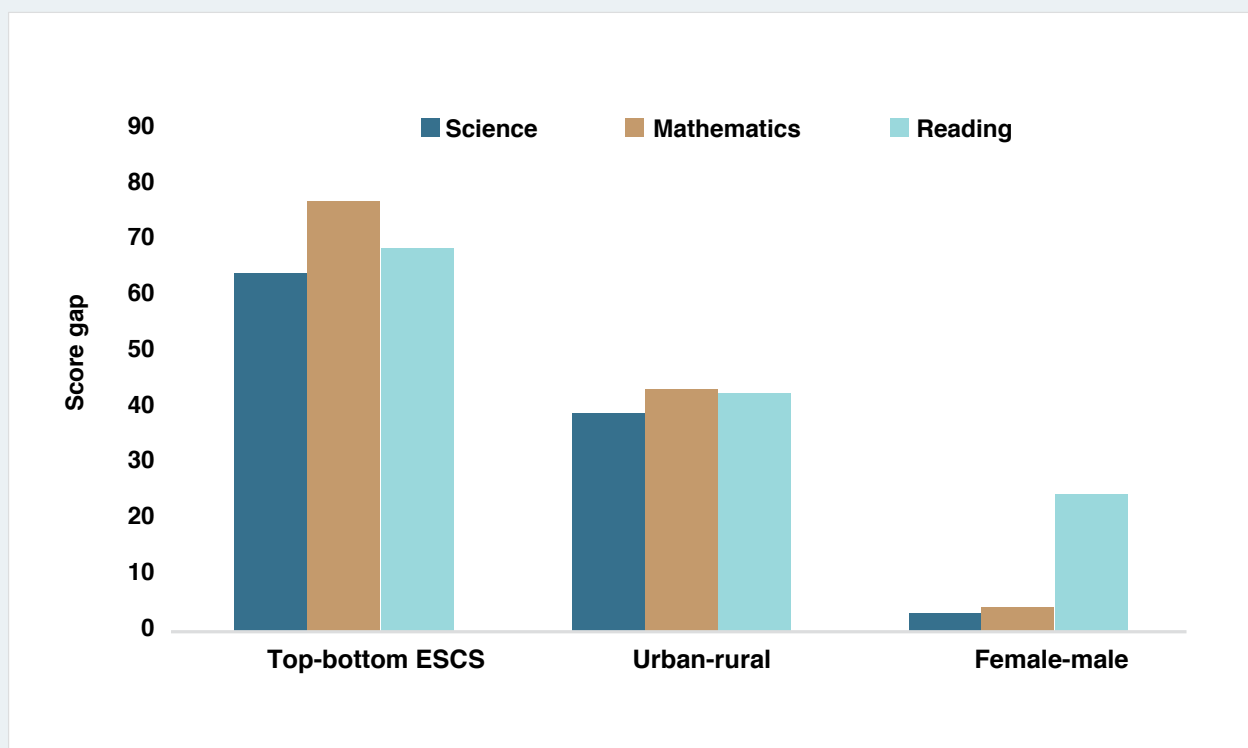
Figure 17 Net enrollment by income quintile and age, 2016



Source: World Bank 2018a.

Gaps between ethnic majority and minority groups are also observed in learning outcomes. In particular, non-Kinh students face difficulties in mastering Vietnamese language skills. In 2011–12, while 87 percent of all Grade 5 students were rated independent¹⁹ for Vietnamese knowledge and skills, only 72 percent of non-Kinh students were independent. In 2013–14, 89 percent of Kinh students met knowledge and skill standards across all four test sections in both Vietnamese and mathematics, while fewer than 50 percent of non-Kinh students did so. The performance gaps widen for higher grades. Figure 18 shows that there are more than 60 PISA point differences—approximately equivalent to more than two years of schooling—between students from the top and bottom socioeconomic levels in all three subjects, science, mathematics, and reading. In contrast, the rural-urban gap is equivalent to one year of schooling. Although there is no gender gap in mathematics or science, girls slightly outperform their male counterparts in reading, a trend observed in many countries worldwide.

Figure 18 PISA 2015 performance gaps by ESCS, geographical location, and gender



Source: Author's calculation based on PISA 2015 database.

Note: ESCS = economic, social, and cultural status; PISA = Programme for International Student Assessment.

Internal migrants

In search of better job opportunities, many young families in rural areas migrate to urban areas, in particular to industrial zones. Compared with nonmigrant children, migrant children are less likely to attend school: they are 1.3 times more likely to be out of school at age 5, 1.8 times more at primary school age, and 2.4 times more at lower secondary age. One major reason for nonenrollment is their legal situation. Migrant families often do not have permanent residential certificates or birth certificates, without which they cannot enroll their children in public schools in the area in which they live. Even if they could, they would need to pay out-of-pocket fees to enroll. As a result, a high proportion (36 percent) of migrant children are enrolled in expensive private schools. Even if they are enrolled in school, migrant children consistently perform worse than nonmigrant children and the gap widens at higher grades. Another major reason for nonattendance is the dearth of physical facilities. Because of the rapid growth of the school-age population, school infrastructure is inadequate in some urban areas. When space is constrained, public schools are not mandated to enroll migrant children.

Children with disabilities

Although Vietnam has developed a legal framework for protecting and enabling the development of children with disabilities, they still face numerous difficulties in accessing education. For instance, more than half of children with severe disabilities have not been enrolled in school. Many provinces have no special schools for children with disabilities. Unlike in other countries, civil society organizations have been only minimally involved in providing special education services and policy advocacy for children with disabilities.

Regional gaps

A large gap between regions remains in the qualitative learning environment of preschool education in Vietnam, such as access to classrooms and availability of materials and teachers in disadvantaged localities (Vietnam 2017). Even though the central government allocates greater per capita spending for education to poorer regions, total education spending in each region depends on the fiscal capacity and willingness of the respective local governments. The Red River Delta region generally performs the best among regions, while the Mekong River Delta region usually faces the most difficulties. For instance, the Red River Delta enjoys the lowest dropout rate in primary and lower and upper secondary education and the highest lower and upper secondary enrollment rate, whereas the Mekong River Delta region suffers the highest dropout rate and the lowest enrollment rate. Reasons for the low gross enrollment rate in the Mekong River Delta may include geographical challenges such as difficult transport conditions and long distances between school and home, and internal migration. The lower value placed on education, coupled with higher opportunity costs caused by the availability of work even for young children, are factors causing low enrollment in the region (Vietnam Ministry of Education and Training, General Statistics Office, and UNESCO/IIEP 2016).

Given these gaps, possible policies to equalize schooling and learning opportunities may include (1) universalizing early childhood development beyond universal preschool for five-year-olds given that equitable access to early childhood development is one of the success factors for high PISA scores, (2) targeting financial support in the form of subsidies or stipends to students at the upper secondary level to address issues of affordability and opportunity cost, (3) targeting second-chance schooling opportunities to never-enrolled children and dropouts through both school-based incentives and state–community–civil service organization partnerships, and (4) delinking state registration from social services such as access to public schools.



Enhance implementation capacity to achieve competency-based teaching and learning

The MOET has identified that the change in the content of questions was one of the main causes for the drop in PISA math and reading rankings from 2012 to 2015: the 2015 test added new units with questions relating to a modern practical context, which Vietnamese students are not familiar with. Having witnessed more than half a century of historical educational reforms during his work in the field, Associate Professor Tran Kieu, Former General Director of Vietnam National Institute of Educational Sciences, observed a changing pattern in the nature of the educational philosophy and objectives of the country. As in many other East Asian countries, pressures from exams, especially at the upper secondary level, result in teachers focusing on rote memory and knowledge transfer rather than enhancing student competencies. Until the mid-1990s, the education sector in the country had few specific training goals and objectives. Descriptions of educational outcomes could only be found in documents of the Communist Party of Vietnam, which set forth well-rounded figures and characteristics that were too general to quantify and assess. It was not until Resolution No. 29-NQ/TW was issued in 2013 that more specific and realistic educational outcomes were officially stated, concentrating on learners' competencies. "Every time we revised our strategic plans for education, it would be accustomed to changes in the socioeconomic context of the country which are in line with global movements. A learner-centered approach which emphasizes the development of competencies is now the core of modern education worldwide," said Associate Professor Tran Kieu (interview, September 19, 2019).

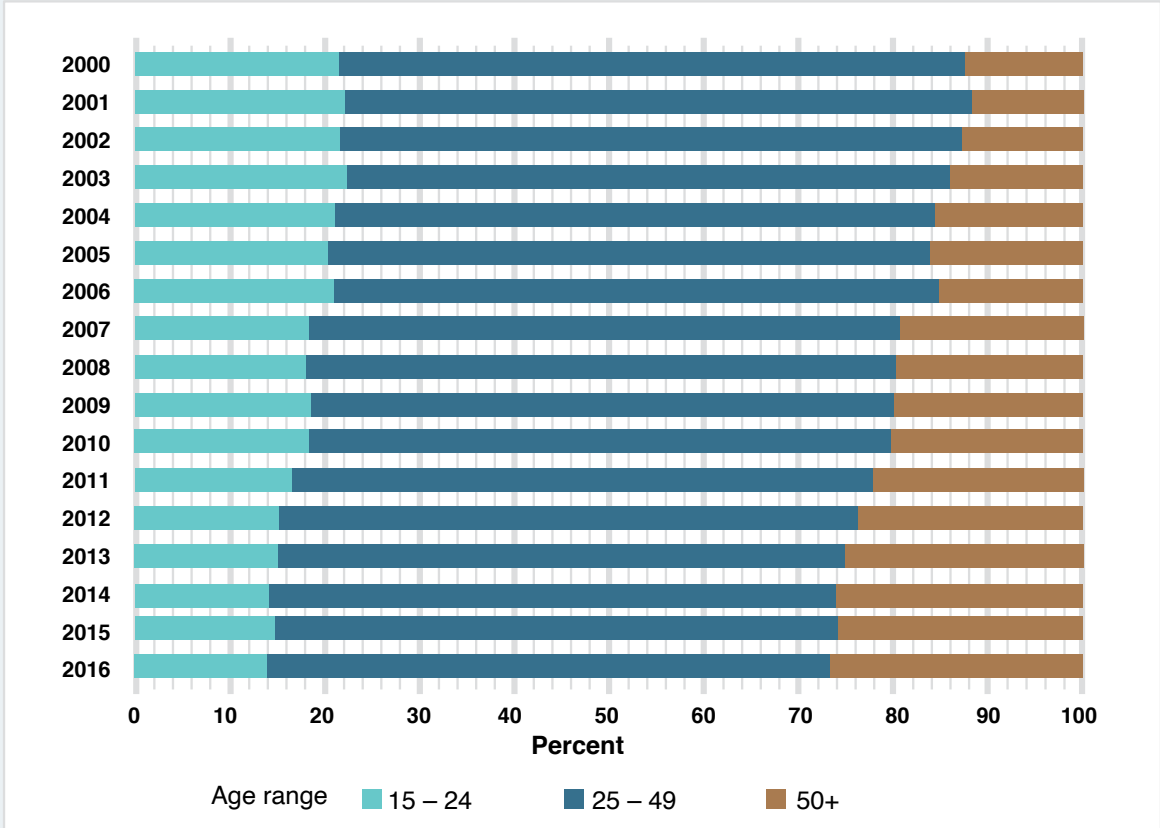
Given these weaknesses, the government is committed to improving education quality by enhancing competency-based teaching practices and reforming school curricula and textbooks. However, the quality of training and degree of implementation capacity are inconsistent. For instance, Vietnam introduced a "whole school" reform to teaching and learning as part of the Vietnam Escuela Nueva program, which has shown positive impacts on cognitive and noncognitive achievement of children, but the students' variation in performance level is related to variation in the understanding and engagement of principals and teachers (Parandekar et al. 2017). Clear guidance on and facilitation of enabling conditions for competency-based teaching are still needed. To address this issue, Vietnam has developed various teacher training programs using on-site training and online learning platforms. Furthermore, many regions lack funding to upgrade classrooms and provide the requisite equipment and learning materials. Many schools operate double shifts because of lack of physical facilities and teachers, making it more difficult to implement competency-based teaching and learning (Vietnam Ministry of Education and Training 2016). Hence, more equitable investment in physical facilities and learning materials would be essential to improving overall quality across the country.

On the whole, the government needs to more effectively implement ongoing policies and programs, such as the Renovation of General Education Project and the Enhancing Teacher Education Program-for-Results, as part of the overarching 2013 Fundamental and Comprehensive Education Reform. The government may also consider piloting suitable models of disruptive technology such as adaptive learning and high-tech learning management systems.

Boost human capital as the engine of growth and competitiveness²⁰

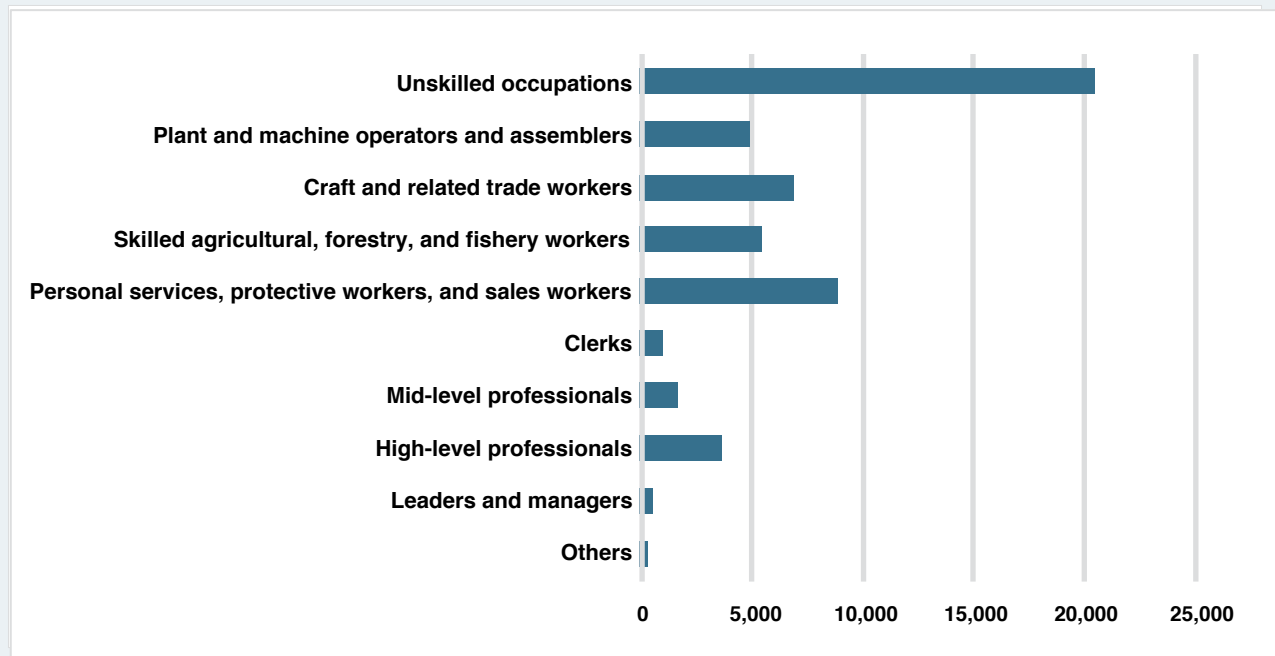
As their economies grow, countries need to invest more in higher levels of education and lifelong learning and better translate foundational knowledge and skills into those relevant to the labor market. However, even though Vietnam’s general education system is renowned worldwide for its strong performance, the tertiary system, including universities and technical and vocational institutions, suffers from structural deficiencies. Tertiary education institutions are not found to be equipping students with the skills needed by today’s labor market—or the skills needed to drive the next phase of inclusive growth. The education system needs to move toward expanding equitable access to tertiary education while making the system more relevant to the job market and the country’s human capital needs. As of 2016, the vast majority of the labor force in Vietnam was still locked in unskilled job sectors (figure 19).

Figure 19 Percentage of labor force in different age groups, 2000–16



Source: General Statistics Office.

Figure 20 Number of employed Vietnamese people by occupation, 2016



Source: General Statistics Office.

By 2030, it is anticipated that most countries will face labor shortages (Boston Consulting Group 2015), and investing in human capital is a key element to becoming one of the top economies in the world. In this regard, Vietnam has an advantage, with 25 percent of its population being between 15 and 29 years old and approximately 50 percent of the labor force being younger than 40 (figure 20). According to a report by PwC (2017), Vietnam has great potential for joining the list of the top 20 countries with the highest economic growth rates.

However, reports by international organizations have pointed out the drop in the population growth rate²¹ and the rapid aging of the country (United Nations 2017). UNESCO has identified Vietnam as one of the world's fastest-aging societies (World Bank and Government of Vietnam 2016). In 2017, the median age in Vietnam was 30.4 years; in 2050 it is projected to be 42.1 years. As the proportion of the population older than 65 increases, the proportion of working-age people in the population will decrease, and costs associated with age and health care will grow. By 2050, life expectancy is projected to be 82.1 years, up from 75.6 years in 2018 (United Nations 2017). This makes it crucial for the country to boost the capacity of its human resources by enhancing the effectiveness of the education sector.

First, improving the quality and relevance of technical and vocational programs is essential for further economic growth. Students who decide not to continue on to tertiary education or who do not do well enough on entrance exams for tertiary education are tracked into technical and vocational programs after lower and upper secondary schools. However, many technical and vocational programs are outdated, too short, or not relevant to labor market needs.

Second, both private and social returns on higher education are high in Vietnam, which justifies not only a greater private contribution, but also continued public investment in higher education (Patrinos, Thang, and Thanh 2018). Despite the high returns—which jumped from 13 percent in 1992–93 (Moock, Patrinos, and Venkataraman 1998) to 18–21 percent in 2014²² (Patrinos, Thang, and Thanh 2018)—higher education suffers from low investment, resulting in poor quality and relevance. Deficiencies in the higher education system include lack of full-time faculty with doctoral degrees; low salaries for faculty, forcing many faculty members to take on large teaching loads across multiple institutions; tight bureaucratic regulations; failure to promote innovative classroom practices; irregular updating of curricula and study programs; and lack of flexibility to choose study programs. Recent reforms to increase institutional autonomy have devolved some decisions to higher education institutions, but the level of autonomy, particularly academic and human resource autonomy, remains limited.

Third, research and higher education are not integrated. Vietnam’s research and university-based graduate education systems are separated, which increases costs while often lowering quality and productivity. Although the majority of researchers with PhDs are based in higher education institutions, they do not receive much research funding from the government. As Vietnam continues to make progress toward achieving its goals and aspirations, as stated in the Vietnam 2035 Report (World Bank and Government of Vietnam 2016), the country needs to unite its research and graduate education systems.

Strengthening the country’s human capital should include an overhaul of the higher education sector, focusing on (1) enhancing university governance and institutional autonomy and accountability; (2) efficiently allocating public funding for higher education and research, thereby providing incentives for performance and outcomes; and (3) mobilizing private sector participation through public-private partnerships and university-industry links.

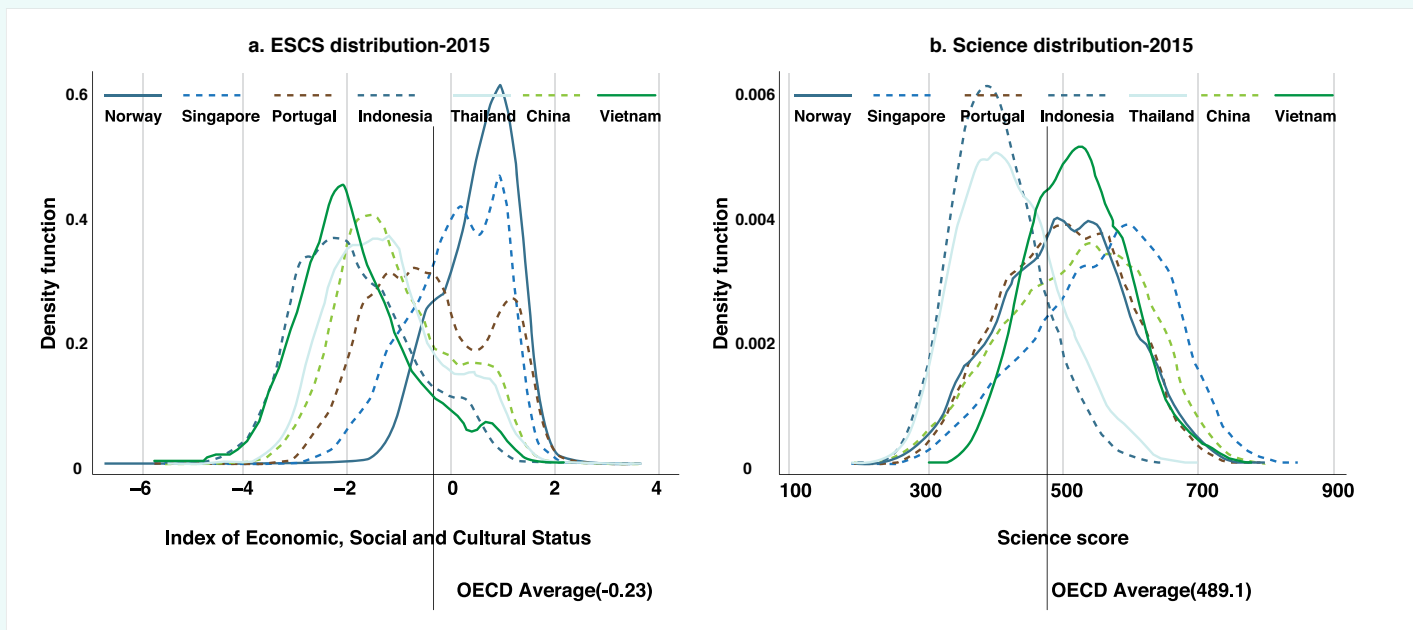


22. Demombynes and Testaverde (2018) estimate the rate of return to higher education to be 66 percent in 2014.

Annex A Analysis of PISA 2015

Few low performers. Panel a of figure A.1 shows the distribution of the Programme for International Student Assessment (PISA) socioeconomic index developed by the Organisation for Economic Co-operation and Development²³ for Vietnam and selected comparator countries; panel b of annex figure A.1 shows the distribution of 2015 PISA science scores for the same countries. Vietnam's science score distribution is centered above 500 and comparable to the top performers as measured by average score, but also shows much lower dispersion. Moreover, Vietnam has an abnormally short left tail. There are barely any low performers, meaning that few students are left behind. Indeed, Vietnam has the lowest share of students below basic proficiency in science of all countries participating in PISA.

Figure A.1 Comparison of ESCS distribution and science score distribution



Source: World Bank staff estimate.

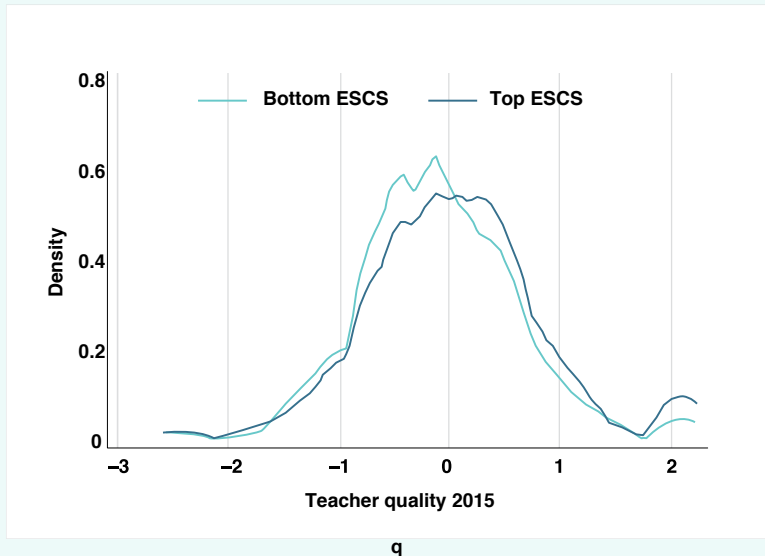
Note: ESCS = economic, social, and cultural status; PISA = Programme for International Student Assessment.

High school segregation and its implications for teacher quality. Within Vietnam, teacher quality and school average socioeconomic level matter the most. On average, students from schools with a higher average socioeconomic level perform better than students from “poorer” schools. Teaching practices associated with high-quality teaching are also determinants of higher scores, even once other factors are controlled for, such as economic, social, and cultural status (ESCS) at the school level. Unlike most other

23. The PISA index of economic, social, and cultural status was created on the basis of the following variables: the International Socio-Economic Index of Occupational Status; the highest level of education of the student's parents, converted into years of schooling; the PISA index of family wealth; the PISA index of home educational resources; and the PISA index of possessions related to “classical” culture in the family home.

countries, individual socioeconomic level is not significant once school-level socioeconomic levels are taken into account, suggesting that schools in Vietnam are highly segregated by socioeconomic level. The level of segregation is comparable to that of neighboring countries China, Indonesia, and Thailand.

Figure A.2 Teacher quality in Vietnam



Source: World Bank staff estimate.

Note: ESCS = economic, social, and cultural status.

Figure A.2 shows the distribution of teacher quality by socioeconomic level. Teacher quality tends to be higher for those students from the top ESCS distribution. Because teacher quality is one of the main drivers of student learning in Vietnam, this gap in teacher quality needs to be narrowed.

Annex B Vietnamese PISA participants are not fully representative of 15-year-olds in Vietnam

Vietnam's impressive performance on the 2012 and 2015 Programme for International Student Assessment (PISA) examinations may need to be considered cautiously because of the low school enrollment rate of 15-year-olds in Vietnam; in 2012, Vietnam's "coverage index" was only 55.7 percent, the third lowest of the 63 countries participating in the PISA. In 2015, it was only 49 percent, the lowest among all participating countries. PISA participants are of higher socioeconomic status than all 15-year-old students as observed in the Vietnam Household Living Standards Survey. In other words, PISA participants are not representative of all 15-year-olds in Vietnam. To adjust for these low enrollment rates, if one assumes that 15-year-olds who were not in school at the time of the PISA assessment would have scored in the bottom half of all 15-year-olds had they taken the PISA exams, and then compares the top 50 percent of 15-year-olds in all PISA countries, Vietnam would have ranked much lower, for instance, 40th in math and 41st in reading, instead of 16th and 18th, respectively, out of 63 countries in the 2012 PISA. Even so, Vietnam would still be an outlier relative to its GDP per capita.

Source: Glewwe et al. 2017.

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