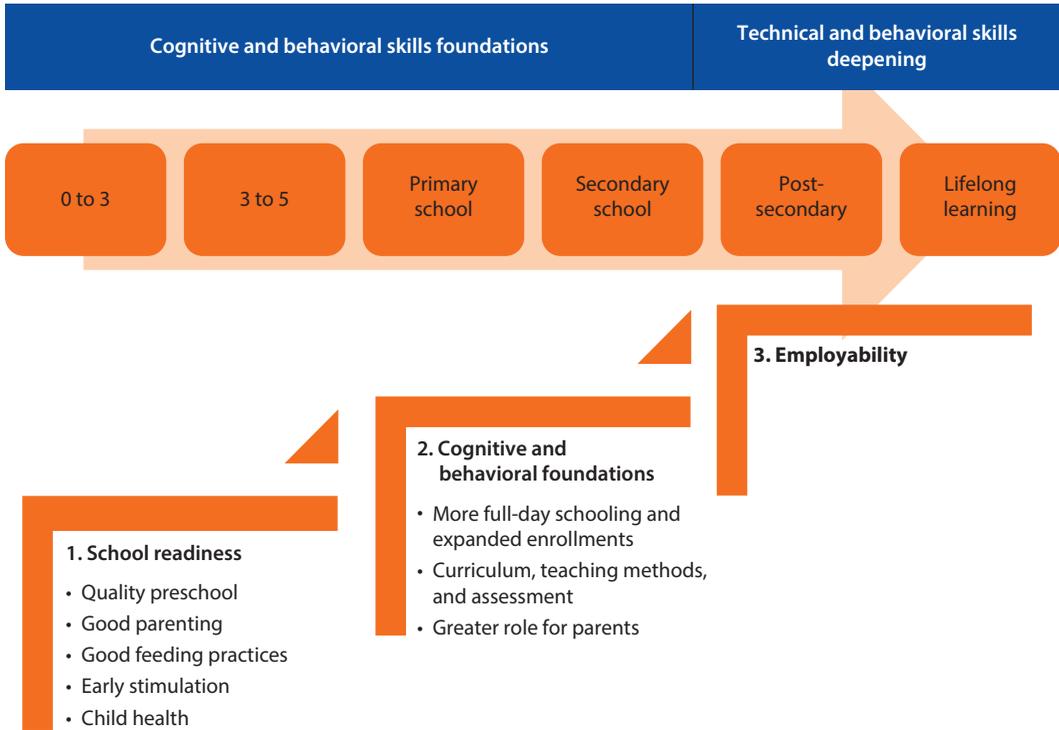


Cognitive and Behavioral Foundation Skills in the General Education System

General education has been important in advancing basic cognitive skills among Vietnam's children and workforce over the last two decades. Vietnam's general education system has undergone a remarkable transformation since the *đổi mới* reforms. Enrollments have expanded dramatically at every level, and Vietnam's population has become increasingly well educated. An initial successful focus on expanding access to and completion of primary education, as called for under the Millennium Development Goals, has opened the way to an increased emphasis on expanding pre-primary and secondary education enrollments. Available evidence suggests that the education system succeeds in equipping graduates with basic literacy and numeracy skills, perhaps more successfully than education systems in richer countries.

Strengthening higher-order cognitive and social and behavioral skills among all school graduates means entering a new phase in Vietnam's education development from expanding access to deepening quality. In other words, with employers highlighting the importance of advanced cognitive and social and behavioral skills, Vietnam needs to strengthen its system further to provide graduates with those needed foundation skills and to overcome inequalities in learning outcomes. It is the second step of a holistic skills development strategy (figure 4.1). This chapter provides a snapshot of the current general education system and discusses how Vietnam can do more to build the right cognitive and behavioral foundations. It calls for *more schooling*, with expanded full-day instruction at primary level and enhanced access to secondary education; *better schooling*, with a curriculum and teaching methods that foster the development of higher-order cognitive and behavioral skills in students; and *schooling that involves parents and local communities* more. Vietnam is in a good position to implement such reforms—the school infrastructure is there, and because of the declining birthrate, the school population is also declining.

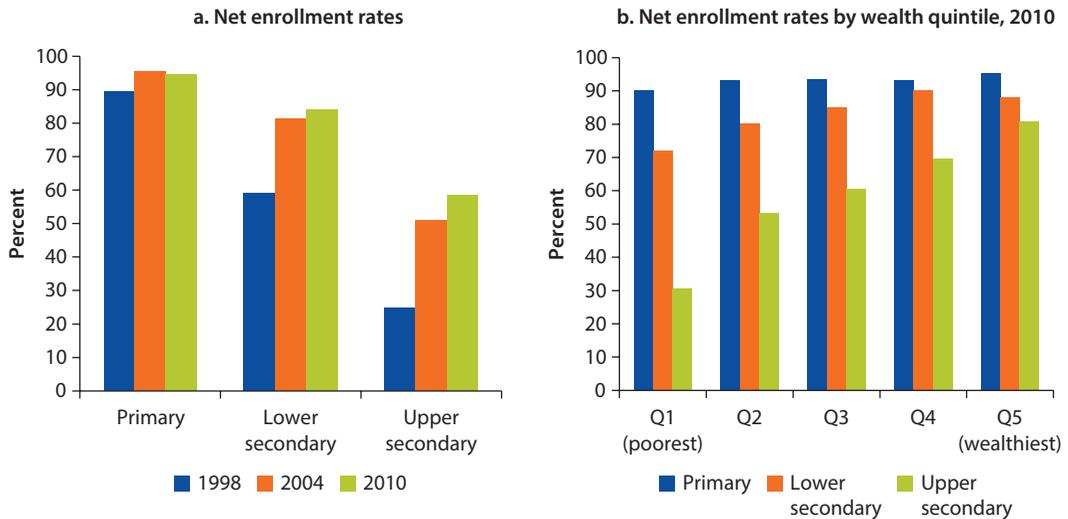
Figure 4.1 Step 2 in Skills Development: Developing the Cognitive and Behavioral Skills Foundation



General Education in Vietnam at a Glance

Ever greater shares of Vietnamese children and young people attend and complete primary, lower secondary, and upper secondary education, but inequalities exist in enrollment at the postprimary level. Primary enrollment is universal today, and lower and upper secondary enrollments were above 80 percent and close to 60 percent, respectively, in 2010 after considerable increases in enrollments since 1998 (figure 4.2, panel a). The universality of primary enrollment is evident from the breakdown by wealth quintile (panel b): 90 percent of children from the poorest households are enrolled in primary education. Primary education in Vietnam is compulsory and involves formal half-day provision, which is free of charge. Secondary education is not compulsory, and schools levy tuition fees, which are exempt for children from registered poor households. Despite this assistance, net enrollment rates at secondary level vary significantly between rich and poor children, in particular at the upper secondary level. The failure by many children from less well-off households to progress to upper secondary education is also a key predictor of their subsequent underrepresentation in higher education. A nuanced picture emerges: in Vietnam today, primary education is for all, and upper secondary and above is mainly for the wealthy.

Half-day tuition time in primary education is short relative to the needs of children and compared to other countries. Half-day schooling runs between

Figure 4.2 Net Enrollment Rates and Enrollment by Wealth Quintile

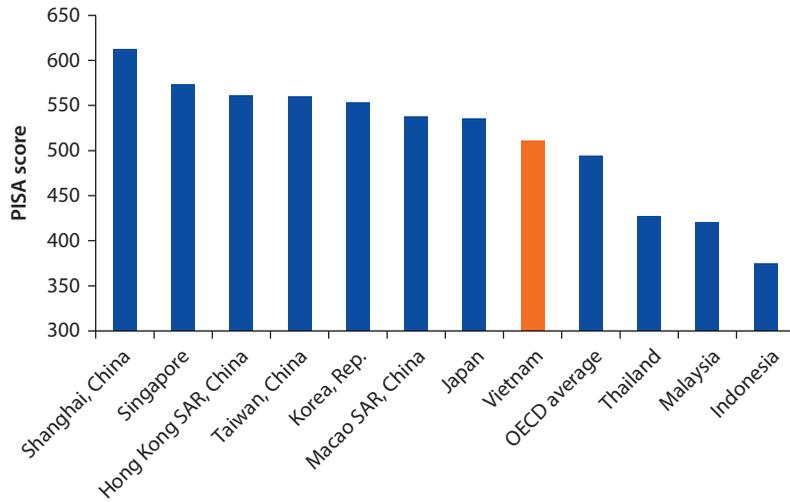
Source: World Bank staff estimates based on VHLSS 1998, 2004, and 2010 data.

Note: VHLSS = Vietnam Household Living Standards Survey.

23 and 25 instruction periods (40 minutes long) per week over a school year of 36 weeks (that is, between 550 and 600 hours per year). The amount of time in school is deemed too short to cover the curriculum adequately. Teachers in Vietnam are paid for 40 hours (the norm of working hours in the civil service), but deliver only about 15.3 hours of tuition a week (23 periods). The amount of tuition time per teacher is low compared to other countries with established full-day schooling. In advanced economies, teachers typically spend between 22 and 25 hours per week teaching, which corresponds exactly to the amount of tuition received by students (on average between 800 and 1,000 hours of tuition each year) (SEQAP 2012).

Even with relatively short formal instruction time, the Vietnamese general education system performs well in imparting basic cognitive skills such as literacy and numeracy. Vietnam's participation in the 2012 Programme for International Student Assessment (PISA) allows, for the first time, for the benchmarking of its educational outcomes internationally (figure 4.3). Like their peers in many other East Asian countries, Vietnam's 15-year-old students showed stronger achievements in mathematics, science, and reading than the average of much wealthier countries in the Organisation for Economic Co-operation and Development (OECD). PISA assesses competencies of 15-year-olds in school, which means that it captures only those Vietnamese students who remain in upper secondary education—typically the better-off, and likely better-performing, students—and excludes those who have already dropped out.

Vietnam's overall impressive performance in mathematics hides significant variation in students' competencies across different dimensions of mathematics use. PISA allows differentiating between the formulating domain (translating a

Figure 4.3 Mean 2012 PISA Mathematics Scores, Selected Cities and Countries

Source: OECD 2013.

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

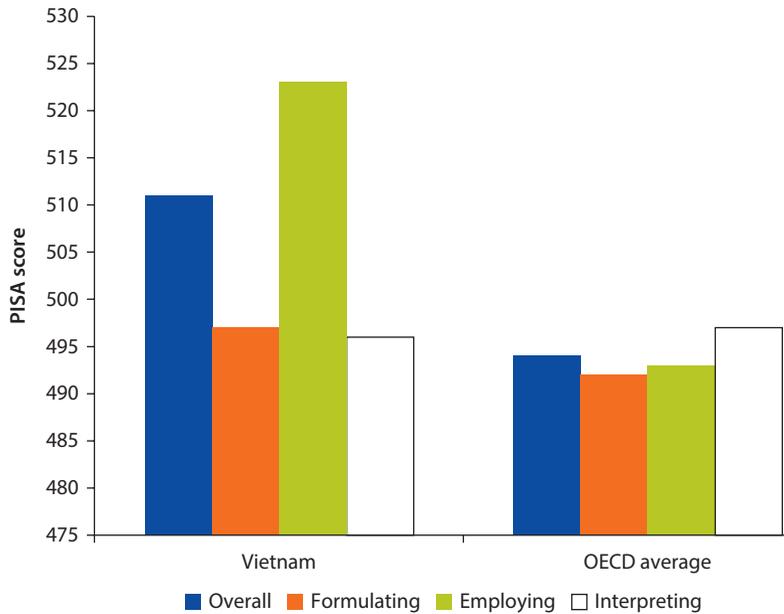
real-world problem into a mathematics problem), the interpretation domain (linking the mathematical outcome to the situation of the problem), and the employing domain (choosing the right mathematical tools to solve a math problem). Vietnam's performance on the formulating and interpretation domains is significantly lower than its average score, while its performance on the employing domain is relatively higher (figure 4.4). The scores suggest that Vietnamese students are not equally familiar with different dimensions of mathematics and relatively less so in formulating and interpreting mathematical problems.

Gaps in student performance are large between disadvantaged and other children, but primary schooling shows some success at helping children from disadvantaged backgrounds catch up. The Young Lives School Survey in 2012 involved a curriculum-based test at the beginning and the end of grade 5 (figure 4.5, panels a and b). It shows, first, that there are large gaps in curriculum mastery between ethnic Kinh and ethnic minority children both at the beginning and end of the school year. It also demonstrates, however, that ethnic minority children in grade 5 reduced the performance gap with their ethnic Kinh peers in curriculum mastery in Vietnamese language and mathematics over the course of the school year. Catch-up in Vietnamese language was particularly pronounced. In mathematics, the learning progress was fast for all the children, with less bridging in the learning outcome gap. In mathematics, the gap at the end of grade 5 remains the equivalent of one year of instruction (the average increase in scores between the first and second rounds was 41 points—less than the difference in performance between ethnic Kinh and minority children).

Primary education overall is not able to help disadvantaged children fully make up for unequal starting positions. Figure 4.5 (panels c and d) shows data from

multiple rounds of Young Lives surveys presenting the evolution of learning outcomes of children over time by the wealth index of the children’s households (panel c). Differences in learning outcomes between children from different socioeconomic groups are already well established at age 5, consistent with the evidence from the Early Development Instrument (EDI) shown in chapter 3. Although there is some narrowing of the gap in learning outcomes between

Figure 4.4 PISA Mean Mathematics Scores, by Subscale, 2012



Source: OECD 2013.

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

Figure 4.5 Math and Language Test Scores of Children of Different Backgrounds

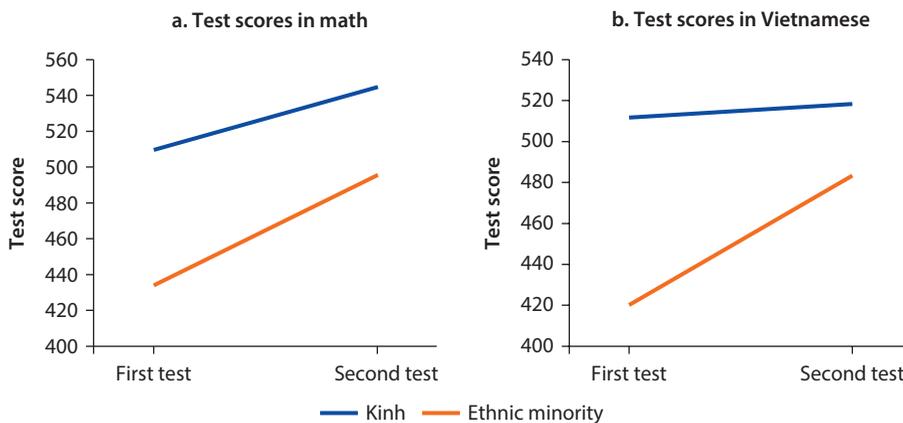
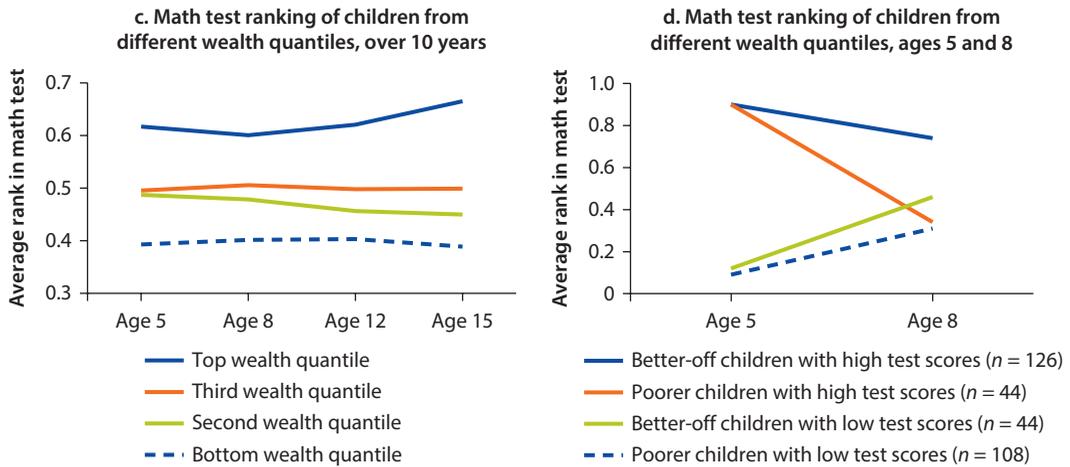


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Figure 4.5 Math and Language Test Scores of Children of Different Backgrounds (continued)

Sources: Rolleston et al. 2013, using Young Lives survey data (panels a and b); World Bank staff estimates using Young Lives survey data (panels c and d).

children in richest and poorest households within grade 5, gaps remain through time. In fact, the average rank in mathematics and Vietnamese language test scores of initially well-performing students from disadvantaged backgrounds are not able to keep pace with well-performing students from better-off backgrounds (panel d).¹ This finding suggests that although schooling contributes to bridging the gap in learning outcomes, it is not sufficient to make up for the effects of disadvantage already incurred before the age of 6, that is, gaps in school readiness. To improve learning outcomes among disadvantaged children, it is necessary to look not only at the classroom—the quality of the teacher—but also at how the situation at home can be improved, including through engagement with the parents and targeted additional support for children from disadvantaged backgrounds.

Vietnam's focus on ensuring minimum quality standards across all primary schools appears to be bearing fruit in terms of relatively equitable provision. More than a decade ago the Ministry of Education and Training (MOET) introduced the Fundamental School Quality Level (FSQL), which encompassed indicators of quality that would be monitored and enforced for primary schools. The indicators related to teaching staff, teaching materials, infrastructure, and school management. The 2012 Young Lives School Survey shows that students in more advantaged sites surveyed across Vietnam were on average receiving more periods of instruction per week, their teachers were more qualified, and the facilities were of higher quality. But the difference in many key indicators of quality between more and less advantaged sites was relatively small and did not follow a clear pattern (Rolleston et al. 2013).² More important, although children in more advantaged sites were more likely to attend better-performing schools, some of the best-performing schools in terms of the “value added” to students' learning achievement are in disadvantaged sites.

Step 2: Building Cognitive and Behavioral Foundation Skills in General Education

Vietnam's general education system is successful in providing graduates with good basic cognitive skills, and any reforms should carefully build on the system's strengths. Shifting the emphasis in general education toward making sure that more children learn and acquire the higher-order cognitive and behavioral skills demanded in Vietnam's labor market does not mean that the system needs wholesale reform. Instead, it needs careful adjustments, building on its strong features. Building stronger cognitive and behavioral skills will require (a) *more schooling*, with full-day instruction and expansion of access to secondary education; (b) *better schooling*, with a curriculum, teaching methods, and assessments that foster the development of higher-order cognitive and behavioral skills in students; and (c) *greater involvement of parents and communities in schooling*. All three requirements are particularly important to help students from disadvantaged backgrounds catch up. The move to full-day schooling presents many opportunities to broaden the curriculum and find time to build on strong foundations through exposure to a wider range of learning experiences.

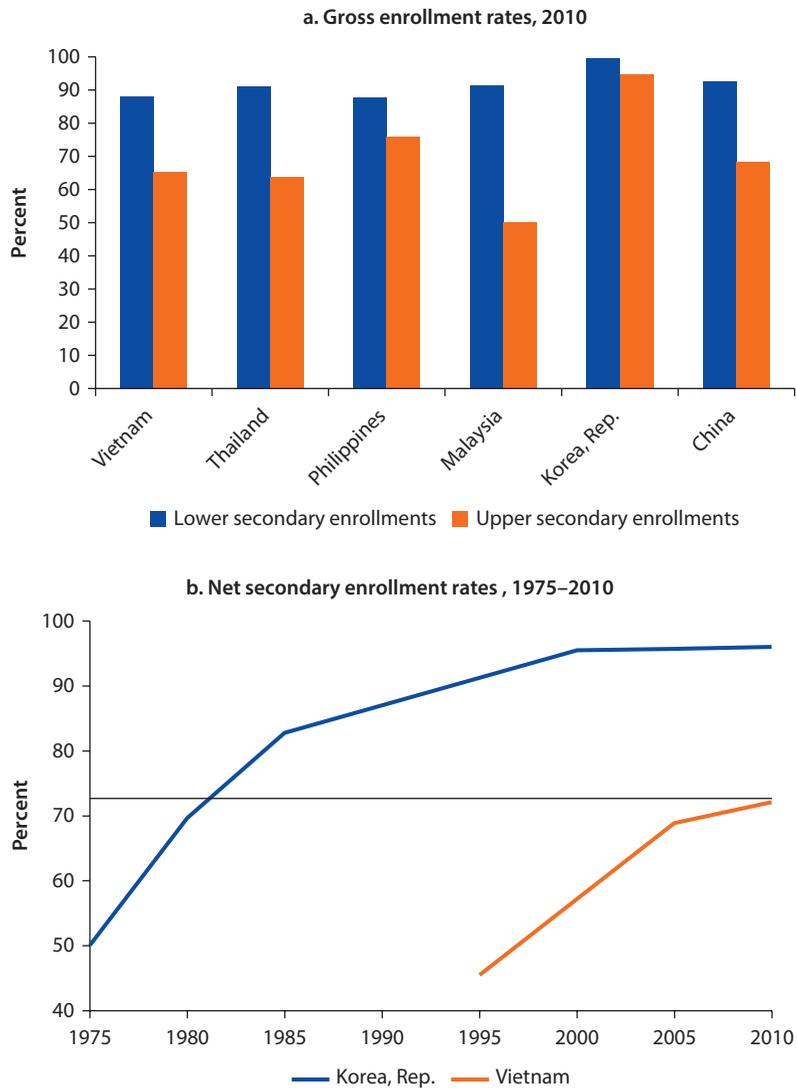
More Schooling

Improving cognitive foundation skills among Vietnam's next generation will require that children spend more time in school. First, education careers need to be extended through increasing the progression rates from primary to lower secondary and from lower secondary to upper secondary. Second, the tuition time in primary education needs to be extended through introducing full-day schooling. More schooling carries additional costs, which need to be covered by the government or parents or both. A decline in the number of students offers an opportunity to rebalance public spending toward the new priorities of expanded secondary education and full-day schooling.

More students need to enroll and complete general secondary education. As figure 4.6, panel a, demonstrates, gross enrollment rates for lower secondary education are broadly on par with Malaysia, the Philippines, and Thailand but are below those in China and significantly below those in the Republic of Korea, where lower secondary education is universal. Even though Vietnam is trailing Korea on upper secondary gross enrollment rates today, Vietnam is aiming to do as well as Korea in the future. To provide some orientation: Vietnam's combined upper and lower secondary net enrollment rate in 2010 stood at 72 percent—the equivalent of Korea's in the early 1980s (see figure 4.6, panel b). At that time Korea's share of employment in professional and technical occupations, which require at least secondary education, was roughly similar to Vietnam's today. Its considerable expansion of employment in these occupations was associated with expansions in secondary enrollment.

Expanding secondary enrollments requires an expansion in the supply of secondary schooling and a strengthening of demand by easing the financial constraints of less well-off households. Progressing to lower and upper secondary

Figure 4.6 Gross and Net Secondary Enrollment Rates in Vietnam and Neighboring Countries

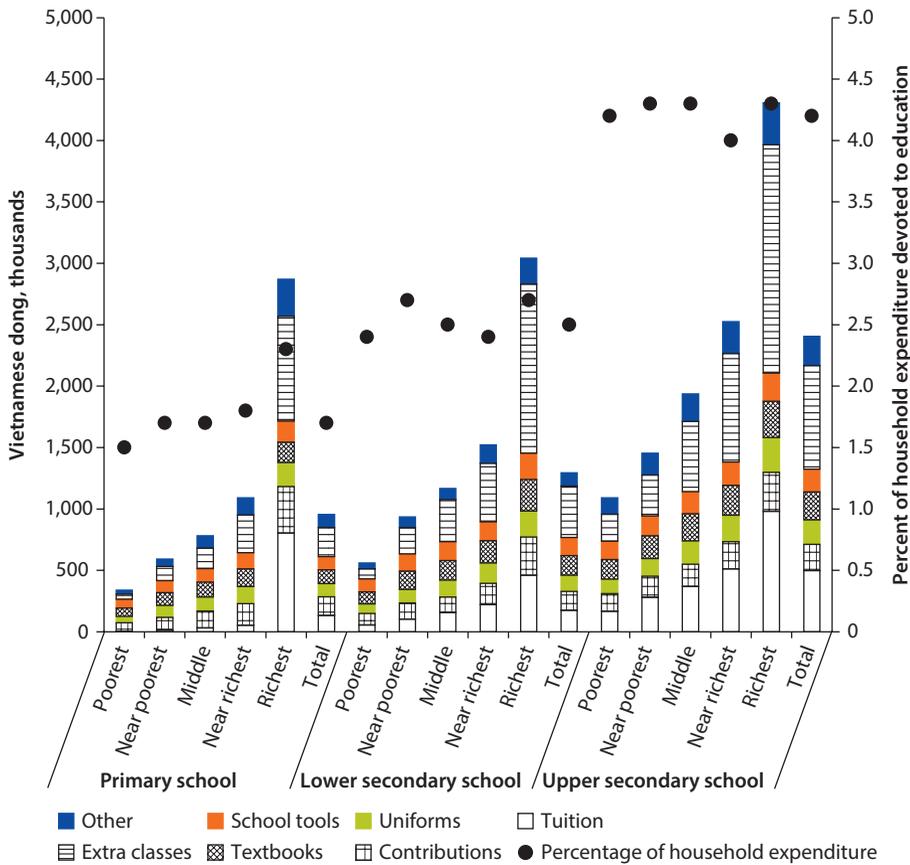


Source: World Bank EdStats (<http://datatopics.worldbank.org/education/>).

Note: In panel a, Philippines data are from 2009. In panel b, 1995 data for Vietnam are from 1998, and 2005 data are from 2004.

education involves considerable costs to households. This involves both a direct cost and the indirect cost of not earning income on the labor market. Figure 4.7 presents the private cost of education by level of education and by type of expenditure in 2010. At around 4.2 percent of overall household expenditure, the private cost of upper secondary is large and significantly larger than for primary education (around 1.7 percent) and lower secondary (around 2.5 percent). The shares of private expenditures are broadly similar across

Figure 4.7 Private Spending on Secondary Education, 2010



Source: World Bank staff estimates based on VHLSS 2010 data.
 Note: VHLSS = Vietnam Household Living Standards Survey.

household wealth quintiles, but the poorest households spend significantly less than richer households in absolute terms, with expenses on tuition, contributions, and extra classes making the biggest difference. Larger expenses for formal tuition and contributions at the upper secondary level likely reflect that upper secondary schools are fewer in number than lower secondary schools and are located on average farther away, which imposes transport and boarding costs that may be unaffordable to less well-off households.

Formal tuition is not the main driver of private spending, and tuition exemptions alone do not offset all private costs. In addition to tuition, households must pay for books, equipment, and uniforms, which suggests that only waiving the tuition for children from poorer households may not be sufficient to encourage their higher enrollment at secondary levels. International experience shows that well-targeted and adequate cash transfers for poor households, conditional on a child’s school enrollment or attendance, can help to offset direct and opportunity costs associated with schooling and thereby expand the demand for secondary

education (Grosh et al. 2009). And targeting resources to the poor, particularly to the hardest-working children, can help to expand enrollments and raise learning outcomes. Recent evidence from a scholarship program in Cambodia showed that scholarships that were allocated based on a combination of income-based and merit-based targeting mechanisms had the highest impact on test scores (Barrera-Osorio and Filmer 2013).

Wealthier parents already demand more schooling than is formally provided, which is evident in the prevalence of extra classes. Parents pay for their children to attend regular core academic lessons typically by their own teachers after school hours. Vietnam's policy of socialization builds on parents' financial contributions toward education, including complementing publicly funded half-day provision in primary education. Traditionally, many children in urban areas in Vietnam have participated in informal extra classes that are taught in the afternoons. Extra classes are not only a Vietnamese phenomenon; they are encountered across several countries in East Asia. But they are prominent in Vietnam: in 2010 parents of 33 percent of primary students and 49 percent of lower secondary students reported some expenditure on coaching sessions for academic subjects (VHLSS 2010). The actual number of children whose parents pay for extra classes may be much higher. For example, in the 2009 Young Lives survey, 70 percent of 14- and 15-year-old students attended extra classes, and extra classes amounted to an average additional 10 hours of instruction per week, representing 27 percent of total instructional time.

Extra classes are problematic in several ways. First, if they focus on the same academic material that is part of the formal half-day curriculum (coaching sessions for compulsory subjects), as opposed to activities such as arts or sports that can help build behavioral skills, they risk consuming precious tuition time that could be allocated for alternative activities. Second, extra classes are often informal and not regulated. They place teachers in an undue position of power in relation to parents. There is evidence that many parents are asked to make unofficial payments to schools and teachers (World Bank 2012a; CECODES, VFF-CRT, and UNDP 2013). Third, richer households are able to spend much larger amounts on extra classes (see figure 4.7), and extra classes are mainly an urban phenomenon. The risk, therefore, is that extra classes may deepen inequalities in learning, as opposed to bridging them. Fourth, extra classes serve exams, which reward heavy preparation in terms of memorization and model answers, but which are not demanding in terms of creativity and critical thinking. Changing the nature of exams, especially those that act as gatekeepers, may help change some of the practices around extra classes.

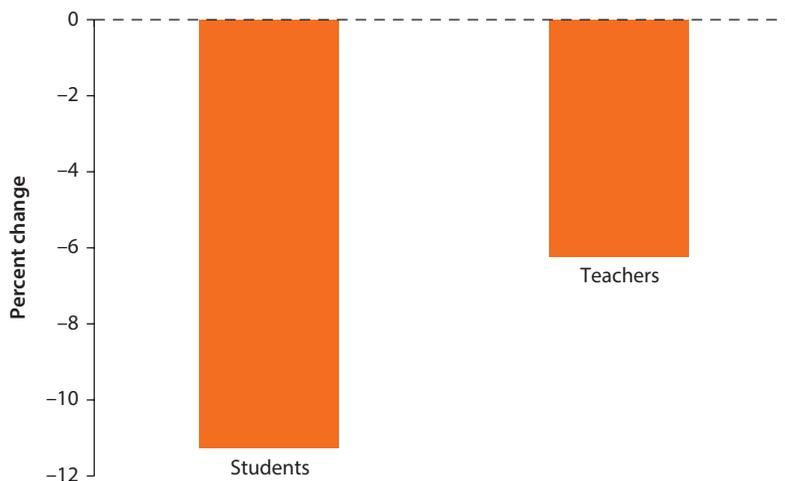
Expanding formal full-day schooling may well be the best strategy to limit extra classes. MOET has attempted to regulate the provision of informal extra classes, but with little apparent effect. An alternative to regulating extra classes is to expand formal full-day schooling to reduce the time available for teachers to offer private tuition and to help make up for the revenue loss related to forgone extra classes. An expansion of full-day schooling can be financed by a mix of budgetary and private resources. Well-off parents who currently finance extra classes for their

children could be asked to provide formal cofinancing to schools for full-day schooling as opposed to informal payments to teachers who provide extra classes.

The shift toward ensuring full-day primary schooling has already begun, but does not yet cover the whole country. The incidence of formal extra classes in rural settings is lower than in urban settings, and a significant share of children at primary level remains in half-day provision. This is why MOET is promoting the expansion of formal full-day schooling and has launched a program to expand full-day schooling in primary schools in the 35 poorest provinces with support from the School Education Quality Assurance Program (SEQAP) cofinanced by Belgium, the United Kingdom, and the World Bank. A foreseen increase of tuition time under full-day schooling to at least 30 instructional periods by 2015 and 35 by 2020 would allow Vietnam to catch up with international standards (Cerbelle 2013).³

A decline in student numbers in general education may open fiscal space to further expand full-day schooling and enrollments at the secondary level. Vietnam is beginning to undergo a dramatic demographic transition with declining cohort sizes among the young and expanding among the old. According to Vietnamese census data, the size of the population cohort below the age of 15 declined by 17 percent between 1999 and 2009. Data from the annual census of primary schools from the District Fundamental School Quality Level Audit (DFA) presented in figure 4.8 show that the number of students in primary schools declined by 11 percent between 2005 and 2010. Fewer students need fewer teachers, so the number of teachers has also declined, although by a smaller percentage. While managing a decline in student numbers is challenging, it may open fiscal space. Excess teachers can

Figure 4.8 Changes in the Number of Teachers and Students in Primary Schools, 2005–10



Source: World Bank staff estimates using District Fundamental School Quality Level Audit (DFA) 2005 and 2010 data.

be reallocated to help deliver full-day schooling, or savings from a smaller teaching workforce can be reallocated to pay remaining teachers for longer instruction times. Beyond reallocating resources within primary education, the demographic decline may free up resources for expanding schooling at the secondary level, including progressively abolishing tuition fees at the secondary level and enhancing financial support to students from poor families.

Better Schooling

What matters is not just more schooling but more quality schooling with a curriculum and teaching methods that foster the formation of higher-order cognitive and behavioral skills. Vietnam already has a successful education system that performs well in imparting core basic cognitive skills. This is also true for children from disadvantaged backgrounds who do not appear to be falling further behind in primary education. How to make schooling in Vietnam better, therefore, is not an obvious proposition, but the Vietnamese authorities are already embarking on a reform aimed at making schooling better—through a modernized, competency-based curriculum, more student-centered teaching methods, and enhanced competency of the teaching workforce. Children from disadvantaged backgrounds are likely to benefit disproportionately from such reforms.

Curriculum

Vietnam's current general education curriculum is more focused on teaching content and knowledge rather than on developing higher-order cognitive and behavioral skills in students. Vietnam's general education curriculum, which was adopted in 2000, sets out, among other goals, to strengthen students' ability to cooperate and self-study and to apply knowledge in practice as objectives of education activity. MOET, however, acknowledges that these goals do not go far enough to meet today's needs. According to the ministry, the problem with the current curriculum is that it focuses too much on content and knowledge and not enough on providing self-study skills, the practical application of knowledge, and the development of the cognitive and behavioral skills (MOET 2010).

A new general education curriculum is under development, providing a major opportunity to reorient the system. The XI Congress of the Communist Party in 2011 said the "Vietnamese education system should be fundamentally and comprehensively renovated in the coming years, aiming at standardization, modernization, socialization, democratization, and international integration; renovating the curriculum, contents, teaching, and learning methods; renovating the education management mechanism, building capacity for the teachers and training managers." In response, MOET has launched an ambitious process of developing a new general education curriculum and new textbooks by 2015. It aims to define students' essential competencies, which will then form the basis of educational objectives, standards, learning content, teaching methods, and assessment. The vision is to ensure the curriculum's coherence from grade 1 through

grade 12, but with more broad-based content focus in basic education (primary and lower secondary) and more electives in upper secondary education. It should be nationally consistent but enable provinces to adjust a certain flexible share of the curriculum. It will define half-day provision but provide schools with guidance on how to arrange full-day provision. A strong emphasis is placed on modernizing teaching methods and student assessment.

Vietnam's chosen direction for curriculum reform follows that chosen by other countries in East Asia and worldwide. In 1997 Singapore adopted the "Thinking Schools, Learning Nation" initiative, which aims to promote active learning and creative and critical thinking in schools. The initiative involved the explicit teaching of critical thinking and problem-solving skills, for example, through a new secondary school subject called knowledge and inquiry and a reduction of subject content (Tan and Gopinathan 2000). Korea's new national curriculum places more emphasis on critical thinking skills and creativity than in the past. In both cases changes to assessment methods and approaches were critical elements of the reforms. In Korea, university entrance exams use essays that test writing and logical thinking, and in Singapore university admission criteria were widened beyond secondary graduate certificate and an entrance examination to results in project work in schools and extracurricular activities.

Pedagogy and Teaching Methods

Curriculum change and textbook reform are important steps, but the resulting changes in the teaching methods and instruction in the classroom are even more important. In other words, implementation matters most and requires enhancing the skills of teachers and school principals and parental involvement. Translating a new general education curriculum into concrete change in the classroom will, therefore, require modernization of teacher professional development, both in-service and pre-service, and sustained investment in its rollout across Vietnam's teacher workforce. Change will also involve the need to continue strengthening student assessment. Vietnam is already testing new teaching methods that are more geared toward developing cognitive and behavioral skills. MOET has begun introducing the model of *Escuela Nueva* from Colombia into primary schools in Vietnam on a pilot basis (see box 4.1) with the aim of informing the renovation of the general education curriculum, the teaching methods used, and how to manage its possible rollout.

Teachers matter most for better schooling. Enhancing the competencies of the teaching workforce is the single most important investment to create the preconditions for the formation of higher-order cognitive and behavioral skills. The skills and abilities of the teaching workforce significantly affect the quality of learning in the classroom. Teacher education and qualifications have been found to be a positive and significant predictor of student achievement worldwide—and in grade 5 examinations in Vietnam (World Bank 2011; Rolleston et al. 2013). A well-qualified teacher workforce is likely better equipped to translate a changing curriculum into the reality of changed teaching methods in the classroom. Because the aggregate teacher wage bill exceeds 80 percent of total education

Box 4.1 Vietnam *Escuela Nueva*

Escuela Nueva is a model of organizing schools and classrooms in a way that enhances the development of core cognitive and behavioral skills, such as problem solving and teamwork. It was launched in Colombia in 1975 by the *Fundación Escuela Nueva*, a Colombian nongovernmental organization (NGO), to help improve schooling outcomes among children in disadvantaged circumstances, and is now serving more than 5 million children across 16 countries worldwide. The Ministry of Education and Training (MOET) has adapted the model to the Vietnamese circumstances and is piloting the Vietnam *Escuela Nueva* (VNEN) in close to 1,500 primary schools across the country with financial support from the Global Partnership for Education (GPE). VNEN puts forward five key elements of innovative teaching:

- *Students at the center of the learning process*, with encouragement and support to develop their own learning goals and with the necessary tools and resources to realize those goals
- *Cooperation and collaboration between small groups of learners* that not only lead to higher academic achievement, but also promote independence, self-esteem, and interpersonal skills and relationships
- *Active and reflective learning methods* that take place in a supporting classroom environment, encourage student inquiry and discovery, provide problem-solving opportunities, and generate maximal cognitive engagement to students interspersed with adequate resting periods
- *Linkages in students' knowledge building as the basis of the pedagogical content*—new information is integrated with existing knowledge structures, including the use of innate human inductive skills, to derive patterns and apply them to solve problems
- *Empowerment of the local community* to ensure that school life is integrated with the child's social and family life and that local cultural practices are valued in the school just as they are at home.

These innovations mean that teaching and learning in VNEN are quite different from the traditional model currently in use in schools in Vietnam. The main visible difference is the seating arrangement—children are seated in clusters of four or five students as compared to the row and bench seating in traditional classrooms. VNEN classrooms also contain more material to provide intellectual stimuli to the children—math and reading corners, a “tree of words” to depict different groups of words, and community maps. VNEN encourages parents and the community to take part in the life of the school—especially in ethnic minority areas, where parents and others come to school to pass on their traditions.

VNEN follows the same general education curriculum as the traditional classrooms, but presents the curriculum in a way that will better engage the students. For example, teaching under VNEN includes a 3-in-1 learning guide (textbook, workbook, and guide together in one book) with more interactive exercises to complement the stories that make learning more fun and engaging for children. Teachers engage in less reading and writing on the board, and students spend more time on tasks. VNEN provides tools, such as materials, protocols,

box continues next page

Box 4.1 Vietnam *Escuela Nueva* (continued)

and methods, that enable even teachers of an ordinary level of ability to provide an enriching learning experience.

VNEN is planned to undergo a rigorous impact evaluation that will provide policy makers with in-depth information on success factors that could be expanded systemwide as part of the planned general education curriculum reform.

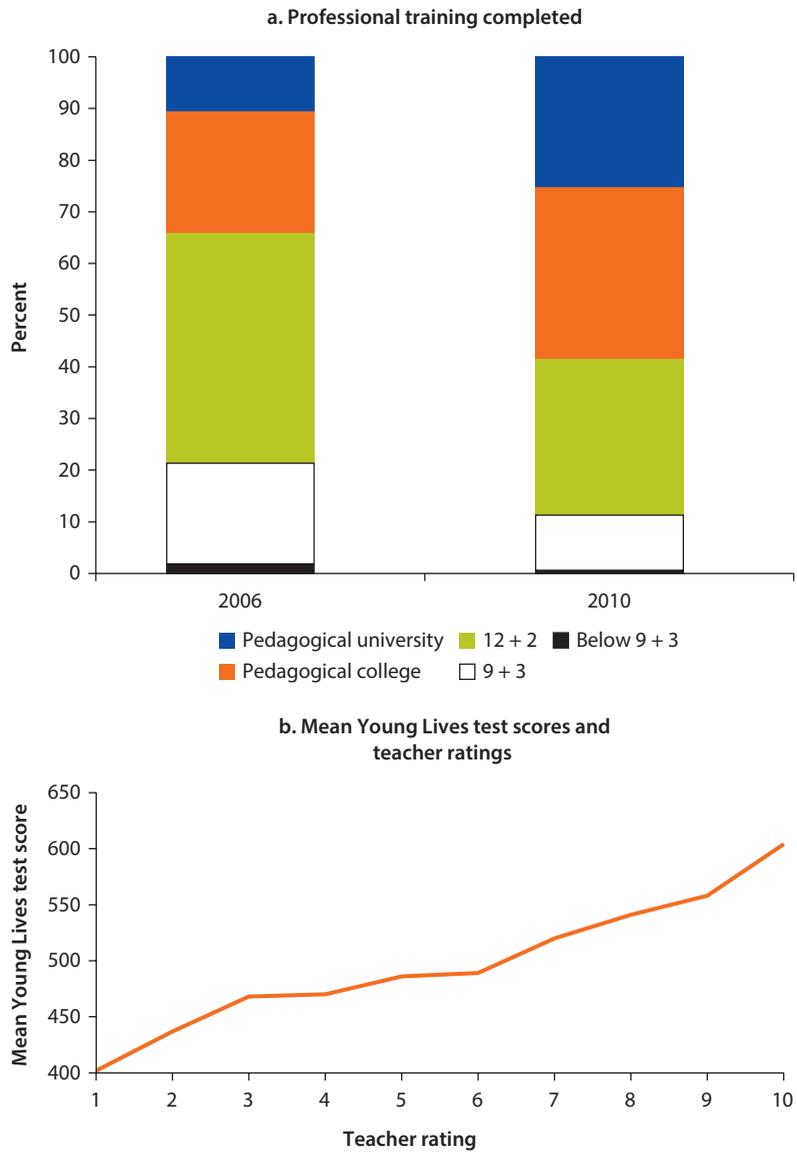
Sources: Epstein and Yuthas 2012; World Bank 2012b.

expenditures in Vietnam, improving what teachers do in the classroom is also the main investment into quality that the government can make.

The quality of Vietnam's teaching workforce is already an asset. The primary education teacher workforce has become significantly better qualified in recent years. Nearly 60 percent of all primary school teachers now hold a college or university degree—almost double the share of 2006. The share of teachers with only 9 or 12 years of academic schooling followed by 3 or 2 years of teacher training has also declined significantly (figure 4.9, panel a). Increased teacher qualification matters: evidence from the 2012 Young Lives School Survey suggests that high-performing schools have higher shares of teachers with a college or university degree. High teacher capacity is also evident in their capability to correctly assess their students' abilities, which is critical to help them provide the support their students need. Data from Young Lives show a strong correlation between teacher ratings and mean test scores in mathematics for the same students (figure 4.9, panel b). Moreover, teacher attendance in Vietnam is very high—another strong feature of the Vietnamese education system. The already high capacity and rising qualifications of the teaching workforce can be expected to provide a sound foundation for further professional development related to the new curriculum and teaching methods.

Investing in in-service professional development to equip teachers with the skills to teach a renovated curriculum is one of the most important tasks for Vietnam's education system in the coming years. Vietnam can build on an increasingly well-qualified teaching workforce at the primary level through the use of in-service professional development, but there is much to improve. First, the evidence from the DFA suggests that in-service professional development among primary teachers is limited and its use has been declining. Second, the content and methods of in-service professional development require modernization. The content will need to be reformulated in line with the changes that the new general education curriculum will bring. In reforming the method of delivery, teacher training needs to shift away from the traditional cascading model (MOET trains trainers who train other trainers to deliver training in the summer months) to a method of delivery in which capacities in provincial teacher training colleges are enhanced to provide more tailored programs all year round and with new teaching methods. A special emphasis will be required to equip teachers with the right skills and tools, especially those in the most

Figure 4.9 Primary Teachers’ Professional Training, and Correlation of Student Test Scores and Their Teachers’ Ratings



Sources: Panel a, World Bank staff estimates based on District Fundamental School Quality Level Audit (DFA) data, 2006 and 2010; panel b, Rolleston et al. 2013.

Note: 9 + 3 = 9 years of academic training followed by 3 years of teacher training; 12 + 2 = 12 years of academic training followed by 2 years of teacher training.

challenging circumstances, such as those teaching in remote regions and those teaching students from ethnic minority backgrounds.

Teacher training needs to focus not only on how to teach curriculum content but also on how to impart behavioral skills. Chapter 3 describes how behavioral skills are associated with learning success and the acquisition of cognitive skills.

Pupils with greater academic confidence make more progress, holding other factors constant (Yorke and Rolleston, forthcoming). An effective teacher in Vietnam, therefore, needs to be good at teaching mathematics, Vietnamese, and other subjects and to excel at helping students to build confidence and show good effort. Teacher effectiveness begins with attitude and motivation. Evidence from the 2012 Young Lives School Survey shows that teachers in high-performing schools had more confidence that their students would succeed (and not be hampered by their family backgrounds) compared to teachers in less well performing schools with respect to the learning prospects of children from disadvantaged backgrounds. Effective teachers were more likely to disagree with the statement that the amount a student can learn is primarily driven by family backgrounds and more likely to agree that a student's home experience can be overcome by good teaching (Rolleston et al. 2013). A teacher with a more fatalistic or discriminatory attitude is unlikely to be able to effectively foster behavioral skills such as academic confidence and effort by students. Explicitly influencing teacher attitudes in teacher training and professional development, therefore, is likely to raise teacher effectiveness.

Assessment

Beyond curriculum and teaching methods, student assessment needs to be aligned with the objective of fostering higher-order cognitive and behavioral skills. Once the curriculum and standards in general education are adjusted to better reflect higher-order cognitive and behavioral skills, the student assessment system needs to be equipped with the tools to help evaluate these skills in students, see how schools perform in imparting these skills, and to hold schools and local education authorities accountable for results. Efforts to promote the formation of critical and creative thinking and behavioral skills in Singapore and Korea have involved changes to student assessment and university admission criteria.

Educational assessment is firmly anchored in Vietnam's general education system and consists of the three main categories of assessment. First, *classroom assessments* involve written and oral tests, and marked assignments and homework are used in classrooms across the country with the objective of providing real-time feedback on students' performance to inform teaching. Second, *national examinations* for making high-stakes decisions about students' progression to the next level in the education system are firmly established and widely accepted as a mechanism for selecting students for further education, both at grade 9 (in some provinces) and the school-leaving examination at grade 12 (the results of which are used mainly for entry to vocational and professional colleges), and the university entrance examination. Further tests are being conducted according to provinces' preferences and capacities. Third, Vietnam has conducted *large-scale surveys* of grade 5 (2001, 2007, and 2011) and grade 6 and grade 9 (2009), and in 2012 participated for the first time in PISA, which is organized by the OECD.

The potential for using classroom assessments for improving student learning is not yet fully exploited. MOET has issued curriculum standards to guide

the design and structure of classroom assessments, but so far the evidence of the utilization of these standards in test development in practice is limited. Teacher capacity in using assessment techniques is one obstacle. Teachers often cite the difficulty in translating the standards into specific test items given that the standards are presented in a very general way. Instead, they often use textbooks and teachers' guides as the basis for devising tests. In upper secondary schools, teachers acknowledge that the tests they develop are heavily influenced by the structure and content of the high-stakes examinations (grade 12 graduation and university entrance). Moreover, the results from classroom assessments and examinations are not routinely utilized in schools to guide quality improvements in teaching, including by effectively communicating results to parents. Further efforts to raise teachers' capacity in using classroom assessment and improved monitoring and feedback to teachers on the quality of classroom assessments are necessary to make effective use of this important tool to promote quality of teaching (World Bank 2009).

The system of national examination is well established, but its potential could be leveraged more. The General Department of Testing and Accreditation (GDETA) manages national examinations and is accountable to MOET. The examination questions are based on an examination framework for each subject that tends to follow the relevant textbook in use in schools rather than the official curriculum. The grade 12 examination consists of multiple-choice questions only, while the university entrance examination also includes open-ended questions. The university entrance examination is perceived as more rigorous and valid than the grade 12 test. There are no mechanisms in place, such as pilot testing or pretesting, to ensure the quality of the examinations. The quality of national examinations and public confidence could be enhanced by making publicly available high-quality, independent technical reports, and by introducing systematic and transparent mechanisms to ensure quality at key stages of the examination process, including training the GDETA staff on contemporary assessment practices. Quality could also be enhanced by independent research on the impact of national examinations, creating a permanent oversight committee, or conducting regular quality reviews (World Bank 2009).

Large-scale national assessments are perhaps the weakest link in the system. Large-scale surveys at grades 5, 6, and 9 are not a formal element of the system. They have been conducted on an irregular basis with the financial and technical support from the World Bank and the Asian Development Bank (ADB). Although significant capacity has been built for the management of national assessments, the quality of the grade 5 assessment in 2011 was regarded as weak, underscoring the need to further enhance capacity. The principal constraint is that the national assessments have been ad hoc and not part of a system. They have typically been managed out of project management units and do not have an organizational "home" or a standard system built around them.

Student assessment needs to become more varied and involve test items designed to assess higher-order cognitive skills such as creative thinking and problem solving. Students' behavioral skills can be assessed by teachers and, as in

some German states, be communicated regularly to parents in student report cards. More generally, student assessment should be reflective of the full curriculum, not just those things that can be easily tested, including through multiple-choice tests, such as mathematics. Multiple-choice tests have much to recommend them in a situation in which over a million students are being assessed, but the testing approach needs to be broadened if the quality of learning is to be improved. Students need to know that other abilities are also valued, such as being able to write, speak, and listen in language studies and being able to design and carry out experiments in science or projects in geography. The introduction of more open-ended questions would allow for greater emphasis on higher-order thinking and problem solving.

More Involvement of Parents and Communities in Schooling

A prominent role for parents in schooling is important for several reasons. First, parents have a strong interest in ensuring that their children receive a quality education. Providing parents with information and a forum to voice views and advise the school can make the school more explicitly accountable to them for their children's learning progress. Second, much learning takes place at home, and the home environment is an important contributor to learning success. For example, the availability of a child's own place to study at home has been found to be associated with higher learning achievement at grade 5 in Vietnam (World Bank 2011). Parents need to be aware of the learning process and content in the school and how they can complement them by providing effective support to their children's learning at home—after school and during the long summer vacations. Third, a greater involvement of parents and communities will help make instruction more reflective of local needs, traditions, and contexts. It will also help build bridges where there are cultural and other gaps between school and home, for example, in the case of ethnic minority children who are taught by Kinh teachers. Finally, involvement in school can help raise parenting skills benefiting also any siblings not yet in school.

The opportunities for formal parental involvement in schools beyond making financial contributions are limited in Vietnam. According to government regulations, schools can establish a parents' council for a class or the school as a whole, but where such councils exist they have little formal influence. Councils can channel parents' feedback to teachers on educational issues and allow parents to express their views to the principal on educational activities or school management. Legally, however, the parents' council has very limited weight on influencing the operation and monitoring the performance of a public school. Moreover, school councils do not even have to include parents as members. In practice, the role of the parents' council is often reduced to collecting parents' voluntary contributions to the school. In cases of dissatisfaction, the only way for parents to be heard is via going to the provincial or district education authorities, according to the Law on Complaints.

A greater role of parents in the school usually goes hand-in-hand with the transfer of more decision-making power from education authorities to the

school. But it is possible even within the current system of central standards and predominant decision making at the province level. Provinces and districts could cede certain decisions to schools that could be made with the involvement of parents. Schools could be entrusted with deciding the arrangements for full-day schooling, and parents could contribute to this decision making. Parents could advise on how to incorporate extra classes into the formal program and how to arrange afternoon activities under formal full-day schooling. Despite the different models of what roles to assign to parents and community members, it is agreed that parents also need sufficient information and capacity to be effective participants in school governance.

Parental advice on some aspects of budgetary decisions, such as the use of school grants, is usually a first step in the direction of greater involvement. Vietnam has already taken some steps toward greater school-based management and enhancing the role of parents in primary and secondary schools. More could follow. The SEQAP project involves the use of school improvement grants that the school, rather than provincial or district authorities, can decide how to use. Parents could take part in the decision process. Schools participating in VNEN have the freedom to involve parents in the learning process and to contribute to learning content, for example, through introducing local ethnic minority traditions in the program. Augmenting these first steps would be a logical next step.

A greater involvement of parents and communities in schooling is possible even in disadvantaged communities. Vietnam's experiences with SEQAP, VNEN, and earlier pilot projects employing ethnic minority teaching assistants show that greater involvement of disadvantaged parents and communities in schooling is possible and important for the educational process. Experience from rural communities in Pakistan shows how school report cards for parents in very low capacity contexts were successful in helping to raise achievement scores for initially poor-performing schools (Andrabi, Das, and Khwaja 2009).⁴

Summary and Conclusion

Vietnam's general education system is well placed to transition to a new phase in education development from expanding access to deepening quality. After two decades of successful expansion in access to general education, greater emphasis now needs to be placed on ensuring that more children learn and acquire the higher-order cognitive and behavioral skills demanded in Vietnam's labor market. Progress in this direction will require further expanding access to secondary education and expanding instruction time through full-day schooling, thereby also reducing the prevalence of informal extra classes. The reduction in student numbers due to declining age cohorts provides an opportunity. Budget resources can be freed up to cover additional costs associated with expanding enrollments in secondary education and full-day schooling, including progressively abolishing tuition fees at a secondary level. Second, more schooling should mean better schooling through a competency-based, as opposed to content-based, general education curriculum, coupled with the right teaching

methods to stimulate creative and critical thinking in primary and secondary school students. Enhanced in-service teacher training capacity will be critical to equip Vietnam's teaching workforce with the capabilities to make a new curriculum a reality in all classrooms in the country. Third, a greater involvement and outreach to parents will help them to hold the school more explicitly accountable for children's learning success and to make sure that children get the best possible learning support at home.

Annex 4A: In Depth

Results from the 2012 Programme for International Student Assessment

Vietnam participated in the PISA for the first time in 2012. Vietnam's 15-year-old students performed significantly above their peers in many much wealthier OECD countries. It also showed a significantly smaller share of low achievers (defined as performance below level 2 of the PISA mathematics scale) than the OECD average, and its results appear to be less driven by socioeconomic and cultural background than in many other participating countries (OECD 2013). Because PISA assesses the competencies of 15-year-olds in school, it excludes the relatively large share of Vietnam's early school-leavers, who are disproportionately from poor and disadvantaged backgrounds and who often perform less well than the average. Table 4A.1 presents the results of PISA 2012 in mathematics, reading, and science.

Table 4A.1 PISA Assessments of Vietnamese 15-Year-Olds and Their Peers in OECD and Other Economies, 2012

| | <i>Mathematics</i> | | | <i>Reading</i> | <i>Science</i> |
|----------------------|--------------------------------|--|--|--------------------------------|--------------------------------|
| | <i>Mean score in PISA 2012</i> | <i>Percentage of low achievers (<level 2)</i> | <i>Percentage of top performers (level 5 or 6)</i> | <i>Mean score in PISA 2012</i> | <i>Mean score in PISA 2012</i> |
| OECD average | 494 | 23.1 | 12.6 | 496 | 501 |
| Shanghai, China | 613 | 3.8 | 55.4 | 570 | 580 |
| Singapore | 573 | 8.3 | 40.0 | 542 | 551 |
| Hong Kong SAR, China | 561 | 8.5 | 33.7 | 545 | 555 |
| Taiwan, China | 560 | 12.8 | 37.2 | 523 | 523 |
| Korea, Rep. | 554 | 9.1 | 30.9 | 536 | 538 |
| Macao SAR, China | 538 | 10.8 | 24.3 | 509 | 521 |
| Japan | 536 | 11.1 | 23.7 | 538 | 547 |
| Liechtenstein | 535 | 14.1 | 24.8 | 516 | 525 |
| Switzerland | 531 | 12.4 | 21.4 | 509 | 515 |
| Netherlands | 523 | 14.8 | 19.3 | 511 | 522 |
| Estonia | 521 | 10.5 | 14.6 | 516 | 541 |
| Finland | 519 | 12.3 | 15.3 | 524 | 545 |
| Canada | 518 | 13.8 | 16.4 | 523 | 525 |
| Poland | 518 | 14.4 | 16.7 | 518 | 526 |
| Belgium | 515 | 18.9 | 19.4 | 509 | 505 |
| Germany | 514 | 17.7 | 17.5 | 508 | 524 |

table continues next page

Table 4A.1 PISA Assessments of Vietnamese 15-Year-Olds and Their Peers in OECD and Other Economies, 2012
(continued)

| | <i>Mathematics</i> | | | <i>Reading</i> | <i>Science</i> |
|----------------------|--------------------------------|--|--|--------------------------------|--------------------------------|
| | <i>Mean score in PISA 2012</i> | <i>Percentage of low achievers (<level 2)</i> | <i>Percentage of top performers (level 5 or 6)</i> | <i>Mean score in PISA 2012</i> | <i>Mean score in PISA 2012</i> |
| VIETNAM | 511 | 14.2 | 13.3 | 508 | 528 |
| Austria | 506 | 18.7 | 14.3 | 490 | 506 |
| Australia | 504 | 19.7 | 14.8 | 512 | 521 |
| Ireland | 501 | 16.9 | 10.7 | 523 | 522 |
| Slovenia | 501 | 20.1 | 13.7 | 481 | 514 |
| Denmark | 500 | 16.8 | 10.0 | 496 | 498 |
| New Zealand | 500 | 22.6 | 15.0 | 512 | 516 |
| Czech Republic | 499 | 21.0 | 12.9 | 493 | 508 |
| France | 495 | 22.4 | 12.9 | 505 | 499 |
| United Kingdom | 494 | 21.8 | 11.8 | 499 | 514 |
| Iceland | 493 | 21.5 | 11.2 | 483 | 478 |
| Latvia | 491 | 19.9 | 8.0 | 489 | 502 |
| Luxembourg | 490 | 24.3 | 11.2 | 488 | 491 |
| Norway | 489 | 22.3 | 9.4 | 504 | 495 |
| Portugal | 487 | 24.9 | 10.6 | 488 | 489 |
| Italy | 485 | 24.7 | 9.9 | 490 | 494 |
| Spain | 484 | 23.6 | 8.0 | 488 | 496 |
| Russian Federation | 482 | 24.0 | 7.8 | 475 | 486 |
| Slovak Republic | 482 | 27.5 | 11.0 | 463 | 471 |
| United States | 481 | 25.8 | 8.8 | 498 | 497 |
| Lithuania | 479 | 26.0 | 8.1 | 477 | 496 |
| Sweden | 478 | 27.1 | 8.0 | 483 | 485 |
| Hungary | 477 | 28.1 | 9.3 | 488 | 494 |
| Croatia | 471 | 29.9 | 7.0 | 485 | 491 |
| Israel | 466 | 33.5 | 9.4 | 486 | 470 |
| Greece | 453 | 35.7 | 3.9 | 477 | 467 |
| Serbia | 449 | 38.9 | 4.6 | 446 | 445 |
| Turkey | 448 | 42.0 | 5.9 | 475 | 463 |
| Romania | 445 | 40.8 | 3.2 | 438 | 439 |
| Cyprus | 440 | 42.0 | 3.7 | 449 | 438 |
| Bulgaria | 439 | 43.8 | 4.1 | 436 | 446 |
| United Arab Emirates | 434 | 46.3 | 3.5 | 442 | 448 |
| Kazakhstan | 432 | 45.2 | 0.9 | 393 | 425 |
| Thailand | 427 | 49.7 | 2.6 | 441 | 444 |
| Chile | 423 | 51.5 | 1.6 | 441 | 445 |
| Malaysia | 421 | 51.8 | 1.3 | 398 | 420 |
| Mexico | 413 | 54.7 | 0.6 | 424 | 415 |
| Montenegro | 410 | 56.6 | 1.0 | 422 | 410 |
| Uruguay | 409 | 55.8 | 1.4 | 411 | 416 |
| Costa Rica | 407 | 59.9 | 0.6 | 441 | 429 |
| Albania | 394 | 60.7 | 0.8 | 394 | 397 |

table continues next page

Table 4A.1 PISA Assessments of Vietnamese 15-Year-Olds and Their Peers in OECD and Other Economies, 2012
(continued)

| | Mathematics | | | Reading | Science |
|-----------|-------------------------|--|---|-------------------------|-------------------------|
| | Mean score in PISA 2012 | Percentage of low achievers (<level 2) | Percentage of top performers (level 5 or 6) | Mean score in PISA 2012 | Mean score in PISA 2012 |
| Brazil | 391 | 67.1 | 0.8 | 410 | 405 |
| Argentina | 388 | 66.5 | 0.3 | 396 | 406 |
| Tunisia | 388 | 67.7 | 0.8 | 404 | 398 |
| Jordan | 386 | 68.6 | 0.6 | 399 | 409 |
| Colombia | 376 | 73.8 | 0.3 | 403 | 399 |
| Qatar | 376 | 69.6 | 2.0 | 388 | 384 |
| Indonesia | 375 | 75.7 | 0.3 | 396 | 382 |
| Peru | 368 | 74.6 | 0.6 | 384 | 373 |

Source: OECD 2013.

Note: Economies are ranked by the mean scores in mathematics.

Education and Skills Development in the Republic of Korea

The Republic of Korea is a useful case study for Vietnam. Both countries' education systems are rooted in and are strongly influenced by Confucianism. Korean and Vietnamese citizens view the pursuit of education as an important social value, and industrialization and economic development strategies emphasize human resource development. Vietnam is interested in Korea's experience in skills development and draws lessons from Korea's distinguished achievements, such as high PISA scores and high enrollment rates at all levels of education. The history of Korea's modern education and skills development reforms are summarized in table 4A.2.

Education development at the initial stage of Korea's postwar period focused on promoting literacy through enforcing the universalization of primary education (1948–60). The main focus for educational development during that phase was on reconstruction of educational infrastructure. Educational programs initially launched during 1945–48 and the formal establishment of primary education after the proclamation of Korea in 1948 aimed at reducing the high illiteracy rate (more than half of the population aged 13 and above was illiterate at the time). At this time Korea also established the 6-3-3-4 linear school system: six years of elementary education, three years of middle school education, three years of high school education, and four years of higher education. This system prevents dead ends in education careers and introduces multiple pathways to tertiary education (TE). Last, primary school teachers' qualification requirements were upgraded from upper secondary school diploma holders to four-year teachers' college graduates.

In the period of 1961–80 the emphasis shifted toward an expansion of vocational high school and strengthening of science and technology disciplines. Korea was experiencing strong economic growth and a shift of employment from agriculture to capital-intensive heavy and chemical industries during this phase.

Table 4A.2 Korean Education Development Focus, Policy Goals, Major Concerns, and Resources, 1948 to Present

| <i>Periods</i> | <i>1948–60</i> | <i>1961–80</i> | <i>1981–2000</i> | <i>2001–present</i> |
|-----------------------------|--|---|---|--|
| Education development focus | Reconstruction of educational infrastructure | Education for economic growth | Decentralization of education Facilitation of local autonomy | Restructuring education system |
| Policy goal | Universal primary education (compulsory) | Universal secondary education Supply technical manpower Enhance technical and vocational training | Universal tertiary education Quality improvement Vocational training reform | Lifelong learning Human resource development Quality improvement of public schools Research support (TE) Regional development (TE) Human resources development (TE) |
| Major concerns | Access to education | Growth of quantity—efficiency and control | Quality Autonomy Accountability | Competitiveness in globalization Knowledge society |
| Resources, tools | Using foreign assistance | Long-term (5-year) planning Law of Local Education Financing Fund Foreign loans to support TVET | Presidential Commission for Education Reform 1995 Education Reform | Education and financial support for TE |

Source: KEDI 2007.

Note: TE = tertiary education; TVET = technical and vocational education and training.

Simultaneous population growth and urbanization generated increasing social demand for education. To strengthen education, the government further expanded primary school enrollment and promoted vocational high schools and science and technology education. Expanding primary education enrollment resulted in overcrowded classrooms and raised competition among students for seats in secondary schools. To relieve the burden, Korea moved toward automatic grade promotion and abolished the entrance exams for lower and upper secondary schools in 1969 and 1974, respectively.

Between 1981 and 2000 Korea decentralized its educational administration and shifted from bureaucratic control to increased local education accountability to stimulate improvements in education quality. The growing numbers of secondary school graduates in turn increased the demand for TE. Private tutoring began to flourish. In addition, a widening income gap during this period resulted in unequal access to education. Education reforms aimed to eradicate private tutoring and relieved students from competitive exams. Reforms further lifted government's control over university enrollment, and in 1995 universities were granted more autonomy in recruiting students. The Presidential Commission for Education Reform summarized Korea's new direction for educational development, including more emphasis on learner-centered education, diversification of educational programs, autonomy and accountability of school operations, a new

information system, and a new mechanism to allow open access to results of school education evaluation (KEDI 2007).

Since 2001 the East Asian financial crisis and globalization have forced Korea to refocus on strengthening the nation's competitiveness through education. Reforms to Korea's education system have aimed at responding to two challenges: (a) supporting the nation's competitiveness in the global market; and (b) meeting the human resource development needs. The first priority of the government has been to reform higher education in a way that enhances its relevance and the international competitiveness of Korean universities and to strengthen technical and vocational education and training (TVET) to reduce an overreliance on TE. In improving the nation's competitiveness and in preparation for the advent of becoming a knowledge-based society, lifelong learning is considered to be an integral part of the educational system.

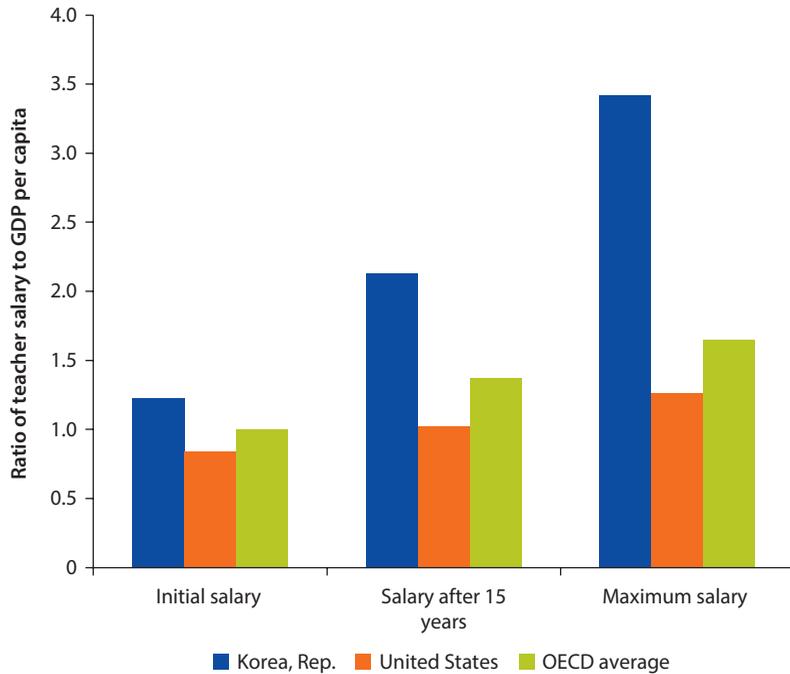
Korea has had the advantage of being able to sequentially improve its education system and to shift gears slowly toward rigor and responsiveness to the economic development over the decades. The journey for education development sets an interesting example of how a growing economy could achieve national education success in quantitative expansion and qualitative improvement simultaneously without a trade-off. It also shows how an education system develops from an elite to a mass system and finally to universal access and how doing so can enhance a country's economic development (Jones 2013). Today, a number of features of the Korean education system stand out.

First, teacher salaries in Korea are high in relation to the OECD standard and in relation to GDP per capita. Well-trained and well-remunerated teachers tend to be one of the driving forces for improved quality of education. Figure 4A.1 presents the ratio of the average salary of a teacher in lower secondary education relative to GDP per capita in comparison to that of the United States and the OECD country average in 2008. Korean teachers are significantly better paid than their peers elsewhere in the OECD.

Second, Korea's no-dead-end tracking ensured that 84 percent of secondary school graduates transitioned to college in 2008. The 6-3-3-4 linear track also ensures that all secondary school graduates, whether from an academic or vocational school, are equally qualified to apply to universities. Students are not being streamed into vocational programs that might restrict them from entering academic tertiary programs.

Third, there was shift from rote memorization to knowledge-based education and an emphasis on critical thinking and problem-solving skills. As Korea entered the 21st century, the focus of its education system was no longer only on rote memorization of academic content, but was broadened to impart broader cognitive skills such as problem solving and critical thinking, which have helped Korean students to score high in PISA.

Fourth, Korea's education system is well funded. Total spending on education in Korea is the second highest in the OECD as a share of GDP spending on education (8 percent in 2009). This includes a significant share of private sector contributions, accounting for 40 percent of total education spending (above

Figure 4A.1 Ratio of Lower Secondary Teachers' Salary to GDP per Capita, 2008

Source: Jones 2013.

Note: GDP = gross domestic product; OECD = Organisation for Economic Co-operation and Development.

50 percent for pre-primary, 25 percent for nontertiary, and more than 70 percent for TE). Spending is not just high but also efficient: relatively high teacher salaries are possible also due to slightly larger average class sizes than elsewhere.

Despite the successes of Korea's education system, some weaknesses remain. Prominent among them is private tutoring, which needs to be further regularized and restricted in the school system. Reliance on private tutoring has been one of the biggest issues in the Korean education system. Private tutoring is expensive, and the reliance on it creates inequalities among students due to differences by socioeconomic status (Jones 2013).

With around 70 percent of high school graduates moving on to TE, Korea has recently focused attention to further improving the TVET system to address the overemphasis on TE. Korea's employer federation estimates 30 months and US\$100,000 to train new tertiary graduates in the skill requirements in their jobs, which reflects the reality that students are lacking vocational skills despite strong academic achievements. Vocational education and training has had a long history in Korea, dating since the 1960s. In the 1990s Korea launched a special TVET high school program involving two years in school followed by one year of workplace training, inspired by the German dual system apprenticeship model. The number of schools and students

choosing this path started to drop a few years after its introduction (Lee 2007), and the program was abolished.

More recently, to address demand from industry, the government decided to promote innovation in TVET through “meister high schools” to offer customized employment-linked vocational training programs and to reinforce demand-orientation (Park 2011). As part of the reform, 21 meister high schools were founded to train students to become skilled workers in industries such as new media, energy, machinery, mechatronics, and telecommunication. The plan is to expand the number of such schools to 50 by 2015. Moreover, curricula and teaching methodology started to incorporate a competency-based approach. A National Competency Standard (NCS) was developed in 1996 to set standards that define the knowledge and skills required of workers in specific occupational fields and to set systematic criteria based on which individuals may be educated and trained.

The reform also entailed a further strengthening of private sector engagement and collaboration among different ministries to help eliminate the mismatch of skills affecting TVET graduates. The Ministry of Education and the Ministry of Labor collaborate to pursue joint and consistent policies. Similarly, collaboration extended to the private sector and large corporations, small and medium-size companies, sectoral councils, and trade associations.

Notes

1. There may be concern that the decline in relative performance of those with the highest test scores captures mean conversion, for both better- and worse-off students. While mean conversion may well be occurring, it is interesting to note that the decline for worse-off students is substantially greater than for better-off students. The opposite can be said for those students whose rank is rising over time. To check the robustness of the results to these concerns, we examine whether the same results are found when a student performs poorly (or well) on two tests, mathematics and Vietnamese. If a student falls within the bottom 25 percent on both tests, something other than measurement error may be at work. We find similar results both for ranks and normalized scores when we examine the change in their test scores over time, suggesting that these trends are not a statistical artifact but are likely to reflect underlying processes.
2. A notable exception is access to computer and Internet technology in schools, which is far more common in more advantaged urban areas and raises a concern regarding a digital divide. With prospective students in urban areas turning predominantly to online information resources when making educational and career choices, less access to computers and the Internet in rural and remote areas in school risks becoming a key constraint to decision making. See chapter 5.
3. Although in practice wide variation and often not a clear distinction can be found between formal full-day schooling and informal extra classes, full-day schooling is expanding fast. According to MOET data, the share of primary schoolchildren who received 30 or more instructional periods increased from around 60 percent to 73 percent nationwide between 2007–08 and 2011–12 and from 39 percent to 70 percent in the 35 poorest provinces supported under SEQAP.

4. School report cards were distributed that compared learning achievement results across different schools in the same village. Many parents in the villages included in the program were illiterate; as a result, the distribution of report cards had to be done through facilitated village meetings to ensure everyone understood the results and to discuss the factors that influenced learning. This program shows that capacity building is possible for parents to understand learning outcomes and to play a role in their children's schooling even in the lowest capacity contexts.

References

- Andrabi, T., J. Das, and A. I. Khwaja. 2009. "Report Cards: The Impact of Providing School and Child Test Scores on Education Markets." Unpublished manuscript, World Bank, Washington, DC.
- Barrera-Osorio, F., and D. Filmer. 2013. "Incentivizing Schooling for Learning: Evidence on the Impact of Alternative Targeting Approaches." Policy Research Working Paper 6541, World Bank, Washington, DC.
- CECODES (Centre for Community Support and Development Studies), VFF-CRT (Centre for Research and Training of the Viet Nam Fatherland Front), and UNDP (United Nations Development Programme). 2013. "The Viet Nam Governance and Public Administration Performance Index (PAPI) 2012: Measuring Citizens' Experiences." Joint Policy Research Paper, Hanoi.
- Cerbelle, S. 2013. "Primary Education Teachers in Vietnam." Unpublished manuscript, World Bank, Washington, DC.
- Epstein, M. J., and K. Yuthas. 2012. "Scaling Effective Education for the Poor in Developing Countries: A Report from the Field." *Journal of Public Policy and Marketing* 31 (1): 102–14.
- Grosh, M., C. del Ninno, E. Tesliuc, and A. Ouerghi. 2009. *For Protection and Promotion: The Design and Implementation of Effective Safety Nets*. Washington, DC: World Bank.
- Jones, R. S. 2013. "Education Reform in Korea." OECD Economics Department Working Paper 1067, OECD (Organisation for Economic Co-operation and Development) Publishing, Paris.
- KEDI (Korean Educational Development Institute). 2007. *Understanding Korean Education*. Vol. 5 of *Education and Korea's Development*. Seoul: KEDI. <http://eng.kedi.re.kr/khome/eng/education/educationSeries.do>.
- Lee, Y.-H. 2007. *Workforce Development in the Republic of Korea: Policies and Practices*. Tokyo: Asian Development Bank Institute.
- MOET (Ministry of Education and Training of Vietnam). 2010. *Project on Curriculum and Textbook Renovation from 2015 Onwards*. Drafting committee. Hanoi.
- OECD (Organisation for Economic Co-operation and Development). 2013. *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*. Paris: OECD Publishing.
- Park, D. 2011. *Korean Policies on Secondary Vocational Education: Efforts to Overcome Skills Mismatch and Labor Force Shortage*. *Berufsbildung in Wissenschaft und Praxis (BWP)*. Bonn: Bundesinstitut für Berufsbildung. <http://www.bibb.eu/veroeffentlichungen/en/publication/show/id/6663>.
- Rolleston, C., Z. James, L. Pasquier-Doumer, and Tran Ngo Thi Minh Tam. 2013. *Making Progress: Report of the Young Lives School Survey in Vietnam*. Young Lives Working

- Paper 100, Department of International Development, University of Oxford, Oxford, U.K.
- SEQAP (School Education Quality Assurance Program). 2012. "Circular 35/2006—Options for Action: A Discussion Paper." Unpublished.
- Tan, J., and S. Gopinathan. 2000. "Education Reform in Singapore: Towards Greater Creativity and Innovation?" *NIRA (National Institute for Research Development) Review* 7 (3): 5–10.
- VHLSS (Vietnam Household Living Standards Survey). Multiple years. National Statistics Organization, Hanoi.
- World Bank. 2009. *Student Assessment: Vietnam*. SABER (Systems Approach for Better Education Results) Country Report. Washington, DC: World Bank.
- . 2011. *Vietnam: High-Quality Education for All*. Washington, DC: World Bank.
- . 2012a. *Corruption from the Perspective of Citizens, Firms, and Public Officials: Results of Sociological Surveys*. 2nd ed. Hanoi: National Political Publishing House.
- . 2012b. *Vietnam—Global Partnership for Education: Vietnam Escuela Nueva Project*. Washington, DC: World Bank.
- Yorke, L., and C. Rolleston. Forthcoming. *The Importance of Non-Cognitive Skills for Academic Achievement in Vietnam*. Young Lives Working Paper, Department of International Development, University of Oxford, Oxford, U.K.

