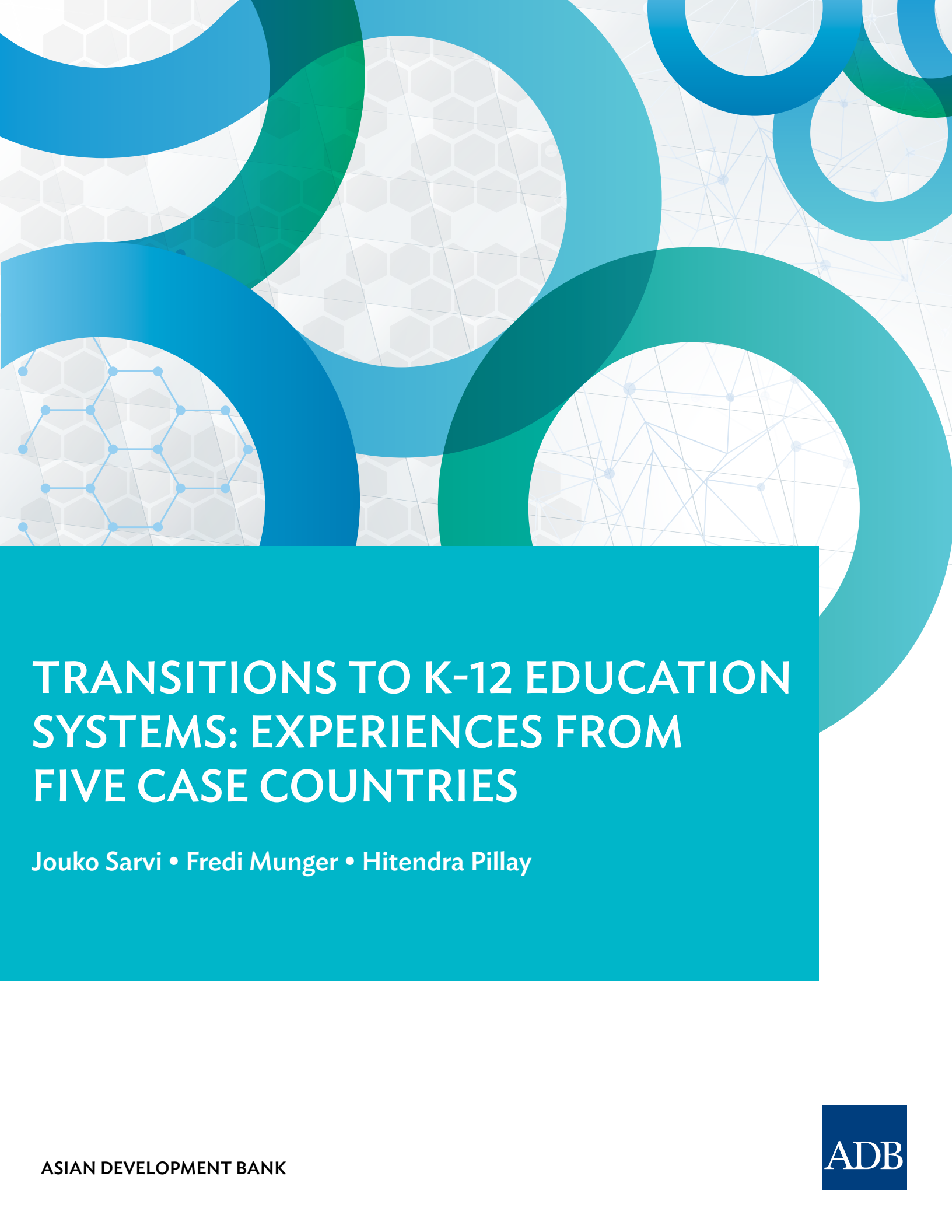




TRANSITIONS TO K-12 EDUCATION SYSTEMS: EXPERIENCES FROM FIVE CASE COUNTRIES

Jouko Sarvi • Fredi Munger • Hitendra Pillay

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Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CSR	Corporate Social Responsibility
DepEd	Department of Education
DP10	10 th Development Plan
EQAO	Education Quality and Accountability Office
ERI	Education Research Institute
ESC	education service contracting
EU	European Union
G20	The Group of Twenty
GASTPE	Government Assistance for Students and Teachers in Private Education
GDP	gross domestic product
GER	gross enrollment ratio
HEI	higher education institution
ISCED	International Standard Classification of Education
K-12	kindergarten through grade 12
LFP	labor force participation
LSS	lower secondary school
MECS	Ministry of Education, Culture and Science
NAT	National Achievement Test
NEET	not in education, employment, or training
NER	net enrollment ratio
OECD	Organisation for Economic Co-operation and Development
OSSD	Ontario Secondary School Diploma
PISA	Program for International Student Assessment
PPP	public-private partnership
SBS	<i>Seviye Belirleme Sınavları</i> (Turkish for the Level Placement Examination)
SY	school year

TIMSS	Trends in International Mathematics and Science Study
TVET	technical and vocational education and training
UCIE	University of Cambridge International Examination
USS	upper secondary school
WAP	working age population

Executive Summary

Currently more than 140 countries offer, or are in transition to, what has become the international norm for pretertiary education, namely a kindergarten through grade 12 (K–12) school education system—kindergarten because of the preponderance of research asserting the long-term learning and social benefits of school readiness programs; and 12 years of primary and secondary schooling due to the time needed to acquire the knowledge and skills sets necessary for 21st century university education, postsecondary training, or decent¹ work. This desk study² conveys the experiences of four countries and one province in preparing and implementing a transition to a K–12 school education system: Mongolia, Ontario (Canada), the Philippines, Poland, and Turkey. Looking at K–12 transition in countries and systems that vary as broadly as this set enables common threads to stand out and divergent options to be noted.

Preparing and implementing a K–12 transition absorbs considerable financial and human resources. It follows that the reasons for restructuring must be compelling. At the macrolevel, apprehensions about competitiveness in an interlocked and dynamic global economy or concerns about growing inequities drive development agendas, which in turn shape sector development plans. At the sector level, rationales for transition often include meeting international norms and standards, better preparing students for life, conserving national identity, and improving student competences. Whether these or other reasons are sufficiently compelling depends upon a country's political, fiscal, socioeconomic, and education contexts. In the jurisdictions reviewed in this study, the decision was taken that the anticipated contributions to social and economic development are worth the cost. Summaries of the five cases follow.

Mongolia. Mongolia, the least densely populated nation in the world, is a low middle income country and has a large proportion of nomadic people (about 26%). At present, the economy is driven largely by the mineral sector, but Mongolia would like to diversify and add higher value-added activities to its economic profile. Gross domestic product growth has been slowing since 2011, declining from 11.6% in 2013 to 7.8% in 2014, and is projected to decline to less than 5% in 2015 and 2016. Over the past decade, successive waves of reform have restructured the Mongolian school education system three times, initiated

¹ In this report “decent” refers to work that earns a living wage and is carried out under conditions that meet the country's minimum standards for health, safety, and human rights.

² Study findings were presented at Regional Forum on K–12 Innovative Strategies for Supporting a Transition to a 12-Year Education System, held in Baku 25–26 May, 2015. The forum was organized jointly by the Government of Azerbaijan and the Asian Development Bank (ADB). Feedback from the Forum has been incorporated in the report. Jazira Asanova, Senior Education Specialist, ADB, provided comments on draft report. The study and forum are activities of Regional Technical Assistance (TA-8303 REG): Partnership for Innovation in Education in Asia and the Pacific, financed by ADB.

three rounds of curriculum revision, dropped the threshold age of entry from 8 to 6, and increased participation at all school education levels. Transition to a 12-year school education cycle was undertaken stepwise between 2007 and 2015. Structural change was bundled with reforms focusing on achieving international standards for participation, curriculum, teaching methods, and student knowledge and skills competences.

Ontario, Canada. Ontario is a high income province with an education system that is widely recognized as high performing, equitable, and fair.³ The system transitioned from a 13- to a 12-year school education cycle between 1999 and 2003, in part to align with other Canadian provinces and in part out of cost considerations. The government expects to complete a push for universal kindergarten in 2015, thereby completing its K–12 program. A changing economy and a large population of immigrants shape Ontario's ongoing priorities for equity and “next generation” education. School education reform was organized around preparing all students for life and started with baseline and intermittent studies of student destinations. Results of those studies inform all aspects of education reform at the secondary level and aspire to smooth transitions to the workplace as well as further education and training.

Philippines. The Philippines is a low middle income country. Following decades of decline, an ambitious school education reform, including transition to a K–12 system, was initiated with the potential to reverse decline and create a high-performing and inclusive school education system. Simultaneously, an intensive program was launched to bridge input deficits in infrastructure and teachers that had accumulated to a point where confidence in the government to deliver quality public education was low. The K–12 reform entails extension of compulsory education to include kindergarten and a brand-new level of education, grades 11 and 12. This upper secondary school (USS) program incorporates many “next generation” features such as contextualized learning for core and elective subjects, dual vocational education, and inclusion of cognitive and noncognitive competences in the curriculum alongside content. Public-private partnerships in education service delivery will increase the diversity of USS programs. Halfway through rollout, limited absorptive capacity raises concerns about achieving reform milestones within its scheduled timeframe.

Poland. Among Eastern and Central European former-Communist countries, Poland, a high income country, has had the most success in improving education outcomes. In 1999, concerns about future economic competitiveness were exacerbated by low school participation rates and poor learning outcomes. Changes in governance rules and public finance enabled reform by empowering schools to make decisions. The first restructuring added a new level of education, lower secondary school (LSS), to the system by reducing the number of grades in the primary and USS levels, thereby extending school education by 1 year. Highly visible changes in performance only 3 years after the first round of reforms was launched motivated schools and teachers to support complementary reforms centered on teaching practices and focused on supporting weaker students and improving vocational

³ The Ontario Ministry of Education uses the term “equitable” to refer to the distribution of resources across the province, meaning that schools are resourced similarly, regardless of location. It uses the term “fair” to refer to treatment of children, meaning that each child receives the support he or she needs to learn regardless of socioeconomic status, mother tongue, or speed of learning.

USSs. The Polish case is a good example of how restructuring can stimulate rapid and sustained education improvements.

Turkey. Since 2003, economic growth in Turkey, a high middle income country, has increased its per capita income threefold, but chaos in neighboring countries has influenced, at least in part, a slowdown in economic growth. Education access, equity, and quality have all improved dramatically over the past 15 years as a result of government-initiated programs alongside a rise in standard of living. Motivated in part by concerns about its comparatively low average education attainment rate, in 2012, Turkey restructured its school education system for the third time since 1997, moving from an 8+4 structure to a 4+4+4 configuration, lowering the threshold age of entry into grade 1 to 5.5 years, and increasing compulsory education to 12 years. By implementing structural and complementary policies nationwide in the same year the law was passed, Turkey combined the preparation and implementation phases and strained absorptive capacity at the new LSS and the newly compulsory USS levels.

Lessons learned from this study include the following six considerations:

- (i) **Clarify the core problem.** Core problems translate into foundational policies such as “improving national competitiveness” or “inclusive growth.” Restating macropolicies as educational outcomes aligns education reforms with macrolevel development priorities.
- (ii) **Restructuring is just one of a bundle of reforms.** Transition to a K–12 structure is part of a package of overall education reforms and, as the most visible part, often becomes a symbol for the entire package.
- (iii) **Maintain focus on improving student competences.** It is easy to lose focus on student learning in the pressure to prepare and implement a highly visible, multidimensional, and financially demanding K–12 reform. However, education programs are judged first and foremost by how well all students perform in assessments of their learning outcomes and competences.
- (iv) **Teachers are the engine that pulls K–12 reform along, slows it down, or derails it.** Even in very high-achieving education systems, teacher professional development is a *sine qua non* of any reform. In high achieving systems, teacher development tends to be peer centered.
- (v) **Replace or supplement high-stakes examinations with low-stakes continuous testing.** High-stakes testing tends to reinforce inequalities between families that can afford private tutoring and families that cannot. For students, high-stakes testing, perpetual preparation for high-stakes tests, and the stressful climate of competition in schools have negative effects. Successful students may do well on tests but have little self-confidence and dislike learning.
- (vi) **Design the curriculum and assessments around the difficulty of cognitive tasks.** Many assessments focus on lower order skills—those that are classified as level one or two on the Organisation for Economic Co-operation and Development’s test of 15-year-olds in reading, mathematics, and science. Curriculum and assessment focusing on higher order skills are thought to be more aligned with the competences required in USSs, higher education, and decent work.

Introduction

Currently more than 140 countries offer, or are in transition to, what has become the international norm for pretertiary education, namely a kindergarten through grade 12 (K–12) education system—kindergarten because of the preponderance of research asserting the long-term learning and social benefits of school readiness programs; and 12 years of primary and secondary schooling due to the time needed to acquire the knowledge and skills sets necessary for 21st century university education, postsecondary training, or decent¹ work. There is significant contextual variance in K–12 reforms among the 140 countries. This desk study maps the different pathways taken by five selected jurisdictions in supporting their respective K–12 reforms. Four countries and one province that recently implemented K–12 reforms were selected for review and analysis to extract lessons that may inform other jurisdictions wishing to adopt a K–12 education system.

The introduction section is divided into three parts, which is also the structure of each jurisdiction report. Part A introduces the contextual diversity of the case jurisdictions in terms of geographic, demographic, economic, and educational factors. Part B introduces a three-layer policy framework useful in understanding the dynamics among the aspirational, regulatory, and scholastic policies that both permit and assist structural changes in the education system. Part C on planning and implementation is brief. While the paper trail on planning is littered with holistic master plans and action plans for specific workstreams, information is scant on how the plans were translated to activities and outcomes of the same—how each country mobilizes, organizes, oversees, and coordinates complex and myriad activities.

The Case Jurisdictions

The five jurisdictions—Mongolia, Ontario (Canada), the Philippines, Poland, and Turkey—vary by population characteristics (median age), geography (islands, location, climate), standard of living (low middle income to high income), size of the school system (500,000 to 23 million students), education system governance (highly centralized to highly decentralized), spending on education (2.7% of gross domestic product [GDP] to 5.5%), and performance of the education system (from declining to widely recognized as excellent). Table 1.1 compares the cases along some key contextual variables. The discussions of individual jurisdictions recapitulate some of these contextual differences to illustrate the challenges.

¹ In this report “decent” refers to work that earns a living wage and is carried out under conditions that meet the country’s minimum standards for health, safety, and human rights.

Table 1.1: Comparison of Cases by Contextual Variables

Variable	Mongolia	Ontario, Canada	Philippines	Poland	Turkey
Economic classification	Low middle income	High income	Low middle income	High income	High middle income
Population (2014)	2,881,415	13,678,740	100,096,496	38,220,543	75,837,020
Median age	27.1	40.4	23.5	39.5	29.6
% school age population (5–19)	21.70%	18.2%	30.16%	15.59%	24.90%
2013 HDI	0.698	0.902	0.660	0.834	0.759
GNI per capita (2011 PPP \$)	8,466	41,887	6,381	21,487	18,391
Poverty level	27.4%	8.8%	25.8%	11.4%	16.3%
Mean years of schooling, adults	8.3	12.3	8.9	11.8	7.6
Expected years of schooling	15	15.9	11.3	15.5	14.4
Number of students	497,002	2,105,423	21,620,634	5,532,200	16,465,563
Number of teachers	27,205	114,983	655,408	662,420	829,204
Number of schools	756	4,897	59,282	34,176	56,506
NER, primary	97.0%	99.5%	95.4%	97.0%	99.5%
NER, secondary	91.6%	86.8%	64.5%	90.0%	82.0%
WAP unemployment	8.0%	7.3%	7.1%	10.5%	10.8%
Youth unemployment	16.6%	12.9%	16.2%	27.3%	19.7%
NEETs	1.5%	13.3%	12.2%	12.2%	25.5%
% GDP on education	5.9%	3.2%	2.7%	4%	4%

GDP=gross domestic product, GNI=gross national income, HDI=human development index, NEET=not employed in education or training, NER=net enrollment ratio, PPP = purchasing power parity, WAP=working age population.

Three-Layer Policy Frameworks

Restructuring national education to K–12 is resource intensive—consuming technical, financial, and political resources. Thus, understanding the legal, regulatory, and policy environment helps anticipate bottlenecks and chart a pathway to implementation. The three layers of the framework are foundational, structural, and complementary policies.

Foundational policies. These are found in national (provincial in Ontario) development plans and define the core educational aspirations, provide the rationale for transitioning to a K–12 structure, describe the major human resource development agenda, and present the K–12 goals as they align with the respective development agendas.

A review of the five cases’ foundational policies reveals a surprising overlap in educational problems and aspirations—despite the diversity of socioeconomic and educational contexts summarized above. Some concerns are nearly universal—youth unemployment,

rising inequities, mismatch between education programs and labor market demands, the desire to forge a national identity, and the need to position the country for competitive advantage in a globalizing economy. For labor-exporting countries (Philippines and Poland) there is the desire for trade and professional credentials to be accepted in destination countries, and for labor-importing countries (Mongolia) there is the desire to replace highly skilled imported professionals with locals whose training and qualifications are just as good. For countries where secondary school graduates might wish to attend foreign universities, there is the need for their education credentials to be judged as equivalent. Table 1.2 presents five foundational policies that were mentioned in at least three of the five cases' development plans for the years in which the restructuring was initiated.

Table 1.2: Common Foundational Policies in Terms of Practical Outcomes

Meeting International Standards	Achieving Equity	Preparing for Life	Competing Globally	Fostering National Cohesion
Credentials accepted by schools, universities, training programs, and employers in other countries	Disadvantaged students qualified for decent work or further study	Secondary education and higher education are readily employable.	Cohort of entrepreneurs and employees for emerging economies; workforce attainment at parity with OECD or European norms	Core values and national identity conserved

OECD = Organisation for Economic Co-operation and Development.

The foundational policies noted in Table 1.2 function as principles to guide choices and keep the education system reform and restructuring agenda on track toward desired outcomes. Restating these policies as practical results helps maintain focus on the core issue. For example, if the foundational policy is achieving equity, a concrete educational result could be reducing the socioeconomic effect on learning outcomes. Keeping this result in mind while considering options could focus complementary policies on supporting learning for disadvantaged students or organizing curricula around pathways to alternative postsecondary destinations.

Structural policies. These are the second layer in the policy framework. Most case jurisdictions have restructured to a primary and secondary configuration, with kindergarten included as part of the education system, and secondary education divided into lower and upper levels. In the literature on national education plans there are a number of conceptual descriptors that are often used interchangeably and aligned with the structure of the education system.² This report acknowledges this conceptual challenge and advises

² Primary education: This category varies from grades 1–4 to grades 1–8. In some jurisdictions this is called early childhood education and includes kindergarten and preschool education, thus extending downwards, before grade 1. Basic education: This includes grades 1–8 and in some jurisdictions grades 1–9. Grade 8/9 is the first official exit point in most education systems. Children in grade 8/9 are usually 14/15 years old, which complies with International Labor Organization laws regarding child labor.

readers to consult individual jurisdiction documents, indicated at the end of this report, to understand in more detail how the concepts are used in the respective jurisdictions.

Structural elements are statutory and are included in the education laws; they have three components: definition of compulsory education, configuration, and threshold age of entry.

- (i) **Definition of compulsory education.** The definition is either by age or grade (Table 1.3).

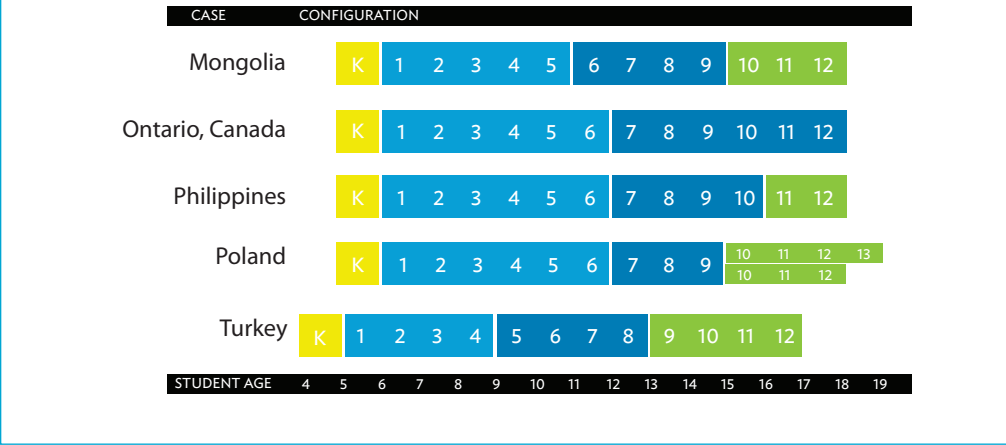
Table 1.3: Compulsory Education in Case Jurisdictions

Mongolia	Ontario, Canada	Philippines	Poland	Turkey
Grades 1–9	Ages 6–18	K to grade 12	Ages 6–16 or –18 (for students employed part time)	Grades 1–12

- (ii) **Configuration.** This refers to the number of grades in the primary and secondary levels and whether secondary is divided into lower and upper levels. Configuration is significant in terms of the ages at which comprehensive education starts and ends and specialized programs begin. This dividing line is different for each of the cases (Figure 1.1). While the number and length of each level is statutory, “soft” divisions within levels are possible in jurisdictions such as Ontario, which is a province where the governance system permits flexibility in how the curriculum is organized and delivered.

Age of entry. As noted in Figure 1.1 entry into grade 1 is 6 years of age apart from Turkey, which begins compulsory education at age 5.5 years but allows parents the option of enrolling children in grade 1 who are at least 5 years old. The age of entry into kindergarten in all jurisdictions except Turkey is 4 years. Kindergarten is compulsory in the Philippines and Poland. K-12 reform is not just about adding grades to upper secondary schools; it allows restructuring of other parts of the education system. Poland reduced the length of primary education from 8 to 6 years and made room for the lower secondary level—

Figure 1.1: Configuration of K-12 Education in Case Jurisdictions



grades 7–9—while at the same time introducing grade 12. Mongolia first increased and then most recently reduced primary education to 6 years and also included grade 12 in upper secondary education. The Philippines added two grades to the upper secondary level. Turkey consolidated the different types of secondary school from 79 to 7 types. Turkey and Mongolia gradually reduced the entry age to grade 1.

Complementary policies. These comprise issues that may be directly or indirectly related to K–12 reform but are necessary for successful implementation of the reform. Authority and responsibility for preparing complementary policies depend upon the governance system in each jurisdiction. For example, in Turkey the curriculum is developed centrally, while in Canada curriculum development is the responsibility of the provinces and school boards. Examples of complementary policies include:

- | | |
|---|--|
| (i) Core curriculum and specialized curricula | (x) Teacher qualification linked to promotions or remuneration |
| (ii) Assessment and examination system | (xi) Student subsidy programs |
| (iii) School financing model | (xii) Public-private partnerships (PPPs) |
| (iv) Student tracking and specialization | (xiii) School choice |
| (v) Aligning TVET with labor markets | (xiv) Provision of early childhood education |
| (vi) Counselling | (xv) Minimum service standards |
| (vii) Methods of administration and supervision | (xvi) Information and communication technology, and |
| (viii) Classroom construction | (xvii) School-based teacher training |
| (ix) Methods and organization of teaching | |

Preparation and Implementation Models

With complex programs, preparation functions are typically trifocal: (i) focusing on the overall progress of all reform components, (ii) focusing on coordinating schedules and activities between teams and workstreams, and (iii) monitoring the progress within workstreams to manage problems and resolve bottlenecks.

As noted earlier, detailed information regarding preparation to implement the reform processes is scarce. A master plan for preparing the transition was located for only one case. In two cases planning models were deduced from the scant evidence provided, through policy briefs in one instance and an executive summary of a study on initial implementation of the reform in the second. For one case no description of the preparation and implementation process was included in any of the documents available for study.

For planning and implementing curriculum development, Mongolia and the Philippines engaged multiple teams of experts and teachers organized into panels by subject and grade level. In both cases the process proved cumbersome due to unclear responsibility for outputs. An alternative model—outsourcing curriculum development—was proposed in a review of the Mongolian experience. Pilot testing played a different role in two cases: In Mongolia curricula were developed and piloted in model schools the year before they were mainstreamed, while in the Philippines only upper secondary programs were piloted over

a 2- to 3-year period in about 100 public and private schools that volunteered to prepare upper secondary programs on their own. No mention was made of pilot testing in Ontario, Poland, or Turkey in the documents reviewed.

With hindsight, more preplanning such as institutional strengthening and teacher preparation to implement the reform was needed in Mongolia, the Philippines, and Turkey. Continuous teacher professional development is a strong component of the Ontario system. Teacher development was a cornerstone of the Polish education reform.

Following this introduction, the paper summarizes key features of each case's K–12 transformation, and the final section extrapolates lessons to be considered by countries considering restructuring their education system to K–12.

Key Features of Each Case's Transition

Mongolia

Over the past decade, successive waves of reform have restructured the Mongolian school education system three times, initiated three rounds of curriculum revision, dropped the threshold age of entry from 8 to 6 years, and increased participation at all education levels. Transition to a 12-year school education cycle was stepwise between 2007 and 2015. Structural change was bundled with reforms focusing on achieving international standards for participation, curriculum, teaching methods, and student knowledge and skills competences.

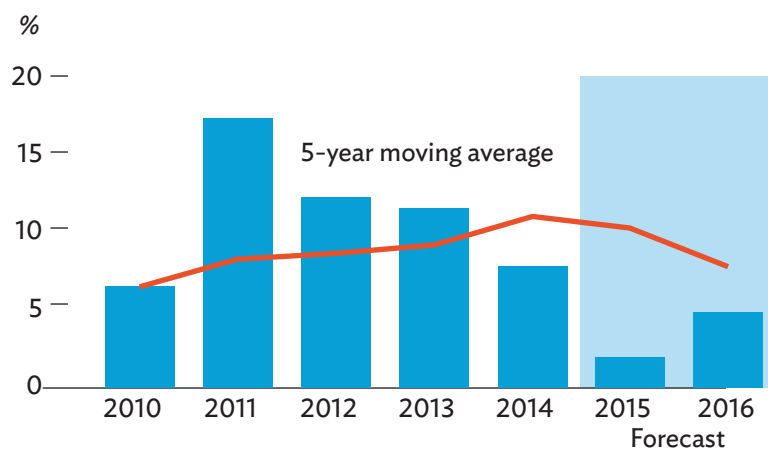
Context

Demographic and economic features influencing Mongolia's education reform include the following:

- (i) **Sparsely populated with high internal migration.** The 26% of the population classed as nomads live as such at least for part of the year. Roughly half the population of 3 million now reside in the capital city. Many new migrants to the city settle in large, unplanned settlements lacking access to schools, kindergartens, and other basic services, thus raising the potential for increased inequities in education provision.
- (ii) **Mongolian diaspora.** More than 100,000 Mongolians, most between the ages of 20 and 35, are studying, working, or living abroad and are a constituency supporting the achievement of international standards.
- (iii) **Young population profile.** The median age is 27.1, and 28% of the population are under 15. The “next generation” of school education is an important priority for the government.
- (iv) **Poverty.** The poverty rate dropped from 35.2% in 2006 to 27.4% in 2012. Poverty is higher in rural areas (35.5%) than in urban areas (23.2%), as traditional livelihoods in the former dissolve and there are fewer job opportunities for young people. While poverty has declined, income inequality is increasing. Education is considered a pathway out of poverty; thus there has been a policy tradition supporting equitable education for rural and urban areas.

- (v) **Cost of education increasing.** Inflation averaged 12.4% in 2013, which affects the cost of education provision. Mongolia spends 5.9% of GDP on education, and school heating is a major cost.
- (vi) **Labor markets.** These have undergone restructuring away from agriculture and towards services (public administration, education, and retail), construction, manufacturing, and mining. Rural to urban migration continues to rise, and the youth unemployment rate is double the average unemployment rate for the working age population (16.6% compared with 8%), highlighting the need for education linked to destinations including work and apprenticeships.
- (vii) **Resource-based economy.** At present, the economy is driven largely by the mineral sector. GDP growth has been slowing since 2011 and is projected to decline even more in 2015 and 2016 (Figure 2.1).

Figure 2.1: Mongolia's GDP Growth Rate, 2010–2016



Source: ADB. Economic Outlook 2015.

Education system features that influence Mongolia's education reform include:

- (i) **Central authority.** The central education authority in Mongolia is the Ministry of Education, Culture, and Science (MECS). MECS formulates national educational policy and sets the standards for each level of school education. MECS also administers teacher training, curriculum development, and state examinations and is responsible for the accreditation of higher education institutions (HEIs). Each province has an Education and Culture Department under the MECS that oversees the educational and financial performance of schools and kindergartens. Their responsibilities also include teacher professional development and student assessment. Schools have management committees. The Reform Policy Framework 2012–2016 envisages that the Institute of Education, an agency associated with MECS, will support schools and policy makers through research.

- (ii) **Re-decentralization.** In 2014, responsibility for subsidized recurrent education budgets was decentralized to the provincial level. Local governments are expected to play a greater role in budget allocation, ensure that policies on curriculum and equitable access are followed, and provide professional supervision to schools.
- (iii) **Participation rates.** There has been significant improvement in access and enrollment, and the national net enrollment rates (NERs) are now 97% and 91.6% for primary and secondary education, respectively. The gross primary completion rate increased from 75% in 1995 to more than 100% in recent years. The transition rate from primary to LSS rose from 85% in 1995 to 98.7% in 2014. Expected years of schooling was 10 in 1989, 7.5 in 1994, and 15 in 2014.
- (iv) **Many small schools.** The education system is still characterized by a large number of medium- or small-sized schools, and many isolated and overcrowded urban schools running in double or triple shifts. There are relatively few stand-alone primary schools in Mongolia, as most schools offer both primary and secondary levels.
- (v) **Persistence of differences in school quality.** A 2008 study showed that students in rural and ethnic minority schools were at a learning disadvantage.³
- (vi) **Education spending.** Public expenditure on education fluctuated between 4.9% and 5.9% of GDP between 2006 and 2014, representing between 13.4% and 16.8% of total government expenditures.
- (vii) **Curriculum development.** At the primary level, standards-based curricula together with standardized testing have been introduced since 1998. Secondary level standards were introduced in 2003. Work continues on improving the curricula and teaching practices needed to achieve those standards. In 2007, a National Curriculum Framework for the whole of school education was introduced, and education standards were revised accordingly. A new curriculum was developed for the primary level in 2013 and piloted in the following year; and for the lower secondary and preschool levels the new curricula were prepared in 2014 for piloting in 2015. Upper secondary curricula are scheduled to be developed in 2015 and piloted the following year. Piloting typically takes place in some 40 pilot schools.

Policy Framework

Foundational policies. The foundational policy of achieving international standards drove the structural policies to increase basic education to 12 years and to lower the age threshold for grade 1 to age 6. If the desired result is to have credentials accepted by schools, universities, training programs, and employers in other countries, then there is a need to go beyond structure, instructional days, or hours per year to link with international frameworks on competences and performance benchmarks.

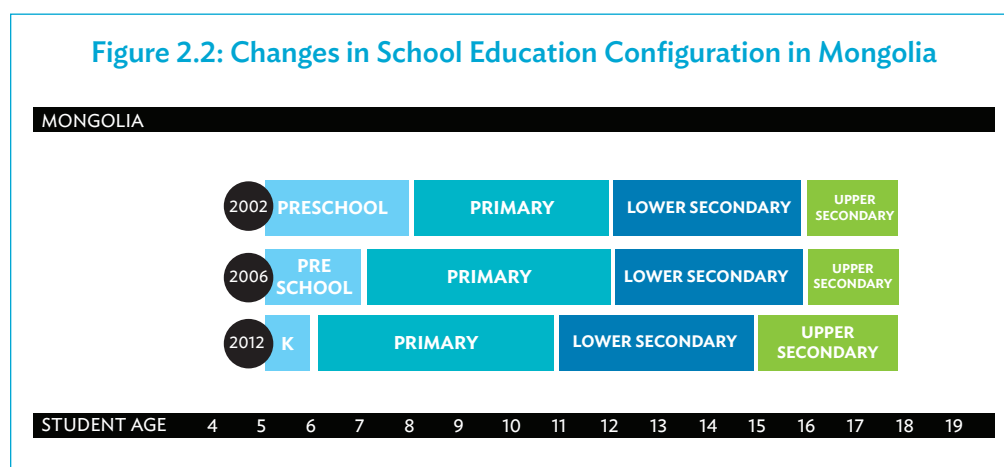
³ Government of Mongolia, Education Evaluation Center, 2008. *Mongolian National Assessment of Primary Education Mathematics and Reading*.

The foundational policies contained in the national development documents for the education sector as well as those summarized in a presentation at the ADB-financed Regional Forum are offered below.⁴ Some are common to other case jurisdictions, while others are unique to Mongolia. The foundational policies include:

- (i) Meeting international standards, particularly those pertaining to
 - (a) Equivalency of student qualifications for overseas study
 - (b) International recognition of national qualifications
 - (c) Meeting international standards for student competences as a means for quality assurance
- (ii) Preparing all children for life and work in the 21st century
- (iii) Conserving national identity
- (iv) Developing national scientific, technological, and socioeconomic capacity
- (v) Guaranteeing national independence and security
- (vi) Preparing a lifelong learning system for effective work and a happy life by respecting morality and humanity and by inheriting national common values

Structural policies. Policies pertaining to education system configuration and age of entry or defining compulsory education were modified in 2002, 2006, and 2012. Each modification lowered the entry age to grade 1, reconfigured other parts of the system, and lengthened school education by adding a year to the primary level (2006) and to the upper secondary level (2012). By 2012, the structure conformed to international standards (Figure 2.2).

In 2002, an education law was passed⁵ changing the configuration of school education. Basic education comprised 4 years of primary education, followed by 4 years of LSS. Education was compulsory for ages 8–16. Following basic education, upper secondary



⁴ Gansukh S. Mongolia's Transition to K–12. Presentation at Central Asia Regional Forum: Innovative Strategies for Supporting Transition to a 12–Year Education System. Baku. 25–26 May 2015.

⁵ Government of Mongolia. 2002. *Law on Primary and Secondary Education*. <https://www.crin.org/en/library/publications/mongolia-national-laws>.

education, a prerequisite for university admission, was offered comprising grades 9 and 10, for a total of 10 years of school education in a 4+4+2 configuration.

- (i) In 2006, the 2002 structure was amended to introduce a shift to an 11-year system. Primary education was extended to grade 5, creating a 5+4+2 configuration. The age of entry was lowered from 8 to 7, and compulsory education was a 9-year program consisting of primary and lower secondary schools.
- (ii) In 2007, the Ministry approved a different transition scheme for the period school year (SY) 2008/2009 to SY2012/2013. This configuration entailed a primary (5 years), lower secondary (3 years), and upper secondary (3 years) 5+3+3 configuration. The school-entry threshold remained age 6, and compulsory education remained for grades 1–9. This illustrates the high number of reform attempts made in Mongolia school education system.
- (iii) In 2012 the Law on Education was amended to adopt a 12-year system with primary (grades 1–5), lower secondary (grades 6–9), and upper secondary (grades 10–12), or a 5+4+3 configuration. Transition was completed in SY2014/2015. The age of entry remained 6, and compulsory education remained grades 1–9. Figure 2.3 depicts the evolution of the Mongolian education system structure.

Complementary policies. These were numerous. The *Government's education reform policy framework for 2012–2016*⁶ includes reforming 11 types of complementary policies; (i) the

Figure 2.3: Scheme for Transition from an 11- to a 12-year Schooling System, Mongolia, 2007–2015

School Year	Grades											
2007–2008	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	
2008–2009	I											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	
2009–2010	I	II					VII					
		II	III	IV	V		VII	VIII	IX	X	XI	
2010–2011	I	II	III	IV	V		VII	VIII				
			III	IV	V			VIII	IX	X	XI	
2011–2012	I	II	III	IV	V		VII	VIII	IX			
				IV	V		VII		IX	X	XI	
2012–2013	I	II	III	IV	V		VII	VIII	IX	X		
					V		VII			X	XI	
2013–2014	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	
											XI	
2014–2015	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XI
Level under 12 year system	Primary					Lower Secondary				Upper Secondary		

Source: Government of Mongolia, Ministry of Education, Culture, and Sports. 2009. Report for the Transition to the 12-Year Schooling System, Achievements and Lessons Learned. Unpublished. Prepared for ADB. Education for the Poor Financial Crisis Response Project.

⁶ Government of Mongolia. 2012. *The Pre-School, Primary and Secondary Education Reform Policy Framework (2012–2016)*.

national curriculum, (ii) teaching approach and assessment methods, (iii) teaching-learning administration and management, (iv) performance and results-based teacher appraisal, (v) textbook and teaching-learning resources, (vi) preservice teacher training, (vii) national quality assurance assessment system, (viii) open schools governance, (ix) teachers professional development system, (x) educational institution management and financing, and (xi) planning an accessible and safe education environment.

To oversee, manage, and implement these workstreams can be challenging and can require a phased approach and appropriately qualified personnel. Some of the tasks are within the purview of MECS to carry out, while others, such as changing the legal environment for selection and appointment of school principals, require collaboration with other entities.

Planning

2012 reform planning process. Reform management teams comprised staff of the Institute of Education, Teacher Development Institute, Educational Evaluation Centre, and Mongolian State University of Education plus the reform implementation teams. Reform implementation teams consisted of experienced teachers who worked closely with the 40 laboratory schools, the majority of which were selected under the Mongolian-Cambridge Education Initiative launched in 2009 with the intention of aligning Mongolia's education with international standards. The implementation teams and laboratory schools had been piloting the new curricula, demonstrating new teaching-learning approaches, advising school management, and organizing workshops to promulgate experiences to nonlaboratory schools.⁷

Reform schedule. SY2006/2007 was used for planning. (Figure 2.3). In SY2008/2009 the first cohort of 6-year-olds entered grade 1 of the 12-year system. The following year, while the first cohort progressed to grade 2, a second cohort entered grade 1. At the same time, the transition at the secondary level began with grade 7. Shaded boxes in the figure indicate implementation of the new curriculum, and arrows indicate grade 5 cohorts that skipped primary grade 6 to enter lower secondary grade 7 the following year.

Implementing the K–12 Restructuring

Fluctuation in enrollments. The transition to the 12-year system was expected to increase total student enrollment by about 9%, and to place additional demands on teachers, classrooms, and other school facilities. In actuality, the number of schools increased by only 2, from 754 to 756, and the number of students fell from 537,546 to 497,022 due in part to a decline in school-age population and partly due to an increase in enrollments in technical and vocational education and training (TVET) programs. Table 2.1 provides some key education statistics during transition to the 12-year basic education program.

⁷ ADB. 2015. *MON: Education Sector Development Technical Assistance Report*. Manila.

Table 2.1: Key Education Statistics, Mongolia (selected years during SY2005/06–SY2013/14)

Item	2005/06	2007/08	2010/11	2011/12	2012/13	2013/14
Total no. of institutions^a	724	754	751	752	755	756
Public institutions^a	585	602	609	614	621	628
Private institutions^a	139	152	142	138	134	128
Total no. of full-time teachers	22,628	22,891	26,358	26,492	26,863	27,205
Student- teacher ratio	24.6	25.5	19.4	19.1	18.5	18.3
Total enrollment	556,876	537,546	512,213	505,409	496,123	497,022
Female enrollment	285,128	273,271	257,302	253,456	248,974	248,893
Upper secondary	83,486	85,640	73,727	79,550	95,418	93,124
Lower secondary	223,768	212,243	172,847	169,275	155,318	146,632
Primary	249,622	239,663	265,639	256,584	245,387	239,343

^a Includes primary schools, secondary schools, integrated primary and secondary schools, and complex schools.

Source: ADB. 2015. Project Completion Report: Mongolia: Education Sector Reform Project. Manila

Access, retention, and promotion. Rising trends in indicators of students' access to education, retention, and promotion within the education system continued during the transition. One exception was the decline in transition between lower and upper secondary from 81% in 2003 to 79% in 2013 (under the 12-year education system). A possible explanation for the decrease is the increased enrollment in TVET programs. Students under the age of 24 who are enrolled in TVET programs under the Ministry of Labor receive monthly stipends and graduate with dual credentials upon completion of the program: both upper secondary education and vocational certificates (Table 2.2).

Table 2.2: Student Retention and Promotion Rates, Primary and Lower Secondary Levels, Mongolia (%)

Item	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Average
SY2005/2006–SY2006/2007										
Promotion rate	94.70	93.80	95.50	97.20	96.50	96.80	97.20	97.10	93.70	95.80
Repetition rate	0.22	0.16	0.06	0.05	0.06	0.14	0.12	0.07	0.10	0.11
Dropout rate	5.10	6.00	4.40	2.80	3.40	3.10	2.70	2.90	6.20	4.10
SY2012/2013–SY2013/2014										
Promotion rate	97.90	98.70	99.0	99.20	96.70	99.10	98.70	99.0	96.30	98.30
Repetition rate	0.14	0.07	0.03	0.02	0.02	0.02	0	0.02	0	0.04
Dropout rate	2.00	1.20	0.90	0.80	3.30	0.90	1.30	1.00	3.70	1.70

Source: ADB. 2015. Project Completion Report: Mongolia: Education Sector Reform Project. Manila

Lessons learned. The abovementioned *Report on Transitions to the 12-Year Schooling System* also reports lessons learned by the Mongolians responsible for implementing the action plans. These include the following:

- (i) It is necessary to take a long term perspective to allow each reform cycle to take its course before making further revisions.
- (ii) Teachers, management, and specialists who will be doing reforms need to be prepared and trained.
- (iii) Professional organizations with research and assessment capacity must be relied upon to update curriculum and prepare textbooks. It was noted that engaging teachers, specialists, university researchers, or research organizations to participate in working groups for short periods of time did not have a positive effect on the quality of work or outputs. The lesson was that, under the short-term/teamwork model, no one was responsible or accountable for the final outcome.
- (iv) Assistant teachers are needed to support 6-year-olds in grade 1 classes and dormitories for at least 3–5 months in the beginning of the school year, given the nomadic nature of the lifestyle.
- (v) The reform was hindered and outcomes were disappointing due to the absence of professional organizations to train teachers, managers, and methodologists at the beginning of the transition.
- (vi) Based on this finding, the Teacher Development Palace was built, the Institute for Education was expanded to include expertise on sector restructuring, the Institute for Teachers' Professional Development was established, and teacher and staff capacity building was included in the transition plan.
- (vii) More discussions and planning are needed on the positive and negative aspects of the transition if known shortcomings and conflicts are to be avoided.
- (viii) Policies, plans, and reforms should be based on recommendations from international, regional and national research evidence and practices. Advice of professional organizations, scientists, researchers, and specialists as well as the results of local studies and pilot programs should be considered and lessons incorporated.

Reflections

Link to international frameworks. The goal of aligning with international norms and standards goes beyond the length of the cycle, academic year, or instructional periods. To achieve the effect of graduating students being able to study abroad, qualify for advanced technical training, work in decent jobs abroad, or compete with imported skilled labor for decent jobs at home, the education system should align with the principles behind international frameworks and curricula as well as its own benchmarks. The Mongolia–Cambridge initiative agreement was signed retaining UCIE to deliver educational services and reforms to the country. This initiative aims to introduce Mongolian–English bilingual education into state schools in Mongolia and to align the national education system of Mongolia to Cambridge international education standards. The bilingual program incorporates Cambridge programs and qualifications. As well as providing the programs and assessments, UCIE also supports and trains teachers to introduce bilingual teaching.

Work began on national education policy reform followed by helping to develop new school curricula and teacher education programs. MECS has opened a few highly competitive state schools, which will offer a Mongolian-English bilingual program of education aligned to international standards for learning environments as well as curricula geared to eventually mainstream elements to less well-equipped schools and less well-prepared teachers. Scaling up the model to a sustainable nationwide implementation has remained a challenge.

Ontario, Canada

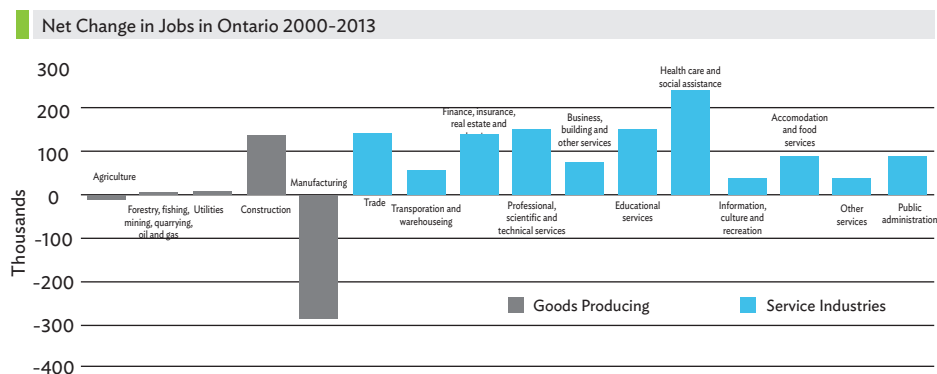
Ontario is a high-income province with an education system that is widely recognized as high performing, equitable, and fair.⁸ The system transitioned from a 13- to a 12-year school education cycle between 1999 and 2003 in part to align with other Canadian provinces and in part out of cost considerations. The government is implementing universal kindergarten, which is expected to be fully in place by SY2015, thereby completing its K–12 program. A changing economy and a large population of immigrants are contextual features that shape Ontario's ongoing priorities for equity and "next generation" education. Education reform was organized around preparing all students for life and started with baseline and intermittent studies of student destinations. Results of those studies inform all aspects of education reform at the secondary level and aspire to smoothen transitions to the workplace as well as to further education and training.

Context

Demographic and economic features that influence Ontario's K–12 reforms include the following:

- (i) **Populous province.** With a population of 13.6 million, Ontario is the most populous of Canada's 13 provinces and territories, accounting for nearly 38.5% of the population.
- (ii) **Economic change.** There has been a structural change in the economy over the last 10 years, moving jobs from manufacturing to financial and public services (Figure 2.4). The education system needs to prepare a different kind of worker to foster economic growth.

⁸ The Ontario Ministry of Education uses the term "equitable" to refer to the distribution of resources across the province, meaning that schools are resourced similarly, regardless of location. It uses the term "fair" to refer to treatment of children, meaning that each child receives the support he or she needs to learn regardless of socioeconomic status, mother tongue, or speed of learning.

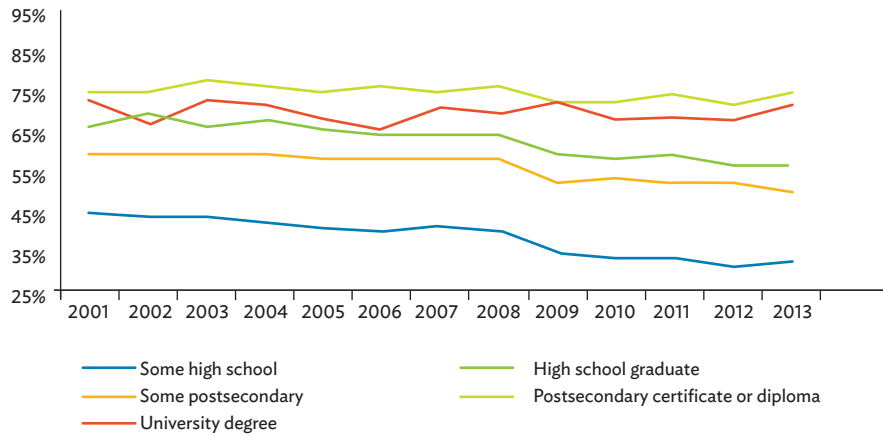
Figure 2.4: Ontario: Change in Employment Structure, 2000–2013

Source: Tiessen, K. 2014. *Seismic Shift: Ontario's Changing Labour Market*. Canadian Centre for Policy Alternative, Ontario Office.

High resource potential. Ontario has a vast pool of human, physical, and financial capital to tap for economic expansion in the knowledge and creative spheres.

- (i) **Immigration underpins population growth.** A shrinking workforce, declining number of children aged 0–14, and an aging population mean that immigration will be a significant source of population growth. The annual rate of growth of Ontario's population is projected to remain close to 1.0%, and net immigration accounts for 73% of population growth. Ontario has more immigrants than any other province or territory. A large population of immigrants from around the world means that Ontario schools have a diverse student body, and teaching must be adapted for non- and new English speakers and for non-French speakers.
- (ii) **Population profile.** The median age in Ontario is 40.4. The present school age population is 18.2%. The population share of youth continues to shrink as the share of seniors grows. By 2020, the number of youth entering the labor force will not be sufficient to replace those retiring. The youth employment rate is a low 11.1%; employment rates are best for those who have completed postsecondary education (Figure 2.5).
- (iii) **Provinces rule.** Canada is a federal parliamentary democracy and constitutional monarchy. Powers are shared between the federal and provincial governments.
- (iv) **GDP slowdown.** Ontario has the greatest economic output of any Canadian province, but the provincial GDP growth rate is shrinking, and, while incomes remain high—GDP per capita was \$42,258 in 2013/2014 with a low Gini coefficient (around 0.32 in 2012)—they are declining. The real per-capita GDP was 5.6%, below the figure for Canada overall in 2012. Despite the slowdown, Ontario is classified as high income, with a gross national income per capita of \$41,887 (2011 purchasing power parity, PPP, \$), a human development index of 0.902, and a poverty rate of 8.8%.

Figure 2.5: Employment Rates of Youth Aged 15–24 by Educational Attainment, Ontario, 2001–2013



Source: Government of Canada, Service Canada. 2014. *Client Segment Profile, Youth Aged 15–24, Ontario*.

Education features that influence Ontario's K–12 reforms are as follows:

- (i) **Ontarians are well educated.** Adults had 12.3 mean years of schooling, and the 2012 cohort had 15.9 years of expected schooling. Some 55% of the adult population have tertiary degrees (highest among Organisation for Economic Co-operation and Development [OECD] countries), and 79.4% have graduated from secondary school.
- (ii) **Compulsory education for ages 6–18.** Ontario has a high proportion of people with secondary and postsecondary credentials—79.4% and 55%, respectively.
- (iii) **Medium-sized system.** There are 2.1 million students in basic education: 1.35 million in primary, 660,000 in secondary, and 212,000 in grade 12. Ontario has nearly 4,000 primary and around 900 secondary schools. Some 98,000 students attend French-language schools. Tables 2.3 and 2.4 describe the numbers of schools and students in Ontario's primary and secondary schools.

Table 2.3: Number of Schools in Ontario's English-Language Schools

Number of Schools, 2002/03 and 2008/09 to 2012/13

	2002/03	2008/09	2009/10	2010/11	2011/12	2012/13
Elementary						
Public	2,588	2,629	2,624	2,611	2,596	2,590
Roman Catholic	1,383	1,405	1,390	1,393	1,392	1,382
Total	3,971	4,034	4,020	4,004	3,988	
Secondary						
Public	606	642	644	640	642	643
Roman Catholic	242	259	207	209	209	270
Total	848	901	911	909	911	913
Elementary and Secondary						
Public	3,194	3,271	3,628	3,251	3,238	3,239
Roman Catholic	1,625	1,664	1,663	1,662	1,661	1,652
Total	4,819	4,935	4,931	4,913	4,899	4,891

Source: Government of Ontario Ministry of Education. 2014. *Ontario Quick Facts: Ontario Schools*.

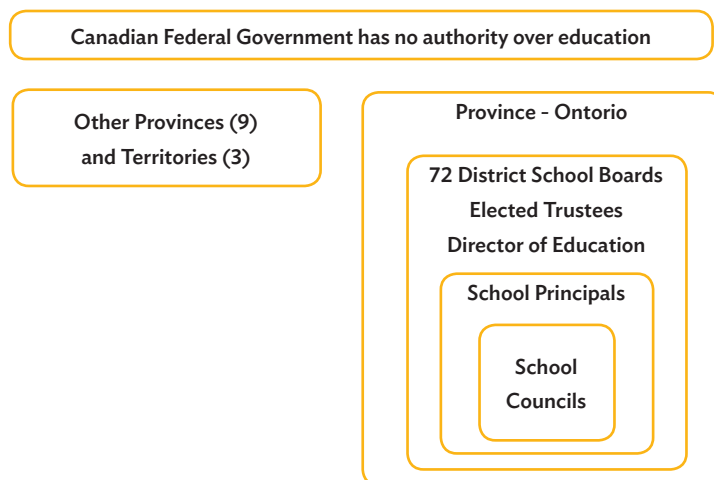
Table 2.4: Number of Students in Ontario's French-Language Schools**Enrollment in French-Language Schools, 2002/03 and 2008/09 to 2012/13**

	2002/03	2008/09	2009/10	2010/11	2011/12	2012/13
Elementary	67 445	67 182	68 015	69 942	71 913	74 216
Secondary	24 906	24 648	24 961	24 907	24 767	24 481
Total	92 351	91 830	92 976	94 849	96 680	98 697

Source: Government of Ontario Ministry of Education. 2014. *Ontario Quick Facts: Ontario Schools*.

- (iv) **Strong and equitable system.** The Ontario school system is strong, and leadership is committed to improving performance further. Program for International Student Assessment (PISA) scores show little impact of socioeconomic effects on learning, indicating a highly equitable system in terms of learning. About 17% of secondary students leave before completing a diploma.
- (v) **Provincial financing.** Education is financed by the province, and school financing is based on a formula with a fixed part, a per-pupil and attendance-based variable part, and an equalization component. Average annual expenditure for 2014 was around \$8,946 per student for primary and secondary levels, and total education expenditure was \$18.78 billion.
- (vi) **Teachers.** There are 115,000 teachers, and a strong and active teachers' union enables the collective voice of teachers to be heard when planning and implementing a reform. However, there is an oversupply of teachers, and in 2015, the government is increasing the number of years of postgraduate study from 1 to 2 and halving the number of places in teacher education institutions. Admission to teacher training colleges is competitive, as teaching is seen as a desirable profession.
- (vii) **No central ministry.** Canada does not have a central ministry of education, and decision making authority is shared between provincial governments and locally elected regional school boards. A Council of Ministers of Education is the mechanism for coordinating pan-Canadian policies. Figure 2.6 depicts Ontario's education governance structure.
- (viii) **School boards manage many types of public schools.** Ontario has 72 school boards governing four distinct publicly financed school systems: an English-language public school board, a French-language public school board, an English-language separate school board, and a French-language separate school board. Originally, the public school systems were Protestant but are now secular, while the separate school systems are Roman Catholic and are open to children of all faiths at the secondary level.

Figure 2.6. Canadian Education Governance



Source: A. Gitterman. 2015. Ontario's Transition to K-12. Presentation at Central Asia Regional Forum: Innovative Strategies for Supporting Transition to a 12-Year Education System. Baku, 25-26 May 2015.

Policy Framework

Foundational policies. Equity is at the core of Ontario's education policies. In 2014, the four foundational policies for education prioritized goals of equity and fairness.⁹ These are the aspirations of a mature education system that is confident of its ability to teach students the competences needed for decent employment, further education, or training as evidenced by students' consistently strong performance on the PISA and other international assessments. A decade after initiating a revitalization program for a system self-described as "stagnant," secondary school completion rates rose from 70% to 83%, accompanied by a gain in the percentage of students going from school to work or apprenticeship programs; Ontario now has the lowest youth unemployment rate among the case jurisdictions and is acknowledged as an equitable system wherein the impact of socioeconomic effects on learning (9%) is much lower than the OECD average on the 2012 PISA (14%).

The Ontario Ministry of Education's 2014 guidelines on education policy lists the following goals:

- (i) **Achieving excellence.** Children and students of all ages will achieve high levels of academic performance, acquire valuable skills, and demonstrate good citizenship. Educators will be supported in learning continuously and will be recognized as among the best in the world.

⁹ Ontario Ministry of Education. 2014. *Equity and Inclusive Education in Ontario Schools: Guidelines for Policy Development and Implementation*.

- (ii) **Ensuring equity.** All children and students will be inspired to reach their full potential, with access to rich learning experiences that begin at birth and continue into adulthood.
- (iii) **Promoting well-being.** All children and students will develop enhanced mental and physical health, a positive sense of self and belonging, and the skills to make positive choices.
- (iv) **Enhancing public confidence.** Ontarians will continue to have confidence in a publicly funded education system that helps develop new generations of confident, capable, and caring citizens.

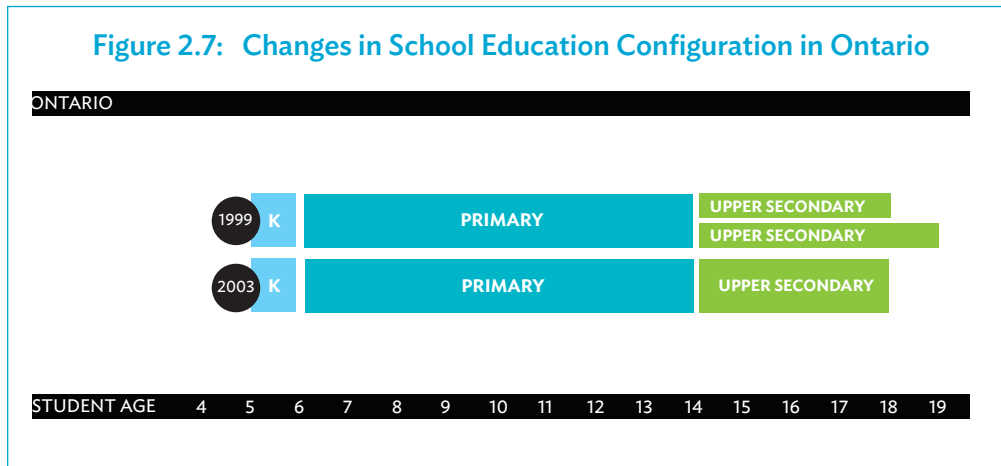
Structural policies. Ontario restructured its education system from 13 to 12 years beginning in 1999 and ending in 2003. The motivation for this was a cost-saving measure by the government as well as a means to align Ontario with the rest of the provinces in Canada. It was also a response to political pressure from parents and financially pressured school boards to shorten the basic education cycle. To accommodate the loss of an academic year, an extra 10 days of schooling was added to each lower grade, and grade 13 material was integrated into earlier years of education.

In 2010, an initiative was launched to provide universal full-day kindergarten. While not mandatory, the availability of the program plus a campaign to raise awareness of the importance of school readiness programs to early grades encouraged widespread participation by 4- and 5-year-olds. The purpose of full-day kindergarten was primarily to close the learning gap for children who were not fluent in either English or French, poor children, and middle class children not participating in private programs. Rolled out over 5 years and now fully implemented across Ontario, full-day kindergarten is taught by a teacher and an early childhood educator. The province provides annually \$1,670 per student for the program.

In 1999, a decision was made to change the 13-year cycle—8 years of primary plus 5 years of secondary (8+5)—into a 12-year cycle (8+4). Students already in secondary school were allowed to finish the 13-year cycle, while entering students would follow the shorter configuration using an adjusted curriculum. The transition from 13 to 12 years was completed in 2003. In Ontario, compulsory education is defined by age, which was from ages 6 to 16 until 2006, when it was redefined as 6 to 18 (Figure 2.7).

Complementary policies. Under the Canadian system, some policy decisions are made by elected school boards that govern primary and secondary schools within a defined geographic area, and schools have leeway to organize instructional time, choose textbooks, form student groupings, determine teaching methods, and monitor learning. This flexibility permits a diversity of public schools and allows parents a wide choice among schools, including language immersion, alternative, specialized, innovative, traditional, and religious schools.

Of the province-wide complementary policies, the most visible were the changes in curriculum and graduation requirements. Under the new curriculum, grades 9 and 10 students can choose academic courses (focused more on theory) or applied courses (emphasizing applications). Locally developed courses called essentials courses are also



provided in some schools for students who are struggling to achieve their graduation requirements. In grades 11 and 12, students choose from “destination” courses that are intended to lead them to university, college, or work.

To graduate with an Ontario Secondary School Diploma (OSSD), students are required to complete 30 credits of 110 hours each (including 18 required courses), complete 40 hours of community involvement, and pass an Ontario Secondary School Literacy Test (or course equivalent). The new program also emphasizes the importance of out-of-classroom career-related experiences for students and, for the first time, requires all school boards to offer cooperative education, work experience, and school-to-work transition programs to all interested students; 40 hours of community involvement activities are also required. No high-stakes provincial or national examination is needed to graduate.

A Teacher Advisor Program was also implemented in 1999 in secondary schools. Teacher advisors are intended to complement the work of guidance counselors by helping students to complete an annual education plan, and by monitoring their progress. They are responsible for meeting with students regularly to help them make informed choices at key transition points in their schooling.

A report on building pathways¹⁰ recommended that more attention be given to developing school-to-work transition programs for students at risk. Since then, the government has introduced a multiyear Student Success Strategy to improve student graduation rates. Key features of the Student Success Strategy are:

- (i) **Specialist high-skills majors.** These were added to the OSSD to allow students to complete a minimum bundle of courses in specific high-skills areas such as arts, business, information technology, and construction and manufacturing.
- (ii) **Expanded cooperative education programs.** These were added through increased partnerships with business and community organizations.

¹⁰ Ministry of Education. 2003. Building Pathways to Success, Grades 7–12. Ontario

- (iii) **Dual-credit programs.** These allow students to earn several credits toward an OSSD through college, apprenticeship, and university courses.
- (iv) **Links to destinations.** These introduced a new coordinated effort and formal links between high schools and postsecondary destinations to help students reach higher.

Planning

Restructuring and transition were part of policy debate, with several commissions and studies recommending a transition to 12 years of basic education before it was adopted. The planning process did not have radical changes. In principle, guidelines such as the curriculum framework are prepared at the provincial level, then school boards and schools determine how it is to be delivered and create development and action plans to do so. This process encourages broad-based ownership of reforms and allows for differences in the pace of implementation.

A more recent example is a roadmap used to move from a policy on equity and inclusion to implementation of those principles at the school board, school, and classroom levels. In 2012, the Education Act was amended to include the Accepting Schools Act, which sets out requirements for all school boards to provide “safe, inclusive and accepting learning environments.” For each of five focus areas, school boards are responsible for working with schools and communities to plan and carry out the actions set out in the guidance.

Implementing the K–12 Restructuring

Resistance into ownership. Despite 50 years of discussion, there was resistance to the transition from a 13- to a 12-year program, and, 15 years later, resistance to full-day kindergarten for all 4–5 year olds. In 1998, only 44% of parents and the general public surveyed were satisfied with the schools, and 62% were satisfied with the teachers, and by 2012 those figures improved to 65% and 70%, respectively. As for the attitude of teachers, in 1997, 126,000 demonstrated their resistance to the Education Quality Improvement Act by striking and closing the schools for 2 weeks. Particularly odious were the issues of teacher performance assessment and the curriculum reform that increased teaching requirements caused by “downloading” grade 13 content into earlier grades. Again, a decade later, greater teacher ownership of improvement efforts was cited as one of two factors that contributed to Ontario’s being named “a world leader in its sustained strategy of professionally driven reform of its education system.”¹¹ Another noteworthy turnaround was the collaboration between the teacher unions and the government to reform teacher education by lengthening the preservice teacher education program and cutting the number of candidate teachers in half to reduce the oversupply.

Restructuring necessitated a slew of less visible reforms. Ontario already being a strong performer, restructuring the system stimulated numerous less controversial

¹¹ Donohoo, J. 2013. *Great to Excellent: Considerations for Professional Learning as the Next Stage of Ontario’s Reform Agenda Is Launched*. Learning Forward Ontario. <http://learningforwardontario.ca/PDF/Great-to-Excellent.pdf>

reforms in curriculum, student assessment, new pedagogies, new technologies, academic support, instructional environments, and professional collaborations in all grades; and for the secondary level, a new philosophy drove innovations in which curriculum and programs were adapted and contextualized according to student destinations. In developed economies many of these activities go through routine periodic review and reform as institutionalized practices.

Focus on learning, consistency, and collective capacity. These reforms were pursued with a strong, clear, and deep focus on learning led by the highest level. Widespread and visible improvements such as an increase in graduation rates improved overall performance, and strong gains among disadvantaged students were attributed to the consistency of practice across schools throughout the province and the ability of teachers to explain what they were doing and why¹².

Leadership practices. Given the division of authority and accountability among the province, school boards, schools, and teachers, highly capable school boards, principals, and teachers determined how the innovations and reforms would be implemented in the schools and classrooms. All levels of the system focused on investment, and the collective capacity enabled better leadership from school boards and allowed better teaching practices to spread quickly among teachers.

Success. “No system in the world has progressed without strong rapport between the government and its teachers and principals. Prior to 2003, student achievement was good but stagnant. The bundle of reforms that included restructuring enabled a system-wide revitalization. Results between 2003 and 2013 that are a knock-on effect of restructuring and complementary policies include:¹³

- (i) **Improvements in learning and graduation rates.** In 2003, only 54% of children in grades 3 and 6 met provincial standards in literacy and numeracy; by 2013, 71% of grade 3 and 6 students achieved those. In addition, only 68% of students were graduating from high school; by 2012, 83% of students were graduating.
- (ii) **Reduced number of low-performing elementary schools.** This dropped from 17% to less than 6%.
- (iii) **Increased fairness within schools.** This was evidenced by the reduced gap between general students and special education students (8% reduction), non-English and non-French speaking students, and students with low socioeconomic status. The achievement gap between boys and girls is narrowing, as is the gap between elementary students with special education needs and elementary students generally. French-language schools continue to perform at a high level, including scoring among the highest on Education Quality and Accountability Office (EQAO) tests.
- (iv) **Decline in student performance in mathematics.** This was measured by EQAO and international tests. While Ontario is ranked as having the top English- and the

¹² Fullan, M. 2013. *Great to Excellent: Launching the Next Stage of Ontario's Education Agenda*. https://www.edu.gov.on.ca/eng/document/reports/FullanReport_EN_07.pdf

¹³ *ibid.*

top French-language systems on the PISA, the overall PISA scores for mathematics decreased 16 points over 9 years from 530 in 2003 to 514 in 2012, and students from ten jurisdictions performed significantly better than Ontario in mathematics, while in 2009 the number was seven.

- (v) **Decline in reading and science between PISA cycles.** In 2012, Ontarian students ranked 4th among jurisdictions, while in 2009 the province ranked 2nd. In science the ranking for 2012 was 8th, while for 2009 it was 6th. Table 2.5 compares Ontario's results with those of neighboring provinces and selected states in the United States.

Table 2.5: PISA 2012 Scores: Ontario, Other Provinces, and US States

Jurisdiction	Science	Reading	Math	Average Score
OECD average	501	496	494	497
United States	497	498	481	492
Massachusetts	527	527	514	523
Connecticut	521	521	506	516
Florida	485	492	467	481
Canada	525	523	518	522
British Columbia	544	535	522	534
Alberta	539	525	517	527
Quebec	516	520	536	524
Ontario	527	528	514	523
Saskatchewan	516	505	506	509
Nova Scotia	516	508	497	507
Newfoundland & Labrador	514	503	490	502
New Brunswick	507	497	502	502
Manitoba	503	495	492	497
Prince Edward Island	490	490	479	486

Source: Institute for Competitiveness and Prosperity. 2013. Ontario's PISA Results Reveal a Decline in Education Rating. http://www.competeprosper.ca/blog/ontarios_2012_pisa_scores_reveal_a_decline_in_education_rating

- (vi) **Chose teachers over technology.** The province resisted the temptation to invest heavily in technology; instead, the leadership built the pedagogical capacity of teachers to teach well and to learn from each other.

Philippines

Following decades of decline, an ambitious education reform, including K–12 transformation, was initiated to reverse decline and create a high-performing and inclusive school education system. Simultaneously, an intensive program was launched to bridge input deficits in infrastructure and teachers that had accumulated to a point where confidence in the government to deliver quality public education was low. The K–12 reform entails extension of compulsory school education to include kindergarten and a brand-new level of education, grades 11 and 12. This USS program incorporates many “next generation” features such as contextualized learning for core and elective subjects, dual vocational education, and inclusion of cognitive and noncognitive competences in the curriculum alongside content. Contribution of private sector in education service delivery has been interesting and strong feature of Philippine education system. Under the K–12 reform PPPs in education service delivery will increase the diversity of USS programs.

Context

Demographic and economic features influencing the Philippines' education reform include the following:

- (i) **Large population.** With more than 100 million people, 34% of whom are under the age of 15, and a median age of 23.5, the Philippines is the most populous and youthful nation among the cases in this study. An additional 12 million Filipinos live and work overseas, comprising one of the world's largest diasporas. The Philippines is an archipelago of more than 2,000 inhabited islands, some small and remote, making public service delivery, including education, challenging.
- (ii) **Growth recently more inclusive.** After decades of sluggish growth, the economy picked up since 2010, achieving above 6% annually over 2010–2014. Sustained economic growth has just begun to translate into poverty reduction; the 2013 Annual Poverty Indicator Survey suggests that real income of the bottom 20% grew faster than for the rest of the population for both wage and entrepreneurial income. Economic growth has also just begun to affect labor markets: Overall unemployment fell from 7.5% in January 2014 to 6.6% in 2015, underemployment dropped from 19.5% to 17.5%, and youth (ages 18–24) unemployment fell from 17.3% to 15%. Improvements in governance and fiscal management since 2010 enabled a first-ever investment grade credit rating in 2013, followed by an upgrade in 2014.
- (iii) **Youth.** Although youth unemployment has dropped, young people still account for nearly half the unemployed. In addition to un- and underemployment, about 12% of young people (19–24) are classified as NEETs—young people who are not employed or looking for work nor in education or training programs (ADB 2014).
- (iv) **Low youth attainment.** Even though the Philippine state has provided secondary education at no cost since 1987, 18–24-year-olds have had an average of only 8 years of schooling overall (7.9 years for young men, and 8.5 years for young women). In 2014, the Philippines was 3rd out of the 10 Association of Southeast Asian Nations countries in terms of current mean years of schooling (8.9), but fell to 7th place in terms of expected years of schooling for the current cohort (11.3); this drop signals an erosion of competitive advantages associated with human capital.¹⁴
- (v) **Schooling pays off.** For individuals in the Philippines, 2 years of schooling beyond grade 10 increases wage income adjusted by probability of employment by 56%.¹⁵
- (vi) **Administration change.** Administrations are limited by the Constitution to one 6-year term in office. When an administration changes, all departmental secretaries and undersecretaries, including those for education, step down and are

¹⁴ ADB. 2015. *Technical Assistance Report to the Republic of the Philippines for Implementing the Senior High School Support Program*. Manila.

¹⁵ ADB 2014(a). *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of the Philippines for the Senior High School Support Program, Linked Document 3: Summary Sector Assessment*. Manila.

replaced by the incoming administration. But the vision for basic education has remained relatively intact through two administrations.

Education system features that influence the Philippines' education reform include the following:

- (i) **Large size.** The Philippine education system is large, with more than 21 million students in grades 1–10, nearly 60,000 elementary and secondary schools, and more than 735,000 teachers. The size and dispersal of the system mean that large-scale innovations do not reach all schools simultaneously.
- (ii) **Secondary lags.** While the Philippines is likely to meet its Millennium Development Goal targets for access to primary education, it is likely to fall short on those for primary school completion rates. The performance of the secondary education subsector is even more problematic. The NER for elementary school rose from 90.7% in 2002 to 95.4% in 2010. Over that same period, the NER for secondary school also improved from 59.7% to 64.5%.
- (iii) **Low cycle completion.** In 2011, of every 100 children who started grade 1, only 54 completed high school. While the cohort survival rate (CSR) at primary schools increased from 71.8% in 2003 to 73.5% in 2011, the secondary level CSR stood at 78.8%—about 1 percentage point above the 2003 level.
- (iv) **Inequality.** Inequality in both enrollment and completion rates is a drag on broad-based system improvement. Gross enrollment ratios (GERs), NERs, and completion rates vary significantly among the country's regions at both the primary and secondary levels. The school dropout rate in 2011 for children aged 6–11 from the poorest quintile was more than seven times higher than that of children in the same age group from the richest quintile, and the dropout rate for children aged 12–15 from the poorest quintile was more than 13 times higher than that of children in the same age group from the richest quintile.¹⁶
- (v) **Academic test performance.** The Philippines has not participated in any international assessments since the 1999 and 2003 Trends in International Mathematics and Science Study (TIMSS), in which its scores were among the lowest of all countries. The country shied away from the TIMSS in 2007 and 2011 and has not participated in the PISA, relying instead on its own national achievement test (NAT). Overall mean percentage scores on the NAT have been low across years. Subject-specific scores on the 2008 NAT indicated that the weakest mastery was in mathematics (42.9%) and science (46.7%). Surveys of firms and investors show that low performance by the country's students and graduates in mathematics, science, and English may constrain economic modernization.
- (vi) **Teacher development.** The teaching approach in the Philippines has been largely rote-based, which leaves learners with a limited mastery of and ability to apply knowledge and skills in further education and the workplace. Estimates from the Department of Science and Technology suggest that the majority of science

¹⁶ Ibid.

teachers are unqualified, including 73% of physics teachers and 66% of chemistry teachers who neither majored nor minored in the subjects they teach. The new curriculum necessitates a change in teaching practices.

- (vii) **PPPs.** The Philippines has a long history of PPPs in education service provision and a shorter history of PPPs for education infrastructure delivery. The PPP for service provision uses the education services contracting (ESC) model, whereby overcrowded public secondary schools contract with nearby private schools to accept an agreed-upon number of students, for whom they receive a subsidy. Students are selected by a committee and must pay any difference between tuition and the subsidy. There are various models for infrastructure PPPs including private sector build, government lease, and eventual transfer of the school from private to public ownership.
- (viii) **Education spending recovering.** Recent years have seen significant increases in spending on basic education, with the Department of Education (DepEd) budget growing by 10.8% in 2010, 14.5% in 2011, 9.1% in 2012, and 22.3% in 2013. This has lifted the share of the DepEd budget to 14.6% of the national budget—the highest since 2005—and the ratio of education spending to GDP to 2.9%. New spending initiatives have enabled DepEd to reduce input deficits in the number of classrooms, teachers, seats, and sanitation facilities.

Policy Framework

Foundational policies: Foundations for the K–12 reform can be found in the current President's campaign's *10 Point Agenda for Education*, *Social Contract with the Filipino People*, and the National Economic and Development Authority's Philippine Development Plan 2011–2016, which sets out an agenda and framework for inclusive economic growth. These emphasize meeting international standards for basic education, preparation for life, and improving equity and fairness. These include:

- (i) Making education the central strategy for investing in people, reducing poverty, and building national competitiveness
- (ii) Expanding basic education from a short 10-year cycle to a globally comparable 12 years
- (iii) Providing all public school children with a full year of kindergarten as their introduction to formal schooling
- (iv) Reintroducing TVET into public high schools to better link schooling to local industry needs and employment and to provide alternative pathways for education and skills development.
- (v) Rebuilding the science and infrastructure in schools to produce more scientists, engineers, technicians, technologists, and teachers in the universities so that the country can be more globally competitive in industry and manufacturing
- (vi) Expanding the Government Assistance to Students and Teachers in Private Education (GASTPE) Program

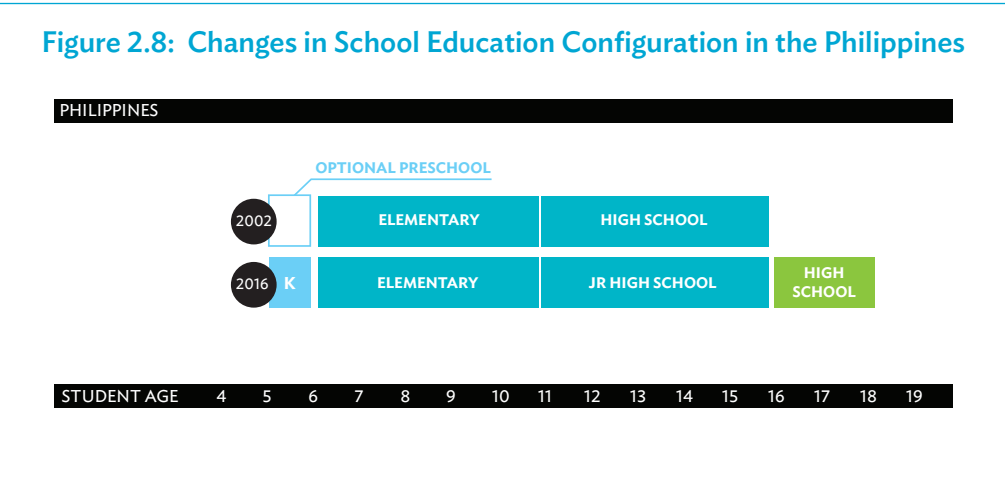
- (vii) Becoming trilingual as a country: “Learn English well and connect to the world. Learn Filipino well and connect to our country. Retain your dialect and connect to your heritage.”
- (viii) Improving textbook quality
- (ix) Building more schools in areas where there are no public or private schools in collaboration with local government to provide education for all

Structural policies. Policies pertaining to education system configuration, threshold age of entry, and compulsory education can be found in the Enhanced Education Act of 2013.

- (i) **K+6+4+2.** The law configures the school education system as: at least 1 year of kindergarten, 6 years of primary education, and 6 years of secondary education. Secondary education includes 4 years of lower secondary school (LSS) and 2 years of upper secondary school (USS).
- (ii) **Ages at entry.** The threshold age of entry for kindergarten is 5 years; the age of entry to grade 1 is typically 6 years, 12 for grade 7, and 16 for grade 11.
- (iii) **Kindergarten through grade 12.** This is defined as compulsory education.

Before 2011 the basic education system consisted of grades 1–10. When upper secondary is introduced in SY2016/2017, the system will be K–12 (Figure 2.8).

The school education system is being expanded from 10 years to kindergarten plus 12 years. The universalization of kindergarten and revisions to the primary curriculum are expected to improve the internal efficiency, quality, and inclusiveness of primary education. The addition of USS, alongside reforms to the grades 7–10 curricula, is intended to make the Philippine basic education system more comparable internationally and to make USS graduates more competitive domestically and globally.



The following relevant laws and policies influence complementary policies for K–12 restructuring:

- (i) **PPPs for education service provision.** The 1989 GASTPE Law established PPPs in education service provision.
- (ii) **6+4 system.** The 2001 Basic Education Law defines basic education as comprising primary and secondary levels.
- (iii) **Teaching profession.** The 2010 Magna Carta for Public School Teachers updates the 1966 law on teacher recruitment, careers, security of tenure, code of conduct, and additional benefits to teachers.
- (iv) **Mandatory kindergarten.** The 2012 Kindergarten Education Act makes kindergarten mandatory for all entrants to grade 1.

Complementary policies. The bundle of reforms that includes K–12 restructuring contains reform policies on mother tongue instruction, curriculum overhaul, teacher credentials, PPPs for infrastructure development as well as for education service provision, assessment, information and communication technology, textbook and materials reform, procurement, minimum standards, school finance, financial management, coordination with local governments, indigenous peoples, inclusive education, school health, and school-to-work transitions, among others.

New level of education—upper secondary. As the current Philippine basic education system ends at grade 10, the *Enhanced Education Act of 2013* requires preparation of an upper secondary program. The purpose for extending basic education by 2 years is to (i) provide students with the skills necessary for entrepreneurship or formal sector employment, (ii) better prepare students to undertake postsecondary education or training, and (iii) spread the high school curriculum content over more years to allow students to learn the material.

USS program. The USS program will consist of a common core curriculum and electives in a choice of four tracks: (i) academic, (ii) technical-vocational and livelihood, (iii) sports, and (iv) arts and design. Specialization will begin in grade 11, with core subjects contextualized by track in addition to electives specific to students' individual pathway within each track. Grade 12 will consist of classes, internships, apprenticeships, and on-the-job training. All students will participate in qualitative and quantitative research activities with practical applications in their selected track. All 12th grade graduates will be eligible for further education and postbasic TVET. Graduation requirements do not at this point include passing a final assessment. Some upper secondary policies are yet to be formulated.

Because USS is new to the Philippines, DepEd has been required to:

- (i) **Develop USS program content.** This includes curriculum, learning materials, and assessment tools for all subjects.
- (ii) **Assign and train sufficient teachers.** They must be qualified to teach at the USS level.

- (iii) **Deliver sufficient classrooms, laboratories, and workshops.** Some may use a PPP modality.
- (iv) **Design and implement a USS subsidy program.** This will finance graduates from DepEd LSSs, graduates from non-DepEd LSSs who were supported under the ESC program, and other eligible graduates from non-DepEd LSSs to attend non-DepEd USSs.
- (v) **Adjust basic education system management functions.** These will include USSs, including financial and procurement functions as well as upgrading the Education Management Information System. In particular, the capacity of DepEd division-level offices to plan for USSs needs to be developed.

Upper secondary vouchers. The Philippines has a long tradition of using PPPs in the delivery of basic education, and the Education Act explicitly expands the scope of such PPPs to encompass grades 11 and 12. Government strategy targets 30%–40% of all USS enrollments to be in non-DepEd—i.e., private—USSs, public and private colleges, universities, and technical-vocational institutes offering USS programs. To reach this target, the government will subsidize about 800,000 grade 11 and grade 12 students per year, who otherwise would attend DepEd USSs, to enroll in non-DepEd schools.

USS vouchers will allow public junior high school (LSS) graduates, who are, on average, less affluent than private school graduates, a choice to attend DepEd or non-DepEd schools and simultaneously diversify the supply of USSs. The USS voucher program design is aligned with the Extended GASTPE program. One of the programs currently being implemented under GASTPE is the ESC program, which provides subsidies for LSS students to attend private schools in areas where public schools are overcrowded. ESC, which subsidized 809,000 students in 2014, will be extended to the new USS voucher program. ESC is managed by the Fund for Assistance to Private Education, a nongovernment organization, which will also operate the USS voucher program on behalf of DepEd.

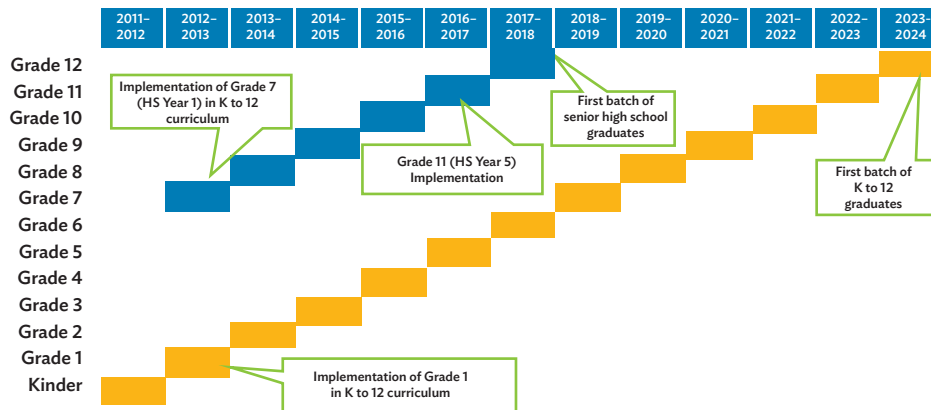
School infrastructure PPPs. The government is also committed to assessing the feasibility of making further use of PPPs for the delivery of USS infrastructure. The government expects that an estimated 30,000 additional classrooms will be required and that some of these may be provided through PPPs. Since 2011, approximately 66,800 primary school classrooms have been constructed under the PPP for School Infrastructure Project. In 2014, DepEd undertook a prefeasibility study of the use of PPPs for USS infrastructure.

Planning

In 2011, the Office of the President released for wide distribution a policy brief on the K–12 education program. It included the scheme shown in Figure 2.9. for the implementation plan for introducing the restructuring in a stepwise manner.

One of the main challenges in planning the transition to K–12 in a system as large and diverse as the Philippines' has been communication among the individuals and teams responsible for preparing components of the rollout as well as communication with

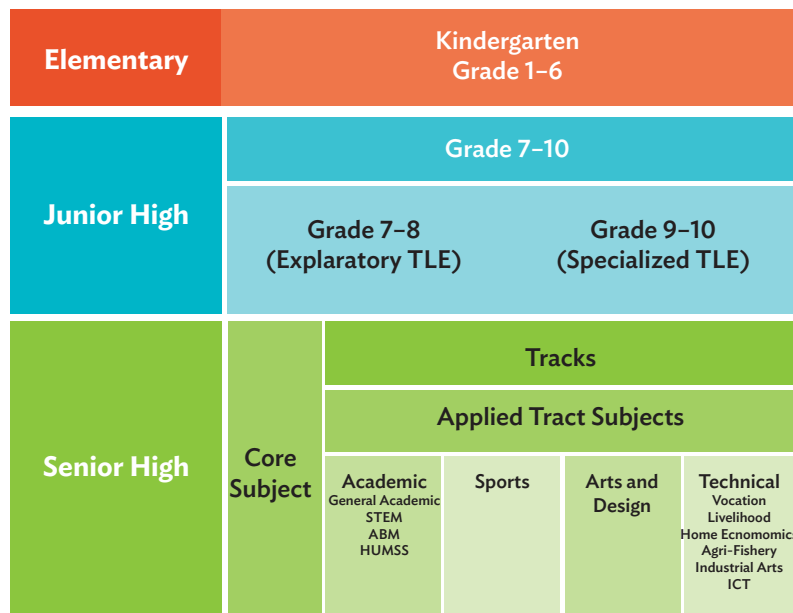
Figure 2.9: Stepwise Implementation of K–12 Restructuring, Philippines



Source: Government of the Philippines, Office of the President. 2011. *K–12 Program*.

legislators, other agency stakeholders, LSSs, potential providers of USSs, local governments, parents, students, and the general public. DepEd relied on infographics to communicate key concepts about the reform. Figure 2.10 is a graphic prepared by DepEd to present the K–12 curriculum visually. It emphasizes how technical and livelihood education is part of the mainstream LSS curriculum.

Figure 2.10: Comprehensive and Specialized Programs, Philippines



Source: Government of the Philippines, Department of Education: <http://www.deped.gov.ph/k-to-12/curriculum-guides>

Curriculum development, particularly for USS, consumed more time than was originally allocated for the task. The delays and difficulties were similar to those experienced in Mongolia: several specialized curriculum development teams with no team member clearly responsible for the product. Difficulties arise if team members have also authored textbooks, have never developed contextualized curricula, and if assessment tools are not prepared alongside. As the task of assigning full- and part-time USS teachers is still in progress, it remains to be seen if teachers will be able to change habitual practices and deliver the new curriculum as intended.

Implementing the K–12 Restructuring

Resistance. When the K–12 program was first proposed in 2010, it met with resistance from parents, teachers, private school providers, HEIs, technical training institutions, legislators, and the general public. While there is still some general resistance, public opinion has improved, particularly after the passage of the Enhanced Education Act of 2013. However, there is still some resistance from private HEIs. The extension of basic education by 2 years means that public and private HEIs will be missing 1 or 2 cohorts from 2016 through 2020. While it would be possible for HEIs to use their excess capacity to offer upper secondary programs, private institutions have difficulties with contractual arrangements that cannot easily be set aside. The issues raised by private HEIs are not yet resolved.

Bridging input deficits. New spending initiatives have enabled DepEd to reduce deficits in the number of classrooms, teachers, seats, and sanitation facilities for grades 1–10. It is expected to fully close the gaps by SY 2015/2016. During 2010–2015 alone, the sector will have added 104,500 classrooms and hired more than 169,000 teachers for kindergarten through grade 10. Nonetheless, public education spending in 2011 in the Philippines was low at 2.6% of GDP, compared with rates of 6.3% in Malaysia, 4.8% in the Republic of Korea, 3.8% in Thailand, and 5.3% in Viet Nam. In addition, 95% of DepEd's 2011 budget went to recurrent costs (85% for salaries alone), which left only 5% for capital and investments to improve quality.

Poland

Among Eastern and Central European former-Communist countries, Poland has had the most success in improving education outcomes. In 1999, concerns about future economic competitiveness were exacerbated by low school participation rates and poor learning outcomes. Changes in governance rules and public finance enabled reform by empowering schools to make decisions. The first restructuring added a new level of education, lower secondary, to the system by reducing the number of grades in the primary and upper secondary levels, thereby extending comprehensive education by 1 year. Highly visible changes in performance—only 3 years after the first round of reforms was launched—motivated schools and teachers to support complementary reforms centered on teaching practices and focused on supporting weaker students and improving vocational USSs.

The Polish case is a good example of how restructuring can stimulate rapid and sustained education improvements.

Context

Demographic and economic features that influence Poland's education reform include the following:

- (i) **Maturing population.** Today the median age is 39.5, and it will be 51 in 2050. Simultaneously, the population is starting to decline: from 38.6 million in 1995, to 38 million in 2010, to a projected 32 million in 2050. There are two main reasons for Poland's population decline: low fertility rates and continued emigration. Poland's demographics pose a challenge for continued economic growth.
- (ii) **Steady economic growth.** Since Poland joined the European Union (EU) in 2004, the economy has grown by more than 4% per year, the fastest and most consistent in Europe. The country's postaccession development agenda has been marked by the desire to fully catch up with the core of the EU in terms of economic growth and living standards. By 2014, Poland had the 6th largest economy in the EU, and living standards had more than doubled, reaching 62% of the level of the most prosperous European countries. OECD has classified Poland as a high income country.
- (iii) **Structural transformation of the economy.** The EU has invested more than \$50 billion in Polish infrastructure, and private investment has turned the country into a hub for production, particularly of automotive parts. To be competitive, Poland must keep wages down, which today stand at about one third of those in the more developed countries of the EU. Now, Poland's development agenda includes exporting more high-tech and knowledge-intensive products, and there are a growing number of small, innovative Polish technology companies. There is also a sizeable and vibrant local economy of small and medium-sized enterprises that maintained economic growth throughout the global economic slowdown of 2008 and beyond.
- (iv) **Youth unemployment.** Although the Polish economy has done quite well, the overall unemployment rate is around 10%. The rates of youth unemployment and temporary employment are higher, with more than 25% of economically active 15–24-year-olds unemployed and 66% of young employees on fixed-term contracts. Some 26% of USS graduates are unemployed, and about 12.2% are NEETs.
- (v) **Poverty.** The poverty level in Poland has been relatively stable, affecting between 17% (World Bank 2012) and the national figure of 6.5%, which if adjusted for inflation would be 11.5% (Polish Central Statistical Office 2014b) using the national poverty line.

Education features that influence Poland’s education reform include the following:

- (i) **Legacy of literacy.** Since 1989, Poland has continued to invest heavily in improving school education, building new private universities, and participating in student-exchange programs among European universities. Poland now has the second-highest rate of tertiary enrollment (73%) in OECD.¹⁷ The mean number of years of schooling for adults is 11.8, and the expected years of schooling for children who started schooling in 2010 is 15.
- (ii) **Success.** Poland has had success in tackling complicated education reforms, which led to an “education boom” with more people in kindergarten (from 30% to 93.5% of 5-year-olds), more teachers with university diplomas (from 50% to 98%), and a fourfold increase in higher education (from 10% to 41.2%). Since 1989, the number of students in tertiary education has risen from 400,000 to two million, while the number of USS students taking their final examinations, the “Matura,” doubled to 80%.
- (iii) **Setting direction and gauging progress.** During the EU accession process, Poland organized many of its reforms to align with accession requirements and benchmarked its education structure, standards, and performance against European norms. In addition, Poland participates in many international assessments including the PISA, TIMSS/Progress in International Reading Literacy Study, Teaching and Learning International Survey, Teacher Education and Development Study in Mathematics, and Programme for the International Assessment of Adult Competencies, to monitor the system and develop evidence-based policy.
- (iv) **Teachers.** Poland has invested significantly in upgrading the teaching profession and preparing teachers to deliver a more challenging curriculum that requires unfamiliar teaching practices. Teacher compensation increased by 50% between 2009 and 2013, and more than 90% participate in professional development.
- (v) **Education finance.** In 2013, public expenditure for the national system of formal school education amounted to \$16.74 billion, which was equal to 4.0% of GDP.
- (vi) **Primary changes.** The numbers of students and graduates of primary and LSSs have been decreasing since 1995 as a result of demographic trends. Consequently, since SY2003/2004, there has been a 12.4% drop in the number of primary schools. The average number of pupils in primary classes is 22 in urban and 15 in rural areas. The share of private schools has been increasing.
- (vii) **Lower secondary growth.** As with primary schools, the number of private LSSs has increased. The average number of pupils in LSS classes is 23 in urban and 21 in rural areas.
- (viii) **Upper secondary programs.** In SY2013/2014, 59.1% of all recent LSS graduates enrolled in general secondary schools, the majority of which are public. In the same year, there were 4,334 general USSs (856 fewer than in the previous year).

¹⁷ Defined as the total enrollment in tertiary education, regardless of age, expressed as a percentage of the total population of the 5-year age group following on from secondary school leaving.

- (ix) **Vocational and technical schools.** These offer programs in engineering technology, services, architecture and construction, and production and processing. The number of technical USSs is declining along with the number of students. In SY2013/2014, the most popular occupations taught in technical USSs included services, engineering, and information technology.
- (x) **Arts schools.** Administered by the Ministry of Culture and National Heritage, these offer training in seven fields: music, fine arts, dance, musical acting, circus performance, animation, and library studies. In SY2013/2014, there were 49 elementary arts schools (with general education and artistic training) including schools of ballet, attended by 9,182 pupils. General upper secondary arts schools trained mostly artists, musicians, and dancers.

Teacher shortage. At present there is an insufficient number of candidates for the teaching profession to meet demand. Poland's teachers have very similar working conditions whether they are posted in rural areas or in large cities. Teachers have independence in terms of teaching, which, together with improved curricula and higher quality examinations, has boosted not only the average outcomes of students but has worked for all learners, both at the bottom and at the top of performance distribution.

Decentralized governance. Decentralization laws passed at the same time as the education laws restructured education governance to a more decentralized model. The state began shedding central control of elementary school operations by transferring decision making to newly reformed and empowered local governments. Under decentralization, more autonomy was provided to local and regional authorities, schools, principals, and teachers to determine how results could be delivered. Simultaneously, private schools were legalized. Table 2.6 describes the basic allocation of responsibilities among levels.

Table 2.6: Allocation of Education Functions among Levels, Poland

Central	Local	School
Core curriculum	Financial and administrative supervision of schools	Developing and implementing school level curricula
Structure of the education system	School infrastructure and equipment	Organizing teaching process
Professional supervision	School funding	Teachers' employment

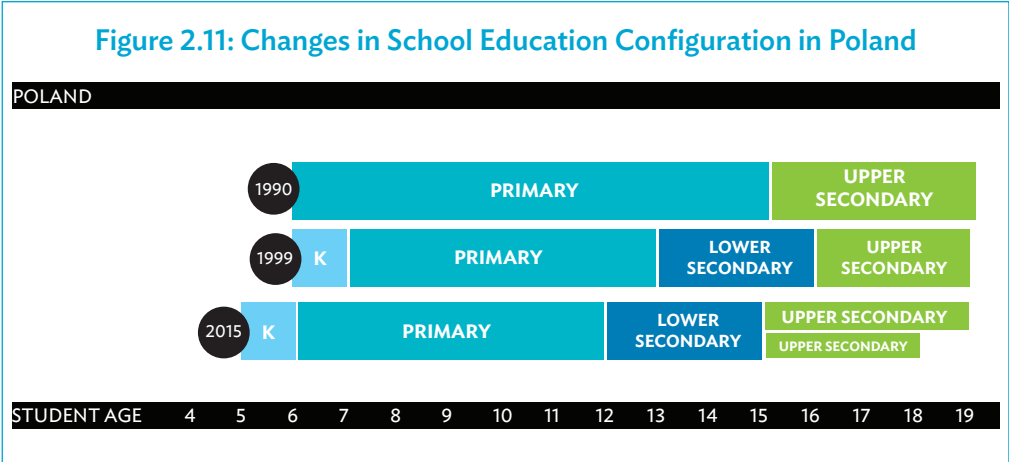
Policy Framework

Foundational policies. With OECD membership in 1996 and EU accession in 2004, education policy in Poland began referencing international standards and benchmarks. Poland's medium-term development agenda through 2020 is aligned with both the Europe 2020 strategy and the European common strategic framework. Both OECD and the EU emphasize policies that are mainstays of Poland's educational reforms. The current national development strategy through 2020 mentions further restructuring the organization of

education and revising the financing function. In the sections describing human capital and social development, emphasis is given to “modern education models, which will contribute to learning the key skills and attitudes such as: language skills, practical knowledge, teamwork skills, ability to use modern technology and creative thinking.”¹⁸

Structural policies. Following the Act on the Implementation of the School Systems Reform of 1999, a complex reform of the education system was implemented that was linked to reforms of state administration. This reform included a reconfiguration of the school education cycle into a three-level system comprising 6 years of primary school, 3 years of LSS, and 3 or 4 years of specialized USS. At the same time, compulsory education was extended to age 16 (grade 9). In 2011, kindergarten was made compulsory for children of age 5. The threshold age of entry for primary school was gradually lowered to 6 between 2009 and 2014. As of 2014, the age of entry to grade 1 was lowered to 6. The restructuring aligned education with the International Standard Classification of Education (ISCED).¹⁹ The transition is represented in Figure 2.11.

Complementary policies. A series of complementary policies accompanied the gradual implementation of structural change. Paramount among these were changes in school curricula made possible by restructuring. The introduction of LSS enabled an extension of comprehensive education and delayed specialization by 1 year. This change had a powerful and broad-based impact on learning achievement, particularly for students who would proceed to work at age 16 or who would continue on to a vocational USS program.



After years of complaints of overly broad and prescriptive curricula and of disputes about possible ways forward, the decision was made to implement the concept of “core curricula.” This coincided with an extensive expansion of school autonomy and responsibility.

¹⁸ Government of Poland, Ministry of Foreign Affairs. 2011. *National Reform Program Europe 2020*. http://ec.europa.eu/europe2020/pdf/nrp/nrp_poland_en.pdf Warsaw

¹⁹ ISCED is the reference classification for organizing education programs and related qualifications by education levels and fields as developed by the United Nations Educational, Scientific and Cultural Organization.

Under this reform, schools were asked to develop their own school level curricula, within a predetermined general framework, while balancing three dimensions of education: acquiring knowledge, developing skills, and shaping attitudes. The reform of the curricula was designed not only to bring about change in the content of school education but, more significantly, to change the teaching philosophy and improve the professional culture of schools.

While the first wave of complementary reforms introduced significant changes, the curriculum was criticized as still outdated, focusing too much on knowledge acquisition and too little on critical thinking, analysis, discussion, and problem solving. The curriculum introduced in 2008 shifted emphasis to learning outcomes and was aligned with the new national examinations' standards.

Planning

Poland did not rush implementation reforms; it took time to first raise the capacity of teachers to implement the reformed curriculum. Support for the reform among stakeholders was garnered by early and visible successes in international assessments. Not all reforms were implemented. For example, Poland is still engaged in reforming and modernizing the school evaluation system using small steps instead of larger reform. The strategy is to provide schools and teachers with significant autonomy. Therefore, continuous professional development of school principals and teachers is important to ensure sustainable outcomes.

The planning process in Poland is best understood as a series of reforms that were planned in sequence but overlapped in implementation (Table 2.7). Adding to the complexity were the overarching reforms external to the education sector that transformed public service governance and finance.

Table 2.7: Sequence of Overlapping Structural and Complementary Reforms, Poland

1989	1999	2009	2012
Bottom-up reforms release of educational potential; nonpublic schools, innovations	Administrative reform school management delegated to local authorities	General education - new core curriculum based on learning outcomes - compulsory education at age 6 - compulsory preschool education for 5-year-olds - individual approach to teaching; special attention given to - talented students and to students with learning difficulties	All upper secondary schools same general education programs for general and vocational USSs

continued on next page

1989	1999	2009	2012
Top- down reforms • decentralization of the system • greater autonomy of schools • increase of teachers' salary (up to the country's average salary) • first long-term educational strategy – “Good and modern school” • 1996: OECD accession (1994: review of educational policy in Poland) • National Centre for Teachers' In-Service Training established	Changes to the system of education • structural reform; creation of LSSs • (ISCED2) – longer compulsory general education • introduction of external system of national assessment • adoption of core curriculum and national standards • reform of teachers' initial education at universities • introduction of teacher career promotion system	Vocational education • modernization of TVET based on the European Credit System for Vocational Education and Training • development of Life-Long Learning Strategy • National Qualifications' Framework based on European Qualifications' Framework (in progress)	Vocational schools • Promotion of better cooperation between schools and employers: • greater role of practical training • employers' engagement: jointly developed curricula, providing courses ordered by employers, establishing and running examination centers by employers • introducing short education forms; vocational qualification courses • external examinations measuring learning outcomes acquired both within and outside formal system

Source: M. Sielatycki . 2012. Poland: Successes and Challenges: Educational Reforms. Conference presentation

Implementing

The OECD PISA study showed large improvements in student outcomes, mostly among the lowest performing students. The subsequent PISA studies also provided evidence that the 1999/2000 reforms helped reduce school disparities in student outcomes from one of the highest levels among OECD countries to a level far below the average. That was an important achievement in a country with large socioeconomic disparities. It was also among the main goals of the 1999 reform: providing equally good basic education for all students.

PISA. In the first PISA round in 2000, Poland's results were below OECD's averages, as this assessment examined the previous education system, which was in effect until 1999. But 3 years later, Polish students' results had improved under the reforms and have continued to improve on each PISA round since. In the last assessment cycle, conducted in 2012, Polish students placed 2nd in reading scores and 6th in mathematics. Results showed significant development of competencies for girls and for both the best and the worst students (Figure 2.12).

Figure 2.12: Poland's PISA Performance, 2000–2012



Source: World Bank. 2014. A. Cross-Country Sharing of Poland's Reform Experience: New Ideas for Education. <http://www.worldbank.org/en/news/feature/2014/12/16/cross-country-sharing-of-polands-reform-experience-new-ideas-for-education>

Educational boom. Apart from the visible success in PISA results that Poland experienced, an educational boom over two decades saw the completion rate of USSs climb to more than 95%, revitalization of high educational aspirations of young people as evidenced by the relatively low percentage of early school leavers, and a quality improvement in education delivery that matches high student aspirations as evidenced by the number of secondary school graduates that enroll in Europe's finest universities.

Under the previous system, students entered primary school at 7 and stayed until it was time to make career decisions at the age of 15, and about 50% of students left school after completing grade 8. Weaker students were streamed into 2-year basic vocational schools run by individual sector industries. Middle-ranking students were sent to 2-year technical secondary schools to prepare as technicians. Only the top 20% of students went on to a 3-year academic secondary program in preparation for university entry, and the GER in higher education was only 7%. Those gaps meant that Poland, in short, was not training a workforce that could move the country toward a new, more vibrant, economy. But today, Poland is a country with a dynamic workforce whose competencies in reading, mathematics, and science exceed OECD and EU averages. 2014 saw a 90% NER for secondary education and a 73% GER for tertiary education.

Turkey

Since 2003, economic growth in Turkey has increased, but chaos in neighboring countries has caused, at least in part, a slowdown in economic growth. Education access, equity, and quality have all improved dramatically over the past 15 years as a result of government-initiated programs alongside a rise in standard of living. Motivated partly by concerns about its comparatively low average educational attainment rate, in 2012, Turkey restructured its basic education system for the third time since 1997, moving from an 8+4 structure to a 4+4+4 configuration, lowering the threshold age of entry into grade 1 to 5.5 years, and increasing compulsory education to 12 years. By implementing structural and complementary policies nationwide the same year the law was passed, Turkey combined the preparation and implementation phases and strained absorptive capacity at the new lower secondary level and the new upper secondary level.

Context

Demographic and economic factors that influence Turkey's education reform include:

- (i) **International presence.** Turkey became an EU accession candidate country in 2005, has been a member of OECD since 1961, and has recently assumed the rotating presidency of the G20 group. Comparators for Turkey are the EU and OECD countries and averages.
- (ii) **Population profile.** While the median age of Turkey is 29.6 years, the population profile is gradually changing. In 2013, 26% of the total population was aged 0–14, 67.8% was of working age (15–64), and 7.7% was aged 65 and over. The 2013 census projections estimate that by 2023 the share of children in the population will drop from 26% to 21%.
- (iii) **Inclusive socioeconomic growth.** Turkey is an upper middle income country with a population of 76 million and a GDP of \$813 billion in 2014, making it the 18th largest economy in the world that year. Per capita income has grown threefold in the past decade, and this growth has been inclusive; Turkey has decreased absolute poverty since 2007, and the share of the population living on less than \$4.30 a day has decreased by more than 6% (8.41% for 2007 and 2.3% for 2012). However, the relative poverty rate has remained almost the same since 2007 (22.8% for 2007 and 22.6% for 2012). Almost one in every four households is at risk of poverty.²⁰
- (iv) **Poverty and education.** Poverty rates steadily decrease as years of education increase. Those who are illiterate or literate but with no primary school completion certificate have the highest poverty rates. Women's educational levels have a higher impact on poverty reduction than men's (Table 2.8).

²⁰ Turkish Statistical Institute. 2014. Household Labor Force Survey, 2013.

Table 2.8: Poverty Rates according to Gender and Educational Status of Household Members, Turkey, 2002 and 2009

Educational Status	Poverty Rate (%)					
	2002			2009		
	Average	Male	Female	Average	Male	Female
Overall	26.96	26.72	27.19	18.08	17.10	19.03
Illiterate or literate but without a diploma	36.99	37.68	36.54	29.84	30.34	29.52
Some primary school	26.13	28.06	24.33	15.34	16.86	13.83
Primary school	26.37	28.40	24.10	17.77	17.19	18.39
Secondary school or equivalent vocational school	18.77	19.49	17.38	9.76	10.89	7.82
2-year postsecondary school or equivalent vocational school	9.82	10.99	8.24	5.34	5.71	4.76
University, faculty, masters, doctorate	1.57	1.22	2.12	0.71	0.92	0.40

Source: Turkish Statistical Institute, Poverty Survey, 2009.

- (v) **Labor force participation.** While participation rates in the EU average 79.3%, the rate in Turkey is considerably lower at 49.1%. On the other hand, Turkey decreased the level of unemployment to 8.7% between 2007 and 2013, while the EU average increased to 10.8% from 7.2%. The levels of labor force participation (LFP) and unemployment are strongly correlated with educational attainment. Table 2.9 demonstrates that, as the level of education increases, LFP increases proportionately.

Table 2.9: Educational Attainment of the Labor Force, Turkey, 2013

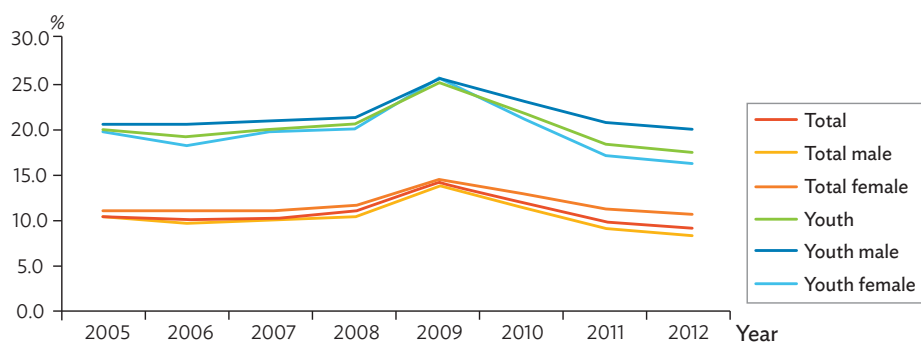
	Illiterate	Less than High School	High School	Vocational High School	Higher Education
LFP	20.1%	48.0%	53.1%	65.1%	80.1%
Female LFP	17.4%	26.3%	32.1%	39.3%	72.2%
Unemployment	4.9%	9.3%	12.0%	10.5%	10.3%
Female Unemployment	2.3%	9.4%	20.1%	20.4%	15.1%

LFP = labor force participation.

Source: Turkish Statistical Institute, Household Labor Force Survey, 2013.

- (vi) **Youth unemployment rate of 17.5% in 2012.** While the LFP rate was just under 50%, the unemployment rate was 17.5% and the nonagricultural unemployment rate was 20.8% for youth (18.4% for young men; 26.1% for young women). Over the same period, the overall nonagricultural unemployment rate was 11.5% (Figure 2.13).
- (vii) **NEETs.** According to the July 2014 Household Labor Survey, about a third of youth aged 15–24 are in school, another third are working, while the final third are not employed or in education or training (NEETs); this is the highest share of inactive youth among OECD countries but is an improvement over the 2009 level of 44%. For the youth who do work, 51% work in the informal economy.

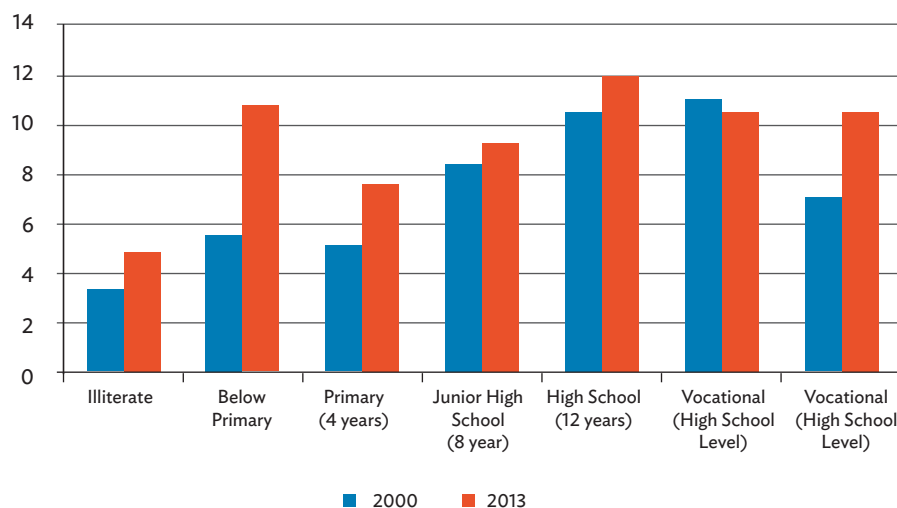
Figure 2.13: Trends in Youth and Total Unemployment Rates, Turkey, 2005–2012 (%)



Source: Turkish Statistical Institute. Household Labor Force Survey, 2013.

- (viii) **Low working age population attainment.** Turkey's labor force is characterized by a low level of schooling, despite improvements in younger cohorts. This improvement is indicated by the difference between the mean years of schooling for the adult population (7.6) and the anticipated years of schooling for children starting grade 1 in 2012 (14.4). More than half the working age population (WAP) have a formal education of fewer than 8 years (Figure 2.14). Younger workers are better educated and more skilled than their elders but still lag behind their counterparts in comparator countries.

Figure 2.14: Unemployment Rate for WAP by Education Level, Turkey, 2000 and 2013



Source: World Bank Country Snapshot, 2014.

- (ix) **Tertiary attainment.** Levels of tertiary attainment in Turkey have improved strongly over the last decade, but they are still low compared with other EU countries. In 2013, 13.2% of the adult population (25+) had attained a tertiary qualification against the EU average of 24.9%. The potential for future growth in the attainment rate is relatively limited, since attainment among young adults (25–34-year-olds) is only 21.5%, well below the EU average of 36.1%.²¹
- (x) **Long-term development goal.** The goal of the Tenth Development Plan is to upgrade the global position of Turkey and enhance the welfare of its people by, among other means, increasing the overall average education attainment of the population.

Education system features that have influenced Turkey's education reform include:

- (i) **Governance.** Turkey has a highly centralized sector governance structure, with the central ministry responsible for policy and the central and provincial governments responsible for school personnel and finance; very little decision making is invested at the school level. In the provinces, educational affairs are organized by the directorates of national education appointed by the minister, but working under the direction of the provincial governor.
- (ii) **Funding.** Although overall funding has increased since 2003, the system is still underfunded in comparison with OECD standards. In 2014, Turkey spent 4% of its GDP on educational institutions at all levels, compared with an average of 6% for OECD countries. Education makes up 11% of Turkey's total public expenditure, compared with the OECD average of 13%. Spending per student is highest at the tertiary level—\$8,193 per tertiary student per year—compared with \$2,736 per secondary student and \$2,218 per primary student.²² While Turkey's public expenditure on education is lower than the average of developed countries, private expenditure is higher, leading to inefficiencies and inequalities in education spending.
- (iii) **Big system, moderate-sized schools.** The Turkish education system is large, with more than 16.4 million students enrolled in grades 1–12 in 2014. Nearly 830,000 teachers work in some 56,500 schools. The average Turkish primary school houses about 200 students, apart from Istanbul, where the figure is closer to 600. LSS populations are around 300 students, with those in Istanbul closer to 500. For USSs the population is about 375 students (506 in general schools and 308 in vocational). Primary schools average 19 teachers; LSSs, 18; general USSs, 16; and vocational schools, 14.
- (iv) **High enrollment ratios.** For SY2013/2014, the NERs were 99.7% for primary and 94.5% for the newly established LSS level. The USSs have expanded, with the NER in secondary education jumping from 48.11% in 2001/2002 to 76.65% in 2014 (girls' enrollment went from 43% to 76.05%).

²¹ Data of European Union Statistical Office, EUROSTAT.

²² OECD. 2014. Turkey—Country Note: Education at a Glance 2014. <http://www.oecd.org/edu/Turkey-EAG2014-Country-Note.pdf>

- (v) **High absenteeism and dropout rates.** At the secondary level, there is an 8.2% dropout rate, and about 45% of students are absent more than 20 days a year. Also, prior to the 2012 restructuring, 75% of secondary students who dropped out did so in 9th grade. As of September 2012, 12-year compulsory education is the standard in all levels of education. Early indications are that more children transition from 8th to 9th grade under the new system.²³
- (vi) **Internal efficiency lower than in comparator countries.** In 2013, the rate of early school leavers (aged 18–24) was 37.5%, while it was 11.9% in the EU countries.²⁴ Most of these are children from marginalized groups such as children of poor families and families in migratory/temporary seasonal work, and students with special needs.
- (vii) **Teachers.** Salaries for teachers are low by international standards, but within Turkey teachers are considered relatively well paid.
- (viii) **Gender.** The gender access gap disappeared at the primary level and decreased substantially at the secondary level due in large part to the “all girls to school” campaign between 2003 and 2008. The gender parity rate is now 0.95 at the primary level. Poverty barriers to access were addressed through a conditional cash transfer program called “conditional education assistance,” which is managed by the Ministry of Family and Social Policies.
- (ix) **Quality and equity improving.** While still below the OECD average for PISA results in reading, mathematics, and science, Turkey has narrowed the gap. While Turkey is progressing from low initial results, it exhibits the highest annual change in average PISA scores of any participating country. Turkey’s performance is noteworthy, as the scores of the poorest students increased faster than those of the better-off students, reducing the achievement gap between the richest and poorest students. OECD reports that Turkey is the second most successful country in reducing the effect of family background on education success.
- (x) **Rising trends.** Turkey had some of the largest gains in PISA scores of countries that have participated for 10 years or more. The 2012 results indicate that the achievement gap between Turkish and other OECD students has been halved. Turkey’s gains occurred at the same time that enrollment and retention in school have increased dramatically—a circumstance that often causes scores to decline. Ten years ago, only about 50% of Turkish 15-year-olds were still in school, while today about 75% are enrolled. PISA results reveal that Turkey registered one of the sharpest declines in the importance of students’ socioeconomic background on their academic performance. Over the last 10 years, Turkey has tripled spending on primary education; constructed new schools in underserved areas; strengthened curriculum standards; and invested in libraries, computers, teachers, textbooks, and smaller class sizes.

²³ Education Reform Initiative. 2014. *Education Monitoring Report*. Sabanci University. Istanbul, Turkey. <http://erg.sabanciuniv.edu/en/publications>

²⁴ Data of European Union Statistical Office, EUROSTAT.

- (xi) **Room for improvement.** Turkey's average 15-year-old is still 40 PISA points (1 full year) behind the OECD average, and, despite the achievements noted above, socioeconomic effects are still a more important determinant of success than in other OECD countries; about 25% of students are considered functionally illiterate by OECD standards, although this has improved from 36% in 2003.

Policy Framework

Foundational policies. The Tenth Development Plan (DP10) intends to increase the enrollment rate in tertiary education and increase the average level of schooling of the WAP.²⁵ Considering the structural changes in Turkey's economy and DP10's agenda for economic development, a better educated workforce with 21st century competences is vital to both the economic and human resource development strategies. DP10's target is to increase the share of people in the labor market who have at least a secondary school credential to 42% by 2018 from 38.5% in 2012. These policies are the foundational basis for making school education compulsory through grade 12.

In terms of social development, DP10 aims for a more equitable distribution of the benefits of growth to reduce poverty and unemployment, and to improve access to public services including education. Related education policies focus on continuing past pro-poor and pro-girl policies. Quality issues are addressed through bridging input deficits that would reduce class size.

Structural policies and the reintroduction of LSS. In 1997, the Turkish education system was changed to a compulsory 8 years of primary school, followed by an optional 3 years of secondary school, eliminating LSS (8+3). The system was lengthened in 2005 when 1 year of study was added to secondary school, bringing the system to the international norm of 12 years (8+4). Most recently, in 2012 the system was reconfigured again to 4 years of primary followed by 4 years of LSS and 4 years of USS (4+4+4). The change was presented as a step towards adopting a 12-year compulsory education system. In 2012, the government completed the legal work for reconfiguring basic education from an 8+4 to a 4+4+4 structure, thereby returning to a three-tier system.²⁶

Prior to 2012, only 8 years of primary education was compulsory, although many students continued through grade 12 and beyond. After 2012, compulsory education was redefined as grades 1–12. The age of entry into grade 1 was lowered from 6 to 5.5 or even 5 years if parents so wished (Figure 2.15), kindergarten from year 4 was included.

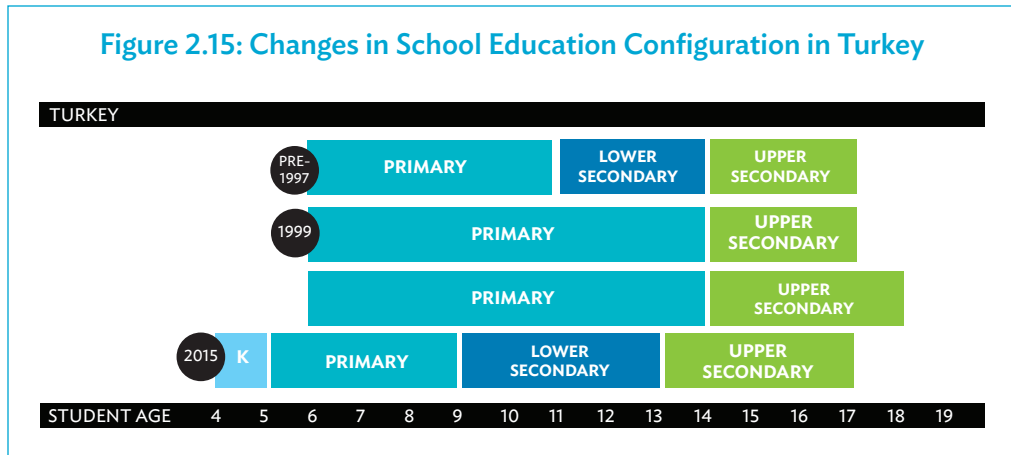
Four ministry priorities for upper secondary education were to reduce the types of USSs, simplify admissions at that level, increase the absorptive capacity of the USS level, and eliminate private tutoring academies.

School types at the USS level. At the time that upper secondary schooling was expanded to 4 years, there were 79 types of USSs. Successive waves of reform reduced this number to 7.

²⁵ Government of Turkey, Ministry of Development. 2013. *The Tenth Development Plan 2014–2018*. Ankara, Turkey.

²⁶ 2012 Law number 6287, known as the 4+4+4 Education System Law.

Figure 2.15: Changes in School Education Configuration in Turkey



This includes general education schools that prepare students for higher education, and six types of specialized schools:

- (i) **Anatolian high schools.** These are the most desirable, and entry is highly competitive, admitting only about 10% of applicants. These schools focus on foreign languages; some even use a foreign language as the medium of instruction. The academic load is greater than in other high schools.
- (ii) **Science high schools.** These are for students who go on to science or engineering departments at the universities.
- (iii) **Religious high schools.** These educate future imams, preachers, and teachers of the Koran. Programs also offer comprehensive education including the core and elective curriculum and prepare students for higher education.
- (iv) **Fine arts high schools.** These are for students who have a special interest and talent in performing or graphic arts.
- (v) **Private high schools.** Admission can be highly competitive, and these schools are expensive. Some private high schools offer the International Baccalaureate curriculum.
- (vi) **Vocational/technical education.** Turkey also has a number of vocational secondary schools, classified as technical, communication, health, tourism and hotel management, and teachers' vocational high schools. The students at these schools may need to study for 5 years to prepare for higher education or employment. Most programs are dual vocational, and students typically work as trainees in their chosen field for 3 days per week; the remaining 2 weekdays are spent on in-class theoretical instruction.

Transition to USS. This has undergone significant changes three times in the last decade. Most recently, in 2012, the high-stakes secondary school entrance examination (SBS or Level Placement Exam) was eliminated, and student selection for the third level of school education is made on the basis of grade point average. The rationale was to move from a model where resources were invested in special schools for the best students to a equitable model.

Tackling tutoring. Turkey's large private tutoring industry has been growing for decades as a consequence of high-stakes examinations for USS and university admissions. In 2011, there were some 4,055 firms offering private tutoring services, and more than 1.2 million students attended private tutoring courses last year. The number of tutoring academies had grown from 1,730 in 2000 serving some 174,496 students. The Turkish government's 2012 policy on private tutoring academies is to either convert them into private schools or close them down starting in 2013. The policy stimulated public debate on private tutoring in terms of its effects on education outcomes, equality of opportunity, and who benefits from private tutoring.

Planning and Implementation

The restructuring law was passed in 2012, and changes went into effect in SY2012/2013, thereby merging the planning and implementation processes. For compulsory education, the first priority, the transition model, was to implement the policy incrementally, beginning with 9th graders in SY2012/2013. As 80% of students completing grade 8 had already transitioned to secondary school, it was anticipated that the increase in enrollments would not cause serious shortages of teachers or physical space that year.

Because the changes went into effect in the same year as the law was passed, the ministry was left very little time to organize schedules and teachers around the new timetables, publish curricula and textbooks, and introduce the new elective courses. The tight planning schedule left little opportunity to ensure that teachers were fully prepared; training was often limited to web-based lectures without face-to-face or web-based interactions.

Curriculum at lower secondary level. In terms of adapting the curriculum, a new basic curriculum for grades 1–8 had been developed, piloted, and implemented between 2003 and 2008. To that core curriculum, the ministry added 21 new elective courses in six categories starting in grade 5.²⁷ To accommodate the expanded curriculum the ministry added time to the weekly timetable, reaching 36 hours in 5th and 6th grades, and 37 hours in 7th and 8th grades. In effect, what had been a primary, middle, secondary school model became a primary, lower secondary, upper secondary model, the difference being that the curriculum for middle schools was more student focused, while curriculum in LSSs is more subject focused.

Early findings. Sabanci University's Education Reform Initiative (ERI)²⁸ undertook a 3-year longitudinal study of the first years of the transition from the 8+4 to the 4+4+4 system, including a comparison of 2011/2012 and 2012/2013 academic performance and a qualitative study comprising semistructured interviews with students on their transition from 4th to 5th grade. The report is not yet available, but the research team was kind enough to share a rough English translation of the executive summary. Some findings are included in the next few paragraphs along with a general description of student and school level changes.

²⁷ The categories for elective courses are religion, ethics, and values; language and expression; foreign languages; science and mathematics; arts and sports; and social sciences.

²⁸ Education Reform Initiative. 2014. *Education Monitoring Report*. Sabanci University. Istanbul, Turkey. <http://erg.sabanciuniv.edu/en/publications>

Grade 5 students. Prior to K-12 restructuring, students remained in the same school for 8 years of basic education. Beginning in SY2012/2013, students spend their first 4 years in a primary school, followed by 4 years in a middle school and 4 years in a high school. In addition new elective courses were added to the 5th grade course schedule. With the reintroduction of LSS, 10-year-olds entered a program with both core and elective parts, many subjects and teachers, and a subject-focused pedagogy. Thus, students moving from 4th to 5th grade experienced a considerable change in their scholastic and social environments.

ERI comments that students were finding lessons harder, feeling overwhelmed by the number of classes and teachers, and confused by the number of textbooks. Indeed, the marks of 5th grade students in SY2012/2013 were lower than those of 5th graders the year before the change. The survey reported that students found the transition stressful; some were often bullied; and some expressed a desire to drop out of school.²⁹

To accommodate the increased demand, a number of schools offering lower secondary education went from single shift to double shift; some schools began teaching at 6:00 am and finished at 7:30 pm. An important point to note with regards to elective courses is that rates of teacher and student attendance are lower for these courses than they are for others. The primary reason for this problem has been identified as the difficulty in finding teachers who are qualified to teach the elective courses. However, the inadequate spatial and financial resources of schools, the period of refurbishment in schools that was triggered by the introduction of the 4+4+4 system, and the way in which the students have avoided these lessons have also been identified as the causes of such inattendance. Some students reported that the elective courses in mathematical applications and English involve a repetition of the compulsory classes in those subjects. Another important result of the introduction of these compulsory courses has been that they have effectively prevented 5th graders from engaging in extracurricular activities.

More students in USS. Early indications are that the results chain of removing barriers to USS and extending compulsory education as a means to raise the average attainment levels is off to a good start. The NER for USS jumped by 12 percentage points between SY2011/2012 and SY2014/2015. Table 2.10 reports the NER for primary, LSS, and USS for SY2010/2011 and SY2011/2012 (prior to restructuring) and for the 3 years

Table 2.10: Comparison of Net Enrollment Ratios for School Education Levels from 2010 to 2014, Turkey (%)

	Primary Net Enrollment Ratio (%)	Lower Secondary Net Enrollment Ratio (%)	Upper Secondary Net Enrollment Ratio (%)
2010/2011	98.4	–	66.1
2011/2012	98.7	–	67.4
2012/2013	98.86	93.09	70.06
2013/2014	99.57	94.52	76.65
2014/2015	96.30	94.35	79.37

Source: Education Reform Initiative. 2014. *Education Monitoring Report*. Sabanci University. Istanbul, Turkey. <http://erg.sabanciuniv.edu/en/publications>

²⁹ A single-shift school is one in which teachers handle only one group of students a day, as opposed to a double-shift school, where one group is taught in the morning and a second group in the afternoon.

postrestructuring. Although information on grade-wise dropouts was not available, a comparison of the NER for USS postrestructuring implies a higher transition rate into grade 9 postreform.

Low scoring students placed in vocational high schools. In the first year of the new structure, 574,000 students who did not score high enough on the SBS to enroll in academic high schools would have to enroll in private schools, vocational schools, or religious schools to comply with the compulsory education component of the 2012 Education Law. To accommodate those students, new regulations added coursework required for regular high schools into the curriculum of vocational high schools and Anatolian high schools to cover this gap.

Reflections

While the point of view of source materials is an issue in any desk study, the discourse around education in Turkey is particularly partisan. The glass-half-full writers spin a tale of progress from a low starting point against the backdrop of dramatic changes from military to civilian rule, from a regional to a global power, and from a highly inequitable education system to one wherein access and learning have progressed markedly for girls and children from disadvantaged groups as a result of government programs. The glass-half-empty crowd write discouraging reports about persistent problems with absenteeism, inequalities between schools, high-stakes examinations that perpetuate inequality, and a teaching practice that is too seldom student centered. Critics of the 4+4+4 reform note that the pace of implementation left inadequate time for planning, and as a consequence the reforms have outstripped the absorptive capacity of schools, teachers, and students. Supporters applaud the goals of crafting a more equitable system that prepares all students for a trade or for entry to university.

On reflection, one potential weakness in the 4+4+4 reform is that students must choose their fields at too young an age. Specialization at age 10 works well in systems where each pathway is of high quality, where contextualized comprehensive education continues within each pathway, and where students can progress to higher education or further training from any pathway. Turkey is introducing dual vocational education in the lower and upper secondary vocational programs, and apprenticeships can be beneficial to students if they are managed carefully, complement the theoretical material covered in in-school coursework, and are administered well.

A second concern is absorptive capacity in LSSs and USSs. By making USS compulsory, Turkey is increasing the enrollments at that level by at least 20% (80% of the 8th graders proceeded to 9th grade the year before the reform was implemented). For some reason the predicted absorptive capacity of nonvocational schools was insufficient to meet demand, and many students were routed to vocational or religious schools instead. As comprehensive courses are being added to those specialized programs, students enrolled in their second-choice schools should be able to continue to higher education or further training.

Could the Philippine option of PPPs to reduce crowding in public LSSs work in Turkey? Transplanted options tend not to thrive in foreign soil, and Turkey describes private tutoring academies as contributing to inequities, but they will be a source of excess capacity if the policy of closing down such institutions gains traction.

The restructuring also resulted in a surplus of primary school teachers who may have been absorbed into LSSs without sufficient preparation. Also, the addition of core and elective courses to LSSs resulted in a large number of teachers handling subjects outside their specialized areas, at least at first.

Finally, if the expanded vocational track is in compliance with EU-sponsored lifelong learning and other TVET programs, it could enable Turkey to align its education system both with international standards and with the national and global labor market.

Lessons Learned and Reflections

Lessons Learned Include the Following Six Considerations

- (i) **Clarify the core problem.** Core problems are translated into foundational policies. Hence, slow economic growth or stagnant poverty rates become “improving national competitiveness” or “inclusive growth.” Restating macropolicies as educational outcomes aligns education reforms with macrolevel development priorities. Five examples of foundational policies restated as education results are:
 - (a) **Meeting international standards.** Education credentials are accepted by schools, universities, training programs, and employers in other countries as equivalent to their national credentials.
 - (b) **Achieving equity.** Disadvantaged students are qualified and prepared for decent work or further study.
 - (c) **Preparing for life.** Secondary and tertiary education graduates get jobs faster; tertiary education has higher completion rates.
 - (d) **Competing globally.** Cohorts of entrepreneurs and employees are prepared for emerging economies; workforce attainment is at parity with, or exceeds, comparator nations’ norms.
 - (e) **Fostering national cohesion.** Core values and national identity are conserved.
- (ii) **Restructuring is just one of a bundle of reforms.** Transition to a K–12 structure is part of a package of education reforms and, as the most visible part, often becomes a symbol for the entire package. Reform packages can be organized into a three-layered policy framework, with macrolevel or foundational policies in the first layer. These act as principles that guide the second and third layers. Structural policies are domiciled in the second layer. These are statutory and define the K–12 configuration, threshold age of entry to grade 1, and duration of compulsory education. The third layer comprises complementary policies covering curriculum, teachers, school infrastructure, system administration, financing, and governance, among others. These are prepared by whoever was vested with that authority by the country’s governance structure, including decentralization laws. Coordination of policies within each layer and alignment of layer 3 with layers 2 and 1 bring harmony and discipline to the reform.

- (iii) **Maintain focus on improving student competences for all students.** It is easy to lose focus on student learning in the pressure to prepare and implement a highly visible, multidimensional K–12 reform costing millions or even billions of dollars. Education programs are judged by three criteria:
 - (a) First, in terms of how well on average students perform in assessments of their competences. Improving the performance of weaker students is the most effective way of improving a system’s overall performance. Systems that focus on supporting the 10% highest achieving students do not progress as far or as quickly as systems that focus support on the other 90%.
 - (b) Second, on how well those competences prepare students for their postbasic education destinations, whether or not they graduated from grade 12.
 - (c) Third, on whether those destinations align with macrolevel policies for human resource development.

If a reform does not deliver on the first criterion, it cannot deliver on the second or third criteria.

- (iv) **Teachers are the engine that pulls K–12 reform along, slows it down, or derails it.** Even in very high-achieving systems, teacher professional development is a sine qua non of any reform. In high-achieving systems, teacher development tends to be peer centered. Systems wherein teacher motivation or skills fall short of curriculum requirements for content knowledge or teaching methods will be required to be flexible and to try temporary fixes and “workarounds.” There are many options:
 - (a) Invest in a preparatory phase of intensive teacher training 1 year ahead of step-wise implementation of the new curriculum (Mongolia).
 - (b) Hire part-time or temporary teachers who have the knowledge and competences to teach subjects having teacher shortages, if teacher laws and teacher unions permit (Philippines).
 - (c) Allow asymmetrical implementation of the reform on a school-by-school basis triggered by schools developing sufficient teaching capacity to deliver the program (Poland).
 - (d) Contract with private providers to offer programs in some areas (Philippines).
 - (e) Invest in continuous teacher professional development programs (Ontario).
 - (f) Use distance training for teacher training.
- (v) **Replace or supplement high-stakes examinations with low-stakes continuous testing.** High-stakes testing tends to reinforce inequalities between families that can afford private tutoring and families that cannot. For students, high-stakes testing, perpetual preparation for high-stakes tests, and the stressful climate of competition in schools have a negative effect on “winners” and “losers” alike. Reportedly, successful students may do well on tests but have little self-confidence and dislike learning.
- (iv) **Design the curriculum and assessments around the difficulty of cognitive tasks.** Most assessments focus on lower order skills—those that are classified

as level one or two on OECD's test of 15-year-olds in reading, mathematics, and science. Curricula and assessments focusing on higher order skills are thought to be more aligned with the competences required in USSs, higher education, and decent work. The following lists some of the reading competences associated with five levels of difficulty on the PISA reading assessment from 2012:

- (a) **Level 1 (lowest):** locating a single piece of information or identifying the main theme of a text
- (b) **Level 2:** locating straightforward information or using some outside knowledge to understand the material
- (c) **Level 3:** making links between different parts of a text or relating it to familiar everyday knowledge
- (d) **Level 4:** locating embedded information or construing meaning from nuances of language
- (e) **Level 5 (highest):** evaluating text critically, building hypotheses, accommodating concepts that may be contrary to expectations

Reflections

Resistance to restructuring overcome by success. K-12 transitions in the case jurisdictions were not launched as a result of popular demand. Unlike the preschool and mother-tongue instruction movements, which have vocal lobbies, K-12 restructuring does not enjoy this level of civil society or political support. Rather, in the Philippines, Turkey, Ontario, and Poland the expansion was met by popular resistance and skepticism in the national press. In the case of Poland, quick and highly visible results on demonstrating improved learning encouraged teachers and quieted popular and bureaucratic resistance to the systemic changes.

Providing alternative pathways. The Ontario experience underlines the importance of destinations (transition from secondary school) for school graduates and dropouts. The most recent education reform in Ontario started with baseline studies of where the graduates were going and then engineered the reform (including organizing courses) to encourage a smooth transition to destinations according to the province's objectives and market signals.

Transition to K-12 takes time. Three of the five cases underwent two or more restructuring reforms prior to the K-12 reform. An asymmetrical implementation model allows schools to implement the reform according to their preparedness rather than all at once. A step-wise rollout exerts pressure to implement programs before schools and teachers are ready, but permits year-on-year improvement in reform implementation.

On model schools. There is a correlation between average literacy rate and GDP growth, and improving the performance of the lowest performing students is likely the most effective means for improving average literacy. This point highlights equity issues raised by the model school option used in some case countries. Special schools for talented and gifted students, laboratory schools, and model schools with competitive entrance examinations are highly inequitable. Such programs favor students from higher socioeconomic status, are staffed by better prepared teachers who receive much higher

salaries than mainstream teachers, and are equipped with sufficient inputs of better quality as compared with ordinary state schools. The underlying policy issue is whether to expend resources and support for the top 10% of students or the other 90%.

The private sector. Some case countries encourage partnership with the private sector for school infrastructure delivery, school service delivery, or both. The Philippines has a long and beneficial tradition of such partnerships. Public support for schools other than those run directly by the ministry of education increases the diversity of K–12 schools and can reduce the cost of delivery for the government.

Unanticipated outcomes. In each case, restructuring led to outcomes—some desirable, others not so much so. In the Philippines, difficulties were encountered due to the expansion of basic education into what had been the first 2 years of higher education, which led to legal action taken to delay or derail the introduction of grades 11 and 12. TVET in Mongolia is under the Ministry of Labor, which offers a monthly stipend to students under the age of 24 who are enrolled in TVET programs, leading to a burgeoning enrollment in secondary level TVET programs and an unforeseen drop in general USS enrollment. When Ontario moved from a 5- to a 4-year secondary school program to align with other Canadian provinces and for fiscal prudence, the Ontario Ministry of Education did not anticipate many students remaining in school for an extra “victory lap” year despite earning enough credits to graduate. The watchword is to expect the unexpected.

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Transitions to K–12 Education Systems: Experiences from Five Case Countries

With more than 140 countries currently offering or in transition to a kindergarten through grade 12 (K–12) school education system, this desk study explored the experiences of four countries—Mongolia, Philippines, Poland, and Turkey—and one Canadian province, Ontario, in preparing and implementing K–12 systems. Lessons learned from the five diverse jurisdictions are (i) align the education system with macro policies, (ii) view transition to K–12 as part of a package of reforms, (iii) prioritize improving student learning, (iv) consider teacher development as critical, (v) avoid high-stakes examinations, and (vi) focus on higher order curriculum and assessments.

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