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Policy Lessons from and for Japan

This chapter reviews Japan's history of education reform. It also summaries the key strengths of the country's education system and suggests what other countries could learn from Japan's example. Given the fundamental changes occurring in Japan's demographic and economic profile and the effects of globalisation, the chapter also recommends some policy reforms that could help maintain the country's excellence in education.



INTRODUCTION

As shown in Chapter 2, the performance of Japan's students in mathematics and science compared with that of students in other OECD countries is impressive, and their performance in reading literacy, though not in the very top ranks, is also high. There is nothing new about this consistently good performance: Japan has placed at or near the top of the international rankings on all such surveys since they began. What is new is that Japan has, over recent years, seen improvements in students' ability to creatively use and apply the knowledge they have acquired, areas in which educators have traditionally seen weaknesses in Japanese education. Similarly, in the PISA 2009 assessment Japanese students showed much higher levels of engagement and enjoyment of reading and learning than was the case in 2000.

Japan also provides a comparatively equitable distribution of learning opportunities, but social disparities among schools have increased considerably over the past decade.

It is tempting to believe that these results are due to the achievement of only a small elite of students, but that is not the case: 95% of the age cohort completes high school in Japan, the highest proportion among the G8 nations.

All of this has repercussions in daily life. Universal literacy and high levels of academic achievement mean that newspaper editors in Japan can and do routinely assume that their readers can understand sophisticated statistical tables and highly technical scientific topics. Factory managers distribute manuals that assume knowledge of calculus to teams that include recent high school graduates. The advantage of this level of knowledge and skill to a country, in both citizenship and economic terms, is incalculable.

This chapter begins with a review of Japan's education reform trajectory as a backdrop to current reform efforts. It then summarises key strengths of the Japanese education system – from which other countries can learn – and analyses policy challenges that facing the country – where Japan can learn from other education systems.

JAPAN'S PAST REFORM TRAJECTORY

Japan is a mountainous island nation. The proportion of arable land to population is among the lowest in the industrialised world. Its inhabitants crowd together in the mountain valleys and along the coasts in densely populated enclaves. Japan is also subject to regular and frequent disasters, such as typhoons and earthquakes, and the regular possibility of crop failure. These islands contain very little in the way of readily extractable natural resources; instead, the country has achieved a high level of success through its education system.

A long history in such a challenging environment has had a profound effect on Japanese culture; people developed very strong co-operative ties as a collective survival mechanism. Society recognised early on that a lack of natural resources meant that the best way to succeed was through developing human capital. The result is a culture in which great value is placed on education and skills on the one hand, and on the group and social relations on the other. There is a shared belief that if the individual works tirelessly for the group, the group will reciprocate. But if one flouts the group, one can expect very little from society.

The Tokugawa era: 1603 to 1868

Prior to the Tokugawa era, Japanese culture had been one of warriors, in which the Samurai had the highest social status in the nation. During the Tokugawa era, which lasted for about 250 years until the middle of the 19th century, Japan was at peace. From the middle of the 19th century, the Samurai, while retaining their social status, replaced their swords with pens and became the bureaucrats who ran the country. Largely isolated from the outside world, Japan prospered and enjoyed a rich culture. By 1850, an estimated 40% of Japanese were literate, putting the country on a par with Europe, although it lagged behind the Europeans in technology and finance.

The American Admiral Matthew Perry's "Black Ships" appeared in 1853, demanding that Japan open itself to trade on terms favourable to the West. The Tokugawa regime was overthrown in 1868 by a rebellion led by lower-ranked bureaucrats and eventually the emperor was restored to the throne in the Meiji Restoration.

The first great education reform

The new government applauded Western achievement, particularly in advanced education, science and technology, recognising that these were the factors that had led to the West's imposition of an "open" Japan. Japan became determined to match the achievements of the West in these fields and to upgrade its military. With almost total consensus across leaders from all sectors, Japan set out to modernise the country in order to survive in the new world order. Today, Japan continues to compare itself to its competitors, making national benchmarking arguably one of the most important reasons for Japan's success in education. The so-called "temple schools" found all over Japan at the end of the Tokugawa era, as well as the elite schools created for the children of the Samurai bureaucrats, provided a strong base on which the new leaders could build the world-class education system to which they aspired.



Meiji Japan borrowed the administrative scheme for its new education system from the French. That scheme could be characterised as centralised and very orderly. From Germany they adopted the idea of an educational system built around national universities. England provided Japan with a model of schools founded on strong national moral principles (such as “public” schools like Eton and Harrow). And the United States provided a pedagogical paradigm in the teachings of John Dewey – an American philosopher, psychologist and educational reformer – that resonated deeply with the Japanese notion that a school should be responsible for developing the whole child (Dewey, 1902).

The new government, moving quickly to make a modern nation state, decreed universal, compulsory education and abolished the rigid class distinctions in the education system that were believed to have crippled the old regime. Japan was determined to ensure that every Japanese citizen would be as well educated as possible¹. Therefore, there would be no tracking or segregation of students by ability or social class in Japanese education. This turned out to be a critical decision, laying the basis for what would become arguably one of the world’s most meritocratic societies.

In the 1880s there was a reaction against the Meiji government’s determination to implement ideas from elsewhere in the world. Critics feared that the essence of what it meant to be Japanese would be lost. The *Imperial Rescript of Education*, released in 1890, was a ringing declaration of the primacy of Japanese values in guiding the evolution of the new compulsory education system. Emphasising the Confucian virtues of loyalty, respect for one’s elders, the importance of relationships with other family members, one’s spouse and friends, it reminded its readers of the importance of modesty and moderation, the obligation to educate oneself to the fullest, and the duty to obey the constitution and laws.

Ever since the *Rescript* was issued, education policy in Japan has been anchored by both benchmarking Japan against the world’s best education systems and by a firm grounding in traditional Japanese values. This issue will be taken up when the chapter outlines the third great education reform below.

The second great education reform

After World War II fundamental reforms were initiated throughout Japanese society in order to foster a democratic and peaceful nation. Educational reforms were a cornerstone of this effort.

The most fundamental reform was brought about by the new Japanese Constitution and the Basic Act on Education. The new Japanese Constitution established, for the first time, the right of individuals to compulsory education. The Basic Act on Education sought to make education a resource for a democratic and peaceful nation and provided important principles, including the full development of personality as a goal of education and achieving equity and compulsory education for nine years.

In line with these laws, the structure of the school system was simplified and access was made more equitable. Previously, secondary schools and institutions for tertiary education had been differentiated by field of study and admission to college had been limited to small numbers of graduates from special high schools. It had also been difficult especially for women to enter college as they had no access to those special high schools. With the new law, all secondary schools were divided into lower and upper secondary schools with equal access to both male and female students. Compulsory education was extended to six years in primary schools and to three years in lower secondary schools.

Also the approach to teacher training was modified. Previously, graduates from specific teacher education institutions, located in the system between secondary and tertiary education, could apply for the teaching profession. In contrast, the reforms required students to gain designated credits at colleges in order to apply for the profession. Students could now gain those credits while continuing to major in other fields of study without limiting their studies to teacher-related subjects. The implementation of these reforms posed major challenges, as Japan had to train about six hundred thousand teachers in-service to upgrade their skill within a few years.

While the educational reforms that were introduced during this periods did not always take Japanese cultural and customs into consideration and caused considerable confusion among stakeholders which had to implement them quickly and with limited resources, they succeeded in breaking down important barriers that had obstructed educational change in Japan, and set the stage for a new era in the development of the modern educational system.

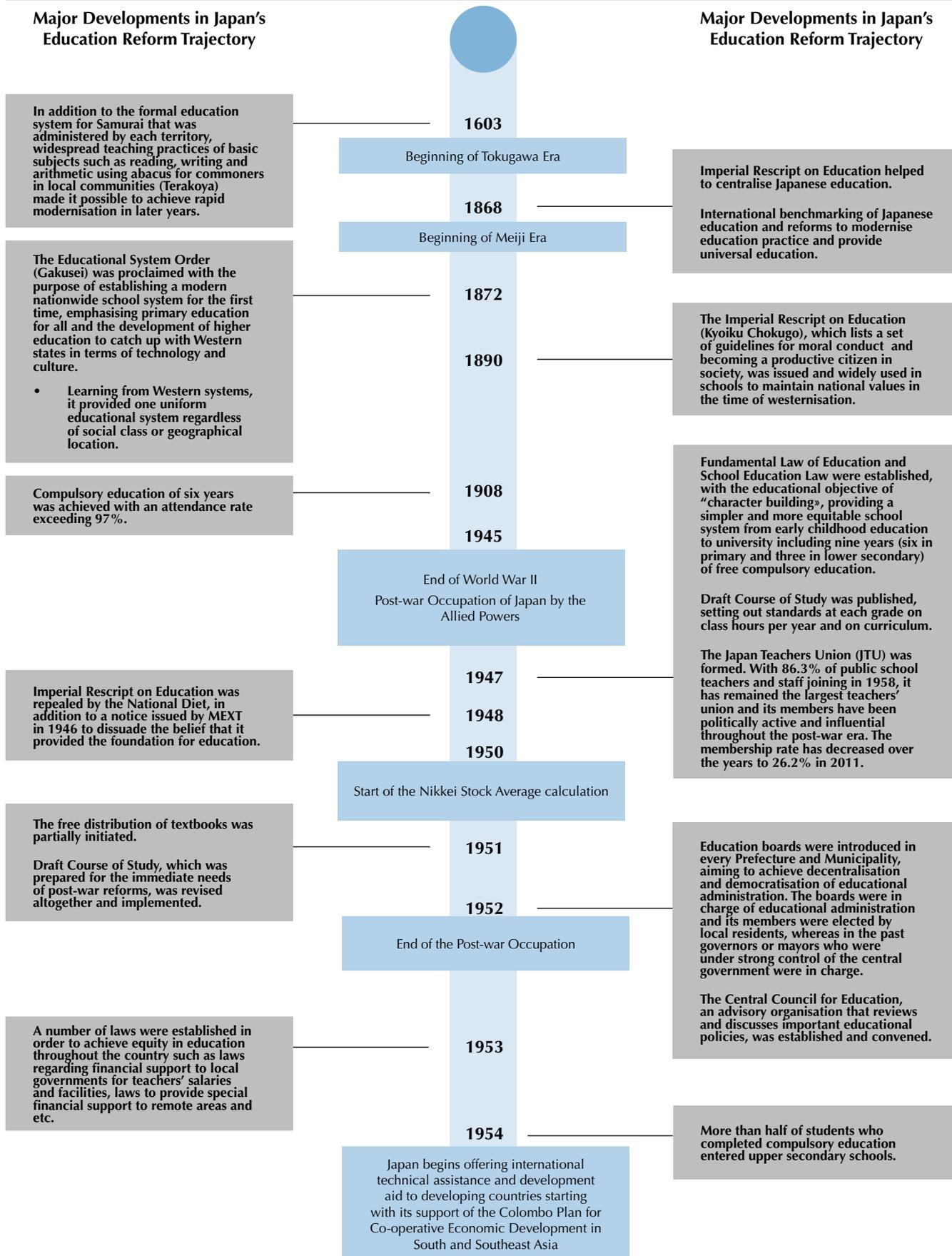
The third great education reform

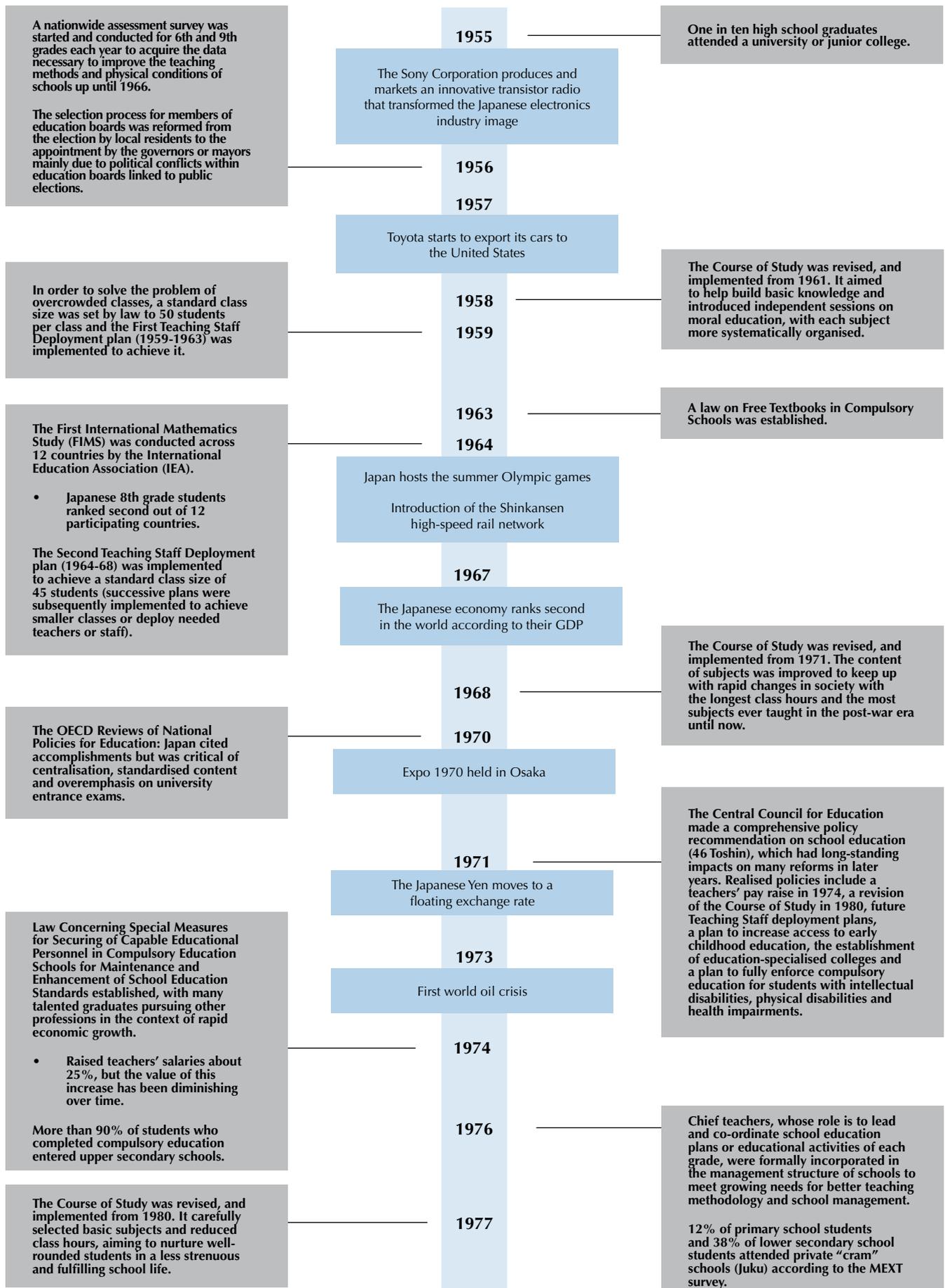
By the 1980s, Japan could declare that it had caught up with the most advanced industrialised nations, both economically and with regard to its education system. When the Fundamental Law on Education was revised in 2006, much had changed since the law was adopted in 1947. Life expectancy for men had risen from 50 to 79 years, and for women from 54 to 85 years. The fertility rate had dropped from 4.5 to 1.3. The high school attendance rate had grown from 43% to 98%. University attendance had climbed from 10% to 49%. From a context in which 49% of workers were employed in agriculture and 30% in manufacturing and related industries, fewer than 5% of workers were now employed in agriculture and more than 67% were employed in manufacturing and related industries.

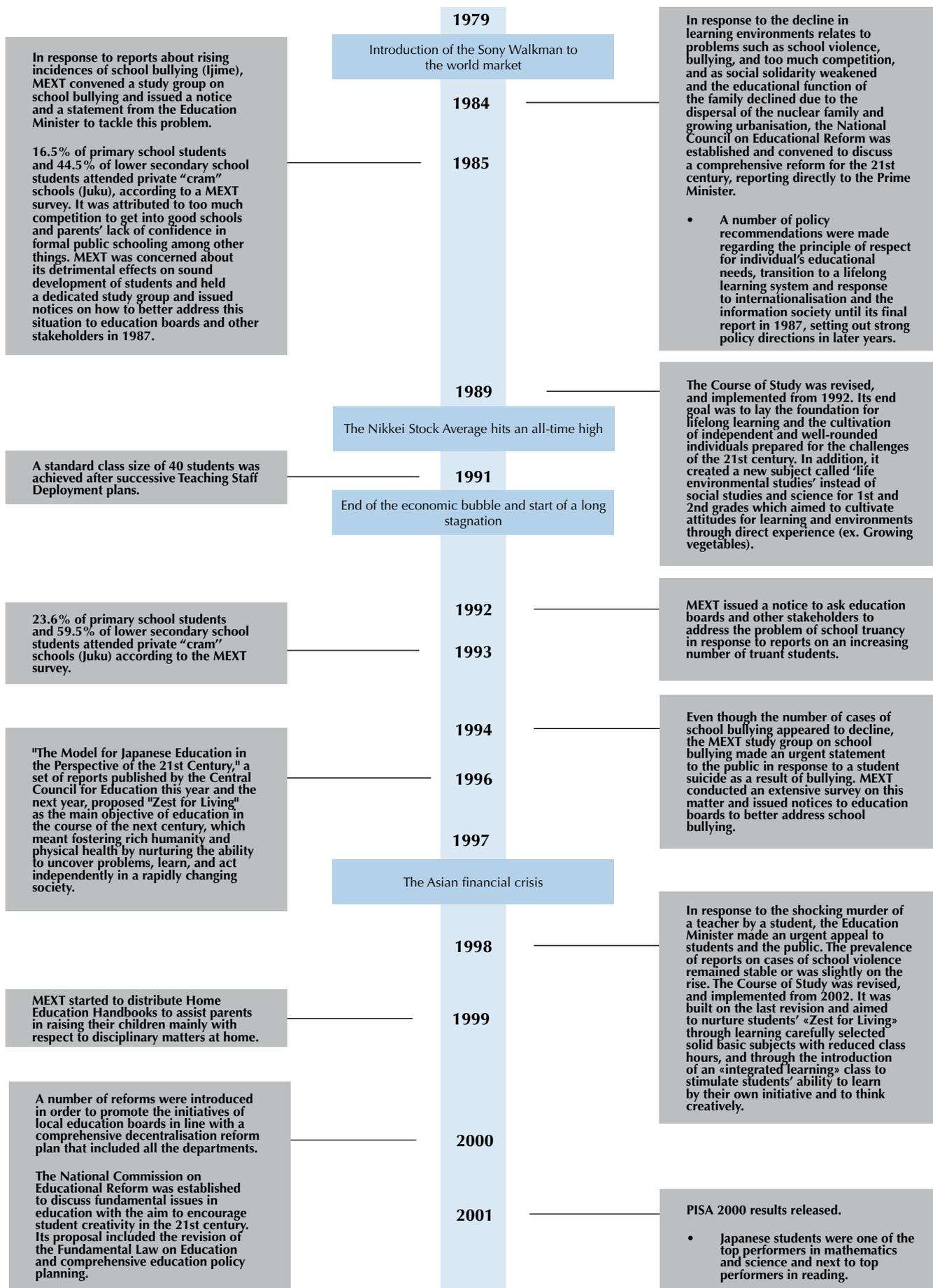
But catching up with the rest of the world and emulating others is easier than charting a country’s own future. That may contribute to the explanation why there was a growing chorus of criticism about Japan’s education system during the 1980s.

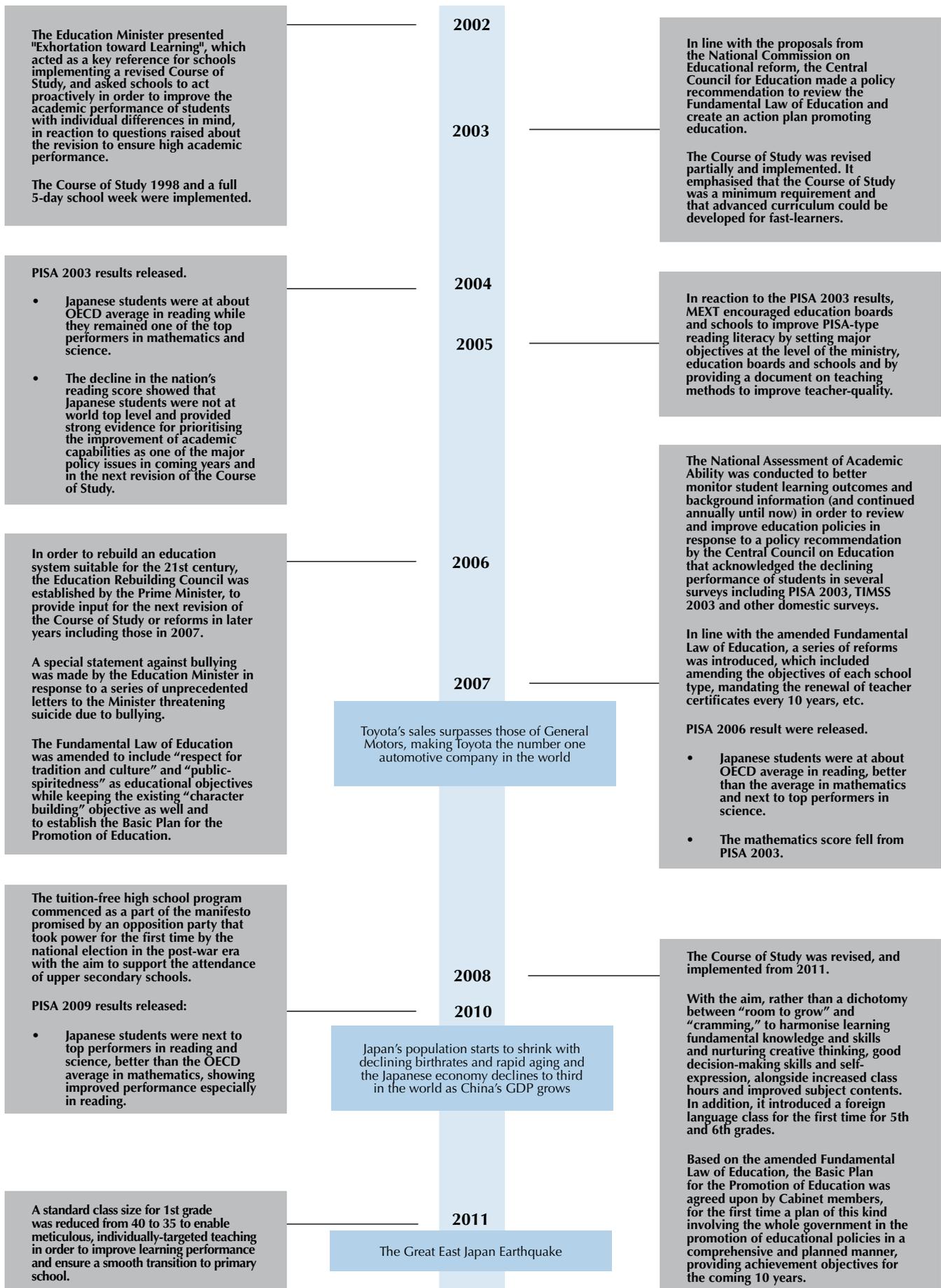


■ Figure 7.1 ■
Japan's Reform Trajectory











A rising chorus of concerns about education

Since the 1980s, many Japanese perceived a decline in the educational functions of the family, resulting in bullying, disruptions in the classroom, student absenteeism and violence in schools. While the incidence of these kinds of student behaviour remains small compared to most Western countries, their increased presence in Japan was being noticed. In the words of the Ministry:

[There is]...a spreading tendency among youth to neglect society. This tendency is not totally unrelated with young people's declining association with society. It can be traced partially to a social trend placing too much emphasis on individual freedom and rights....At home children have their own private room and... mobile phones and other information equipment allow them to avoid getting closely involved with family members... There seems to be increasingly less time spent in peer groups outside and more time spent playing video games at home. This phenomenon of the thinning socialisation of children is thought to be leading to a decline in young people's sense of respect for rules and models and further aggravating their tendency to neglect society or recede into a "world of solitude". (Ministry of Education, Culture, Sports, Science and Technology, 2002)

It is interesting to note that the widely discussed "collapse of class discipline" (*Gakyo Hokai*) or school violence is not reflected in internationally comparative data. If anything, data from PISA show improvements in disciplinary climate and in teacher-student relationships since 2000. However, the media have played a key role in questioning class discipline and the well-being of students, reporting on parents' lack of respect for teachers ("monster parents") and deviant teacher behaviour. All of this has led to some erosion of the cultural and institutional legitimacy of teachers, schools and learning itself in Japanese society.

The Japanese also became concerned that their continued dominance in generating and exploiting advanced technologies was under threat. They noted that while Japanese students continued to do as well as ever in international comparisons of achievement in mathematics and science, they seemed to enjoy science less than other students elsewhere as they progressed through schooling (Ministry of Education, Culture, Sports, Science and Technology, 2002). These findings were also reflected in results from the PISA 2003 mathematics assessment, which showed high levels of student anxiety about mathematics and low levels of interest in and enjoyment of the subject.

Concerns about a loss in moral standards and declining student motivation coincided with a perceived decline in Japan's edge in innovation. While many experts from Western nations have visited Japan to learn from its success in education, many Japanese became worried that high student performance might no longer translate into success in business and in life. Where, they asked, are our Nobel Prize winners? Where are the people with the kinds of breakthrough ideas that could create a new Microsoft or Apple, or even whole new industries? These concerns led the Japanese to wonder whether they should find out how Western nations teach creativity.

However, the difference between Japan and Western nations is not in how they teach creativity; it is that, unlike Asian nations, Western countries emphasise the individual over the group. This notion can be uncomfortable to Asians. They value social order highly and see the high crime rates and general social disorder in many Western nations as simply unacceptable. On the other hand, many people in the West are not willing to pay the price Asians pay for their high levels of student achievement if it means giving up their "personal freedom". This analysis may be oversimplified. It may be true that Asians are less likely than people from some Western countries to chart new courses for their industry or even create new industries. And this might well be because Asians typically defer to their elders and superiors publicly, even if they have private reservations about their superiors' judgement, wait to take their moment in the sun until after their superiors are gone, do not like to criticise others openly, prefer to be modest rather than broadcast their achievements, and value contribution to the group more highly than solo achievements. In Asia there is a saying that "the nail that sticks out gets hammered down". This said, Japan has built one of the best educated, most flexible, fastest learning and uniformly high-calibre workforces in the world. The nation is brilliant at continuously improving products and processes and is capable of very high-quality production on a vast scale. Who is to say which is more important, the occasional breakthrough or continuous improvement? And Japan ranks very high on the Global Innovation Index, falling just behind South Korea and the United States (INSEAD, 2010). Still, Japan is responding to the criticism by demanding even higher student achievement and greater capacity for creativity and innovation.

Emergence of the "risk society"

The emerging concerns about education and the reforms pursued in response to these need to be understood in the context of a period of rapid transformation in the relationship between the state, the economy and civil society that reshaped the role played by education in Japanese society.

Throughout the 1990s, Japan underwent a series of socio-economic and political reforms. The prolonged economic recession that followed the burst of the economic bubble in the early 1990s, along with the intensification of global economic competition, motivated Japanese multinational corporations and the political elite to seek changes to the status quo of deeply-rooted socio-economic and political arrangements. In particular, multinational corporations demanded that the interventionists economic



policies from which they had benefitted throughout the post-war period of “compressed” economic growth be abandoned. This challenged the Liberal Democratic Party’s support for regulatory policies and the Party’s subsidy politics that had protected vulnerable industries and the rural population, the Party’s traditional electoral base.

In the mid-1990s, the rapid globalisation of the economy and the prolonged economic recession created the conditions for structural reforms to create a “small and efficient state”. Such reforms were introduced by Prime Ministers Riyutaro Hashimoto (1996-98) and Junichiro Koizumi (2001-05). This included labour-market reforms that, in turn, led to a rise in fixed-term contracts and widening income gaps.

Reforms of post-war arrangements – ranging from corporate welfare, which included life-time employment, automatic salary progression and family wage, through developmentalist state intervention, the gender division of labour, and the “pipeline link” between schools and the labour-market – that had served as a source of material and cultural stability and established an equitable distribution of wealth, led to a breakdown of post-war certainties and the emergence of what became known in Japan as the “risk society”. Even though employees in Japan still enjoy relatively long employment tenures and a career progression based on seniority more than in other OECD countries, the recent reforms have had a tangible effect on public perceptions of job market uncertainty and insecurity.

While the motivation for Japan’s educational reform has often been portrayed as being of a philosophical and educational nature, strengthening the capacity of individuals to act autonomously and to assume greater individual responsibility for effective lifelong and lifewide learning in order to succeed in the ‘risk society’ contributed in important ways to driving the liberal reform agenda in the field of education.

Departure from the post-war political settlement

An important outcome of these economic developments was also that the post-war political settlement over the state, economy and society as well as the role of education - with a clear separation between the left, on the one the one hand, and liberal conservatives, on the other - no longer provided a viable framework of the political landscape in Japan. Since the 1980s, the dominant political agenda of deregulation, privatisation and market mechanisms challenged labour movements and led to the fragmentation and decline of the political left. This was also reflected in the breakup of the Japan Teachers’ Union (JTU) through which the union lost considerable influence on the education policy agenda.

But similar fragmentation was also apparent at the other side of the political spectrum. While part of the political right focused on economic liberalisation, the emerging “risk society” and the context of social dislocation gave cultural nationalists considerable support. As described by Takayama (Takayama, 2011), their call for greater emphasis on national history, traditional gender norms, patriotism, “back to basics” and “zero tolerance” in schools gave people something to cling to in a rapidly changing society. What emerged alongside the liberal social and transformations “from above” were nationalistic social movements “from below”. These movements gained political momentum in the late 1990s, when nationalistic politicians and associated intellectuals articulated moralising discourses on discipline, traditional gender roles and patriotism. Since then, both liberalism and cultural nationalism, the two predominant movements of the political right, have co-existed in an alternately tense and complementary relationship.

A new agenda for education reform

The changes to the post-war socio-economic and political arrangements were mirrored in educational reform. Fundamental reform in education was initially proposed in the 1980s by Prime Minister Yasuhiro Nakasone and his Ad Hoc Council of Education (*rinji kyōiku shingikai*). In keeping with the liberal economic and labour-market reforms pursued during those years, the recommendations of the Ad Hoc Council of Education included expanded school choice, a renewed emphasis on Japanese ethnic identity, the privatisation of education, and the simultaneous devolution and centralisation of educational administration (Takayama, 2011; Okano and Tsuchiya, 1999).

The spirit of change established by the Ad Hoc Council of Education guided the gradual reforms that shaped Japanese education in the late 1980s, 1990s and 2000s, marking a clear break from what many observers had long taken for granted about Japanese education. While acknowledging how much had changed, the reforms reaffirmed Japanese values. They also reaffirmed the characteristically Japanese approach – so evident in the Meiji reforms – of learning what those countries with the best education systems are doing to adapt to changing requirements, and bringing attractive ideas back and adapting them to the Japanese context while remaining faithful to Japanese values.

Some observers have concluded that the reforms of the 1980s had no major impact. However, such conclusions can only be warranted if one reduces the analysis to changes in the legal framework that would require the approval by the Parliament. But most of the policy changes were, in fact, implemented through “administrative guidance” by MEXT.

The most conclusive evidence of change is perhaps that, as outlined below, many of the reforms in educational policy are closely mirrored in changes in outcomes in PISA and other internationally comparative benchmarks.



“Zest for living”

In 1996, MEXT began to apply a new philosophy to education that was intended to enhance students’ ability to act autonomously and think creatively. *Ikiru chikara*, or “zest for living”, emphasised key competencies, independent thinking, and problem-solving skills. A key part of this reform was to set the conditions that would enable students to develop a well-rounded personality and promote the development of the cognitive and non-cognitive competencies that are needed in Japan’s changed economy and society. In the words of the Ministry:

The standardisation of education due to excessive egalitarianism and the cramming of too much knowledge into children has tended to push aside education geared more to fit the individuality and capabilities of children...,making classroom lessons boring to children with a quick understanding and difficult for children who need longer to understand. (Ministry of Education, Culture, Sports, Science and Technology, 2002)

Zest for living was a reaction against the Japanese’s previously strict insistence on uniformity, specificity and direction from the top. The so-called *yutori-kyoiku*, or “relaxed education”, approach was announced as part of this agenda in 1998 and implemented four years later. Its aims were to reduce the intensity of the school curriculum; move away from rote memorisation and test preparation; expand elective offerings to cater to a broader range of student interests, career perspectives and levels of proficiency; and support innovative pedagogy. In order to maintain enthusiasm for mathematics and science, the reform also put more emphasis on experiential, problem-solving learning through observations, experiments and project studies; reached out to universities, research institutes and museums for help in engaging students’ interest in science; and made the images of leading scientists and engineers more visible and appealing to students thinking about what careers they might pursue.

National curriculum guidelines changed not only qualitatively but also quantitatively, to the extent that the volume of elementary and lower secondary school curricula was reduced by 30%. Though the set curriculum has been shrunk overall as part of these changes, an important new required course has been added at all school levels: the Period of Integrated Study. The intention of this course was to prompt substantial changes in instructional methodology and in students’ views about learning. MEXT describes the aim of this programme as to:

... foster children’s ability and quality to find a theme, think, judge and solve a problem on their own; and enable children to think about their own life, urging them to explore subjects with creativity and subjectivity and to solve problems through their own ways of learning and thinking. To this end, the Period of Integrated Study actively introduces experiential learning such as experience in nature, social life experience, observations, experiments, field study and investigation as well as problem-solving learning to learn about cross-sectional, comprehensive subjects like the environment, international understanding, information, health and welfare as well as subjects that interest students. (Ministry of Education, Culture, Sports, Science and Technology, 2002).

With the aim of encouraging teachers to assume ownership of the programme of integrated study, MEXT kept its directives for this programme to a minimum, and encouraged schools to determine the volume of learning time and the subjects covered in the programme. Teachers were meant to act as co-ordinators of projects for integrated study rather than as disseminators of knowledge. However, that potential strength of the programme turned out to be also one of its weaknesses, since the rapid implementation of the programme with limited time and room for building capacity at the frontline left many teachers stranded in their new freedom. In particular, the inquiry-based, student-centred model of learning that the reform was promoting left many teachers uncertain about their role as educators. Scholars have often noted that Japanese teachers minimise their contribution to learning activities so that students assume more responsibility for their own learning; but this overlooks that even when Japanese teachers act as facilitators in the classroom, they typically follow a detailed plan of how learning activities should unfold. These issues seem not to have been taken into account when the reforms were designed.

Perhaps even more importantly, while the intentions of the integrated course of study were generally welcomed by primary teachers, for high school teachers the institutional contexts as well as deeply-rooted beliefs about the role that secondary education plays in the trajectory of a students’ career posed major obstacles for an effective implementation, even for teachers embracing the intentions of the reform.

This resistance may have contributed to the backlash against the *yutori* curricular reform not just by the general public but also by educators. The media exploited any opportunity to raise doubts about the success of the reform. The latter included the selective use and interpretation of results from international comparisons, including the PISA 2003 assessment, as suggesting a general deterioration of educational performance in Japan. The debate was only partly motivated by substantive educational issues. Other motives included the more ideological stance of nationalist intellectuals who criticised the reform for its excessive emphasis on individuality, choice and entrepreneurship and for a perceived lack of respect for order, discipline and teaching of national history and tradition. The bottom line was that, in 2011, MEXT began rebalancing the reform. While the emphasis on critical thinking



remains and key competencies will be taught in new ways through the “zest for living” philosophy, the changes reflected a return to a more traditional and prescriptive curriculum.

All this said, a comparison of the results from the PISA 2000 and 2009 assessments suggests that much of the reform agenda has, in fact, been implemented with success: Between 2000 and 2009 Japanese students reported greatly improved teacher-student relations and this coincided with the period of implementation of the *yutori* reform. Contrary to suggestions that the quality of education declined over the same period, PISA 2009 results do not show evidence of such a decline. On the contrary, as noted above, student performance on tasks requiring open-ended, higher-order thinking skills – those that are of increasing importance in modern knowledge-based economies – have improved since the reform. PISA 2009 also shows significant improvements in student engagement with learning, with more students in Japan now reporting that they read for enjoyment. In fact, Japan was the only OECD country where the proportion of both boys and girls who read for enjoyment increased between 2000 and 2009; in all other countries that saw an increase in the proportion of students who read for enjoyment, that increase occurred only among girls.

A new conservative agenda

Increasing pressures for devolution, privatisation and downsizing facilitated education reforms based on choice and autonomy that clearly moved away from post-war policies. Conservative demands for abandoning the single-track education system in favour of a more differentiated and selective system had traditionally been contested by moderates in the Liberal Democratic Party, unions and education authorities, which had been concerned about an intensification of competition among schools and resulting dissatisfaction among students and parents who failed to get into their preferred schools. The same holds for other long-standing conservative agendas that demanded that Japanese values and moral/patriotic teaching be incorporated into the curriculum.

But, as described by Takayama (Takayama, 2011), that political gridlock eased significantly in the 1990s when, for the reasons explained above, the influence of the political left was diminished and the Liberal Democratic Party lost its half-century political monopoly. As post-war education policy eroded, the conservative agendas, which would have fallen outside the post-war political settlement, increasingly became the focus of public policy in education. For example, MEXT was able to mandate “appropriate” enforcement of the use of the national anthem and the flag in school ceremonies; in 2006 it amended the fundamental law of education by adding patriotism as one of the nations educational goals.

As another important component, the integrated six-year junior high school was introduced in 1999. While the integrated six-year junior high schools did not completely replace the traditional approach, their introduction eroded the post-war philosophy of an egalitarian 6-3-3 single-track system. In line with the overall liberal reform agenda, ability grouping and expanded school choice were established in the late 1990s and early 2000s. The introduction of “diversity” and “flexibility”, most notably through the integrated six-year junior high school and expanded school choice, primarily targeted top-performing students and responded to demands for more investment in elite education. These changes may have contributed to improvements at the top end of the distribution in reading literacy performance, the rise in performance variation among senior high schools, and closer links between social background and student and school performance that became apparent in the PISA 2009 assessment.

The policy changes led to intense debates among political conservatives. Though the economic interests of business communities had often collided with the philosophy of cultural traditionalists, the reforms sparked open confrontations. As noted above, nationalist intellectuals criticised the reform for its emphasis on individuality, choice and entrepreneurship and for its lack of respect for order, discipline and the teaching of national history and tradition.

Over the past decade, teachers’ salaries in Japan have declined relative to those of other officials with similar qualifications and, while they remain higher than on average in OECD countries the differential has declined. This decline is mainly the result of policies implemented between 2001 and 2006, that devolved part of financial responsibilities for teachers’ salaries to prefectural governments. For the 50 years prior to the reform, the prefectures and MEXT shared the financial responsibility for teacher salaries, with MEXT and the prefectures each paying half of the cost. MEXT also established the standards for teacher salaries and class sizes with the aim to foster equity in education by ensuring sufficient numbers of qualified teachers throughout the country. After the reform, MEXT only provided one-third of teacher salaries with prefectures paying for the remainder, with increased local tax revenue to amend the balance of state and local taxes. Local governments were now also permitted to deviate from national standards for teacher salaries and class sizes and reallocate funds to other purposes which resulted in lower overall spending and larger regional disparities.

However, the much-discussed decline in the status of the teaching profession is only partially explained with financial aspects. Equally important is a perceived decline in the traditionally high level of professional autonomy of teachers and their high social status. One concern that is often expressed by teachers as an explanation for the decline in the status of the teaching profession is a perceived loss of public mission, with liberal discourses redefining the role of teachers less than one of public or social responsibility than one of a service to tax payers and educational consumers. Data from MEXT in 2006 showed that more than 60% of teachers now quit before retirement age.



Devolution of responsibilities for education decision-making

As part of the liberal reform agenda, which included marked devolution in government functions, the early 2000s saw a rise in the number of prefectural governors and municipal school boards that introduced a series of reforms that did not necessarily reflect national plans. For example, in 2000, the superintendent in Shinagawa-Ward in Tokyo introduced quasi-market reforms to promote school choice, standardised assessments, differentiated school budgeting and integrated junior high schools.

In 2002, MEXT redefined its national curricular standards (*gakushū shidō yōryō*) as minimum criteria to be supplemented with curricula developed by local school boards. MEXT also reduced the minimum credits to graduate from high schools from 80 to 74, the credits for required courses from 38 to 31 and the school week from six to five days, while increasing the amount of time devoted to optional courses.

Schools were given greater discretion over their budgets and personnel. New measures were taken to evaluate teachers, and, especially, to commend and reward excellent teachers while transferring teachers with questionable track records to non-teaching positions.

By PISA measures, which reflect the situation in senior high schools, Japan's senior high-school system shows one of the highest levels of competition among schools. While 76% of students in OECD countries attend schools that compete with at least one other school for enrolment, only in Japan, the Netherlands, Australia, Belgium and the Slovak Republic do over 90% of students attend such schools. PISA shows that, within countries, competition among schools and performance are related; but once the socio-economic profile of students and schools are taken into consideration, the relationship weakens, since privileged students are more likely to attend schools that compete for enrolment. This may reflect the fact that socio-economically advantaged students, who tend to achieve higher scores, are also more likely to attend senior high-schools that compete for enrolment, even after accounting for location and attendance in private schools. In Japan, however, school competition is not related to performance, even after accounting for the socio-economic and demographic background of students and schools.

By PISA measures, Japan has also a much greater prevalence of private schools than across OECD countries. An average of 15% of 15-year-olds students across OECD countries are enrolled in privately-managed senior high schools that are either privately or government funded; but in Japan, 29% of students are. On average across OECD countries, privately-managed schools show a performance advantage of 30 score points on the PISA reading scale. However, once the socio-economic backgrounds of students and schools are accounted for, public schools come out with a slight advantage of seven score points, on average across OECD countries. Public and privately-managed schools in Japan show no performance difference before accounting for socio-economic background; but after accounting for students' and schools' socio-economic backgrounds, public schools in Japan outperform private schools. This may be largely because parents of students who did not pass the entrance tests of prestigious public schools then opt for private alternatives.

Overall, the reforms have made a very rigid system more flexible; but the overall structure is still very much in place and the move towards more freedom has been made cautiously. This said, the shift in the distribution of responsibilities for education decision-making from central to prefectural and local levels is clearly apparent in the OECD education indicators, which now show the Japanese school system more on the side of the more devolved, rather than the more centralised, education systems if not with regard to the management of resources than certainly with regard to educational content and school policies.

KEY STRENGTHS OF EDUCATION IN JAPAN AND POLICY CHALLENGES TO MAINTAIN THESE STRENGTHS

Japan's education system continues to produce outstanding results. As noted in Chapter 2, Japan is one of the top-performing countries in PISA while total spending on education – public and private (excluding outlays for after-school instruction) – as a share of GDP is below the OECD average. Japan's strong commitment to education fuelled the sustained period of rapid economic growth in the post-war period, and high-quality human capital has made Japan one of the key players in the production of high-technology, high value-added products.

But PISA also shows a fair number of countries and economies with performance levels close to or higher than Japan's. Japan therefore needs to ensure that its stock of human capital remains competitive with that of other countries and economies around the world and in the region – such as Shanghai-China, Korea, Hong-Kong China and Singapore.

That is particularly important in the context of the dramatic demographic challenges the country now faces. Since the end of the Second World War, improved health outcomes in Japan have increased life expectancy from just over 50 years to approximately 80 years, and Japan's population now enjoys the greatest longevity in the world. At the same time, fertility rates have dropped to below replacement levels and the rate continues to decline. As a result, Japan's under-15 population has fallen from 35% of the total population just after the war to 13.3% today, and projections show that that proportion will decrease to just 8.6% by 2050. Such shifts are significant not only because they affect the numbers of schools and teachers needed, but also because they will have a significant impact on future revenue streams to finance education. Indeed, over the past two years, tax revenues have failed to fund even half of Japan's public spending; and it is estimated that Japan's national debt will hit 213% of gross domestic product (GDP) in 2011 (OECD, 2011).



The following summarises key strengths of the Japanese education systems that offer lessons for other countries. In turn, the examination of current threats to these strengths offers policy lessons for Japan.

A commitment to education

Most nations assert that education is important. But the test comes when the commitment to education is weighed against others. How does a country pay its teachers, compared to other highly-skilled workers? How are its education credentials weighed against other qualifications when people are being considered for jobs? Would you want your child to be a teacher? How much attention do the media pay to educational outcomes as opposed to the sports league?

In the past, Japan's citizens have made choices that show they value education more than other things and, by implication, that they value the future more than current consumption. Japan's commitment to children has not just been rhetorical, but a concrete and enduring priority, for which students, parents, educators and the nation as a whole were prepared to make real sacrifices. This commitment is the foundation of the Japanese system. It is the main reason why Japan has access to a first-rate teaching force, Japanese students are superbly supported at home, and schools are well resourced.

Maintaining strong demand for high-quality education on the part of parents and the general public will be a formidable challenge as some of the motivating forces are weakening. Prioritising investment in education faces similar challenges, as pressure on public resources grow, both in the short time - because of the massive reconstruction effort in the aftermath of the tsunami - and in the longer term - because of spending priorities associated with a rapidly aging population. Some of the material incentives in the education system have already deteriorated over recent years. For example, salaries for teachers as compared with those for other public servants or with those in the private sector have declined, as additional resources invested in education have mainly been devoted to reducing class size or, in some prefectures, been redirected to other priorities.

A conviction that all students can achieve at high levels

Placing a high value on education has only been part of the equation. Another aspect of the Japanese success in education is the deep belief that all children can achieve. In some countries, students are separated into different tracks at an early age, reflecting a notion shared by teachers, parents and citizens that only a subset of the nation's children can or need to achieve world-class standards. But PISA shows that systems that track students in this way tend to be plagued with large social disparities. In contrast, the Japanese education system delivers strong and equitable learning outcomes across different socio-economic contexts, encouraging educators to exploit the extraordinary talents of ordinary students and leaving them with few options to redirect disadvantaged or challenging students to programmes with lower performance expectations. As a result, a very small proportion of Japanese students perform below the PISA baseline Level 2.

The Japanese, like most East Asians, believe that academic achievement is more a matter of effort than of luck or natural (genetically-endowed) ability. They therefore demand that this effort be made and have high expectations for all their students. That is important since international comparisons show that the percentage of students who reported that to do well in mathematics or science they needed good luck, rather than hard work, is negatively related to student performance in these subjects, both within and across countries (Boe, et al. 2002).

Like most East Asian countries and many OECD countries, only about half of Japan's student cohort is assigned to special education. Some experts in the West have decried this as inattention to students who need and deserve extra help. But there is considerable evidence that many students assigned to special education classes in the West have very low levels of achievement, despite being the recipients of much more spending, simply because their teachers have very low expectations for them (see Gartner and Lipsky, 1989). In contrast, the Japanese approach to classroom instruction makes it clear that Japanese teachers work hard to adjust instruction to individual needs. In many ways, Japan has been practicing inclusive education long before it became a policy goal in the West. The underlying assumption is that *all*, or very nearly all, students can meet high standards. In many other OECD countries, some students who could be achieving at much higher levels do not do so because they are given a more diluted curriculum. In the case of special education students, this can be taken to an extreme.

The belief that all students can succeed is mirrored in Japan's post-war commitment to put equity of educational opportunities and educational outcomes at the forefront of its policy agenda and to provide high-quality education to all its citizens. But while PISA shows that Japan allocates more teachers per student to disadvantaged schools, Japan has been less successful than, for example, Shanghai-China, in attracting the most talented teachers to the most challenging classrooms and in recruiting the best principals to the most disadvantaged schools (see the Chapter on China). This is also reflected by a fairly close relationship between the *aggregate* social background of schools and their performance, as shown in PISA. It is true that the *individual* relationship between the social background of students and student performance is only weak to moderate in Japan, but that is mainly because the share of students from disadvantaged social backgrounds is comparatively low. Widening social disparities in the Japanese population could quickly change that dynamic and therefore warrant attention to equity-related issues.



Similarly, while the comparatively large performance differences among Japanese schools shown in PISA are partly a result of the fact that the PISA assessments are undertaken in the first year of Japanese senior high school, trend data show that variability in school performance has significantly increased since 2000. Together with Japan's greater policy focus on competition and school choice, such emerging disparities, combined with the widening income and social disparities in Japan's population, could pose significant long-term challenges to Japan's traditionally high standards of equity in education.

While a policy focus on equity is important and would most likely foster greater social cohesion and increased labor-force participation, it is also important for Japan's role as a global economic leader to ensure that it educates a large number of students that are among the best in the world. In comparison with Japan, Shanghai-China, New Zealand, Singapore and Finland have higher proportions of students who perform at PISA proficiency Level 5 or 6 in reading; and over 50% of students in Shanghai-China and over 30% of students in Singapore and Hong Kong-China are top performers in mathematics, as compared to 21% in Japan. Systems such as those in Shanghai-China and Finland demonstrate that it is possible to educate a high proportion of top performers regardless of the social backgrounds of students and schools; in other words, it is possible to combine excellence with equity. Results from PISA show that Japan is off to a good start in this regard. Japan is one of the few countries that managed to increase the proportion of students performing at proficiency Levels 5 or 6 in reading by almost four percentage points since 2000.

An emphasis on values

Many lessons drawn from Japan's experience with education are useful for analytical purposes, but risk obscuring a very important aspect of the Japanese educational system. The system is designed not only to develop students' cognitive capacities, but also to inculcate the society's values of ethical behaviour, meritocratic advancement and social cohesion in those students. The response of Japan's society to the recent natural disaster, not just in the affected areas but throughout the country, provides a powerful demonstration of this.

In many different ways, students are taught to respect their elders and their teachers, to do what is right, to be orderly and organised. Everywhere in schools there is evidence of efforts to reward hard work and persistence, praise students who take on a challenge, encourage students to serve their school and fellow students and take responsibility for helping others, reward modesty, and give others credit for one's own good work. It is not hard to imagine how this sort of attention to behaviour can affect many aspects of social life, from business ethics to health care, sustainable environment to crime, and it is worth considering what might happen to a country that ignores this aspect of their children's education.

All this means that Japanese teachers are expected not only to look after the cognitive development of children, but also to their affective and physical development and to provide career guidance. At the same time, current evaluation and assessment systems in Japan do not consider those wider outcomes. As those instruments have increasing prominence both in the education system and in public debate, improving the alignment between educational goals and their measures will be of key importance.

Ambitious educational standards that are shared across the system and aligned with high-stakes gateways and effective instructional systems

Japan has clear and ambitious academic standards across the board, and provides a strong and coherent delivery chain through which curricular goals translate into instructional systems and practices, and student learning.

The national curriculum, which is revised every ten years is one the key strengths of the Japanese education system. In theory, the curriculum is set by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) with advice from the Central Council for Education. In practice, the key figures involved in setting the curriculum are university professors and ministry staff. While the curriculum defined by MEXT is only for "guidance", the prefectures are also funded by MEXT and closely follow the guidance. The guidance curriculum is long and detailed, so MEXT also publishes explanatory booklets, subject by subject, by school level.

The curriculum is coherent, carefully focused on core topics and their deep conceptual exploration, thoughtfully sequenced, and set at a very high level of cognitive challenge, even if it follows more the tradition of subject-based syllabus than a competency-based approach. It progresses step by step in a very logical fashion from year to year, concentrating in each year on the topics that must be mastered in order to understand the material presented in the following year. Essential subjects are given plenty of time. Each topic is carefully developed and in great detail. In mathematics and science, the emphasis throughout is on the fundamental underlying concepts, which are presented clearly and straightforwardly. The subject-matter curricula could be characterised as focused but very deep. The attention to detail has not gone lost in the devolution of curricular responsibilities in which local authorities and schools now have considerable responsibility for instructional policies and practices.

Textbooks in Japan are lean and compact compared to their counterparts in other OECD countries. They are also inexpensively produced paperbacks. There is a separate book for each semester, each under 100 pages. The central feature of these textbooks is their attention to the core concepts underlying the course. All textbooks continue to be approved by MEXT but the policies established by the Ad Hoc Council of education in the 1980s reduced the role of the ministry to ensuring that the texts are neutral



in content and that they treat the correct topics for the grade level for which they are written. However, given the clear, detailed and coherent nature of the Japanese curriculum, it is not surprising that textbook publishers still stick very closely to it.

Until recently, there was very little flexibility in the Japanese curriculum, and very little time in the school day for anything but the official national curriculum. In most Japanese high schools, roughly 70% of total available time was devoted to just five subjects: Japanese, social studies, mathematics, science, and foreign language (mostly English). The remaining hours were devoted to gym, music, art, homeroom and other elective subjects. This curriculum, combined with the fact that Japanese students spend more time learning, means that Japanese students have much more time to go into greater depth in these core subjects than students in most other OECD countries do. They are also more focused on the core subjects in the curriculum because they are not distracted by subsidiary courses.

In addition, throughout the country, teachers actually teach based on the national curriculum standards. They also do not pick which parts of the textbook they will use; they are expected to teach the entire textbook, which is the surest sign that all Japanese students are expected to learn to the same standards. The faithful implementation of this curriculum in every corner of Japan makes it much easier for everyone to hold the system accountable for results. The fact that *all* students are expected to master this very challenging curriculum, and at the same pace, adds to this transparency. The education system thus does not vary in the educational objectives it pursues, but rather in how teachers adapt the content and their methods to students' individual needs.

As a result of all of this, everyone – students, teachers and parents – knows what is required to get a given qualification, both in terms of the content studied and the level of performance needed to earn it. Students cannot go on to the next stage – be it in work or in further education – unless they show that they are qualified to do so. They know what they have to do to realise their dream, and they put in the work that is needed to achieve it. It is impossible to do well in Japanese exams without working very hard, over long periods of time. This takes discipline and persistence. Many countries talk about the importance of “learning to learn.” Japan has done much more than talk about it; the country seeks to build its education system around it. From the youngest age, Japanese students – and adults – have very strong incentives to take tough courses and work hard at them. Doing well in exams is a paramount requirement both for entering the university of choice and for getting a good job. In some ways, this is the heart of the Japanese education system. If those incentives were not in place, Japan's educational outcomes might be very different.

Three points emerge that help to define the context of education in Japan.

The first is that in a meritocratic society, the high-school and university entrance exams represent gateways to status in Japanese society. The Japanese widely believe that doing well in these exams depends much more on studying hard than on innate intelligence. Exam success does not only reflect on the individual, but also on the student's parents, other family members and teachers. This constellation of support assumes the responsibility for failure and creates the expectation to succeed. The result is the high levels of student performance seen in PISA.

The second point is that these high-stakes gateways are now under threat. On the one hand, the rapid decline in the student-age population has significantly widened the gateways into the education system, making entry into high schools and universities less competitive. To compensate, Japan will need to consider alternative incentive structures to maintain students' and society's commitment to education. Furthermore, traditionally the first job after formal education was a job for life, which made it particularly important to get into the best educational institution possible. However new entrants in the labour market will now be expected to change jobs and employers more frequently than in the past, even if career paths remain more stable in Japan than in other countries). This will have implications for Japan's education system as it will no longer be solely the educational institutions that are determining an individual's economic and social future, but other factors, including an individual's performance in the workplace, as well.

Third, while other East Asian countries provide equally strong incentives for their students to take tough courses and work hard in school, they do not have students who are as engaged in learning and in school as Japanese students are. However, results from PISA also suggest that Japanese student engagement in learning is still low compared with OECD standards. Fostering students' interest in and engagement with learning and improving their awareness of effective approaches to learning will therefore be of continued importance for Japan, particularly as rapid changes in demands for skills and dramatically changing demographics make lifelong learning an ever more important priority for Japan. It is only when knowledge and skill combine with the capacity and motivation for continued learning that Japan will become a nation full of people who want to learn throughout their lives. As explained in the first part of this chapter, this has been one of the central objectives of Japanese curricular reform since the 1980s. The significant improvements that PISA has shown for Japan since 2000, in the student performance on open-ended tasks requiring the creative use and application of knowledge, in student engagement with reading, and in student-teacher relations suggest that “zest for living” is slowly becoming a reality.

However, further progress will also be needed if Japan is to match the world's best-performing education systems not just in the cognitive development of its students but also in students' will and desire to learn. Experience with the integrated course of study shows that success will depend not just on curricular innovations, but on how well teachers are trained to use them. Further



development of the curriculum is also needed if Japan wishes to fulfil its ambition of shifting emphasis from a traditional subject-matter based approach towards a competency-based approach in the curriculum.

Effective approaches to instruction

At first glance, the Japanese approach to instruction violates the most common-sense principles. Classes are large by OECD standards – 35 to 45 students in a class – and most instruction is for the whole class. There is less instructional technology than in many other countries and fewer instructional aids of other kinds. Students are generally not separated into ability groups; there are no special classes for the gifted, nor are students pushed ahead by a grade or more if they are perceived to be exceptionally able. Similarly, students are not held back if they are having difficulty. Many students requiring special education are also assigned to the heterogeneous, regular classrooms. The job of the teacher is to make sure that all students keep up with the curriculum, and they manage to do this. Teachers meet frequently with one another to discuss students who are having difficulty; they provide as much individual attention to those students as they can within the regular school day. It is not unusual for students who are not doing well in certain subjects to get extra instruction after school.

And yet, these classrooms produce some of the highest-performing students in the world. How do they do it? The primary goal of Japanese teachers is to involve students in deep learning. Many people outside Japan imagine Japanese schools as quiet, intense places where students copy down everything the teacher says. But that is not the reality. In recent years, visitors to Japanese elementary schools have consistently reported that the level of noise is often well above that found in other OECD classrooms, and the sound of laughter and intense conversation fills the school. Students can often be heard talking excitedly with one another as they tackle problems together. The visitor walks down the halls of these schools seeing students acting in plays, playing musical instruments alone or in ensembles, or working through a tea ceremony.

Japanese teachers put a great deal of thought into their lesson planning (see box below). They spend comparatively little time on drills or lecturing to their classes. The drilling is done at home or in cram schools. An important feature of Japanese instruction, which also has implications for the use of whole-group instruction, is the approach to mistakes. In many other OECD countries, mistakes are something to be avoided. Students who produce right answers quickly are rewarded and those who do not are often ignored or punished. In Japan, a teacher will present a problem and ask her students to work on it. As they do so, students may discuss the approaches in small groups. The teacher then looks at how the students try to solve the problem. After a while, the teacher may call on several children to go to the front of the classroom and copy their work onto the blackboard. Some of those the teacher picked will produce the right answer and some will not. The teacher will ask other students in the class to offer their views on the approaches displayed on the blackboard. If a student thinks the approach will not work, that student is asked why and must give an answer that is grounded in substantive reasoning. The students discover that some answers are wrong for interesting reasons, and these reasons are discussed at length. Sometimes they discover that there is more than one approach to answering the question and they discuss why some solutions are more efficient than others, but others might be more interesting. In this way, they arrive at a much deeper understanding of the mathematics underlying the solution to the problem and so become much more adept at using mathematics to solve problems.

One might wonder how it could be possible for one teacher to involve 35 or more students in a wildly heterogeneous classroom when it is so hard for teachers in many other parts of the world to engage 25 students in more homogeneous classrooms. The answer is one of the keys to the success of Japanese education. Unlike teachers in the Western world, many Japanese teachers accept comparatively large classes because more students are likely to come up with a wider range of problem-solving strategies from which other students can learn. And the variety of ideas generated by more students can be used to spark lively discussions. In science classes, for example, there will be a wider range of outcomes from lab experiments that also can be used to explore problem-solving strategies and promote deeper understanding of the topics under study. This also makes it possible for Japanese teachers to have more time to plan, work with other teachers, work one-on-one with students who need individual help, and engage in lesson study, all of which also improve the outcome for students.

All this said, over the past decade, Japanese policy makers have tried to reduce class size to be closer to the OECD average. To some extent, this is motivated pedagogically; but it also simply reflects changing demographics and the difficulties in adjusting the size of the teaching force to the rapid decline in student numbers, given Japan's inflexible teacher labour market and limited mobility into careers outside of teaching.

There is, of course, no doubt that past and current reductions in class size present an opportunity for Japan to promote innovative teaching methods and experiment with new pedagogical approaches, including greater emphasis on co-operative work, project-based learning and greater interaction between students and teachers. At the same time, international comparisons do not lend much support to the belief that reductions in class size represent the most effective use of additional resources. In fact, results from PISA suggest that high-performing nations generally prioritise the quality of teaching over the size of classes. The issue is that the reductions in class size in Japan have absorbed much of the additional public investment in education. This has left limited room for other investments that are key to shaping learning outcomes and the attractiveness of the teaching profession, most notably teachers' pay (which has declined markedly, compared with other professional salaries since the 1990s), the balance between



Box 7.1 Student learning in Japanese classrooms

Harold Stevenson and Jim Stigler, in their classic book *The Learning Gap* (1992), describe the beginning of a fifth-grade Japanese mathematics class this way:

“The teacher walks in carrying a large paper bag full of clinking glass. Her entry into the classroom with a large paper bag is highly unusual, and by the time she has placed it on her desk, the students are regarding her with rapt attention.... She begins to pull out items... She removes a pitcher and a vase. A beer bottle evokes laughter and surprise. She soon has six containers lined up on her desk. The children watch intently. The teacher...poses a question: ‘I wonder which one would hold the most water?’”

The rest of the class is devoted to answering that question. The students decide that the only way to answer it is to fill the containers with something, and they decide on water. They fill up buckets with water and the teacher asks what they should do next. Eventually the students decide that they should identify a small container and then find out how many small containers full of water it will take to fill each of the containers the teacher brought to class. They settle on a drinking cup. The teacher then divides the class into smaller groups. Each group fills its cups, measures how many cups it takes to fill the containers and records the results in a notebook. The teacher then records the answers in the form of a bar drawn to scale under each of the containers she brought to class. The bars form a bar graph when she is done. She never defines terms. She did not use the class to illustrate a concept or procedure she had already put on the blackboard.

As Stevenson and Stigler say:

The lesson almost always begins with a practical problem [either of the sort just described] or with a word problem written on the blackboard....It is not uncommon for a...teacher to organise an entire lesson around a single problem. The teacher leads the children to recognise what is known and what is unknown, and directs the student’s attention to the critical parts of the problem. Teachers attempt to see that all the children understand the problem, and even mechanics, such as mathematical computation, and are presented in the context of solving the problem. Before ending the lesson, the teacher reviews what has been learned and relates it to the problem she posed at the beginning of the lesson.

The point of a Japanese teacher’s questions is not to get the right answer but to make her students think. The point of the lesson is not to cover the ground for the test—there is no test—but to stimulate real understanding.

Source: Stevenson, H. and J. Stigler (1992), *The Learning Gap*, Summit Books, New York.

instructional and non-instructional working time of teachers (the total workload for Japanese teachers is far heavier than that in most other OECD countries), and sustained professional development for teachers.

Given the comparatively low overall public investment in education in Japan, and the comparatively small increase in educational spending over the past decade, the growth rate in public spending on educational institutions has been less than half of that observed on average across OECD countries. To some extent, this was compensated by the decline in student numbers means so that public spending *per student* is closer to the OECD average. The high level of private spending and the willingness of Japanese teachers to work long hours beyond their statutory working time have also played an important role. However, it may be difficult to sustain the commitment of teachers to their students and families’ ability to invest in private education indefinitely.

A high-quality teaching force

Many observers note that crucial to the quality of education in Japan is the quality of its teachers. When the Meiji Restoration began and the state modernised the education system, most of the teachers were Samurai from Samurai schools, members of Japan’s upper classes. In the Confucian tradition, great honour accrued to teachers. As the modern era began and egalitarian schools were created for the first time, those schools were staffed in significant numbers by members of the upper classes, and from that time on, teaching has been a desirable occupation in Japan.

This has been made manifest in financial rewards. According to Teiichi Sato, “After WWII, as incomes began to rise across the board, the government worried that respect for teachers would decline. Prime Minister Tanaka decided to raise compulsory school



teacher salaries to 30% higher than other public servants. While this has gradually eroded, teachers' salaries are on par with other civil servants. This made a difference in the quality of teachers ever since."

Despite the recent declines in teacher pay described above, teachers are still, by law, among the better paid of Japan's civil servants. But it is not the pay alone that attracts competent young people to teaching; it is primarily the high regard in which teachers are held. Teaching continues to be a highly desirable job: there are seven applicants for every teaching position in Japan.

To become a teacher, students must attend a ministry-certified teacher-education programme at a university or junior college. Japan also has some national teacher training universities with model schools attached to support teacher training for new teachers. Teaching practice is a common part of all teacher-education programmes.

Prefectures, like other employers in Japan, are prepared to make major investments in their new teachers to make sure they have the skills needed to succeed. They assume that these new employees come to them with the necessary applied intelligence, but not necessarily the required job skills. So, as do other employers, they take responsibility for providing an induction programme that offers a sustained opportunity to apprentice with experienced master teachers before new teachers are expected to teach full time. The induction period lasts a full year, and the master teachers are given the year off from their teaching jobs to supervise their apprentices. Once a teacher is inducted into the regular teaching work force, the law requires teachers to take certain additional training after ten years of service. Teachers can also apply for paid leave to earn master's degrees at graduate schools. The ministry also offers various training programmes for prefectural trainers at its national centre.

The most interesting aspect of teacher development occurs on the job. In fact, Japan is a laboratory for the idea of continuous improvement of teaching practice. The incarnation of that idea in Japanese schools is lesson study. This practice undoubtedly contributes to the high quality of instruction in Japanese schools. As Stevenson and Stigler note:

[From the time they begin their career right to its end, Japanese teachers] are required to perfect their teaching methods through interaction with other teachers....Experienced [teachers] assume responsibility for advising and guiding their young colleagues. Head teachers [principals] organise meetings to discuss teaching techniques.... Meetings at each school are supplemented by informal district-wide study groups... [Teachers work together designing lesson plans.] After they finish a plan, one teacher from the group teaches the lesson to her students while the other teachers look on. Afterward, the group meets again to evaluate the teachers' performance and to make suggestions for improvement... Teachers from other schools are invited to visit the school and observe the lessons being taught. The visitors rate the lessons, and the teacher with the best lesson is declared the winner. (Stevenson and Stigler, 1992)

This practice is entirely consistent with the way teams work in Japan's private industry. It also reflects the Japanese focus on relying on groups to get work done. This has a profound impact on the practice of teaching. Indeed, it is the best hope for the continual, sustained improvement of teaching practice. It brings the work of teaching out from behind the closed door of the classroom and the individual teacher and opens it up for inspection and critique by colleagues. There is very strong teacher accountability in Japan, not in the form of formalised accountability to the bureaucracy, but instead through an intimate and very real accountability to one's colleagues. Teachers work hard to develop superior lesson plans, teach them well, and provide sound and useful critiques when it is their colleague's turn to demonstrate their lesson plans.

All this said, as in other countries, the demands placed on Japanese teachers continue to rise. Teachers are asked to equip students with the competencies they need to become active citizens and workers in the 21st century. They are asked to personalise learning experiences to ensure that every student has a chance to succeed and to deal with increasing diversity in their classrooms and differences in learning styles. And they need to keep up with innovations in curricula, pedagogy and digital resources. To address these demands, Japan will need to rethink many aspects of its approaches to teacher development, including how to optimise the pool of individuals from which teacher candidates are drawn; recruiting systems and the ways in which staff are selected; the kind of initial education recruits obtain before they start their jobs, how they are monitored and inducted into their service, and the continuing education and support they receive; how their compensation is structured; and how the performance of struggling teachers is improved and the best-performing teachers are given opportunities to acquire more status and responsibility.

First, Japan needs to work hard to remain successful in attracting qualified graduates into the teaching force. Competitive pay levels can be part of this equation. However, countries that have succeeded in making teaching an attractive profession have often done so not just through pay, but also by offering real career prospects, and giving teachers responsibility as professionals and leaders of reform. The most impressive example here comes from Finland, which has made teaching one of the most prestigious occupations by raising entry standards and giving teachers a high degree of professional autonomy within a strong collaborative culture, and by providing them with the support and working conditions that their peers enjoy elsewhere. Teacher candidates are selected, in part, according to their capacity to convey their belief in the core mission of public education in Finland, which is deeply humanistic as well as civic and economic. Finnish teachers have earned the trust of parents and the wider society by their demonstrated capacity to use professional discretion and judgement in the way they manage their classrooms and respond to the challenge of helping



virtually all students become successful learners. In line with this, the Finnish system of accountability was redeveloped entirely from the bottom up.

Second, like most nations, Japan needs to further develop its teaching force. Again, Finland is a model in this respect, with its rigorous, research-based teacher-education programmes that prepare teachers in content, pedagogy, and educational theory, and improve their capacity to do their own research and craft creative pedagogical solutions for teaching. It enables teachers to assume considerable authority and autonomy, including responsibility for curriculum design and student assessment, which engages them in the ongoing analysis and refinement of practice. The preparation Finnish teachers receive is designed to build a powerful sense of individual responsibility for the learning and well-being of all the students in their care.

But no matter how good the pre-service education for teachers is, it cannot be expected to prepare teachers for all the challenges they will face throughout their careers. Data from OECD's first Teaching and Learning International Study (TALIS) show that more effective forms of development tend to be welcomed by teachers themselves who, in many countries, are even willing to contribute to the cost of such education in money and time. As noted before, Japan has a strong tradition to teacher development through collaboration among teachers and lesson study in schools. But education is still far from being a knowledge industry, in the sense that its own practices are being continuously transformed by greater understanding of their efficacy. While in many other fields, people enter their professional lives expecting that what they do and how they do it will be transformed by evidence and research, this is far less true in education. Effective development of teachers in service demands different forms of professional development and appropriate career structure and diversity. In seeking to meet teachers' professional development requirements, policy makers and practitioners need to consider both how to support and encourage participation and how to ensure that opportunities match teachers' needs. This needs to be balanced with the cost in terms of both finance and teachers' time. OECD research identifies several aspects as central to successfully bridging the gap between the ideal learning environment and day-to-day practice:

- Well-structured and -resourced induction programmes can support new teachers in their transition to full teaching responsibilities before they obtain all the rights and responsibilities of full-time professional teachers. In some countries, once teachers have completed their pre-service education and begun their teaching, they begin one or two years of heavily supervised teaching. During this period, the beginning teacher typically receives a reduced workload, mentoring by master teachers, and continued formal instruction.
- Effective professional development needs to be on-going, include training, practice and feedback, and adequate time and follow-up support should be offered. Successful programmes involve teachers in learning activities that are similar to those they will use with their students, and encourage the development of teachers' learning communities.
- Teacher development needs to be linked with wider goals of school and system development, and with appraisal and feedback practices and school evaluation.
- There is a need to re-examine structures and practices that inhibit inter-disciplinary practice and to provide more room for teachers to take time to learn deeply. Inquiry- and group-based approaches, especially in the core areas of curriculum and assessment, should be employed.

Singapore provides one of the most impressive models for nurturing teaching talent. Strong academic ability is viewed as essential, as is commitment to the profession and to serving diverse student bodies. Interest in teaching is seeded early through teaching internships for high school students; there is also a system for mid-career entry, which is seen as a way of bringing real-world experience to students. Singapore monitors occupational starting salaries and adjusts the salaries for new teachers accordingly. In effect, the country wants its most qualified candidates to regard teaching as just as attractively compensated as other professions. After three years of teaching, teachers are assessed annually to see which of three career paths would best suit them – master teacher, specialist in curriculum or research or school leader. Each path has its own salary scale. Teachers with potential as school leaders are moved to middle-management teams and receive training to prepare them for their new roles. Middle managers' performance is assessed for their potential to become vice principals, and later, principals. Each stage involves a range of experience and training to prepare candidates for school leadership and innovation. Young teachers are continuously assessed for their leadership potential and given opportunities to demonstrate and learn by, for example, serving on committees, then being promoted to head of department at a relatively young age. Some are transferred to the ministry for a period. Potential principals are selected for interviews and go through leadership situational exercises.

Third, the development of an effective system of teacher evaluation will be essential for improving the performance of individual Japanese teachers and the performance of the education system as a whole. Designing teacher-appraisal methods is not easy, and requires that the objectives of improvement and accountability be carefully balanced. Combining the improvement and accountability functions into a single teacher-appraisal process raises many challenges, and comparative research on the effectiveness of different models is just beginning to emerge. For example, when evaluation is oriented towards improving practice within schools, teachers are typically willing to reveal their weaknesses, in the expectation that conveying that information will lead to more effective decisions on developmental needs and teacher education. However, when teachers are confronted with potential consequences of evaluation on their career and salary, they are less inclined to reveal weaknesses in their performance,



and the improvement function, which builds on trust in the relationship between appraiser and the appraised, may be jeopardised. In practice, countries usually use some combination of these approaches that integrates multiple purposes and methodologies. Due attention will need to be paid to the criteria against which teachers are appraised. These should include, but not be limited to, student performance. Also important are the degree to which teachers improve their professional skills and, crucially, the part they play in improving the school and system as a whole. In this way, evaluation and appraisal need to be well aligned with the process of system change. However, it is not enough to appraise the right things; the ways in which appraisal is followed through will determine its impact. At present, many teachers across the OECD area feel that appraisal has no or little consequence. School leaders need to become more skilled at using appraisals intelligently, and evaluation needs to be more closely connected with career development and diversity. TALIS data show that, at present, most teachers do not feel that school leaders use appraisal to recognise good performance, which suggests that a key component of appraisal is appropriate training for those conducting the appraisals.

Finally, since learning outcomes at school are the result of what happens in classrooms, only reforms that are successfully implemented in classrooms can be expected to be effective. Teacher engagement in the development and implementation of educational reform is therefore crucial, and school reform will not work unless it is supported from the bottom up. It is therefore essential to build a constructive political process in which teachers share with policy makers and administrators the main goals of reform. This does not mean that the specific interests or concerns of particular groups can be ignored: there will always need to be compromise in making changes to well-established systems, particularly when some individuals are bound to be threatened by change. However, around the world, collaborative models of educational reform have been shown to be highly effective. This requires that those responsible for change both communicate their aims well and involve the stakeholders who are affected. It also requires teachers to be the architects of change, not just its implementers.

Ontario's example is instructive. Its deputy minister meets quarterly with the major teachers' unions, superintendents' organisations, and principals' associations to discuss ongoing reform strategies. The ministry has also created the Ontario Education Partnership Table where a wider range of stakeholders meets with ministry officials two to four times a year. From this gathering, smaller groups of stakeholders worked on particular issues in more detail. In 2005, four-year collective bargaining agreements between the four major teachers' unions and provincial trustee associations were signed. These agreements, the result of a set of provincial dialogues convened by the government, created a framework that advanced the government's educational improvement strategy while addressing teacher workload issues.

A centralised education system in some ways, but one that is decentralised where it matters

The Japanese education system is often described as highly centralised. As PISA shows, however, the reality is far more nuanced. MEXT, the central authority responsible for developing and implementing national education policy, distributes public resources for education at the national, prefectural, and municipal levels, and guides national curriculum standards, textbook development, and teacher training. Each of the country's 47 prefectures has its own board of education responsible for co-ordinating education in its own geographic area. These boards are responsible for establishing and closing institutions and for certifying teachers. In addition, each of the approximately 1 700 municipalities in Japan has its own board of education responsible for selecting school textbooks. Teachers in Japan are largely responsible for how the curriculum is taught, and are given authority over instruction and actual classroom practice.

By PISA measures, Japan can be characterised as offering below-average school and local autonomy in decisions relating to resource allocations. In contrast, Japan grants significant school autonomy over curricular and assessment policies. This reflects the way in which education governance is structured in Japan, with the central government largely guiding financing, prefectures largely guiding teacher selection and evaluation, municipalities given authority over textbooks, and teachers given significant freedom to innovate classroom practice. This is important because PISA shows these factors to be more closely related to educational performance than decision-making responsibilities concerning resource allocation. For example, school systems, like Japan's, that provide schools with greater discretion in making decisions regarding student-assessment policies, the courses offered, course content and the textbooks used, tend to perform at higher levels in PISA. In PISA, some 98% of 15-year-olds in Japan are in schools whose principals reported that only principals and/or teachers have considerable responsibility in establishing student-assessment policies (the OECD average is 66%); 94% are in schools whose principals reported that only principals and/or teachers have considerable responsibility in deciding which courses are offered (the OECD average is 50%); 93% are in schools whose principals reported that only principals and/or teachers have considerable responsibility in determining course content (the OECD average is 45%); and 89% are in schools whose principals reported that only principals and/or teachers have considerable responsibility in choosing which textbooks are used (the OECD average is 78%).

All in all, the analysis suggests that the challenge for Japan lies less in changing the formal distribution of responsibilities for decision making between central, prefectural and local/school authorities than in enabling school and local authorities to actively assume the decision-making responsibilities they already have. In this respect, the policy experience from Finland, which emphasises informality, quick decision making, and freedom to act so that local education authorities and schools can react to changing



situations and the surrounding environment, can serve as a model. Finland's education-management system is not only less hierarchical than that of many other education systems, it is decidedly anti-hierarchical, with the aim of encouraging creativity, entrepreneurship and personal responsibility. Singapore provides another model that combines strong central capacity with local authority to act. The Ministry of Education in Singapore is staffed by knowledgeable, pragmatic individuals, trained at some of the best universities in the world. They function in a culture of continuous improvement, constantly assessing what is and isn't working using both data and practitioner experience. They respect, and are respected by, professionals in the schools.

Maintaining a balanced approach to accountability

"It's always about what students are learning, agreeing on that, and holding yourself accountable and each other accountable by engaging in meaningful reviews of how students are doing," said Jim Stigler during an interview for this report. The Japanese education system is a system with a great deal of accountability, but it is not a system of administered accountability. The Japanese have virtually none of the trappings of formal Western accountability systems and they do not need them. According to the MEXT White Paper 2007, Japan finally instituted a national assessment of every student at sixth grade and the ninth grade for the first time after it stopped conducting those nationwide assessment forty four years ago. But Japan since decided to administer the assessment only to a sample of students in 2010.

The only tests are the entrance exams for high school and university. Everything hinges on a student's performance in these tests. Because newspapers publish results regularly everyone knows the rankings of these institutions and the record of each compulsory and junior high school in getting their students into the right high schools and universities. The newspapers are full of statistics for each school, much like the statistics for popular sports teams in other parts of the world. Magazine articles are written about changes in the rankings and what they mean and why they occurred. Other stories are written about students who succeeded against all odds in the exams and others who did not.

But that is only half the story. As pointed out earlier, in Japanese society the burden of a student's fate is partly shouldered by the family, the teachers, the faculty and even the students' classmates. Teachers' reputations among their peers rest on the success of their students in a way that has no parallel in many Western countries.

The system of homeroom teachers brings another level of accountability. Because these teachers follow the students through the grades, and because they are involved in their students' lives outside of school and are in constant communication with parents, they are accountable to the parents in a unique way. This cannot be duplicated in countries where teachers do not follow students throughout their school careers and where they are responsible for only one or a few subjects.

Some countries provide very strong incentives to students to take tough courses and to study hard in school, others do not; many are somewhere in between. Japan is a leader in the first camp, and most observers believe that this one of the reasons why Japan has consistently high rankings in international education league tables.

The Japanese system creates clear, powerful and tangible rewards for student academic success. In the short term, these come from parents, whose praise is highly valued by children. In the medium term, they come in the form of admission to the right high school or university, which is of paramount importance to the student and to everyone around her. And, finally, in this highly meritocratic society, they come from the value that employers and the society at large place on academic achievement.

All of this, of course, contributes mightily to "exam hell", the well-known pressure cooker that young people in Japan go through at exam time. People elsewhere in the world vow never to institute such high-stakes exams because of the pressure it places on individual students. The Japanese themselves say they don't like exam hell and would like to stop it. Achieving this without losing the benefits in terms of student motivation and meritocracy will be one of the major challenges facing Japan and many other East Asian countries. The examples of Finland and Ontario suggest that alternatives are possible.

Developing accountability through social norms

Japan's challenging environment and living conditions may have shaped the Japanese value of the welfare of the group over that of the individual (White, 1988). In this environment, individuals gain esteem by doing things that the group values. If a person's actions threaten group harmony, social sanctions follow with wide-ranging repercussions. If one loses the respect of one group, establishing respect with other groups can be more difficult. This cultural factor explains why the Japanese work hard to maintain good relations with the groups to which they belong. It also lies behind the good educational performance in Japan.

In Japan a school's reputation depends on the academic performance of the students and on their behaviour. Society holds the school responsible for both aspects in a way that has no parallel in the West. For example, if a student violates the law, the law enforcement authorities call that student's homeroom teacher, and all faculty members apologise for the student's behaviour. It is not surprising then that Japanese students tend to develop a strong sense of obligation to the faculty, and strive to perform well academically and to stay within the limits of the law when not in school. Indeed, the same idea applies to a student's relationship to the other students at school. To fail is to let the group down. Therefore most members of this society will work hard to do as well



as possible, and are always working towards higher goals, because that is the way to earn acceptance and gain status. The same values permeate the workplace.

Unlike many societies where advancement depends mainly on connections and clans, Japan is steadfastly meritocratic. While children from wealthier families are statistically more likely to get higher paying jobs than less wealthy children, in Japan this trend is less pronounced than in many other OECD countries and seems to be due to greater financial investment in a child's education and less due to social connections. Up until recently, people worked their entire adult life for the same firm they joined after school or university. A person's employment in a particular firm is usually a function of the high school or university they attended prior to joining that firm; this is unusual elsewhere. In turn, the high school or university a person attends is based entirely on how a student does in entrance exams.

In Japan, a mother is judged on her success in supporting the education of her children. In practice, a mother is judged first by the high school that her son or daughter gets into, and then the university to which her child is admitted. Though the trend is changing, it is less common for Japanese mothers to work outside the home than Western mothers. Sociologists describe how society expects Japanese mothers to make sacrifices for their children who, in return, are expected to perform well in school.

Thus advancement in Japan is a function of merit and determined by examination. This ought not to work, because there are many other important skills that are not measured by Japanese examinations. The exams emphasise memorising and accumulating facts, and mastering procedures, rather than analytical thinking, creativity or the capacity for innovation. However, this system does work because Japanese employers are mainly interested in three things: applied intelligence, the capacity to learn, and the capacity to work hard and persist in the face of difficulty.

Some outside observers believe that Japan has no formal accountability system because, as noted before, it does not use the national assessment of academic ability to enforce accountability (the test-based system of accountability). But the above mechanisms provide for strong accountability in Japan. Students are accountable to teachers and parents. Teachers are accountable to each other in a system in which all the teachers in the school know just how good or bad the other teachers' performance is because of lesson-study processes. Everyone knows how the high schools and universities are ranked and so everyone knows how to rank the institutions and teachers who prepare students for those high schools and universities. Student performance on those entrance exams is made public.

All this said, since the 1980s there has been a decline in one of the key assets of the Japanese education system: the high level of trust in schools and teachers. Building and maintaining trust in education is crucial for many countries. Trust cannot be legislated. The strong role that trust plays in the relationship between government and teachers in Finland has suggested to some that lessons from Finland may be less relevant to other countries, especially if one views trust as a precondition for the kinds of deep institutional reforms embodied in the development of the comprehensive school. But the Finnish experience also shows that trust is at least as much a consequence of policy decisions as it is a pre-existing culture. In Finland it is assumed that students will perform at their best when their teachers' morale is high, and teachers' morale will not be high if they perceive themselves to be under attack by the authorities. Trust in this case means eliciting teachers' views on what needs to be done to improve student performance, acting on those views to the greatest extent possible, and working hard to help teachers develop the capacity required to meet their students' needs. Given the respect that teachers have historically enjoyed in Finland, there was a solid base on which to build reforms. But Finnish teachers only latterly gained their high level of autonomy over curriculum, assessment and other decisions. This granting of trust from the government, coupled with their new-found status as university graduates from highly selective programmes, empowered teachers to practice their profession in ways that deepened the trust accorded them by parents and others in the community.

Investing in education from the start

Japanese parents do not only demonstrate an exceptional commitment to the education of their children in school, but they have also traditionally provided for a strong educational start prior to the enrolment of their children. However, social changes together with adjustments in labour demand driven by changing demographics will put an increasing premium on the participation of women in the labour force. This will require Japan to strengthen early childhood education and care in ways that other high-performing education systems have already done.

Currently, early childhood education in Japan is provided by two types of institutions: childcare centres (*hoikuen*) and kindergartens (*yochien*), with kindergartens oriented towards learning while childcare centres focus on care. These two systems have developed independently and remain largely independent, with different facilities and different objectives. Childcare centres accept children below primary-school age and have care as their main objective, while kindergartens are educational in nature and cater to children between the ages of three and six.

PISA results indicate that Japanese students who attend early childhood education perform at significantly higher levels in PISA than those who do not attend any form of early childhood education. Despite these clearly visible benefits, Japan remains among the countries with the lowest levels of public spending on early childhood education and care, leaving parents with a significant



financial burden for attendance in the mainly privately provided childcare centres. Affordable, high-quality early education for children will thus be a priority for Japan.

However, it is not just an issue of funding. Japan's efforts to integrate childcare centres and kindergartens into an integrated system (*Yoho Ittai Ka*) in the new Child/Child-Rearing System (*Kodomo Kosodate Shin System*) is equally important, as the new system will combine the strengths of the centres and kindergartens in order to provide all children, regardless of their socio-economic background, with the best possible start in life. The system will also reduce the economic burden child-caring and child-rearing, and will help to make it easier for women to participate in the labour force and to contribute to economic growth and innovation. As similar efforts in countries like Sweden, Finland, Denmark, New Zealand, Slovenia and Chile have shown, success will partly depend on political leadership combined with a coherent reform agenda and a realistic implementation plan, stakeholder buy-in, an appropriate balance between child and parental needs, and adequate resources.

A common curriculum, which is a key strength of the current school system, could be equally beneficial for early childhood education and care. The planned child curriculum (*kodomo shishin*) can provide the educational foundation for children aged 3-5 if it is aligned with the school curriculum to ensure a smooth transition from early childhood education to school, and overcome the "Grade One Problem" (*shuichi problem*) of school entry.

Effective school-home communication

Japanese students spend an hour a day in homeroom. The homeroom becomes that student's family in the school. Japanese homeroom teachers at elementary schools teach all subjects, except specialised subjects like music and crafts. These homeroom teachers typically follow their classes for several years. They are required to visit their students' families regularly. Students participating in extracurricular activities spend time with teachers who coach them in their basketball team or brass band after school and also on weekends. In the upper grades, the teachers are expected to provide academic and career counselling.

Teachers at elementary schools maintain communication with parents through a notebook that students shuttle between school and home. Even if a student has a non-academic problem, the teacher will communicate the nature of the problem to the parents, who are expected to provide appropriate support at home. If that is not sufficient, the teacher will advise the parents to consult other services available at municipal offices.

This entire approach is based on the belief that effort and not ability is what primarily explains student achievement. If a student falls behind, it is not because he or she is not good at school work; it is because he or she is not working hard enough and the system has a way to change this. It is also based on the idea that many people, not just the student, are responsible for a student's poor performance and that poor performance reflects badly on those people, too. This motivates both parents and teachers to do everything possible to make sure the student gets back on track.

During the American occupation of Japan after the Second World War, the Americans required Japan to start Parent-Teacher Associations of the kind that are common in the United States. In the ensuing years, while these organisations have weakened in the United States, in Japan they have become a dominant player in the school system, providing parents with a real voice in education policy and local practice. They are not only organised at the school level, but also at prefectural and national levels, with a seat on the Central Council on Education. With a reform introduced in 2004, it is now also possible for parents and community residents to participate in school management with a certain degree of authority and responsibility as members of school management councils (e.g. school management councils can approve basic plans for school management, or express opinions to boards of education, the appointing authority, concerning the appointment of teachers and school staff). The number of this new type of schools, called "community schools", continues to rise.

This said, the voice of parents has remained a conservative force in educational reform, with parents naturally placing greater emphasis on the immediate incentives the education system offers for the education of their children than on the longer-term benefits of changes in the system.

Even so, parental involvement in school is evolving. For instance, with a reform introduced in 2004, it is now possible for parents and community residents to participate in public school management with a certain degree of authority and responsibility as members of school management councils (e.g. school management councils can approve basic plans for school management, or express opinions to boards of education, the appointing authority, concerning the appointment of teachers and school staff). The number of this new type of schools, called "community schools", has witnessed a gradual but stable increase since it was first introduced in 2004.

Balanced resource-allocation priorities

Japan spends less public money on education than most OECD countries, but it gets more for that money. One of the many reasons for this is the careful way Japan allocates that money, and the capacity of the system to channel resources to where they can make most difference. Compared to other OECD countries, Japan spends more on teachers and less on school buildings and facilities, non-teaching staff, central office specialists and administrators, full-colour, glossy textbooks, and so on. Japanese schools are built



to ministry designs: they are perfectly functional but very plain. They are not architectural symbols of community pride and lack many of the special features found in schools in other advanced industrial countries. School administration is typically confined to a principal, an assistant principal, one janitor and a nursing teacher and a clerical officer. There is often no cafeteria – students serve the meals from a central kitchen to their teacher and classmates in the classroom. The students are also responsible for cleaning their classrooms. As noted above, textbooks are very simply produced in paperback format and are much smaller than in many other industrialised countries. At every point, the Japanese have made sure that the money they spend on educating their children goes as much as possible towards teachers and instruction; so it is no surprise that a much greater proportion of total funding is spent on them than is the case in many other countries (Stevenson and Stigler, 1992).

At the same time, the goal of equity in education has become somewhat more difficult to attain, as the devolution of responsibilities for educational finance has opened a widening gap in resourcing levels that is mirrored in growing performance differences among schools. Similarly, the investment in teachers has suffered over the past decade when compared with other educational investments.

When comparing the resources invested in education and spending choices, it is important to keep in mind the significant share of private investment in education. A large percentage of Japanese students attends private, after-school classes. Such instruction often takes place in institutions known as “*juku*”, but is also delivered as home-based tutoring and distance learning. While home based tutoring is the primary way in which students who are behind invest extra time and effort to catch up, the primary purpose of the after-school classes is to offer more advanced study than is available in the public school, to prepare for school lessons and to prepare for school entrance exams through one-to-one or small-group tutoring. The high level of participation in such activities is driven by the intense competition to enter the country’s top universities.

On the one hand, *Juku* can work as a stimulus for the formal education sector by fostering innovation and child-centered pedagogical approaches. The growing investment in *Juku* also suggests that they positively influence students’ school performance and their success rate on school entrance exams, while developing students’ study habits and interest in learning.

On the other hand, one of the major concerns related to *Juku* is the financial cost for families, which inevitably raises issues of equity, because students from disadvantaged backgrounds may not afford the high fees required to attend *juku* and the financial burden associated with child-rearing in a country with low fertility rates. There are other factors important to consider as well. For example, the *Juku* system creates and perpetuates inequality, given that the high cost limits use by low-income families. The *Juku* also unduly dominates children’s lives and restricts their leisure activities in ways that may be detrimental to their well-rounded development. To the extent they duplicate school curricula, *Juku* may also use resources that could be used more efficiently elsewhere. In some cases, *Juku* substitute for schools, crowding out school lessons. Last but not least, *Juku* can disrupt classroom learning by upsetting the sequence of learning and exacerbating disparities between students, causing some to lose interest in classroom activities.

On balance, reducing an overly heavy reliance on the *Juku* system could help improve equity in schooling outcomes in the long term. In the meantime, better integration of after-school activities with school teachers, personnel and facilities may activate a virtuous cycle between the two sectors, ensuring that best practices are shared and that there is an alignment of educational objectives and practices. Learning time may thus have a multiplying effect rather than simply an additive effect.

Careful attention to school-to-work transition

Japan has an unusual and highly effective system for moving students into the workforce. The idea of lifetime employment, although weakened in recent decades, makes it worthwhile for employers to invest heavily in the continued education and training of young people joining their workforce fresh from school or university. This system results in comparatively low rates of youth unemployment – even if they are high in the eyes of many Japanese who compare current unemployment rates against past standards – and works well because students are already accustomed to working hard.

It also produces workers who are used to being loyal team members, working collaboratively with others, showing up on time and working to deadlines. It produces students who know how to learn and are eager to learn and come to work with a prodigious set of skills. Other nations interested in workforce development might consider exploring, in detail, how this system works.

Because Japanese firms generally believe that they will employ people for a long time, there is a strong willingness to invest heavily in the continuing education and training of employees. It is not uncommon for a Japanese firm to send new university recruits overseas during their early years of employment to pursue a foreign graduate programme or to be interns in a foreign plant. Research shows that Japanese firms value candidates who are not just highly intelligent, but ready to learn whatever they need to learn.

Maintaining these strengths as the link between workers and their employers weakens is one of the challenges Japan faces.



CONCLUDING REMARKS

International comparisons show Japan's school system to be among the world's top-performing systems, with regard to the quality of learning outcomes, with regard equity in the distribution of learning opportunities, and with regard to value for money. Japan's strong commitment to education fuelled the sustained period of rapid economic growth in the post-war period, and high-quality human capital has made Japan one of the key players in the production of high-technology, high value-added products. But PISA also shows a fair number of countries and economies with performance levels close to or higher than Japan's. Japan therefore needs to ensure that its stock of human capital remains competitive with that of other countries and economies around the world and in the region – such as Shanghai-China, Korea, Hong-Kong China and Singapore. That is particularly important in the context of the dramatic demographic challenges the country now faces.

One of Japan's main assets is the high value society continues to place on education which provides the country with access to a first-rate teaching force and ensures that Japanese students are superbly supported at home and that schools are well resourced. But maintaining strong demand for high-quality education on the part of parents and the general public will be a formidable challenge as some of the externally motivating forces are weakening.

Another aspect of the Japanese success in education has been the traditional belief that all children can achieve, which is mirrored in the comparatively weak impact that social background has on educational outcomes. However, the significant rise in the performance variation among senior high schools witnessed by PISA suggests that these high standards of equity are beginning to be challenged and that Japan's efforts to devolve responsibilities for educational decision-making to schools and local authorities need to be accompanied with equity-related policies that attract the most talented teachers to the most challenging classrooms and the most capable principals to the schools most in need for effective leadership.

Japan has seen a significant shift from one of the more centralised to one of the more decentralised education systems in the OECD area. The challenge for Japan lies now less in further changes to the formal distribution of responsibilities for decision making between central, prefectural and local/school authorities than in enabling school and local authorities to actively assume the decision-making responsibilities they already have. This will require effective school leadership, some emphasis on informality, quick decision making, and freedom to act so that local education authorities and schools can react to changing situations and the surrounding environment.

Many nations envy Japan for its clear and ambitious academic standards across the board, and for coherent delivery chains through which curricular goals translate into high-quality instructional systems and practices, and student learning. However, the rapid decline in the student-age population has significantly widened the gateways into the education system, reducing the motivating impact which high-stakes gateways have traditionally had. Japan will therefore need to consider alternative incentive structures to maintain students' and society's commitment to education. Also, as individuals change jobs and employers more frequently, an individual's performance in the work place has now a greater impact his or her economic and social future than just the school or university attended. Perhaps most importantly, while PISA shows that Japan has made significant progress in fostering students' interest in and engagement with learning and improving their awareness of effective approaches to learning, this is an area where Japan still lags significantly behind many advanced education system. Curriculum reform will be central if Japan wishes to fulfil its ambition of shifting emphasis from a traditional subject-matter based approach towards a competency-based approach in the curriculum and to match the world's best-performing education systems not just in the cognitive development of its students but also in students' will and desire to learn. Experience with the integrated course of study shows that success will depend not just on curricular innovations, but on how well teachers are trained to use them.

Many observers note that crucial to the quality of education in Japan is the quality of its teachers. But the demands placed on Japanese teachers continue to rise. Teachers are asked to equip students with the competencies they need to become active citizens and workers in the 21st century. They are asked to personalise learning experiences to ensure that every student has a chance to succeed and to deal with increasing diversity in their classrooms and differences in learning styles. And they need to keep up with innovations in curricula, pedagogy and digital resources. To address these demands, Japan will need to rethink many aspects of its approaches to teacher development, including how to optimise the pool of individuals from which teacher candidates are drawn; recruiting systems and the ways in which staff are selected; the kind of initial education recruits obtain before they start their jobs, how they are monitored and inducted into their service, and the continuing education and support they receive; how their compensation is structured; and how the performance of struggling teachers is improved and the best-performing teachers are given opportunities to acquire more status and responsibility. Over the past decades, Japan has tended to prioritise reductions in class sizes over investments in the quality of teachers. This balance may now require adjustment and this report provides a range of examples for how this could be achieved.

Last but not least, since learning outcomes at school are the result of what happens in classrooms, only reforms that are successfully implemented in classrooms can be expected to be effective. Teacher engagement in the development and implementation of educational reform is therefore crucial, and school reform will not work unless it is supported from the bottom up.



Note

1. At the time this commitment did not extend to women.

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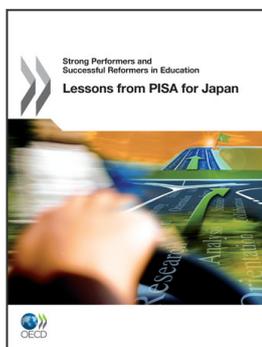
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