Reviews of National Policies for Education

Education Policy in Japan

BUILDING BRIDGES TOWARDS 2030

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Foreword

The highest-performing education systems across OECD countries combine excellence with equity. Japanese 15-year-olds have been among the top performers since the inception of the OECD Programme for International Student Assessment (PISA), and Japanese adults have the highest proficiency in literacy and numeracy in the Survey for Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies. At the same time, the socio-economic status of students does not strongly influence PISA results in Japan. This highlights the high level of equity of the Japanese education system.

But challenges linked to economic and societal trends, globalisation and skill-biased technological change can have a major impact, even in a high-performing education system. Coping with these challenges requires new skills, and schools need to adapt their contribution to shaping the future.

Japan's high performance relies on the high-priority it places on education and on its holistic model of education delivered by highly qualified teachers and the external collaboration of communities and parents. However, sustaining high performance requires constant revision.

Already the Second Basic Plan for the Promotion of Education (2013-17) placed education at the centre of the roadmap to growth. Japan is now moving to its Third Basic Plan for the Promotion of Education (2018-22). A number of reforms are progressively being rolled out, including the following:

- fostering the development of capacities for a new era through a National Curriculum Reform focusing on improving lessons from a perspective of proactive, interactive and authentic learning
- reforming the teaching career to improve teaching skills
- strengthening school-community partnerships by involving communities in children's education and reforming school management
- ensuring financial support for those in need at non-mandatory levels (such as early childhood education and care and tertiary education) while improving access to tertiary education and adult learning through the promotion of new programmes to foster lifelong learning in an ageing society.

This report aims to highlight the many strengths of Japan's education system, as well as the challenges it must address to carry out reforms effectively and preserve its holistic model of education. The ultimate goal is to ensure that the education system delivers the best for all students and that Japanese learners have the knowledge, skills, attitudes and values they need for the 21st century.

Acknowledgements

This report assessing Japan's policies and practices in the field of education and skills is informed by international experience and best practices from OECD countries. The assessment process involved a country background report, an OECD preliminary visit to help define the key areas for review and, in January 2017, the main OECD review visit to Japan. There were also many exchanges and consultations with experts and stakeholders in Japan and internationally.

The review team is indebted to the Japanese government which supported this review, under the leadership of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). We are also grateful to Tomoka Satomi, Director of International Affairs Division; Naoki Himiya, Director of Policy Planning and Coordination Division of Lifelong Learning Policy Bureau; Yu Kameoka, Liaison Officer to the Minister / Minister's Secretariat; and Kosuke Terasaka, Deputy Director of Policy Planning and Coordination, Division of Lifelong Learning Policy Bureau; for organising the review visits and co-ordinating the review process.

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Editorial

Since Confucius and Socrates, educators have recognised the double purpose of education: to pass on the meaning and significance of the past and to prepare young people for the challenges of the future. So the challenge is not simply to deliver more of the same education, but to prepare students for a different world.

These days, digitalisation is connecting people, cities, countries and continents, bringing together a majority of the world's population in ways that vastly increases our individual and collective potential. But the same forces have also made the world more volatile, more complex and more uncertain. The rolling processes of automation and hollowing out jobs, particularly for routine tasks, have radically altered the nature of work and life.

For those with the right knowledge, skills and character qualities this has been liberating and exciting. But for those who are insufficiently prepared, it can mean the scourge of vulnerable and insecure work, and life without prospects. As our economies shift towards regionalised hubs of production, linked together by global chains of supply and information, but concentrated in locations where comparative advantage can be built and renewed, the distribution of knowledge and wealth is key, and that is intimately linked with the distribution of educational opportunity.

But while digital technologies have disruptive implications for our economic and social structure, they do not have predetermined implications. It is the nature of our collective and systemic responses to these disruptions that will determine their outcomes – the continuous interplay between an emerging technological frontier and the range of cultural, social, institutional and economic ingredients, including education, that we combine in response.

When we could still assume that what we learn in school will last for a lifetime, teaching content knowledge and routine cognitive skills was rightly at the centre of education. Today, where we can access content on search engine such as Google, and where routine cognitive skills are being digitised and outsourced, the focus must shift to enabling people to become lifelong and life-wide learners. Schools now need to prepare students for more rapid change than ever before, to learn for jobs that have not been created, to tackle societal challenges that we cannot yet imagine, and to use technologies that have not yet been invented. Some experts suggest that nearly two-thirds of children entering primary school today will end up working in jobs that do not yet exist. Schools also need to prepare students for an interconnected world in which students understand and appreciate different perspectives and world views, interact successfully and respectfully with others, and take responsible action toward sustainability and collective well-being.

Japan engages with these challenges proactively. At a time when PISA results show Japan comparing favourably both in terms of the learning outcomes of students and equity in the distribution of educational opportunity, policy makers are not complacent but are carefully analysing tomorrow's threats to Japan's current strengths. This review has been commissioned as part of these efforts.

Curriculum design, teacher education, school organisation, financial support for non-mandatory stages of education, and lifelong learning are all part of the reform package Japan has put in place to embrace the future.

But transforming schooling at scale requires not just a coherent and ambitious vision of what is possible, but also smart strategies that help make educational change happen. Knowledge is only as valuable as our capacity to act on it and the reality is that many good ideas get stuck in the process of policy implementation.

The toughest challenge for policy implementation goes back to the way in which educational institutions are managed and governed. Public education was invented in the industrial age, when the prevailing norms were standardisation and compliance, and when it was both effective and efficient to educate students in batches and to train teachers once for their working lives. The curricula that spelled out what students should learn were designed at the top of the pyramid; then translated into instructional material, teacher education and learning environments, often through multiple layers of government; and ultimately implemented by teachers in the classroom.

This structure, inherited from the industrial model of work, makes change a very slow process and the changes in the demands of societies have vastly outpaced the structural capacity of our current governance systems to respond. And when fast gets really fast, being slower to adapt makes education systems really slow and disoriented.

Japan's curriculum reform is far-reaching, and builds on Japan's strong tradition of holistic education. It sends a strong signal that students success in the 21st century is not just about academic knowledge, but also about character qualities involved in achieving goals, living and working with others and managing emotions, such as perseverance, perspective taking, mindfulness, ethics, courage or leadership. The curriculum reform appears to build on the understanding that 21st century students live and work in a world in which most people need to appreciate a range of ideas, perspectives and values, and collaborate with people of different cultural origins; a world in which people need to decide how to trust and collaborate across such differences, often bridging space and time through technology; and a world in which their lives will be affected by issues that transcend national boundaries.

But there are other and divergent signals which students and parents receive too. Perhaps the most powerful ones come from the gateways that regulate access to higher education, most notably the university entrance exams. These exams have great influence over how students learn, teachers teach and schools operate.

The university entrance exams in Japan still prioritise routine cognitive skills, and the nature of their assessment tasks often sacrifices validity gains for efficiency gains and relevance for reliability. The gap between the aspiration of the curriculum and the reality of the university entrance exams has compromised the implementation of previous curricula, it risks to do the same this time round. If Japan does not succeed with aligning its university entrance exams with the school curriculum, the private tutoring industry will be quick to fill the gap and the intended curriculum will not become the implemented curriculum and even less so the achieved curriculum. In short, getting the design of the university exam wrong will hold the whole education system back, narrow the scope of what is valued and what is taught, and encourage shortcuts and cramming.

The bottom line is that school systems are rather conservative social systems. Everyone supports educational reform, except for their own children. Parents may measure the education of their children against their own educational experiences. Teachers may teach

how they were taught rather than how they were taught to teach. It will require extraordinary leadership to convey the goals of the curriculum successfully to parents, educational institutions and employers.

And that is still the easy part. A far greater challenge is to build the capacity to deliver the intentions of the curriculum in the classroom, which requires deep shifts in pedagogy and instructional practice. Teachers are the key to developing new competencies; they are the people who reach the learners. That is why the quality of an education system can never exceed the quality of its teachers. So expectations for teachers are high. We expect them to have a deep and broad understanding of what they teach and whom they teach, because what teachers know and care about makes such a difference to student learning. That entails professional knowledge (e.g. knowledge about a discipline, knowledge about the curriculum of that discipline, and knowledge about how students learn in that discipline) as well as knowledge about professional practice that enables teachers to create effective learning environments which foster the cognitive and social and emotional aspects that lead to good learning outcomes. It also entails an understanding of the research-theory-practice nexus and the inquiry and research skills that allow them to become lifelong learners and grow in their profession.

Overall it requires teachers to be passionate, compassionate and thoughtful; to make learning central and encourage students' engagement and responsibility; to respond effectively to students of different needs, backgrounds and languages, and to promote tolerance and social cohesion; to provide continual assessments of students and feedback; and to ensure that students feel valued and included and that learning is collaborative.

Japan has a huge advantage over other countries, in the sense that the role of teachers has always extended beyond the classroom and the delivery of instruction. Japanese students are fortunate in that they typically have a teacher who is also a mentor and who takes a real interest in their life and aspirations, who helps them understand who they are, discover their passions and where they can build on their strength. But the price for this has been extraordinary long working hours for teachers and a high degree of responsibility. The revision of the school organisation aims to reduce the teachers' burden and to provide extra services to students at school. But in moving towards a more Tayloristic work organisation Japan needs to take care not to lose its traditional strength. In the English-speaking world, most notably the United States, teachers have much fewer working hours, but spending most of their time teaching leaves them limited time to pursue other important activities, including working with individual students, parents and, most importantly, with their fellow teachers to improve their own performance and that of their colleagues, and to pursue professional development that leads to stronger educational practice. Finding the right balance will not be easy.

And there is more to this, Japan needs to invest in supporting the continued professional development of its teachers to adopt the new curriculum and beyond. Given the rapid changes in education and the potentially long careers that many teachers have, teachers' development must be viewed in terms of lifelong learning, with initial teacher education conceived as providing the foundation for ongoing learning, rather than producing ready-made professionals. Japan's students are unlikely to become lifelong learners if they do not see their teachers to be lifelong learners. That requires teachers to collaborate and work in teams, and with other schools and parents, to set common goals, and plan and monitor the attainment of goals.

The future of education will also demand much greater attention to equity. Digitalisation and globalisation will continue to amplify the impact knowledge and skills have on the

life chances of students. Even if inequality in knowledge and skills themselves do not widen, their impact on social and economic outcomes will continue to accelerate. In some sense, Japan has been remarkably successful in this respect. The achievement gap between students from wealthier and poorer families has remained much smaller than it is in much of the Western world. The current reform targeting the funding of non-mandatory stages of education (early childhood education and care and higher education) will help to sustain that advantage and thus foster inclusive economic and social development. But on other dimensions of equity, most notably gender, Japan has remained remarkably unsuccessful. PISA results reveal wide differences in student aspirations and their attachment to different fields of study, which then translate into subsequent educational and occupational choices.

Last but not least, the increase in the depreciation rate of human capital resulting from technical progress and globalisation should lead people to hone their skills over their lifetime. The only thing that can help people accept that their job may disappear is the confidence that they have the knowledge and skills to find or create a new one. It works the same way for nations. It is important how evenly knowledge and skills are spread within a society. If there are large sections of the adult population which are not keeping up with the demands for new knowledge and skills, it becomes more difficult to improve productivity and make better use of technology, which becomes a barrier to raising living standards. The skills of a nation and how they are distributed are closely linked to social and economic development. And the extent to which the effects of technology-induced economic restructuring are widening income and wealth inequalities, or reducing them, depends fundamentally on the supply and distribution of education, and the growth of skills across populations. OECD's Survey of Adult Skills shows that Japanese workers are less likely than their counterparts to participate in lifelong learning. Beyond time and financial constraints, the low participation levels reveal the difficult access to lifelong learning faced by non-regular workers, and the need for improvement in the supply of adult training. Japan will need to find a better balance between short-term training and labour market programmes for displaced workers, and long-term policies that facilitate lifelong development of the knowledge and skills for the 21st century.

In sum, the OECD commends Japan for not being complacent at the height of its educational success, but for seeking to address the demanding challenges of the 21st century. Japan has developed a compelling plan for this. But it will require extraordinary efforts to implement this plan successfully. That must entail the investment of financial and political capital, the full involvement of all stakeholders around a shared vision, and significant support for educators, who hold the key to the successful implementation of educational policies. Last but not least, the capacity to look outwards will be a key differentiator for progress. In the future, the division may be between those education systems that feel threatened by alternative ways of thinking and those that are open to the world and ready to learn from the world's best experiences.

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Executive summary

Compared to other OECD countries Japan's education system is one of the top performers among both youth and the adult population. Japanese students have among the best performance in scientific, mathematics and reading literacy in the OECD Programme for International Student Assessment (PISA), while adults in Japan have the highest proficiency in literacy and numeracy. These excellent results are linked to an environment conducive to learning in schools and beyond, with a high quality of engagement by teachers and strong support from families for effective delivery of well-rounded (holistic) education.

Alongside this high performance, Japan faces significant economic and socio-demographic challenges. Since the 1990s, the economy has been running in low gear. Ageing of the population has shrunk the labour force and risks leading to an undersupply of skills and low development and uptake of technology. An increase in non-regular jobs has generated a "working-poor" population, and the poverty rate is among the highest in OECD countries. Investing in youth and adults to develop competencies for the 21st century can help Japan improve its uptake of new technologies, ensure a smooth transition to the future, and shield its most fragile population from poverty.

To tackle some of these challenges, the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) launched an in-depth reform of the curriculum and the education system. The OECD was invited to carry out this Education Policy Review to examine the current reform agenda and the policies and practices that lie behind the success of Japan's education system.

Drawing on national and international evidence and experience, the review identifies policy options to further enhance performance of the education system and anticipate future needs. It assesses the strengths and challenges of the current reform agenda in Japan and makes recommendations with regard to introduction of the new curriculum, schools and lifelong learning (Annex A summarises strengths, challenges and policy options). Based on desk research, international research evidence and two OECD review visits to Japan (Annex B), the report was prepared by an OECD review team, composed of OECD analysts and high-level international experts (Annex C).

Current reform agenda

Japan has launched a number of reforms, some of which will be part of the 2018-22 National Basic Plan for the Promotion of Education. Highlights among the reforms include:

- Introducing a National Curriculum Reform to enhance active learning and focus on fostering student competencies related to the three pillars of the reform: 1) motivation to learn and apply learning to life; 2) acquisition of knowledge and

technical skills; and 3) skills to think, make judgements and express oneself. Student assessments will be adapted to reflect the new curriculum.

- Reforming the teaching career to improve teaching skills, including a revised selection process, comprehensive career training and reorganisation of teachers' schedules to allow time for training.
- Strengthening school-community partnerships by involving communities in children's education and reforming school management (the *Team Gakkou* [school as a team] programme).
- Ensuring financial support for those in need, including a reduction of the financial burden on low-income families for education in non-mandatory levels (early childhood education and care [ECEC] and tertiary education).
- Improving access to tertiary education and adult learning through the promotion of new programmes to foster lifelong learning in an ageing society.

Strengths and challenges

To support an effective transition to 2030, Japan can build on its current efforts to develop high levels of skills to improve productivity, growth and social cohesion.

- Japan recognises the need to improve teaching and learning to foster competencies for the 21st century. This includes developing cross-curricular skills, such as problem-solving and creativity. This transition may require adaptation of the curriculum, teaching and school practices and of student assessments, such as university entrance examinations.
- Japan's education system effectively delivers well-rounded (holistic) education for children: teachers are skilled and take good care of students overall; students are engaged and work collaboratively; parents fund extra learning outside of school (*juku*); and communities support learning. This unique model is based on all parts of the system working together cohesively. But socio-demographic and economic changes, as well as challenges in child well-being and teacher workload, require Japan to rethink how to sustain this model in the future.
- Japan's education system is high-performing, but it can boost its contribution to skills development. While there is public funding for mandatory levels of education, funding support is limited in ECEC and tertiary education. This potentially limits opportunities for women and students of lower socio-economic status. The potential of lifelong learning is recognised in Japan, but there is a need to ensure that it matches labour market needs, supports reintegration of unemployed or non-active individuals and is available for workers who have limited time for study on top of their employment.

Recommendations: Supporting Japan's education system transition into 2030

To ensure that the current reforms take hold and the education system smoothly transitions into the future, Japan can build on the strengths of its well-rounded (holistic) education model. The reforms currently planned in Japan can effectively foster the competencies required for the future and further enhance the country's education

performance. This report presents a set of recommendations to support their implementation:

- Curriculum reform: Prioritise the curriculum reform through a strategy that sustains alignment across interdependent components and communicates its value to stakeholders. This includes adapting existing assessments to reflect the new curriculum and investing in teachers' training and initial teacher education to reinforce their capacity to adapt their practices to the revised curriculum (particularly active learning). Consider additional educational issues, such as the development of digital competence and proficiency in foreign languages.
- School-community partnerships: Preserve the provision of well-rounded holistic education by enhancing school organisation and school-community partnerships. Review the role and training of school leaders in light of 2030 objectives. Focus management practices and partnerships with local communities on supporting the introduction of the new curriculum and alleviating teachers' workload. Partnerships can counterbalance inequalities between schools and contribute to providing non-academic services to children that are currently delivered through shadow education.
- Lifelong learning: Strengthen lifelong learning and financial arrangements for non-mandatory education to support equity. This includes increasing public funding to low-income households for ECEC and mainstreaming income-contingent loans for students accessing tertiary education. Design lifelong learning to meet the need for upskilling of both employers and the population, and ensure affordability, innovative delivery approaches and flexible scheduling.

Chapter 1. Education in Japan: Strengths and challenges

This chapter provides a brief description of Japan's education system and the context in which it operates. Since the 1990s, the Japanese economy has been sluggish, and the ratio of debt to GDP has reached uncharted territory. The forecast of sharp demographic decline, the rapidly ageing population and the evolution of the skills required to flourish in a knowledge economy also present new challenges to Japan's economy, society and educational institutions.

Japan's unique education system relies on the concept of "the whole child" or holistic education, where schools not only develop academic knowledge, but also foster students' social, emotional and physical development. International standardised assessments highlight the excellence of education and the high level of equity in Japan, but Japanese students exhibit a higher level of anxiety and a lower level of life satisfaction than their counterparts elsewhere in the OECD.

Building on its strengths, Japan has started to reform its education system to adapt to the globalised environment of the 21st century, increase well-being, broaden students' skills and enhance its contribution to the economy and society.

Introduction and background to the report

The Basic Act on Education specifies that the mission of the Japanese education system is to convey universal principles such as "full development of the personality" and "dignity of the individual." It also states that the system should "help children to become independent individuals who combine well-balanced knowledge, morality and a healthy body" and will continue to work towards personal fulfilment, while respecting civic responsibility and actively participating in building the state and Japanese society. As such, Japan's education system not only ensures that children will receive the necessary inputs for self-realisation, but it also helps to bond society by providing basic training ground for good citizenship (Boyle, 1992[1]).

Since the beginning of international standardised assessments of student achievement in the 1990s, Japan has demonstrated the excellence of its education system by regularly being among the top performers. But today's rapidly changing socio-economic situation is posing new challenges to Japan in terms of academic achievement and civic responsibilities for shaping the future of Japanese society. Globalisation and modernisation have been changing the skills required in the workplace and in everyday life. With a shrinking and ageing population, Japan faces major demographic decline, which has led to significant changes in its industrial and employment structures. Japan's high standards of equity in education have also been challenged, with widening income and social disparities across the population. Meanwhile, school bullying and student well-being have come into focus.

To respond to these challenges, the Japanese government (elected in 2012) created the Council for the Implementation of Education Rebuilding, a new institution aiming to place education at the centre of the roadmap to growth. Headed by the Prime Minister, the Council brings together experts from a wide variety of fields. It has formulated ten global recommendations, including policy recommendations for development of the Second Basic Plan for the Promotion of Education (2013-2017).

In the Second Basic Plan, based on the report prepared by the Central Council for Education (an advisory board to the Ministry of Education, Culture, Sports, Science and Technology - MEXT), the Cabinet set four policy directions for the reform package:

1) Developing social competencies for survival: independence and collaboration in a diversified and rapidly changing society.
2) Developing human resources for a brighter future: initiating and creating changes and new values through leadership in various fields in society.
3) Building safety nets for learning: a wide range of learning opportunities accessible to everyone.
4) Building bonds and establishing vibrant communities**:** a virtuous circle where society nurtures people and people create society.

These policy directions focus primarily on curriculum reform and school organisation. Other matters, such as lifelong learning and costs of tertiary education, are still under active policy consideration.

Building on the Council's work and the current Basic Plan for the Promotion of Education (2013-17), MEXT has been implementing policies such as increasing financial assistance to households for education, reorganising local education boards and strengthening self-governance in universities.

In 2015, MEXT announced a plan to enhance schools' capacity by improving teacher quality, introducing specialists, promoting school-community partnerships and revising the National Curriculum Standards to be implemented from fiscal years 2020-22. MEXT and the Central Council of Education, an advisory board to MEXT, have also been discussing transition mechanisms from upper secondary education into university, aiming to transform upper secondary education, the university entrance selection process and university education (called Articulation Reforms).

In this context, the government plans to introduce the third Basic Plan for the Promotion of Education (2018-22). Developed by the Central Council of Education, it defines a comprehensive and systematic implementation of education policy in Japan, focused on how the education system can help individuals prepare for 2030.

The Japanese government invited the OECD to conduct an analysis of the strengths and challenges of its education system, focusing on selected policy areas that are part of the third Basic Plan for the Promotion of Education and future education policy. The review's objectives were to: 1) define practices to improve instruction in schools, including school partnerships with the community; and 2) assess the state of tertiary education and the means to revitalise it (examining the key features and the role of tertiary education and how lifelong learning can contribute to its revitalisation).

The OECD analysis focused on the following items of the Japanese current reform agenda:

- A National Curriculum Reform (to be implemented from 2020-22), which will focus on using active learning to develop the competencies of students around the three stated pillars: 1) motivation to learn and apply learning to life; 2) acquisition of knowledge and technical skills; and 3) skills to think, make judgements and express oneself. New student assessments aligned with the new curriculum will be developed.
- An integrated reform of the teacher training system, which includes development of comprehensive training for teachers throughout their career, along with reorganisation in schools to reduce non-teaching tasks for teachers, and continuous development of a school environment favourable to in-service training for teachers (e.g. Lesson Study).
- Strengthening school-community partnerships, which includes involving communities in children's education as partners to schools, and implementing a school management reform (the Community School programme and the *Team Gakkou* [school as a team] programme). Among the objectives of these reforms are: 1) maintaining the holistic approach to children's education with support from the community; and 2) lightening the workload and responsibilities of teachers and schools, with greater engagement from parents and the community.
- Ensuring financial support for those in need, which includes reducing the financial burden of education on families, especially at non-mandatory levels of education. Grant-type scholarships for tertiary students and subsidies to low-income families for early childhood education and care (ECEC) have recently been introduced as part of the reforms.
- Improving access to tertiary education and adult learning, which includes development and promotion of new programmes for adults to foster lifelong

learning in an ageing society. Plans to reform university entrance examination procedures have also been discussed.

OECD National Reviews of Education Policy aim to help Japan and other countries to better understand the challenges and potential responses resulting from the need for education systems to evolve as they seek to prepare students for the future, in light of current demographic, economic and social changes, the important contribution of lifelong learning and the impact of education funding structures on equity.

Box 1.1. The OECD Education Policy Review process

OECD National Reviews of Education Policy can cover a wide range of topics and sub-sectors tailored to the needs of the country. They are based on in-depth analysis of strengths and weaknesses, using various sources of available data, such as PISA, national statistics and research documents. The reviews draw on policy lessons from benchmarking countries and economies, with expert analysis of the key aspects of education policy and practice being investigated.

Reviews include one or more visits to the county by an OECD review team with specific expertise on the topic(s) being investigated (often with one or more international and/or local experts). An OECD Education Policy Review typically takes from eight months to a year, depending on its scope, and consists of six phases: 1) definition of the scope; 2) preparation of a background report by the country; 3) desk review and preliminary visit to the country; 4) main review visit by a team of experts; 5) drafting of the report; and 6) launch of the report.

The methodology aims to provide tailored analysis for effective policy design and implementation. It focuses on supporting specific reforms by tailoring comparative analysis and recommendations to the specific country context and by engaging and developing the capacity of key stakeholders throughout the process.

OECD National Reviews of Education Policy are conducted in OECD member and non-member countries, usually upon request of the country.

For more information:

- Website: www.oecd.org/edu/policyadvice.htm.
- Brochure: www.oecd.org/edu/OECD-Work-Education-Skills-Policy-Products-Services-for-Countries.pdf

Using OECD review methodology (Box 1.1), this report is part of the OECD's efforts to strengthen the capacity for education reform across OECD member countries, partner countries and selected non-member countries and economies. Education Policy in Japan: Building Bridges Towards 2030 draws on the Programme for International Student Assessment (PISA) and the Programme for the International Assessment of Adult Competencies (PIAAC), as well as other comparative data from benchmarking education performers, research and analysis of key aspects of education policy in Japan, and two review visits to Japan. The OECD review team members also made extensive use of OECD's internfernational knowledge base and Japanese educational research, statistical information and policy documents.

The report identifies the main strengths and challenges of Japan's education system within the focus area of analysis, and provides a number of recommendations that can

contribute to improving Japan's future education policy design. In particular, to ensure that the current reforms take hold, it is important for Japan to recognise the present well-rounded (holistic) model of education, to build on its strengths, and to prioritise reforms that can help to Japan transition to 21st century skills and further enhance its education performance.

Japan's socio-economic context

Geography and political system

Japan is an archipelago of 6 852 islands located in the Pacific Ocean, east of the Sea of Japan, the East China Sea, China, Korea and Russia. The country stretches from the Sea of Okhotsk in the north to the East China Sea and Chinese Taipei in the south-west. The four main islands of the archipelago are Honshu, Hokkaido, Kyushu and Shikoku, which together make up about 97% of Japan's land area.

The world's tenth largest country, Japan has a population of 127 million and is highly homogenous, as Japanese make up 98.5% of the total population. About 73% of Japan is forested, mountainous and unsuitable for agricultural, industrial, or residential use. As a result, the habitable zones, mainly located in coastal areas, have extremely high population densities. Japan is one of the most densely populated countries in the world, with 340 people per square kilometre (OECD, 2017[2]). Tokyo, the capital city, has the most populated metropolitan area among OECD countries, with approximately 36 million people.

Japan is a constitutional monarchy, with the role of the Emperor limited to ceremonial duties. Power is held by the Prime Minister, while sovereignty is vested in the Japanese people, who elect members of the Diet, the legislative body of Japan. A bicameral body, the Diet consists of the House of Representatives, in which members are elected by popular vote every four years, and the House of Councillors, in which members are also elected by popular vote but serve six-year terms. Japan has been governed by the Liberal Democratic Party, either alone or as part of a coalition for around 40 years, with other parties in power in 1991-93 and 2009-12.

Japan is a unitary state. The central government delegates many functions to the local governments, but retains the overall right to control them, as provided in the Local Autonomy Law passed on 17 April 1947. Japan is divided into 47 prefectures in 8 regions. Each prefecture is overseen by an elected governor and subdivided into municipalities (1 719 in total). Roles usually fulfilled by prefectures include providing services such as education, public health, social welfare, urban planning, economic development, sanitation and environmental protection, transportation infrastructures and police. As a result, municipalities have significant capacity to decide what services they should prioritise, as long as they respect the parameters set by the central government. In fact, while local government expenditure accounts for 70% of overall government expenditure, the central government still controls local budgets, tax rates, and borrowing.

A sluggish economy

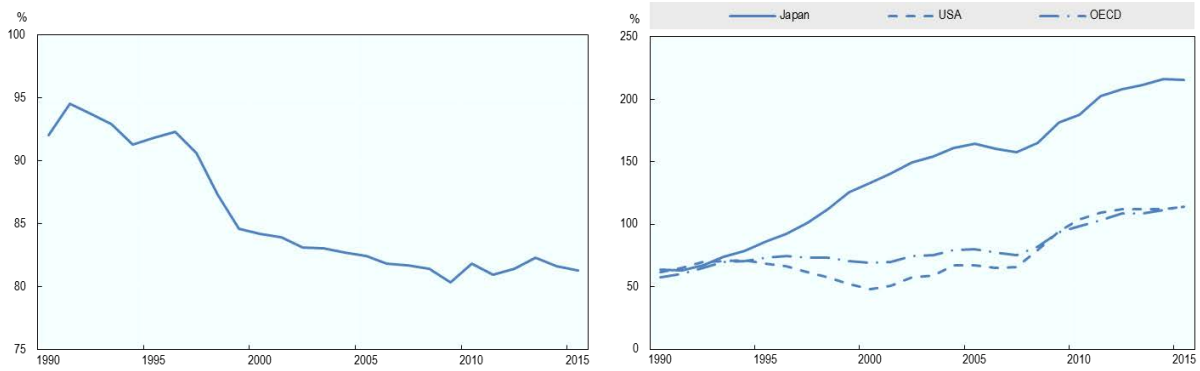
After China and the United States, Japan has the world's third-largest economy, with gross domestic product (GDP) at USD 4 125 billion (OECD, 2017[2]). It is the world's fourth-largest exporter and importer of goods and also of services (WTO (World Trade Organisation), 2017[3]). However, since the early 1990s, Japan's GDP per capita has gone down compared to the top half of OECD countries – to 81% of their level (Figure 1.1a).

In 2015, Japan's GDP per capita was USD 38 400, below the OECD average of USD 40 800 (OECD, 2017[2]).

Figure 1.1. Japan's economic situation, 1990-2015

a) Per capita income relative to the top half of OECD countries

b) Public debt in percentage of GDP



Source: OECD (2017[4]), "OECD Economic Outlook No. 101 (Edition 2017/1)", *OECD Economic Outlook: Statistics and Projections* (database), http://dx.doi.org/10.1787/639d73ee-en (accessed 13 September 2017).

StatLink http://dx.doi.org/10.1787/888933789859

Japan's economy is concentrated on services, which amount to 72% of the total GDP, while industry contributes 27% of the total value added and the agricultural sector contributes 1%. Because it lacks natural resources to support its growing economy and large population, Japan has had to specialise in the export of goods where it has a comparative advantage, such as engineering-oriented, or R&D-led industrial products, in exchange for the import of raw materials and petroleum. Japan is among the top three importers of agricultural products in the world by volume (along with the European Union and the United States) to provide for its own domestic agricultural consumption (OECD/FAO, 2007[5]).

The Japanese labour market is tight.[1] Japan's ratio of job offers per applicant rose to 1.51 in June 2017, the highest since 1974 (Japan Macro Advisors, 2017[6]). Total employment as a share of the population aged 15-74 in Japan (68%) is one of the highest among all OECD countries, and the OECD projects even further increases in the employment rate during 2017. Correspondingly, the overall unemployment rate in Japan has fallen to 3.3% and the youth unemployment rate to 5.6%, among the lowest in the OECD (OECD, 2016[7]). Moreover, data from the OECD Programme for the International Assessment of Adult Competencies (PIAAC) rank Japanese workers as the most proficient in numeracy and literacy in the world.

There may be room to improve resource allocation. Workers in Japan may be overqualified, since 31% of them state that they hold a qualification level above what is required for their job (compared to the OECD average of 21.7%). Estimates of the difference in wages between overqualified workers and their well-matched counterparts also show that they earn 19% less (compared to the OECD average of 14.5% less) (OECD, 2016[8]).

Despite high economic performance, Japan has had a sluggish economy for more than 20 years. At the start of the 1990s, the Japanese asset price bubble burst, throwing the

Japanese economy into turmoil. The economic recovery that ensued did not restore Japan's prosperity. The subprime crisis in 2008 triggered a recession, with a growth rate of -5.5% in Japan in 2009, causing Japan to sink even deeper into what is now called the "lost decades". Japan's GDP per capita, which almost matched the level of the top half of OECD countries in 1990, is now 19% below that (Figure 1.1a).

During that period, persistent deflation increased the debt ratio, while chronic deficits were maintaining this effect. Today, the gross debt stands at 216% of GDP (Figure 1.1b), and the public debt service is now the biggest item in the Japanese budget (24.3%). This leaves little leeway for government policy action. In response, the government launched a package of reforms to stimulate the economy, including monetary easing to tackle the liquidity trap, fiscal stimulus to boost consumption and policies to spur private investment and revive growth.

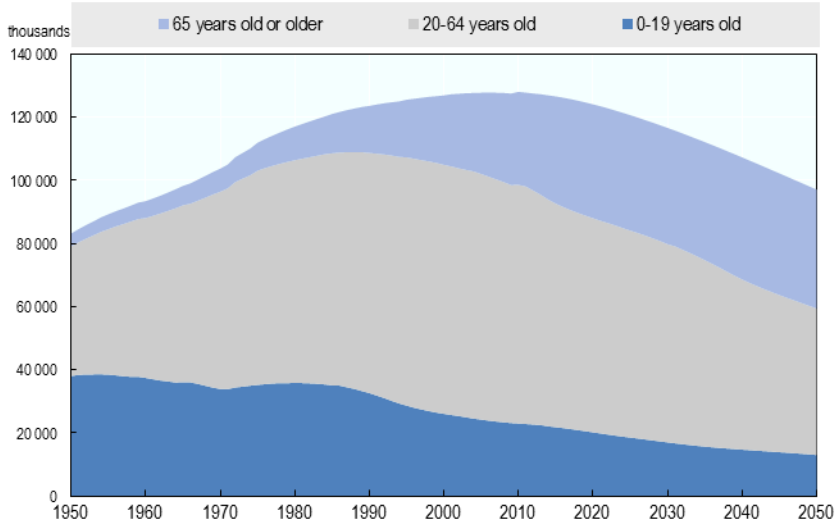
This background has contributed to rising inequalities, linked to the development of a dual labour market after the price asset bubble crisis. As declining growth shifted the Japanese lifetime employment model, labour law reforms gave firms incentives to explore alternative forms of human resources practices (Aoyagi and Ganelli, 2013[9]). Since the early 1990s, a rise in the share of non-regular workers (refers usually to workers who do not enjoy employment security: short-term contract, part-time work or indirect employment) in the workforce has fuelled the increase in inequality in income, strengthened the dualism of the labour market (regular versus non-regular workers), generated a working-poor population, and potentially leveraged the poverty rate (Jones, 2007[10]).

The share of non-regular workers rose from below 20% in the 1990s to almost 40% in 2017. Moreover, the share of the population living under the poverty threshold (i.e. with a disposable income of half of the national median), rose by 4 percentage points between 1985 and 2012 to reach 16%, which was in the second highest decile among OECD member countries (OECD, 2017[2]). In 2011, the richest 10% of the population in Japan earned 10.7 times as much as the poorest 10% (compared to the OECD average ratio of 9.5). These results highlight that a segment of the population in Japan is fragile and facing the risk of poverty. Unemployed people, part-time workers, homeless people and single-parent households, in particular single mothers, are especially at risk (Sekine, 2008[11]).

Rapidly ageing population

The demography of Japan is intertwined with the economic issues the country is facing. Japan's population peaked in 2010, at just over 128 million, before beginning what is projected to be a sustained and increasingly steep decline to reach less than 100 million in 2050 (Figure 1.2). At the same time, the low fertility rate and the highest life expectancy among OECD countries have led to a progressive ageing of the population, with the share of the elderly rising from 5% in 1955 (one of the lowest percentages among OECD countries) to the highest in 2014, with more than 25% of the population who have retired (OECD, 2017[12]). A shrinking labour force undermines Japan's growth potential and might slow its progress towards higher standards of living. Moreover, ageing of the population has induced the growth of public spending, fuelling deficits that are to some extent responsible for the high level of debt.

Figure 1.2. Japan's population and age structure, 1950-2060



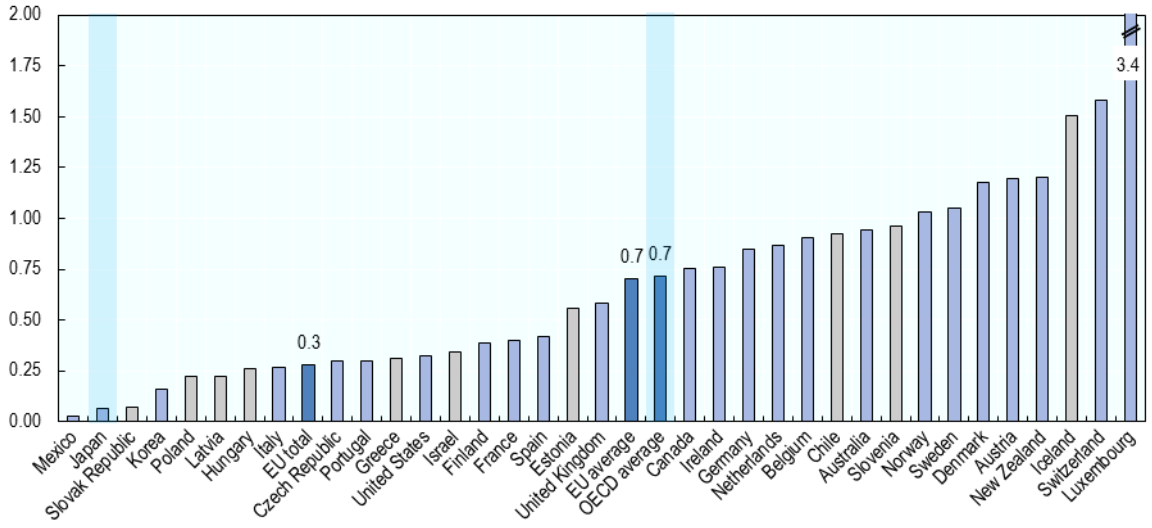
Source: OECD (2017[12]), "Labour Force Statistics: Population projections", *OECD Employment and Labour Market Statistics* (database), http://dx.doi.org/10.1787/data-00538-en (accessed 13 September 2017).

StatLink http://dx.doi.org/10.1787/888933789878

The rapid ageing of the Japanese population is a direct challenge to the economy. One way to target this is to invest in family-friendly or welfare policies that support increased births or immigration. While foreign-born individuals as a percentage of the total population reached an average of 13% across OECD countries by 2015, the proportion in Japan was less than 2% (among the smallest across the OECD) (OECD, 2017[13]). Permanent migration to Japan relative to the total population represented 0.06% in 2015, below the OECD average of 0.71% (Figure 1.3). In PISA 2015, only 0.2% of 15-year-old students in Japan have an immigrant background, compared to 5% of students across OECD countries (OECD, 2016[14]).

Figure 1.3. Permanent migration flows to OECD countries, 2015

Percentage of the total population



Note: Permanent immigrant inflows cover regulated movements of foreigners considered to be settling in the country from the perspective of the destination country. They cover regulated movements of foreigners as well as free movement migration.
Data for countries in light blue are not standardised. EU average is the average of EU countries presented in the chart. EU total represents the entries of third-country nationals into EU countries for which standardised data are available, as a percentage of their total population.
Source: OECD (2017[13]), *International Migration Outlook 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/migr_outlook-2017-en.

StatLink http://dx.doi.org/10.1787/888933497823

A cohesive society

Japan is a relatively homogenous society. The Japanese ideal has traditionally been embodied in the unity of people, language, and culture (Weiner, 2009[15]). More recently, Japan has started to consider diversity more openly. For instance, ethnic clubs in schools have begun to open to encourage pupils with different backgrounds to "maintain and nurture their ethnic identity" (Creighton, 2014[16]).

Feudalism and neo-Confucianism left a legacy of a highly stratified and ordered society in Japan. The hierarchical caste system (in decreasing importance: samurai, farmers, craftsmen and merchants) was formally established at the start of the Edo period (1603) and disappeared with the Meiji restoration (1869). While Japan was progressively opening to the world, the Meiji government established a bilateral system of education to compete with western countries (mandatory primary education for the masses, and secondary and tertiary education for the elite). Since then, the number of schools, enrolments and the length of studies have continued to grow. In the 1960s, when many farmers' sons obtained upper secondary and college degrees and enjoyed upward mobility into white-collar jobs, their educational credentials became an indicator of a lifetime achievement and of a new social status. The historical vertical differentiation of society inherited from the Edo period has been progressively replaced by a "credential society" (*gakureki shakai*), in which upper secondary schools and universities are academically

stratified, and graduation from a particular institution is a measure of academic achievement conferring prestige and social ranking. (Ishikida, 2005[17]).

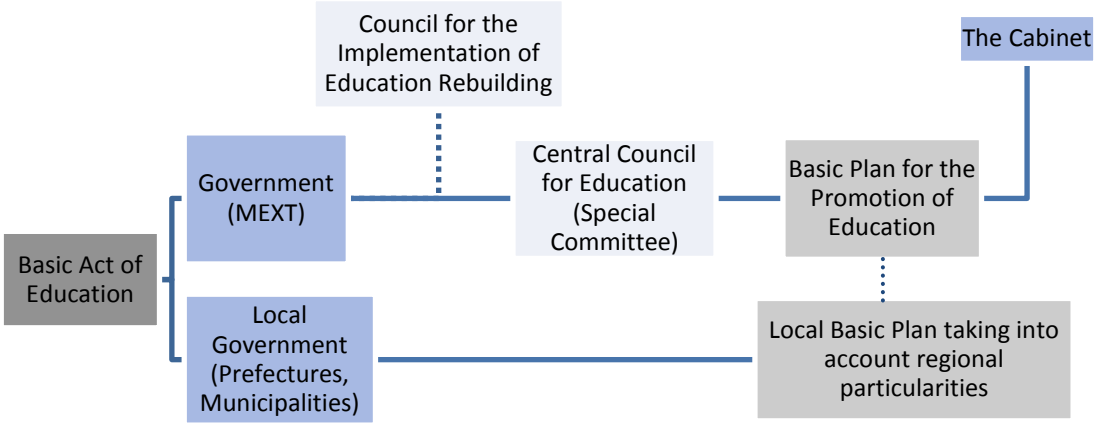
The concept of social peace and group identity is pervasive in Japanese education and society in general. The socialisation process in Japanese primary schools mimics the distinctive features of Japanese law, government and management (Rohlen, 1989[18]). Teachers develop group behaviour among pupils, without exerting strong authority. As in civil society, authority tries to shift responsibility downward to lower-level groups. This results in a great sense of order within the group, and prepares children for group participation and bonding, which are required in the Japanese society at every level. Some experts have suggested that the Japanese concepts of attachment and group behaviour as part of social order could explain why Japan is a more ordered society than China or South Korea, for instance, which share the same Confucianist roots (Hechter and Kanazawa, 1993[19]).

Education governance and curriculum

Trickle-down policy-making process

The Basic Act on Education (revised in December 2006), stipulates that the government shall formulate a basic plan (Basic Plan for the Promotion of Education) to comprehensively and systematically advance policies to promote education. It also specifies that local governments shall also endeavour to formulate a basic plan suited to their local circumstances by referring to the national Basic Plan.[2]

Figure 1.4. Responsibility process of the Second Basic Plan for the Promotion of Education



Source: Adapted from MEXT (2016[20]), OECD-Japan Education Policy Review: Country Background Report.

The government mandates the Central Council for Education to prepare the Basic Plan. A special Committee is formed for that purpose. The plan has to be ultimately validated by the Cabinet of Japan, the executive branch of the Government of Japan, composed of the

prime minister and other ministers. The first Basic Plan for the Promotion of Education 2008-12 was endorsed by the Cabinet in 2008.

The Council for the Implementation of Education Rebuilding was created after the election of Shinzō Abe in 2012. The Central Council drafted the Second Plan for 2013-17, taking into account some recommendations formulated by the Council, and it was endorsed by the Cabinet in 2013 (Figure 1.4). This OECD review has been undertaken in parallel to discussions for the development of the third Basic Plan for the Promotion of Education 2018-22.

According to the Basic Act on Education, the national government comprehensively formulates and implements educational measures to provide equal opportunities in education and to maintain and increase educational standards. In general, the Basic Plan first assesses the current status of education in Japan and the challenges facing the education system. It then offers different policy directions and diverse measures to be implemented for each of them. For instance, in the Second Plan, one of the measures to achieve the policy direction "developing social competencies for survival" was the "improvement of the educational content and methods to cultivate solid academic abilities". There is also provision for unexpected circumstances. For example, the Second Plan details exceptional measures for "recovery and reconstruction assistance for the Great East Japan Earthquake".

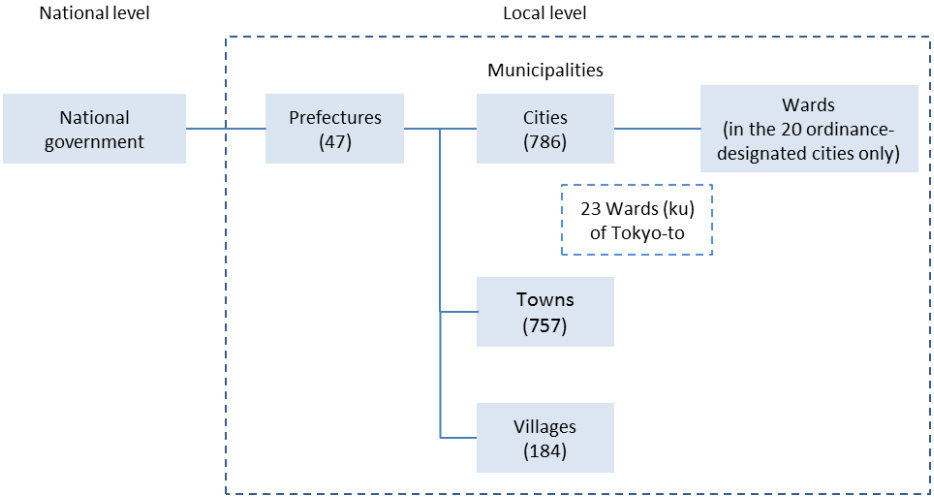
The Act requires local governments (47 prefectures and their respective municipalities) to formulate and implement educational measures corresponding to their regional context. Among the main bodies that help shape national education policies:

- The Ministry of Education, Culture, Sports, and Science and Technology (MEXT) regulates the education system from ECEC (kindergartens only) to upper secondary education levels (e.g. setting National Curriculum Standards, defining teacher certification programmes and official requirements for setting up schools). The Ministry of Health, Labour and Welfare is in charge of ECEC (day-care centres) and vocational education and training.
- The Central Council for Education, composed of education experts and representatives from various stakeholder groups (e.g. parents and representatives from different fields, such as economy, sports, culture and media), prepares reports on educational issues at the request of the Minister of Education.
- MEXT is responsible for tertiary education. It regulates the standards for establishing universities. Public and private universities are required to conduct self-evaluations and undergo accreditation processes by evaluation and accreditation organisations certified by MEXT at least every seven years (at least every five years for professional graduate schools).

Overall, the national government has to maintain and improve the level of national education by presenting strategic objectives as national standards, formulating the framework of the education systems, and maintaining the infrastructure. At the local level, governments are expected to take action respecting the national guidelines in order to deliver education. Figure 1.5 shows the hierarchy of the different local institutions. For instance, the prefectures and municipalities endorse important responsibilities in terms of policy and delivery of education at the local level:

- The 47 prefectures are in charge of upper secondary education and responsible for the handling of teaching materials. The prefecture governor is responsible for the education budget and private education from ECEC to upper secondary education.
- The 1 719 municipalities are responsible for mandatory (school-level) education. A board of education in each municipality is in charge of establishing and managing public mandatory schools. The mayor of the municipality is responsible for the education budget.
- Both boards of education from prefectures and municipalities can help schools understand and comply with the National Curriculum Standards by providing additional material. Boards of Education set rules concerning basic school administration and evaluate schools. To do so, they send supervisors to schools (usually former school leaders), who are expected to provide external guidance on school management, curriculum and teaching.
- Other education stakeholders include teacher unions, the *juku*[3] institutions and civil society.

Figure 1.5. Government of mandatory education system by level, as of October 2016



Note: Figures in parentheses indicate the number of these bodies in Japan.
Wards are subdivisions of large cities (population over 500 000) with a stabilized budget. They are granted some prefectural authorities such as hiring teachers, covering the budget of teachers' salary and conducting teacher's training.
Source: OECD (2012[21]), *Lessons from PISA for Japan*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264118539-en.
Updated: Ministry of Internal Affairs and Communications
http://www.soumu.go.jp/main_content/000283329.pdf#search=%27%E5%85%A8%E5%9B%BD%E5%B8%82%E7%94%BA%E6%9D%91%E6%95%B0%27

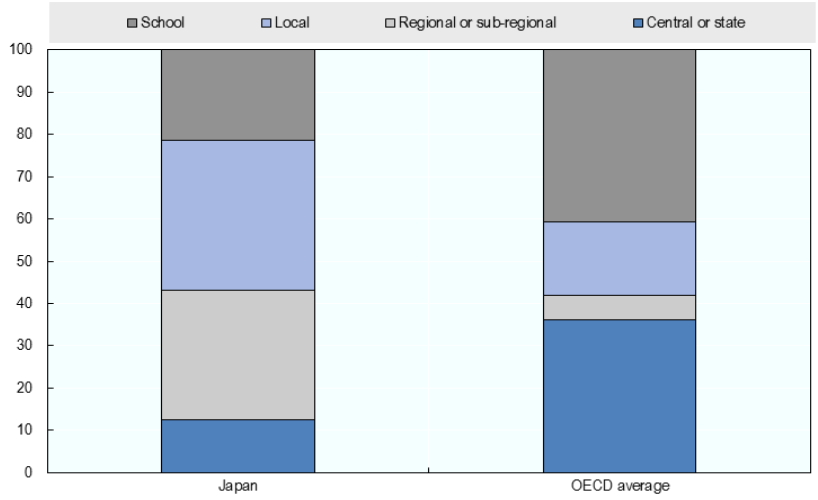
Prefectures and municipalities make most education decisions on school management and allocation of teachers to schools. In Japan, 66% of decisions are taken at the local or regional level, compared to the OECD average of 23% (Figure 1.6).

The population of Japanese municipalities is spread out, with many villages and towns located in rural areas and on small islands. These rural municipalities sometimes do not have sufficient financial resources to hire teachers and may struggle to attract them to their schools (OECD, 2015[22]). In such cases, the national law transfers the authority for

teacher affairs in mandatory education from smaller municipalities to prefectures (through the prefectural boards) or to cities designated by government ordinance (cities large enough to exert the role of a small prefecture).

Prefectural boards of education have the authority to recruit and train teachers, and to allocate them to schools based on municipalities' reports and principals' opinions. The boards of education in each municipality supervise issues related to everyday delivery of teacher public services. The share of decisions taken at prefecture level in public lower secondary education in Japan is 31%, well above the OECD average of 5%. Prefectures take 65% of decisions in resource management and 58% of decisions in personnel management (compared to the OECD average of 8% for both).

Figure 1.6. Distribution of decisions taken in public lower secondary schools, 2012



Source: OECD (2012[23]), *Education at a Glance 2012: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2012-en.

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In tertiary education, decision-making is shared between the government and the tertiary education institutions. MEXT regulates the standards for establishing universities and sets six-year mid-term objectives for each of the national university corporations, which then set their mid-term plans based on these objectives. MEXT also certifies accreditation organisations. Public and private universities are required to conduct self-evaluations and undergo evaluation by those accreditation organisations at least every seven years (OECD, 2015[22]). Overall, MEXT's position is that it should retain its authority over certain aspects of operations of national universities (such as defining the student enrolment cap and level of fees and controlling any major academic reorganisations at department or programme level) on the grounds that they are run with public funds and play important public roles (Newby et al., 2009[24]).

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

As stated in a previous report (OECD, 2012[21]), the Japanese education system is not as centralised as it seems at first. The government authority (MEXT) is responsible for developing and implementing national education policy, distributing public resources for

education at the national, prefectural, and municipal levels, and guiding national curriculum standards, textbook development, and teacher training. At the regional level, each of the country's 47 prefectures has its own board of education responsible for co-ordinating education in its geographic area, according to its Local Basic Plan for Education (Figure 1.4).

Prefectural boards of education are mainly in charge of regulating the number of institutions: they have the power to establish and close schools. They also certify teachers, control the quality of teaching and are in charge of offering support measures necessary for implementing projects in cities and towns and for the appropriate operational management of the facilities (providing instruction, advice and aids, dispatching supervisors to the municipal schools, etc.).

At the municipal level, each of the approximately 1 700 municipalities in Japan has its own board of education responsible for selecting school textbooks. However, school principals also seem to participate in this selection to some extent (Table 1.1). The way the curriculum is taught rests almost exclusively with teachers, who also have authority over instruction and actual classroom practice.

Table 1.1. School autonomy over curriculum and assessment policies, 2015

Percentage of 15-year-olds in Japan in schools whose principals reported that principals have considerable responsibility in …

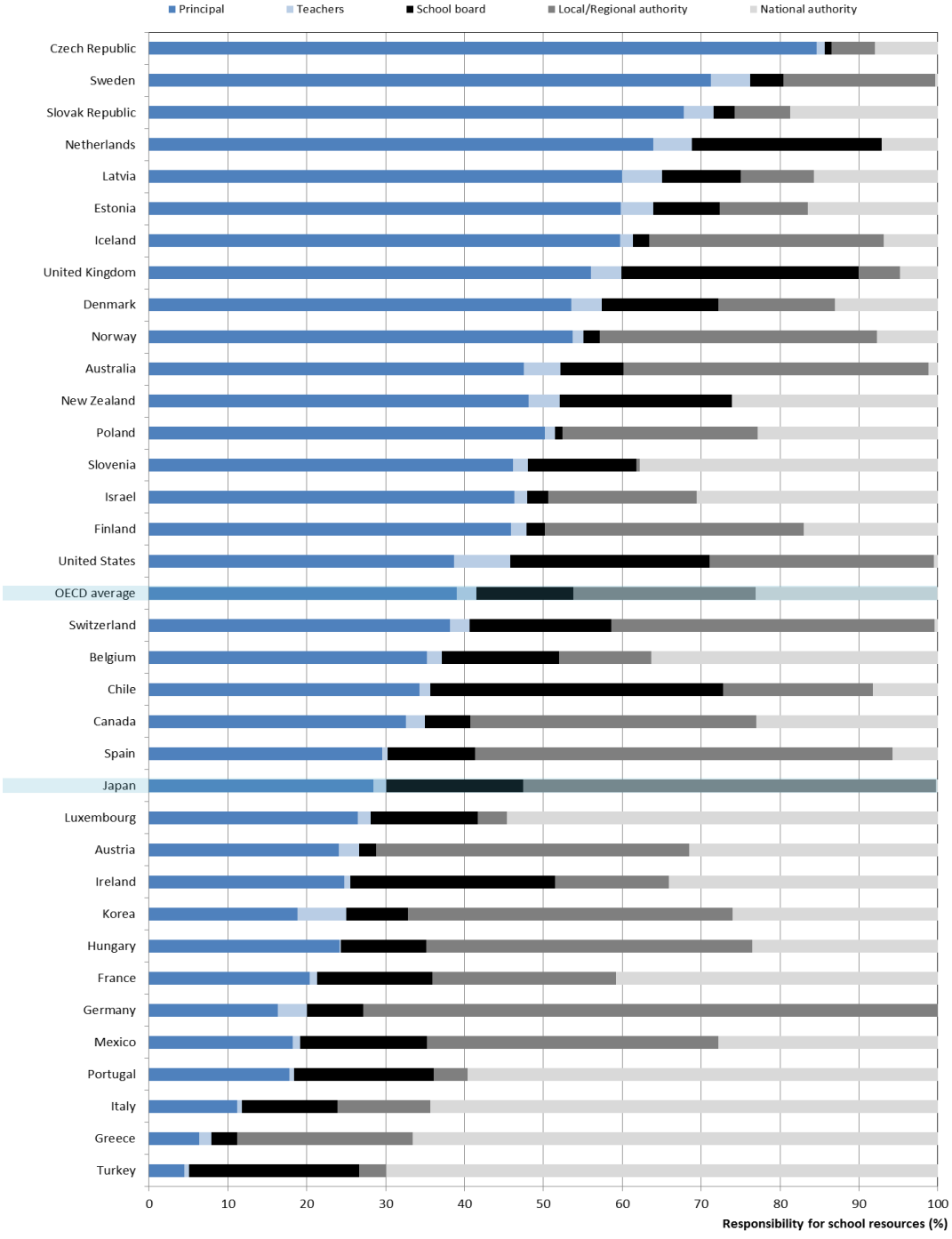
PISA 2012	Japan	OECD average
Establishing student-assessment policies	90%	61%
Deciding which courses are offered	80%	64%
Determining course content	82%	27%
Choosing which textbooks are used[4]	76%	32%

Source: OECD (2016[26]), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264267510-en.

According to PISA data, Japan can be characterised as providing below-average school and local autonomy in decisions relating to resource allocation (Figure 1.7). In contrast, Japan grants significant autonomy to schools in curriculum and assessment policies. This reflects the way in which education governance is structured in Japan: the central government largely guides financing; prefectures largely guide teacher selection and evaluation; municipalities have authority over textbooks; schools set general student assessment approaches; and teachers have significant freedom to innovate in classroom practice.

This distribution of roles might be one factor leading to Japanese academic success. PISA results suggest that school autonomy in content is more closely related to educational performance than responsibility for making decisions concerning resource allocation. For example, school systems like Japan's, that provide schools with greater discretion in making decisions on student-assessment policies, courses offered, course content and textbooks used (Table 1.1), tend to perform at higher levels in PISA (OECD, 2012[21]; OECD, 2016[26]). Further evidence also shows that while autonomy in content makes a difference, this depends on the capacity and quality of those working in schools to be able to use such autonomy effectively (Hanushek and Woessmann, 2014[27]).

Figure 1.7. Distribution across the education system of responsibility for school resources, 2015



Note: The six tasks categorised as responsibilities for resources (selecting teachers for hire, firing teachers, establishing teachers' starting salaries, determining teachers' salary increases, formulating the school budget and deciding on budget allocations within the school) are given equal weight.
Source: OECD (2016[26]), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264267510-en.

StatLink http://dx.doi.org/10.1787/888933435811

Curriculum revised every ten years

MEXT determines the National Curriculum Standards, a broad set of standards for all schools from kindergarten to upper secondary schools. The National Curriculum Standards provide curriculum guidelines and structure education programmes to ensure that they comply with a fixed standard of education throughout the country. The National Curriculum Standards have generally been revised once every ten years or so since 1951.

At the beginning of the 2000s, the revision of the National Curriculum Standards imposed a large reduction of learning content, full implementation of a five-day school week (reduced from six days) and the introduction of the period for integrated studies, all in an attempt to reinforce a more "relaxed education" (*yutori kyōiku*) policy. The subsequent revision of the National Curriculum Standards, announced in 2008 and implemented from 2009 to 2011, was developed in response to the argument that the implementation of "relaxed education" had contributed to a decline of academic standards, as shown by tests run by the Mathematical Society of Japan in top Japanese universities and at the primary and lower secondary level, and later by 2003 PISA results (NIER (National Institute for Educational Policy Research), 2011[28]).

The latest revision of the National Curriculum Standards was discussed by the Central Council for Education starting in 2014, and the National Curriculum Standards for primary and lower secondary school were announced in March 2017. They are to take effect progressively: in April 2020 in primary school, in April 2021 in lower secondary school, and in 2022 in upper secondary school. The new National Curriculum Standards will introduce school curriculum management and enhanced use of active learning (defined as proactive, interactive and authentic learning). It will also aim to develop "curriculum open to society" by fostering students' competencies relevant to society and promoting partnerships between schools and communities.

The objectives defined for the revision of the National Curriculum Standards are:

- to nurture competencies needed to live independently in the rapidly changing and unpredictable future society and to participate in shaping a society (a "curriculum open to society"),
- to improve the quality of understanding and nurture academic competencies, while maintaining the framework and educational content of the current National Curriculum Standards,
- to nurture richness of mind and sound body through enhancement of moral education, experiential learning and physical education.

The revision of the National Curriculum Standards, as of March 2017, will follow four main directions:

1. Adhering to the objectives set out above.
2. Improving lessons through proactive, interactive and authentic learning: This type of pedagogical approach should be generalised to improve the quality of the learning process, to achieve high-quality understanding and develop the qualities and abilities of all students.
3. Curriculum management by each school: Each school will manage its curriculum to improve the quality of educational activities and maximise the effect of learning, by determining educational content, allocating time adequately, securing necessary human and physical resources, etc.

4. Educational content for primary and lower secondary education: The new National Curriculum Standards will enhance Japanese language learning, information and communication technologies (ICT) learning, mathematics and science education, education on Japanese tradition and culture, experiential learning activities and foreign language education, moral education and education for students with special educational needs. "Foreign language activities" will be introduced as a mandatory subject in the third and fourth grades in primary education.

Japan's education system

Structure of the school system

In Japan, three different kinds of institutions offer pre-mandatory education: kindergartens, nursery schools, and centres for ECEC. Kindergartens, the core component of Japanese early education, accept any child from age three to age six (the age of primary school admission). Nursery schools provide day care for children from zero to six years old, while centres for ECEC have the characteristics of both kindergartens and nursery schools. Around 96% of four-year-olds were enrolled in pre-primary education in Japan in 2014 (OECD, 2016[29]).

School education in Japan is designed as a comprehensive single-track school system based on the US model. Japanese students attend primary school (*shōgakkō*) for six years before attending lower secondary school (*chūgakkō*). This mandatory education is free of charge, open to all local residents and contributes to the social fabric of the community. Most important, the Japanese hold strong beliefs concerning children's ability to learn. Every student is expected to succeed, subject to the right amount of effort, perseverance and self-discipline. By teaching these behavioural habits early, primary school education is seen in Japan as fundamental in shaping a positive attitude toward lifelong education (Dolan and Worden, 1992[30]). Table 1.2 gives details of the composition of pre-primary, primary and secondary education.

Table 1.2. Schools, students, teachers and non-teaching staff in Japan, 2015

Education Stage	Type of School	Establisher Type	Course Term (Years)	Normal School Attendance Age (Years)	No. of Schools (Schools)	No. of Pupils or Students (1 000 People)	No. of Full-Time Teachers (Person)
Preschool	Kindergartens	National/Public	—	35	4 763	270.2	23 704
		Private			8 142	1 287.2	87 355
	Day-Care Centres	Public (Management)	—	0-5	9 528	799.5	116 862
		Private (Management)			14 548	1 385.7	203 334
Elementary	Primary Schools	National/Public	6	6-11	20 630	6 522.5	411 586
		Private			22	77.5	4 889
Secondary	Lower Secondary Schools	National/Public	3	12-14	9 780	3 258.5	238 710
		Private			777	245.8	15 122
	Upper Secondary Schools	National/Public	3-4	15-17	3 643	2 295.	174 938
		Private			1 320	1 039.	60 368
	Secondary Schools	National/Public	6	12-17	34	23.6	1 734
		Private			17	7.9	698
Higher	Universities	National/Public	4-6	18-21	178	576.2	77 265
		Private			603	1 975.8	103 614
	Junior Colleges	National/Public	2-3	18-19	18	7.1	517
		Private			334	124.2	7 921
	Colleges of Technology	National/Public	5	15-19	54	52.3	4 192
		Private			3	2.1	152
	Graduate Schools	National/Public	2-5	22-	163	166.4	61 504
		Private			460	84.6	43 760
Special Needs	Schools for Special Needs Education	National/Public	Elementary School Div. 6 yrs. Junior High School Div. 3 yrs. High School Div. 3 yrs.	3-17	1 082	134.8	78 981
		Private			14	0.8	299
Others	Specialised Training Colleges	National/Public	1-	Post-secondary Courses: From 18 yrs. Upper Secondary Courses: From 15 yrs. General Courses: No limit	205	26.7	2 955
		Private			3 001	632.7	37 819
	Miscellaneous Schools	National/Public	1 year or longer in principle, but term of 3 months or longer, but less than 1 year is also acceptable	No limit	8	0.6	47
		Private			1 268	121.2	8 776

Source: MEXT (2016[20]), OECD-Japan Education Policy Review: Country Background Report.

The Ordinance for Enforcement of the School Education Law stipulates the annual standard school hours for each subject (this is also specified in the National Curriculum Standards), while the organisation of the teaching time is decided in each school. In primary and lower secondary education, the set of subjects taught in schools is uniform across Japan. The organisation of the class is detailed in Table 1.3 and Table 1.4. Along traditional subjects such as Japanese or Arithmetic, the Period for Integrated Studies' aims to enable students to think in their own way about life through cross-disciplinary studies and inquiry studies. Students are expected to acquire the abilities to learn and think on their own, to make proactive decisions, and to solve problems. The uniform organisation of education at primary and lower secondary levels embodies the Japanese notion of equal opportunity of education.

After three years at lower secondary school, students attend upper secondary school (*kōtōgakkō*) for another three years. Although this stage is not mandatory, 97% of the population graduates from upper secondary (the third highest rate among OECD countries) (OECD, 2016[29]) and thus qualify to access tertiary education (Figure 1.8).

In upper secondary education, students need 74 or more credits in order to graduate. Only 31 credits should come from compulsory subjects, which are the following:

- Integrated Japanese language
- Either world history A or world history B
- One subject out of Japanese history A, Japanese history B, geography A and geography B
- Contemporary society, or ethics, politics and economy
- Mathematics I
- Science and our daily life, and one subject out of basic physics, basic chemistry, basic biology and basic earth science or three subjects out of basic physics, basic chemistry, basic biology and basic earth science
- Physical education and health
- One subject out of music I, art and design I, crafts production I and calligraphy I
- English communication I
- One subject out of basic home economics, integrated home economics and design for living
- One subject out of information study for participating community and information study by scientific approach

The remaining of credits is obtained by studying elective courses included in fields such as Japanese Language, Civics, Mathematics, Science, Art or Foreign Language. Since the proportion of time spent on compulsory subjects is around 30%, there is room in upper secondary education for students to stand out (Nakayasu, 2016[31]).

Table 1.3. Mandatory provision of education in primary schools, 2016

Grade		First	Second	Third	Fourth	Fifth	Sixth
Number of classes for each subject	Japanese	306	315	245	245	175	175
	Social studies	-	-	70	90	100	105
	Arithmetic	136	175	175	175	175	175
	Science	-	-	90	105	105	105
	Living environment studies	102	105	-	-	-	-
	Music	68	70	60	60	50	50
	Art and handicraft	68	70	60	60	50	50
	Home economics	-	-	-	-	60	55
	Physical education	102	105	105	105	90	90
	Moral education	34	35	35	35	35	35
	Foreign language activities	-	-	-	-	35	35
	Period for integrated studies	-	-	70	70	70	70
	Special activities	34	35	35	35	35	35
Total number of classes		**850**	**910**	**945**	**980**	**980**	**980**

Note: Classes are 45 minutes long.
Source: MEXT (2016[20]), OECD-Japan Education Policy Review: Country Background Report.

Table 1.4. Mandatory provision of education in lower secondary schools, 2016

Grade		Seventh	Eighth	Ninth
Number of classes of each subject	Japanese	140	140	105
	Social studies	105	105	140
	Mathematics	140	105	140
	Science	105	140	140
	Music	45	35	35
	Art	45	35	35
	Health and physical education	105	105	105
	Technology and home economics	70	70	35
	Foreign languages	140	140	140
	Moral education	35	35	35
	Period for integrated studies	50	70	70
	Special activities	35	35	35
Total number of classes		**1015**	**1015**	**1015**

Note: Classes are 50 minutes long.
Source: MEXT (2016[20]), OECD-Japan Education Policy Review: Country Background Report.

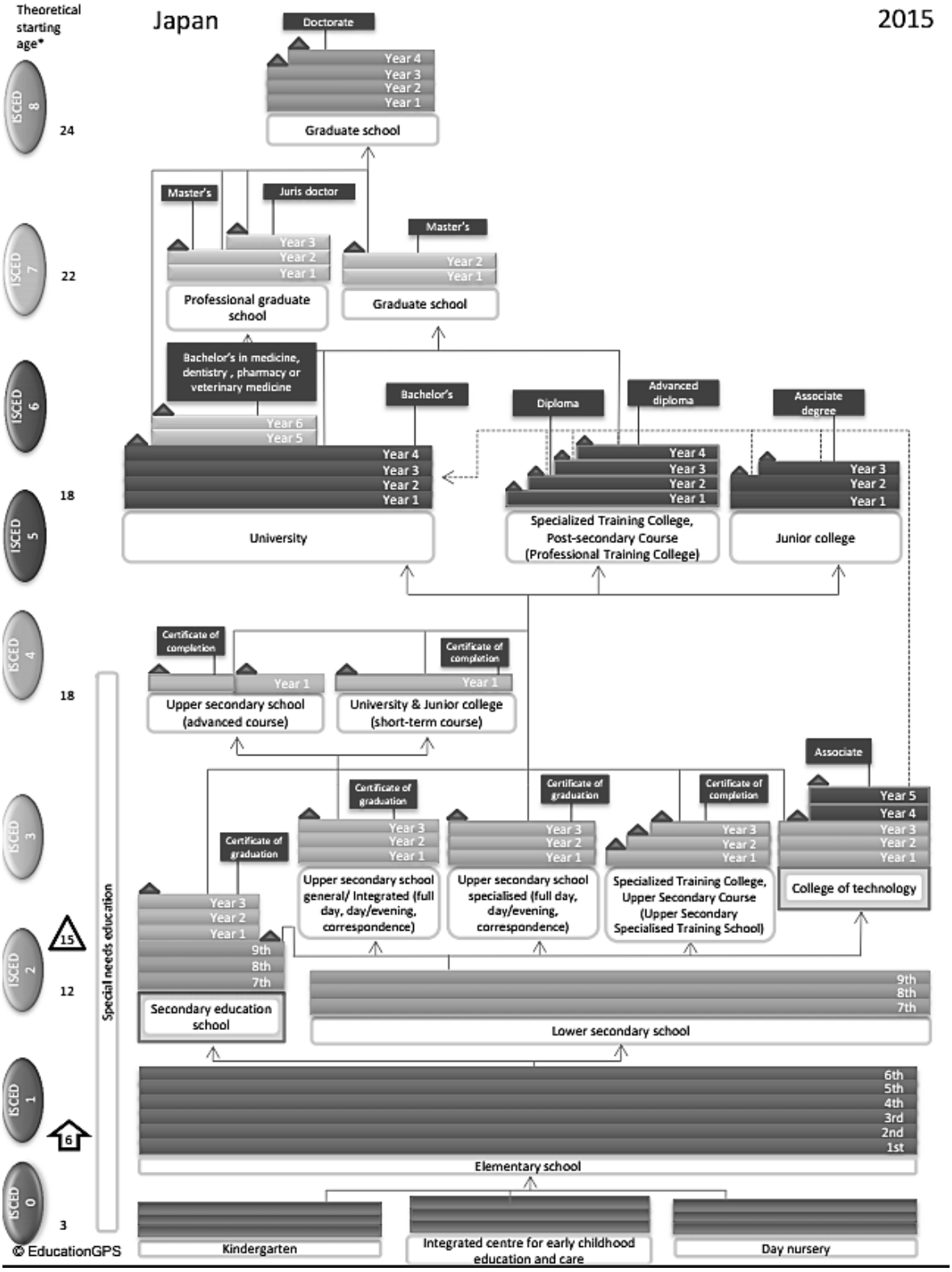
In Japan, the different kinds of tertiary education institutions are highly stratified, and each plays a well-defined role. Strictly speaking, only universities and junior colleges provide post-secondary education, but other institutions complete the picture:

- Universities aim to develop students' academic knowledge as well as specialised skills based on scientific research. Entrance to public universities is determined by a standardised national test (the National Centre for University Entrance

Examination) and special examinations administered by the individual universities. The university track follows a classic scheme: bachelor's degree (four years), master's degree (two years) and doctorate (three to five years).

- Junior colleges provide mainly professionally oriented short-cycle degrees. They offer a two-year specialisation programme in fields such as education (childcare, pre-primary school teaching), home economics, gardening or nursing (three years). Junior college students were usually female, as the sector tended to cater to their traditional role in society. However, these institutions are now declining, because the number of female students entering universities has increased significantly, while the overall number of students has been falling due to demographic trends. There were 6 000 students in junior colleges in 2015, compared to 23 000 in 1995 (MEXT, 2016[20]).
- Colleges of technology offer both theoretical and practical training in skills of immediate use to employers, mostly in the field of engineering. Lower secondary graduates can apply to this five-year programme, while upper secondary graduates can enter it directly in the fourth year. Successful students are considered to be practical technicians with an "Associate" credential.
- Specialised (or professional) training colleges offer one-year to three-year employment-related programmes at either upper-secondary or post-secondary level to meet immediate workforce needs.
- Junior colleges and colleges of technology deliver an associate degree. Specialised training colleges deliver a diploma in two to three years, or an advanced diploma in four years. All three of these institutions deliver diplomas at the ISCED 5 level.

Figure 1.8. Structure of the Japanese education system, 2015



Source: OECD (2016[32]), "Diagram of the education system: Japan", OECD Education GPS, http://gpseducation.oecd.org/CountryProfile?primaryCountry=JPN (accessed 20 July 2017).

School management: distributed leadership

In Japan, as in most OECD countries, school leaders are experienced former teachers who have met some additional training requirements. Teachers wanting to become a school leader have to enter a Professional Graduate School in Education to build on their applied knowledge and develop a theoretical background. This graduate school delivers a master's degree in teaching to become a "School Leader (mid-career core teaching staff)". School leaders are then expected to master leadership theories and exhibit practical and applied skills needed to fulfil their leadership role in the school as well as bringing local communities closer.

There have been changes in the career structure of teachers in Japan (Box 1.2). Since the revision of the School Education Act in 2007, three new positions have been introduced to promote effective school administration: senior vice-principal, senior teacher and advanced skills teacher. A narrow definition of school leaders includes only upper-level management (school principal, senior vice-principals and vice-principals), while broader definitions also include mid-level leaders, such as senior teachers and head teachers (Yamamoto, Enomoto and Yamaguchi, 2016[33]).

The roles of senior teacher, advanced skills teacher and senior vice-principal are optional in school. The senior vice-principal is part of management and accessing this position requires passing an examination at the prefecture level (Box 1.2). As the senior teacher will undertake tasks close to management, some examination at the prefecture level is also required to become a senior teacher. Advanced skilled teachers and senior teachers are selected by the prefectural Board of Education after recommendations from the Board of Education of the city, town, or village (in case of ordinance-designated cities, they are directly selected by the Board of Education of the cities themselves).

Box 1.2. The career structure of teachers in Japan

The Boards of Education (BOEs) of prefectures and ordinance-designated cities are responsible for hiring teachers to work in schools in their jurisdiction. Teachers are employed by the BOE and assigned to teach in schools in its jurisdiction. They are typically transferred to different schools every few years.

New teachers usually start their teaching career as homeroom teachers and/or as subject teachers in specialised area(s). After they have gained more classroom teaching experience, those teachers take on the role of chief teacher of a grade, responsible for managing a group of teachers. They are then promoted to senior teachers, who work to support principals and (senior) vice principals. After this stage, teachers must pass the managerial class examinations in order to be promoted to head teacher, (senior) vice-principal and principal. Some teachers are also transferred to BOEs to become teacher supervisors, who advise schools and co-ordinate training for teachers and school leaders.

Source: MEXT (2016[20]), OECD-Japan Education Policy Review: Country Background Report.

Boards of education usually allocate senior teachers and senior vice-principals to school with difficulties or a large number of students, and advanced skilled teachers to school with young teaching staff. The senior vice-principal supports the principal in the effective operations of the school. Both the senior teacher and the advanced skilled teacher teaches students, but the senior teacher also supports the principal in the effective running of the

school, while the advanced skilled teacher advises other teachers and staff in order to improve education guidance for students.

Leadership in-service training is provided through several different options:

- At the local level: Since local boards of education are responsible for educational training, the ministry has provided since 2003 a sample of training for school leaders focused on organisational management that has been distributed to local boards of education and other interested parties (Yamamoto, Enomoto and Yamaguchi, 2016[33]).
- At the national level:
  - The National Centre for Teachers' Development (NCTD) provides national training programmes for leaders at different levels. Leadership programmes focus on school administration training and training for future trainers on school organisational management (National Center for Teachers' Development, 2015[34]). The school administration training programmes are designed for specific positions and experiences, such as principal, vice-principal and mid-level teachers.
  - The NCTD, in co-operation with MEXT, also provides training programmes for selected school leaders nominated by the BOEs of local governments, who are expected to play a central role in their region (National Center for Teachers' Development, 2015[34]; Yamamoto, Enomoto and Yamaguchi, 2016[33]).

Given this management-oriented training, and the strong engagement of teachers and collaborative practices, the role of principals in Japan is more of an administrative nature, focusing on determining schedules, managing teachers and other functions that may be required to support teaching and learning practices by teachers. Teachers work together collectively on classroom issues, and school leaders adopt a supportive role on organisational issues. This distributed approach to leadership means that the individual principal does not exercise the main pedagogical role in schools, as it is a collective distributed task among teachers. Therefore school leaders in Japan do not appear high in international comparisons of instructional leadership indicators.

Data from PISA 2015 shows that Japanese school principals scored below the OECD average in the index of instructional and curriculum leadership (OECD, 2016[26]). As set out in the Basic Act on Education and the School Education Law, at the national level, the government specifies the goals to achieve and formulates the National Curriculum Standards that schools refer to while developing their curriculum.

Leadership in schools in Japan is spread across different leadership administrators and teachers, who have the freedom to develop their own curriculum according to the government's directives (Pont, Nusche and Moorman, 2008[35]). Effective practices are discussed during design of the curriculum, and school leaders, as former teachers, can play an active role. However, this role appears to be limited, as shown by data from PISA and the OECD Teaching and Learning International Survey (TALIS). In both PISA and TALIS, Japan scored among the lowest in related indicators. The index of engagement in instructional leadership in lower secondary education by principals was lower than the TALIS average (OECD, 2014[36]).

But principals do provide feedback to teachers. About 75% of Japanese teachers reported receiving feedback from their school leader (above the TALIS average of 54%). School

leaders in Japan are more likely than the OECD average to make decisions about student retention or promotion and to make judgements about teachers' effectiveness (OECD, 2015[22]). Despite their former careers in teaching, school leaders in Japan focus on ensuring effective organisational management, such as the proper functioning of the school, while teachers are in charge of instructional and pedagogical issues.

Vertical and horizontal stratification in secondary education

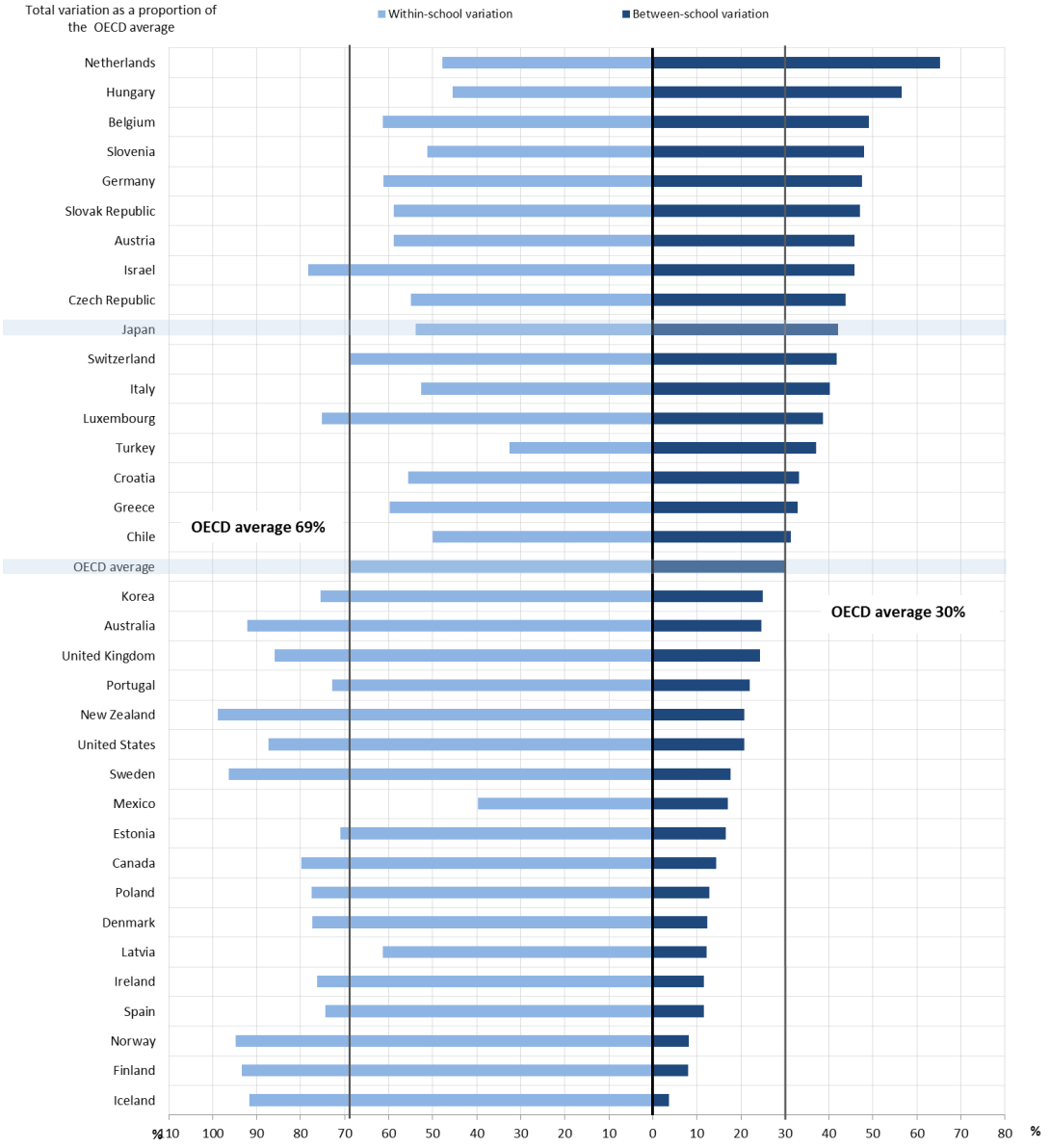
In contrast to differentiated school systems, such as those in Austria and Germany which stream their students into separate tracks as early as age 10, Japan has a comprehensive school system and sorts students into different programs at age 15 when they are entering Grade 10 (compared to the OECD average of 14.3 years old). Vertical stratification is defined as the extent to which students of a similar age are enrolled at different grade levels. In PISA, 100% of 15-year-old students from Japan are enrolled in Grade 10 (as in Iceland and Norway). This makes vertical stratification non-existent in these countries, with no grade repetition by students (OECD, 2013[25]).

Conversely, a highly vertically-differentiated school system tackles heterogeneity among students. Vertical differentiation occurs when applicants to schools agree upon the level of quality for each institution, resulting in a clearly established hierarchy of educational institutions. Upper secondary schools in Japan are ranked predominantly by the prestige they gain based on the percentage of their students who enter top universities after passing the difficult entrance examinations. To maintain the rank of their institution, upper secondary schools organise their own entrance examinations and rely more than other OECD countries on screening applicants. For instance, the "percentage of students in schools whose principals reported that students' records of academic performance (including placement tests) are always considered for admittance" is 92.3% in Japan, the highest rate among OECD countries (OECD, 2013[25]).

The direct consequence of vertical differentiation is reduced variation within schools and increased variation between schools. Japan exhibits significant variation in student performance: 42% between-school variation (above the OECD average) and 54% within-school variation (below the OECD average) (Figure 1.9). Therefore, the index of academic inclusion[5] across schools for Japan is 56, 14 points below the OECD average (an index of 100 indicates that all schools are performing the same even if their students perform differently) (OECD, 2016[14]).

Within schools, the heterogeneity level of students is tackled with a mild ability-group learning strategy, which amounts to horizontal stratification. In Japan, the "percentage of students in schools where students are grouped by ability into different classes" is 10.1% for "all subjects" (compared to the OECD average of 7.8%) and 43.5% "for some subjects" (compared to the OECD average of 38%) (OECD, 2016[26]).

Figure 1.9. Variation in science performance between and within schools, 2015



Note: Countries and economies are ranked in descending order of the between-school variation in science performance, as a percentage of the total variation in performance across OECD countries.
Source: OECD (2016[14]), *PISA 2015 Results (Volume I):Excellence and Equity in Education*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264266490-en.

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High student performance that comes at a cost

While already having demonstrated educational success, Japan has embarked on a major reform of the education system, revolving around a reform of the school curriculum. This ambitious plan aims to encompass policy measures to adapt teaching and learning to the competencies required for the 21st century. By doing so, Japan could also improve in

lower-performing dimensions, such as students' ability to think critically and student well-being.

Strong academic achievement and equity, with some limitations in the ICT environment

Japanese students are among the highest performers in PISA across OECD countries. With an average score of 538 points in science in PISA 2015, students in Japan are outperformed only by students in Singapore (556 points), and they perform similarly to students in Estonia and Chinese Taipei (Figure 1.10). Japanese students' average reading score (516 points) is comparable with that of students in Germany and Korea, but students in Canada, Finland, Hong Kong (China) and Singapore outperform Japanese students in reading by 10 score points or more. Japanese students attain the same mathematics score (532 points, on average) as students in Beijing-Shanghai-Jiangsu-Guangdong (China) and Korea, but they are outperformed by students in Hong Kong (China), Macao (China), Singapore and Chinese Taipei (OECD, 2016[14]).

Across most countries, socio-economically disadvantaged students not only score lower, they also have lower levels of engagement, drive, motivation and self-belief. Japan, along with Canada, Estonia and Finland, achieves high levels of performance and equity in education outcomes as assessed in PISA 2015, with 10% or less of the variation in student performance attributed to differences in students' socio-economic status (Figure 1.10). Across OECD countries, 13% of the variation is attributable to socio-economic status. Moreover, some 29% of disadvantaged students (those in the bottom quarter of the PISA index of economic, social and cultural status in each country) across OECD countries are "resilient", meaning that they manage to perform better than expected on the basis of socio-economic status and perform among the top 25% of students around the world. In Japan, the percentage of resilient students has grown by 8 percentage points since 2006, so that nearly one in two disadvantaged students (49%) is considered resilient.

Similarly, the Trends in International Mathematics and Science Study (TIMSS) demonstrates high performance. Among 49 surveyed countries, Japan ranks in the first decile in mathematics and science in Grades 4 and 8. Trends in these two fields are rising, with an increase in Grade 4, for instance, from 567 points in 1995 to 593 points in 2015 in mathematics, and from 553 to 569 in science (Mullis et al., 2016[37]).

In the OECD Survey of Adult Skills (PIAAC), as noted earlier, adults in Japan demonstrated the highest levels of proficiency in literacy and numeracy among adults in all countries participating in the survey. Japan also had by far the smallest share of adults scoring at Level 1 or below in both proficiency domains (Figure 1.11).

In contrast, PIAAC results show that 21% of adults in Japan had no computer experience or failed the ICT core assessment (compared to the OECD average of 14.2%), meaning that they lacked the most elementary computer skills. This share rises with age, showing that the older population is even less familiar with ICT (21.2% for the 45-54 age group, 40.9% for 55-64 year-olds, the fourth-highest among participating countries).

Figure 1.10. Science performance and equity in PISA, 2015

Notes: B-S-J-G (China) refers to the four PISA-participating China provinces: Beijing, Shanghai, Jiangsu and Guangdong. FYROM refers to the Former Yugoslav Republic of Macedonia. Argentina: Only data for the adjudicated region of Ciudad Autónoma de Buenos Aires (CABA) are reported.
Source: OECD (2016[14]), PISA 2015 Results (Volume I): Excellence *and Equity in Education*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264266490-en.

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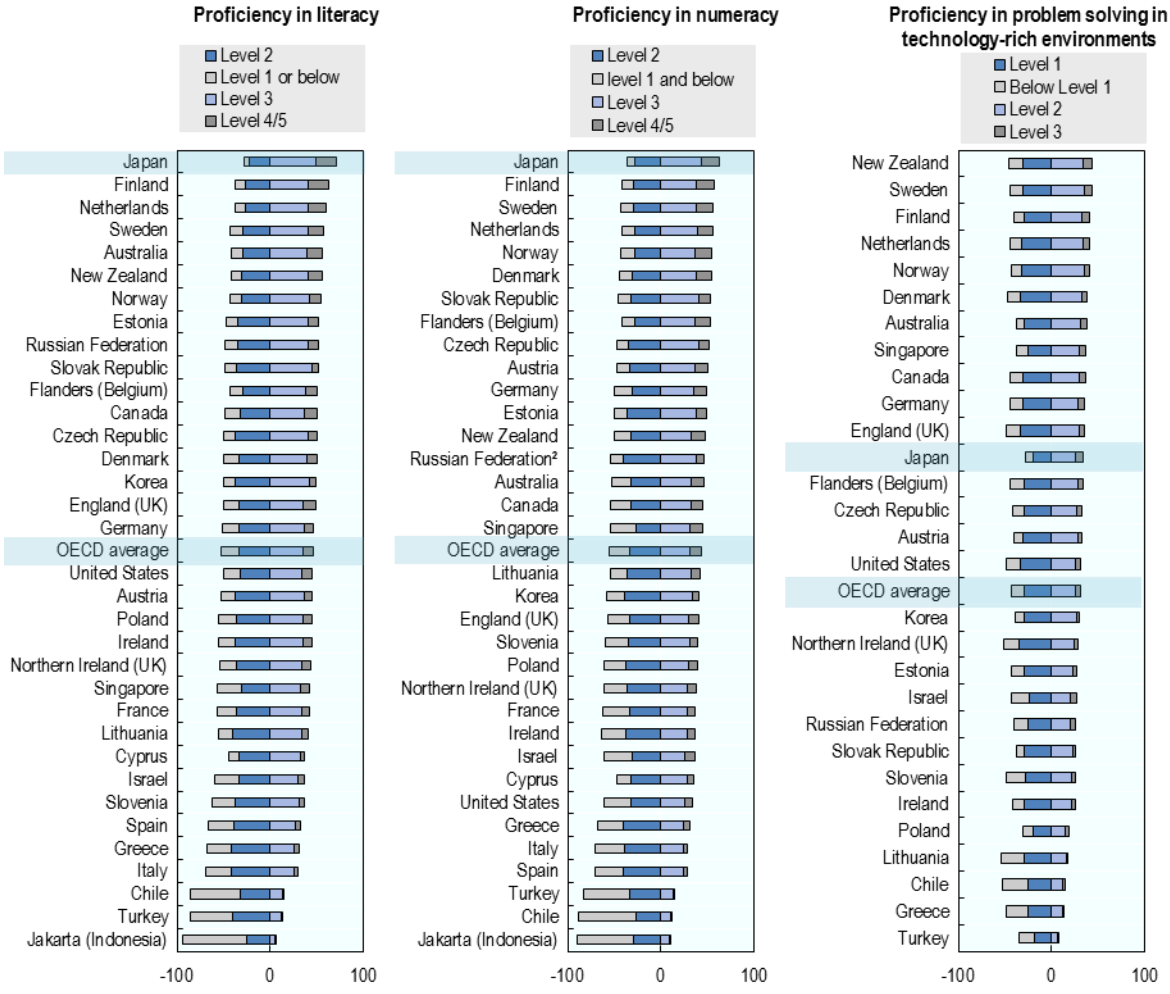
The younger group (those aged 16-24), is more proficient in computer literacy than their elders, but still lags behind other countries, since 12.1% of them failed the ICT core test or had no computer experience (4.3% in average in OECD countries). Moreover, the share of Japanese 16-24 year-olds proficient at higher levels (Levels 2 and 3) is 5 percentage points below the OECD average and 17.5 percentage points behind the top performer, Korea (OECD, 2013[38]).

Figure 1.11. Proficiency of adults, 2012

Percentage of adults scoring at each proficiency level in literacy, numeracy and problem solving in technology-rich environments



Notes:

Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD (2016[8]), *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264258051-en.

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StatLink http://dx.doi.org/10.1787/888932900479
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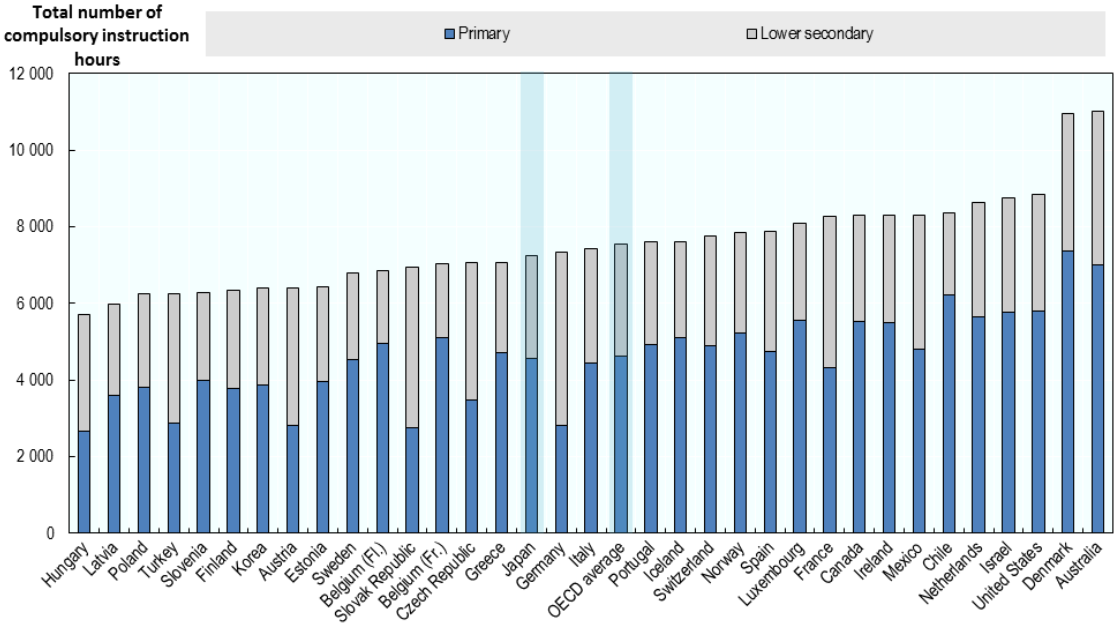
Japan also struggles with the effect of its university entrance exams on the whole education system. Since accessing top universities in Japan not only makes students more likely to win a secure job on graduation but also heightens social recognition, students are under pressure to win entrance to those universities. As reported in *The Economist* (1997[39]), this high-stakes exam has led the education system to focus on "rote learning" and "teaching to the test", while incentivising students to attend academic *jukus* (after school courses). The Council of Education noted in a report back in May 1997 that cramming hours were stifling creativity and critical thinking.

During the review visit, the OECD team had several discussions with stakeholders on the issue of developing specific dimensions of cognitive skills such as critical thinking. TALIS data show that around 16% of teachers in Japan reported feeling capable of helping their students to think critically (compared to the TALIS average of 80%) (OECD, 2014[36]). Data from the Survey of Adult Skills also show that while younger Japanese (16-24 year-olds) displayed higher levels of proficiency than their older compatriots in problem-solving, their performance was lower than in relation other countries (OECD, 2013[38]).

Mandatory learning time in school

Students in Japan are currently expected to receive a total of 7 260 hours of instruction during their mandatory primary and lower secondary education. This is slightly less than the OECD average of 7 540 hours (Figure 1.12).

Figure 1.12. Mandatory instruction time in general education, 2015



Source: OECD (2016[29]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2016-en.

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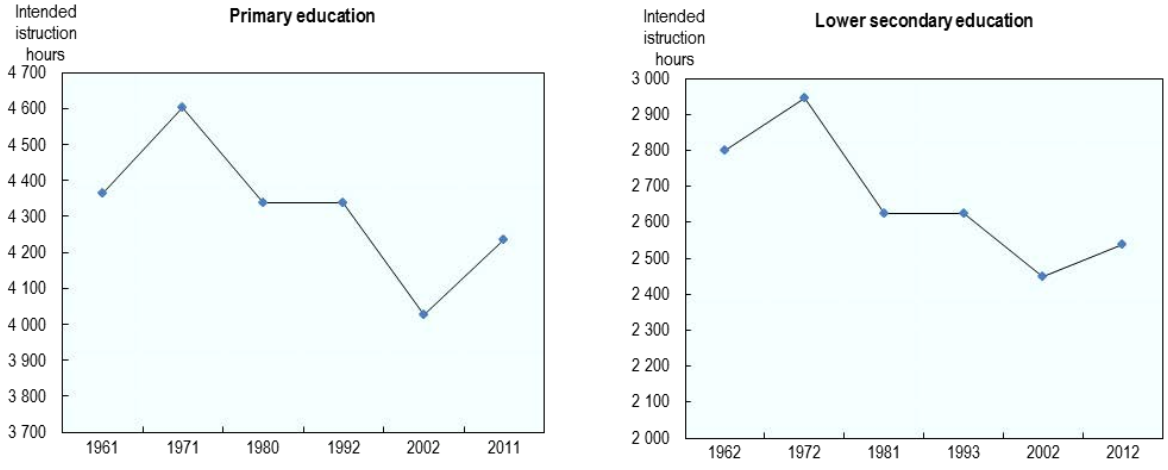
During the last revision of the curriculum (in 2011 for primary and in 2012 for lower secondary education), the intended number of hours of schooling in Japan has increased, particularly compared to the early 2000s (Figure 1.13). In the 1990s, concerns about the system's strong focus on examinations and disciplinary problems in schools (including widespread bullying) prompted moves to encourage greater individual creativity, and the so-called "relaxed education" (*yutori kyoiku*) reform was introduced in the early 2000s. The reform included cutting the school curriculum content by 30% and reducing the school week from six days to five. The goal was to increase students' experiences outside schools in order to improve their social competencies, for example during activities in nature and society. As a result, the number of study hours was significantly reduced.

Around the same time, the PISA 2003 reading test shifted the emphasis from reproduction of subject content to solving problems in new contexts. Between 2000 and 2003, the overall performance of Japanese students on PISA dropped from 522 points to 498 points, causing what has been called "PISA shock". This sparked a national debate on education policy, especially on the effectiveness of the 2002 revision of the National Curriculum Standards, which had significantly reduced the curriculum content and lesson hours in primary and lower secondary education.

Figure 1.13. Intended instruction time in the National Curriculum Standards, 1961-2012



Note: The intended instruction time indicated in the National Curriculum Standards is calculated in units of 60 minutes.
Sources: MEXT (2016[40]), *Shougakkou no kyouiku katei ni kansuru kiso shiryou* (Basic information on the primary education programme), www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/074/siryo/__icsFiles/afieldfile/2016/02/15/1366890_3.pdf, MEXT (2016[41]), *Chuugakkou no kyouiku katei ni kansuru kiso shiryou* (Basic information on the lower secondary education programme), www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/076/siryo/__icsFiles/afieldfile/2016/05/31/1371318_12.pdf.

After 2004, the "relaxed education" was adjusted to take account of successive PISA results and public reaction to the earlier reforms, with new measures to that ensure students get solid grounding in basic knowledge. The revised national curriculum announced in 2008 and 2009 aimed to balance the building of a solid knowledge base with nurturing of students' skills to think, make judgements and express themselves. Primary school textbooks have been expanded by almost a quarter and lesson times

lengthened by one or two hours per week in primary and lower secondary schools to cover the longer curriculum (Figure 1.13).

Pervasive shadow education

Japanese students attend a slightly lower number of mandatory schooling hours than the average in OECD countries. However, according to PISA 2012, 70% of 15-year-olds reported attending after-school lessons in mathematics (along with 58% in Japanese and 54% in science). This share of after-school mathematics was the highest among OECD countries and is significantly higher than the OECD average of 38%. In particular, socio-economically advantaged students are more likely to attend after-school lessons in mathematics (83%) than disadvantaged students (55%). The difference between the two groups in Japan is also among the largest across OECD, along with Korea and Greece (OECD, 2013[25]).

A survey organised by MEXT shows that more than half (around 60% depending on the year) of students in their last year of lower secondary school attend *jukus*, as most students at this level prepare for entrance examinations to upper secondary schools (MEXT, 2016[42]). In fact, the closer students get to university entrance examinations, the more likely they are to attend *jukus.* In a report on children's educational activity outside of schools, MEXT showed that the share of students attending *jukus* increases steadily, from 16% in the first year of primary school to 65% in the last year of lower secondary education, while the share of students engaged in extra activities drops from around 70% in primary school to around 30% in lower secondary education (MEXT, 2008[43]). During the fiscal year 2016, surveyed Japanese households reported spending JPY 246 000 on supplementary learning for lower secondary in public schools and JPY 195 000 in private schools (MEXT, 2016[44]).

Juku attendance started escalating in the 1970s, when a steep increase in the educational aspirations of the Japanese population was not matched by the level of education supplied by the government. Because the number of candidates far exceeded the available places, parents turned to private providers offering educational support, the *juku* industry (private after-hours tutoring schools). According to a detailed literature review (Entrich, 2015[45]), there is a strong popular belief in Japan that investment in shadow education (out-of-school private tutoring) leads to a tertiary education level and access to high-ranking institutions. This led to academic research, which established that investing in shadow education fosters educational inequalities (Seiyama, 1981[46]; Seiyama and Noguchi, 1984[47]; Konakayama and Matsui, 2008[48]). However, Japanese schools appear to deliver equitable results (Figure 1.11), since students' socio-economic status explains only 10% of the variation in science performance, below the OECD average of 13% (OECD, 2016[14]).

In Japan, standardised exams that determine entrance to upper secondary school or university signal the social status of a family. Families' investments in *jukus* therefore peak in Grade 9 the last year of lower secondary, when students prepare entrance examinations to access selective upper secondary schools, which are seen as potential gateways to top universities (MEXT, 2016[49]). Further evidence indicates that shadow education is also pervasive at other levels in education.

To access university, students must go through "examination hell", where the intensity of the competition is crystallised by the saying "four pass, five fail", meaning that students who sleep four hours a night should succeed, but those who sleep five hours will likely fail (Stevenson and Baker, 1992[50]). A majority of students in upper secondary school

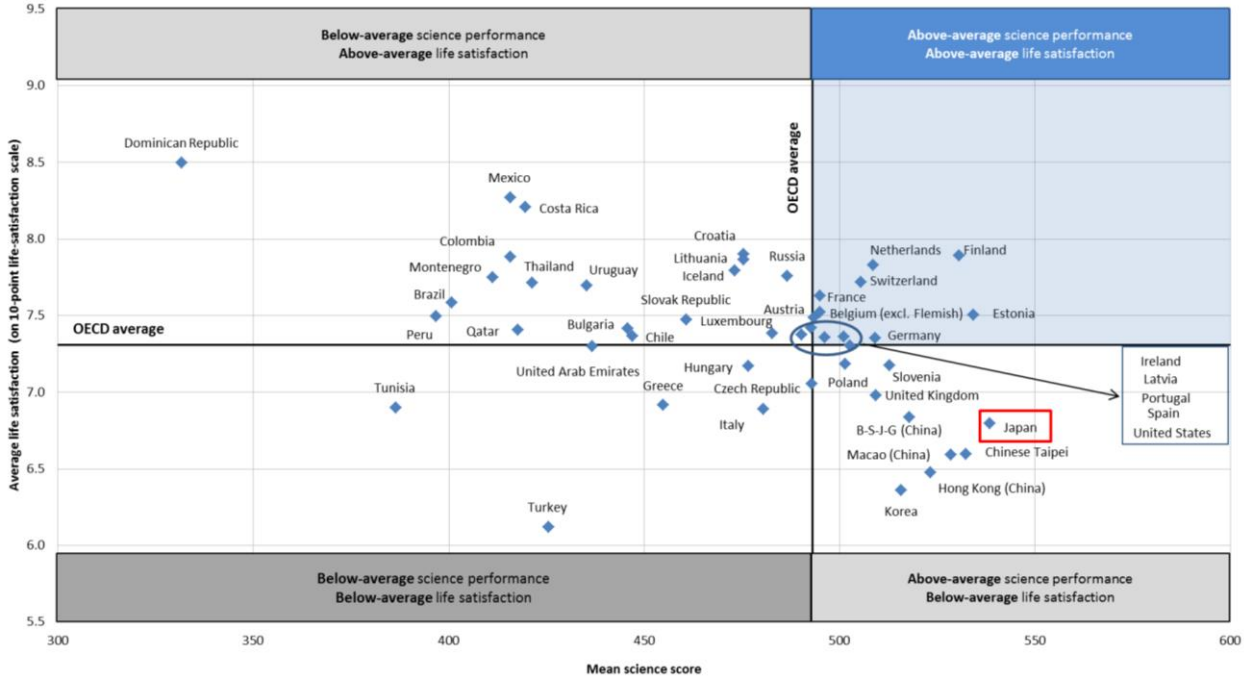
also take extra classes at *jukus* to prepare for the all-important university entrance examinations (Clark, 2005[51]). Although the competition for access to upper secondary school and university is believed to have decreased lately, due to low birth rates, attendance at *jukus* is not declining (MEXT, 2016[49]).

Lower levels of student well-being and higher level of anxiety

In the *Japan Times*, Kyodo (2015[52]) echoes a report from the Cabinet Office stating that youngsters have a higher propensity to commit suicide when they are due to go back to school after a long vacation, around the end of spring and summer holidays. The highly competitive school environment, the repeated standardised tests (the "exam race") and bullying (see below) may generate high levels of stress for students. The cost of the academic success of Japan may lie in a lower level of child well-being.

In Japan, 61% of students feel satisfied with their life, 10 percentage points below the OECD average, according to 2015 PISA data. While Japanese students perform the highest in science, their average life satisfaction index is significantly below the OECD average (Figure 1.14).

Figure 1.14. Life satisfaction and performance across education systems, 2015



Note: B-S-J-G (China) refers to the four PISA-participating China provinces: Beijing, Shanghai, Jiangsu and Guangdong.
Source: OECD (2017[53]), *PISA 2015 Results (Volume III): Students' Well-Being*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264273856-en.

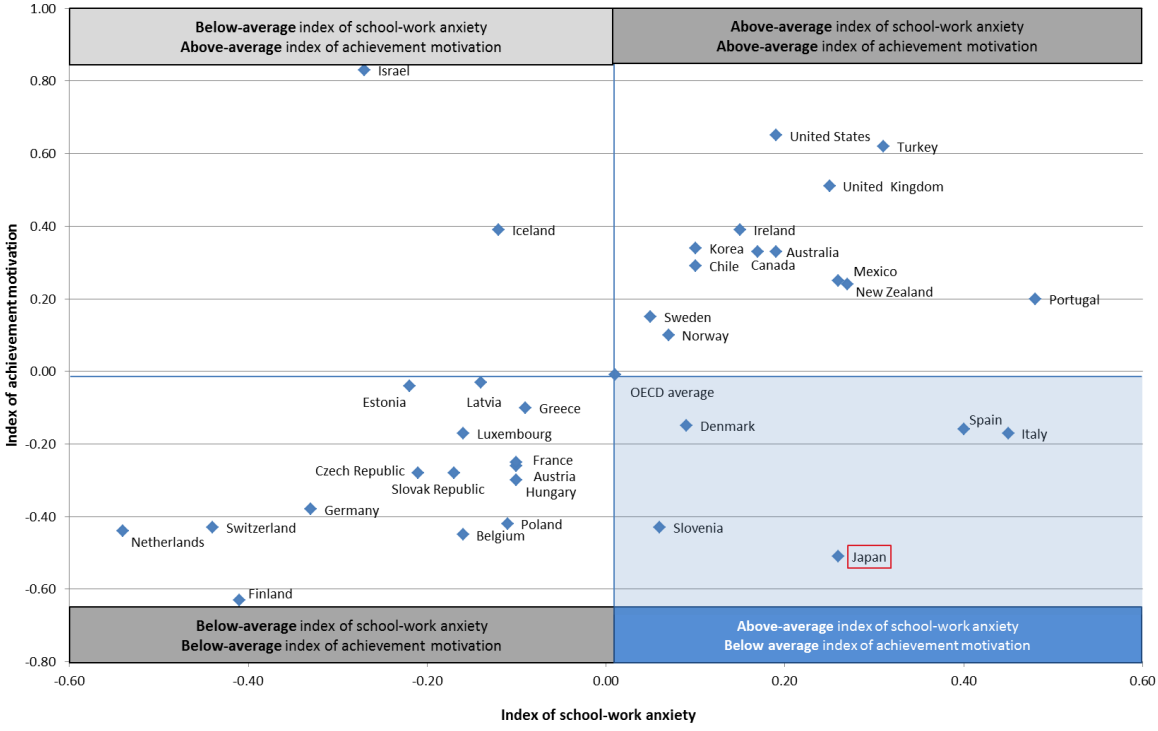
StatLink http://dx.doi.org/10.1787/888933470611

Japanese students also report school-work-related anxiety in the highest quartile of an index that measures anxiety, while their index of achievement motivation is the second lowest among OECD countries. The students' sense of belonging at school is around the OECD average (OECD, 2017[53]). There is a positive correlation across education systems

between the index of school-work anxiety and the index of achievement motivation (Figure 1.15). However, Japan appears as an outlier on this representation, since Japanese students combine high levels of anxiety with low levels of motivation.

Japan presents a below-average index of exposure to bullying in PISA 2015, although 22% of student reported being bullied at least a few times a month (above the OECD average of 18.7%). The fact that, in Japan, students interviewed for PISA are in upper secondary (rather than lower secondary) could play a role in the relatively low ranking of Japan among other countries in terms of bullying. According to a MEXT survey, the number of reported cases of bullying at primary, lower and upper secondary schools rose to 225 132 in academic year 2015, from 188 072 cases in the previous year (an increase of 20%) (MEXT, 2017[54]). These results do not necessarily highlight an upward trend but may be the result of a new law introduced in 2013, by which schools are legally compelled to detect bullying early and take measures to prevent it (Act for the Promotion of Measures to Prevent Bullying).

Figure 1.15. Achievement motivation and school-work anxiety across education systems, 2015



Source: Adapted from OECD (2017[53]), *PISA 2015 Results (Volume III): Students' Well-Being*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264273856-en.

StatLink http://dx.doi.org/10.1787/888933789916

In PISA 2012, students in Japan reported lower confidence about their ability to solve a set of pure and applied mathematics problems than the average across OECD countries, although they have shown improvement since 2003. Japanese students reported less pleasure and interest in learning mathematics, less openness to problem-solving and more anxiety in learning mathematics than the OECD average, even if their pleasure and interest in learning mathematics have increased over time (OECD, 2014[55]).

Compared to 2006, fewer Japanese students in 2015 reported that they enjoy learning science, but more students reported that learning science is useful for their future plans. Students in Japan reported almost the same level of motivation to learn science as the OECD average. And while Japanese students in 2015 reported a greater sense of self-efficacy in science than their counterparts in 2006, they are still below the OECD average in this respect (OECD, 2016[14]).

According to TIMSS, Japanese students from Grades 4 and 8 are among the three countries whose students least like learning mathematics (with Korea and Chinese Taipei in Grade 4, and with Korea and Slovenia in Grade 8). Japanese students in Grade 4 are slightly below the OECD average in terms of appreciating learning science, but they once again rank last when reaching Grade 8 (with Korea and Chinese Taipei).

A report published by MEXT in 2011 reveals that Japanese upper secondary education students have markedly lower self-esteem and self-confidence than students in America and in other Asian countries. On standard questions such as: "Do you value yourself as a person", only 36.1% of students answered "Agree" or "Somewhat agree", compared to 89.1% in the United States, 87.7% in China and 75.1% in South Korea. Similarly, only 15.4% of students in Japan "believe they are a capable person", while 84.5% of students do so in the United States, as do 67% in China and 46.8% in South Korea (MEXT, 2011[56]).

Schools as learning environments

Part of the success of Japanese students stems from the holistic approach of education in schools. Parents' engagement with and bonds to communities make school life rich and diverse for students and contribute to the completeness of the curriculum. Moreover, the evaluation and assessment process of school performance drives schools to improve constantly and guarantees an environment especially conducive to learning.

The unique Japanese model of holistic education

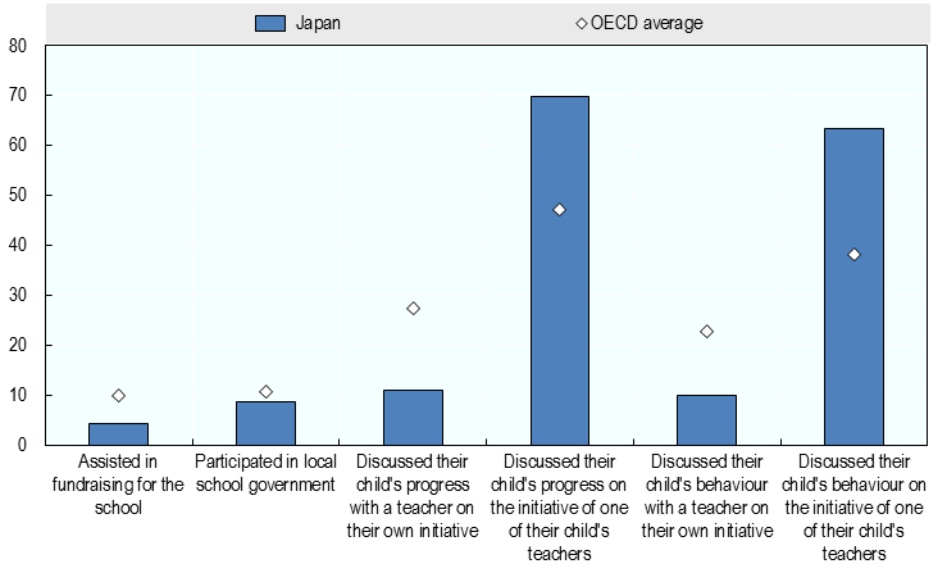
The Japanese model revolves around the concept of "whole child education" (cognitive, social, emotional, and physical development of students), where other systems might focus only on two or three dimensions of child development. To achieve this, the Japanese curriculum is infused with *Tokkatsu*, a concept encompassing non-cognitive aspects of education that aims to develop emotional intelligence. In particular, *Tokkatsu* are educational activities in which the school and classrooms are considered as "societies". Through group activities, independent and practical attitudes are cultivated in children to enable them to build better group life and to develop personally. Key principles behind *Tokkatsu* include encouraging child-initiated activities, self-motivation, collaborative learning and learning by doing.

During their visit, the OECD review team observed that teaching in Japan is not limited to academic content, but also tackles a broad range of activities. For instance, teachers supervise students as they clean the school, help serve school lunch or engage in extracurricular activities. They also supervise field trips and excursions, and engage with the parents by initiating discussions and organising visits at their home. Primary school teachers may teach the same group of students for 2 or more years, and teachers from lower secondary are responsible for a homeroom class that remains together until high-school entrance. Repeated and diverse interactions develop trust between teachers and students, in contrast to systems where teachers focus on teaching activities only. Schools

in Japan are thus the breeding ground for social and emotional development and provide students with initial training to become good citizens.

Figure 1.16. Parental involvement in education, 15-year-olds, 2012

Based on school principals' reports



Source: OECD (2013[25]), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201156-en.

StatLink http://dx.doi.org/10.1787/888933789935

Parental involvement in education in Japan strengthens the school's influence. Compared to their OECD counterparts Japanese parents particularly stand out in two areas: discussing their child's *progress* on the initiative of a teacher and discussing their child's *behaviour* on the initiative of a teacher (Figure 1.16). For instance, the homeroom teacher establishes relationships with students' parents, which facilitates open lines of communication about the student's academic progress. According to Hoover-Dempsey and Sandler (1995[57]): "In most circumstances, parental involvement is most characterised as a powerful enabling and enhancing variable in children's education success, rather than as either a necessary or a sufficient condition in itself for that success. Its absence eliminates opportunities for the enhancement of children's education; its presence creates those opportunities." The excellent school-home communication established by Japanese teachers incentivises parents to support the teacher's position at home and contributes to Japanese education success.

Teachers in Japan: A highly productive but fragile population

The teaching profession in Japan is highly competitive, especially outside large cities, which helps drive the quality and status of the profession. To start teaching, teachers in Japan must comply with several prerequisites (see Box 1.3). First, candidates to initial teacher education (ITE) must perform well in the national university examination, and there are often additional criteria for those entering ITE through faculties of education.

Initial teacher education in Japan, which is similar to programmes offered in other countries in terms of selection criteria, duration and content, generally lasts four years. This includes a short mandatory teaching practicum, though the duration of teaching practicum is often longer for candidate teachers in faculties of education.

After completing ITE, teacher candidates must apply to their local boards of education, which issue teaching certificates, then pass multiple-stage competitive employment examinations to be eligible for a permanent teaching position in a public school. When entering the profession, they follow a 1-year formal induction programmes while engaging in teaching and other educational activities (OECD, 2015[22]).

The Lesson Study, a widespread method in primary school in Japan, used in particular in mathematics lessons, incites teachers to work together to identify specific teaching issues, spread good practices and update their knowledge. Usually, teachers work together to prepare a specific lesson on a topic where students have struggled, and nurture their reflexion with leading-edge academic literature. Then, one teacher teaches the lesson to students, while other teachers (sometimes even from other schools) observe and learn the new pedagogical approach.

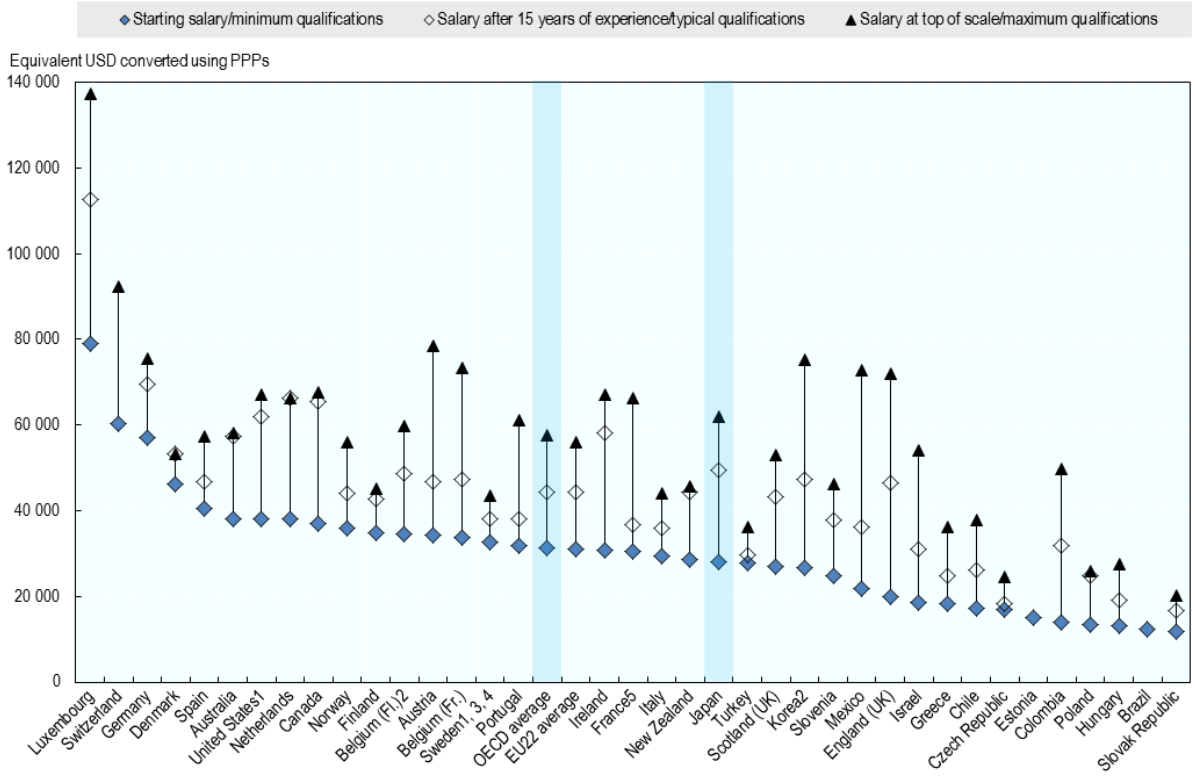
Professional development in Japan tends to both extend and renew teachers' practice, skills and beliefs. The Lesson Study not only improves teaching practices over time, but also strengthens co-operation between teachers and potentially fosters the development of an inter-school network of teachers. In addition, in 2009, Japan introduced the Teaching Certificate Renewal License. Under this system, teachers must renew their teaching certificates by participating in at least 30 hours of professional development programmes every 10 years to improve their knowledge and practices.

Japanese teachers have among the highest total statutory working time in OECD countries, with 1 891 hours per year from pre-primary to upper secondary (compared to OECD averages around of 1 615 hours depending on the education level) (OECD, 2017[58]). Their work covers a wide variety of school activities, including eight hours for extracurricular activities per week, well above the TALIS average of two hours (OECD, 2014[36]). Despite this heavy load, teachers' salaries in Japan are only around the average of OECD countries. For instance, a starting secondary teacher in Japan earns USD 3 000 less annually than the OECD average, but USD 4 000 more when he/she reaches 15 years of experience (Figure 1.17).

Teachers in Japan are largely responsible for how the curriculum is taught and have authority over instruction and classroom practice (OECD, 2012[21]). However, they report lower-than-average levels of self-efficacy in some domains. Around 16% of teachers in Japan reported feeling capable of helping their students to think critically (compared to the TALIS average of 80%) (OECD, 2014[36]). In addition, about one-quarter (24%) of Japanese teachers reported that they do not feel prepared to teach the content, pedagogy and practical components of the subjects they teach (above the TALIS average of 7%).

They also report more often than their counterparts in other countries that work schedule conflicts were a barrier to participation in professional development activities (86.4%, compared to the TALIS average of 50.6%). Only 28% of teachers in Japan believe that the teaching profession is valued in society (compared to the TALIS average of 31%), and 58% of Japanese teachers would choose to work as teachers if they could decide again (compared to the TALIS average of 78%) (OECD, 2014[36]).

Figure 1.17. Lower secondary teachers' salaries at different points in teachers' careers, 2014



Notes:
1. Actual base salaries.
2. Salaries at top of scale and typical qualifications, instead of maximum qualifications.
3. Salaries at top of scale and minimum qualifications, instead of maximum qualifications.
4. Data from 2013.
5. Includes the average of fixed bonuses for overtime hours.

Source: OECD (2016[29]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2016-en.

StatLink http://dx.doi.org/10.1787/888933399015

Box 1.3. Initial teacher education in Japan

Universities and university departments with teacher preparation programmes/courses provide pre-service training for candidates for the teaching profession. In order to become candidates, individuals need to pass entrance examinations and be enrolled as students at universities with teacher-preparation programmes. Candidates who seek to become teachers need to complete all required teacher-preparation courses and a practicum, in addition to an associate or a bachelor's degree.

In Japan, ITE is provided by universities through the "Open System" - this means universities can provide ITE if they meet certain requirements, even if they do not specialise in teacher education - or by departments of education in universities, which specialise in ITE. As of 2014, 228 universities and departments (52 national universities, 4 public universities, and 172 private universities) have been approved to offer ITE programmes for primary school teachers, and 520 (70 national universities, 41 public universities and 409 private universities) have been approved for lower secondary teachers.

Once teacher candidates complete an ITE programme, they must apply to the local Board of Education, which issues teaching certificates. With the certificate, they may teach as a contract teacher. To teach at a public school as a permanent teacher, teacher candidates need to pass multiple stage competitive employment examination administered by the Board of Education. First-Stage Examinations typically test general knowledge, subject-based knowledge and professional knowledge, while some BOEs administer Essay Writing, Interview, Practical and Aptitude Test in the Second-Stage Examination. Each BOE sets the evaluation criteria independently, although the criteria have been similar across the BOEs. Successful candidates become teachers are on probationary status in their first year of employment. Individuals who wish to work at private schools also need to take the employment examinations that are typically administered by individual schools.

The Law for Special Regulations Concerning Educational Public Service Personnel mandates Boards of Education to provide induction training for all new teachers with a regular-term contract for one year. The law also requires assignment of a mentor teacher for every new teacher with a regular-term contract. Mentor teachers are most commonly selected by principals from among vice principals, head teachers or senior teachers at the school. Over the last decade, efforts have been made to build collaboration between universities and BOEs to raise the quality of initial teacher preparation and continuous professional development.

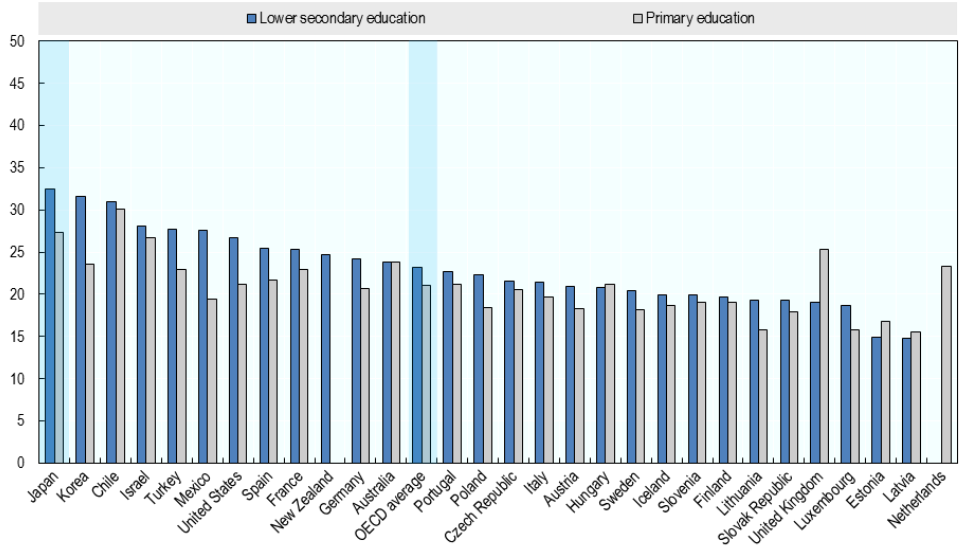
Japan is currently participating in the OECD Initial Teacher Preparation study, which seeks to identify and explore common challenges and strengths in initial teacher preparation systems in eigth participating countries/economies - Australia, Japan, Korea, Norway, Netherlands, Saudi Arabia, United States and Wales (United Kingdom) - with a view to developing an international benchmark on effective initial teacher preparation systems. Findings from these reviews will be published in 2018.

Source: MEXT (2016[20]), OECD-Japan Education Policy Review: Country Background Report.

Despite large classes, Japanese schools are conducive to learning

According to PISA data, classrooms in Japan were more conducive to learning than those in many other countries and economies in 2003, and they became even more so by 2015 when Japanese students reported the highest index of disciplinary climate in their classes among OECD countries, with 0.83 (standardised variable). For example, 91% of Japanese students reported that students never or only in some classes don't listen to what the teacher says (compared to the OECD average of 68%), and 92% reported that their teacher never or only in some lessons has to wait a long time before students settle down (compared to the OECD average of 71%) (OECD, 2016[26]).

Figure 1.18. Average class size across OECD countries, by level of education, 2014



Source: OECD (2016[29]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2016-en.

StatLink http://dx.doi.org/10.1787/888933398905

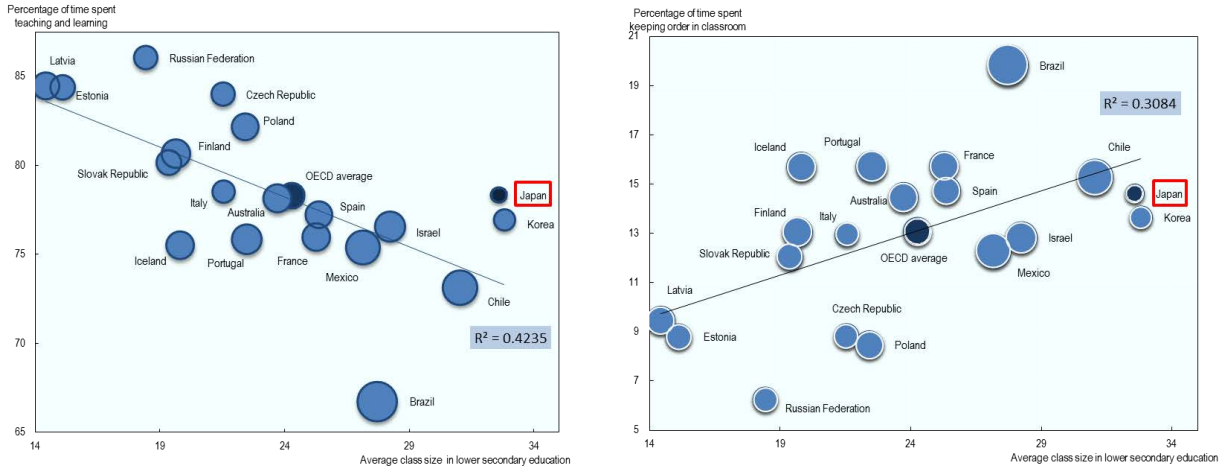
Classes in primary and lower secondary schools in Japan are among the largest in OECD countries. In 2014, the average primary class in Japan had 27 students, the second-largest class size across the OECD (average of 21 pupils). The average lower secondary class was 32 students (Figure 1.18), the highest in the OECD (average of 23 students) (OECD, 2016[29]).

In recent decades, Japan has tried to reduce class sizes, and some municipalities changed their regulations on the maximum number of students per class. Between 2005 and 2014, the average class size in public and private schools decreased by 4% at the primary level and by 3% at the lower secondary level, while OECD average class sizes also decreased, by 2% at the primary level and 6% at the lower secondary level (OECD, 2016[29]). While PISA 2012 data showed that larger classes are generally associated with more class time spent keeping order as opposed to teaching and learning, teachers in Japan devote a similar amount of time in class to teaching and learning as the average across OECD countries, despite larger classes (OECD, 2015[22]).

Figure 1.19. Relationship between average class size and learning climate, 2013

a) Relationship with time spent teaching/learning

b) Relationship with the percentage of time spent keeping order in the classroom



Note: The size of each bubble represents the proportion of lower secondary teachers who reported having more than 10% of students with behaviour problems in their classes.
Source: OECD (2015[59]), *Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2015-en.

StatLink http://dx.doi.org/10.1787/888933284447

Lack of punctuality and truancy are negatively associated with student performance, but are less of a problem in Japan than in other countries that participate in PISA (Figure 1.19). On average across OECD countries, 20% of students reported that they had skipped one day of school or more in the two weeks prior to the PISA 2015 test, while only 2% of students reported doing so in Japan. In addition, while this share has remained stable in Japan, it has increased across OECD countries by 5 percentage points, signalling deterioration in students' engagement with school. Some 12% of students in Japan reported that they had arrived late for school during the same period, in comparison to 44% of students across OECD countries. Japan shows some of the lowest incidence of student truancy among all countries and economies that participated in PISA 2015.

Evaluation and assessment

In Japan, different actors work together to allow continuous improvement of the education system. This ongoing search for improvement, combined with meticulous stakeholders, is a key factor in Japan's academic excellence.

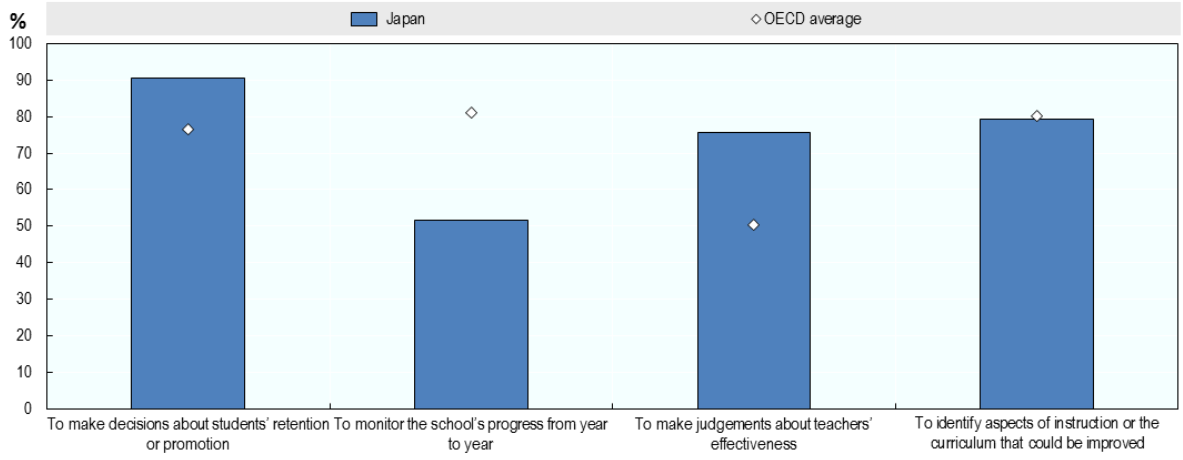
To support schools, prefectural and local boards of education send school supervisors to direct and advise schools regarding curriculum design and pedagogy for instance. Self-assessment is a legal obligation at each level (kindergarten, primary, lower and upper secondary schools, school for special needs education). The Ministry also recommends to have a board composed of parents, local residents and school staff realise the evaluation, and have published a guideline for school assessment to help local stakeholders (MEXT, 2016[20]).

MEXT has been conducting the National Assessment of Academic Ability since 2007. It covers assessments on student achievement (practical use of knowledge and skills) and

student learning (subject knowledge) at Grades 6 and 9 every year. Student learning assessments aim to measure knowledge in mathematics and Japanese every year and, in 2015, science was added for a three-year cycle. These assessments of student achievement and student learning are intended only for monitoring purposes. Schools are expected to use them to improve their educational practices. As part of the process, students, parents and schools complete questionnaires to provide a broader view of the relationship between student performance, learning environments, student lifestyles and teaching practices.

Figure 1.20. Assessment practices in Japanese schools, 2012

Percentage of students in schools where the principal reported the following uses for student assessment



Source: OECD (2013[25]), *PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201156-en.

StatLink http://dx.doi.org/10.1787/888933789954

This kind of assessment contributes to what is called the "PDCA" cycle, which takes place in every school. It consists of Planning (organising the educational curriculum), Doing (implementing the curriculum), Checking (evaluating it) and taking Action (improving it). The way curriculum is taught can evolve based on data concerning students and communities. In fact, if schools in Japan are less likely than the average school in OECD countries (-29 percentage points) to monitor the school's progress from year to year, they are more likely to make judgements about teachers' effectiveness (+26 percentage points (Figure 1.20).

At the national level, PDCA data concerning teaching the curriculum are gathered before the end of the ten-year revision of the curriculum. This accumulation of evidence on teaching practices, pedagogical pitfalls and success stories feeds into the Central Council for Education's discussion of the reform of National Curriculum Standard.

Bonding schools with communities

During the American occupation of Japan after the Second World War, 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

organised not only at the school level, but also at prefectural and national levels, with a seat on the Central Council on Education. The voice of parents has remained a conservative force in education reform, with parents 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 (OECD, 2012[21]).

Historically, the role of parents in schools has been mostly defined by the Parent-teacher Association. It mainly consists in participating in the school life by helping during school educational activities or volunteering for work in some school events. Parental involvement in school is evolving nonetheless. In 2004, MEXT changed laws to enable schools to have a school council/board (School Management Council [*Gakkou Un-ei Kyogikai*]). These schools with school boards, called "Community Schools", allow parents and community residents to participate in public school management with a certain degree of authority and responsibility as members of school management councils. For example, 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 initiative has been expanding, as MEXT considers it a way to promote parental and community involvement in school management and activities. It is one of the four main policy directions of the Second Basic Plan for the Promotion of Education 2013-17 consisting of "Building bonds and establishing vibrant communities: A virtuous cycle where society nurtures people and people create society". Accordingly, engaging local communities in education is a priority policy issue. Since the introduction of the system, the number of schools in which a school management council has been set up increased from 17 in 2005 to 2 806 in 2016, narrowing the gap with the target set in the Second Basic Plan for the Promotion of Education to get 10% of community schools among public schools.

More recently, an umbrella initiative called "Community Co-operation Network for Learning and Education" aims to further promote collaboration between schools and local communities (Chapter 3). It gathers four previously launched projects, including School Support Regional Headquarters (*Gakkou Shien Chiiki Honbu*), Programme to Promote After-School Classes for Children (*Houkago Kodomo Kyoushitsu*), Saturday Educational Activities and Community Tutoring School for the Future (*Chiiki Mirai Juku*). Although schools engaged in this project do not have necessarily the council management characteristic of community schools, they are still deeply committed to engaging the surrounding communities in daily activities. In 2016, there were 4 527 School Support Regional Headquarters in 669 municipalities across the country, for 6 881 primary schools and 3 148 lower secondary schools. About 16 000 after-school classes for children were conducted at public primary schools through the participation of local residents. On Saturdays, local people and companies were supporting activities in about 12 000 public primary, lower and upper secondary schools (MEXT, 2016[20]).

From the cradle to the grave: Costs and benefits of education

The provision of education in Japan starts as early as age 3, with ECEC for children, and extends throughout life with lifelong learning. Except for primary and secondary level (mandatory levels of education), education in Japan is mainly private and requires significant financial contribution from households. The degree of participation depends on the price and the quality of education.

Since globalisation and modernisation are changing the skills required in the workplace and in everyday life, improving access to lifelong learning has become a priority for the Japanese government. On the one hand, workers are more and more in need of updating their skills. On the other hand, demographic forecasts in Japan predict a decline of the workforce. The Japanese labour market needs to make the greatest use of the population, in particular by strengthening participation of women and improving adult learning. Japan is currently implementing reforms that strengthen financial support for non-mandatory levels of education. This should improve labour market outcomes in the short term for women and young graduates.

The ECEC financial burden is lightening

In Japan, educational institutions prior to the mandatory education curriculum include:

- Kindergartens: they allow entrance of any child between three years old and primary school admission age. They are the core part of early childhood education in Japan.
- Day care centres: their primary purpose is day care (from zero year old to primary school admission age).
- Centres for early childhood education and care: they have the characteristics of both kindergartens and day care centres.

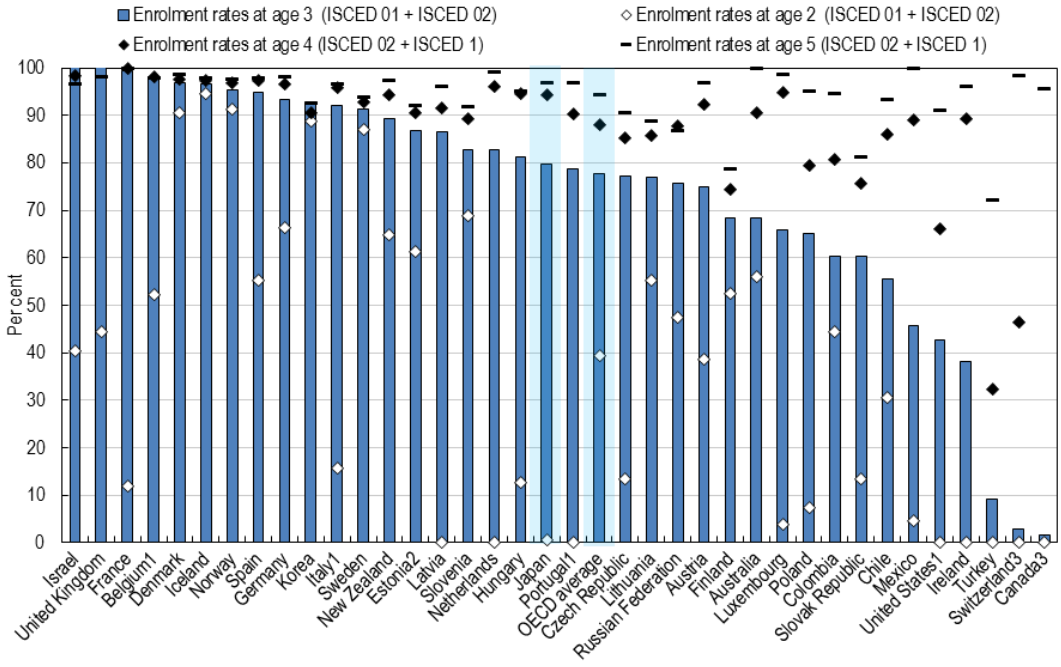
Although no ECEC year is mandatory in Japan, enrolment in ECEC is high: 94% of four-year-olds were enrolled in pre-primary education in Japan in 2015 (OECD, 2017[58]). However, the enrolment rate at age three (80%) is significantly below (around 20 points) those of leading countries (Figure 1.21).

Japan's public and private expenditure on early childhood education per child is low compared to other OECD countries (Figure 1.22). In 2014, the average annual expenditure for early childhood education per enrolled child was USD 6 572, which amounts to only 0.2% of GDP. The OECD average represents USD 8 858, 0.8% of GDP (OECD, 2017[58]).

According to MEXT (2016[20]), public support for pre-primary education aims to foster enrolment and consists in grants covering a share of the expenditures in kindergarten. These subsidies are granted to local governments that implement "kindergarten enrolment incentive activities", which consists in lowering childcare costs according to the financial situation of each household (lower income families being more subsidized).

Figure 1.21. Enrolment rates at age 3 and 4 in early childhood and pre-primary education, 2015

Early childhood educational development programmes = ISCED 01,
Pre-primary education = ISCED 02, primary education = ISCED 1



Notes: 1. Includes only pre-primary education at the ages of 2 and 3 (ISCED 02).
2. Includes early childhood development programmes at the ages of 4 and 5 (ISCED 01).
3. Year of reference 2014.
Source: OECD (2017[58]), *Education at a Glance 2017: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2017-en.

StatLink http://dx.doi.org/10.1787/888933558249

Unlike in most other countries, private sources account for the lion's share of expenditure on early childhood education in Japan. In fact, the Japanese government dedicates its funds to mandatory education (primary and lower secondary). Public sources only fund 44% of expenditure on pre-primary education, one of the lowest proportions among OECD countries (well below the OECD average of 83%) (OECD, 2016[29]). Therefore, despite a low level of expenditures per enrolled child, the limited level of public spending means that the financial burden on households is high. Since Japanese families have demonstrated willingness to share the cost of education, there are high levels of enrolment in pre-primary at age 4, but room for improvement at earlier ages (Figure 1.21).

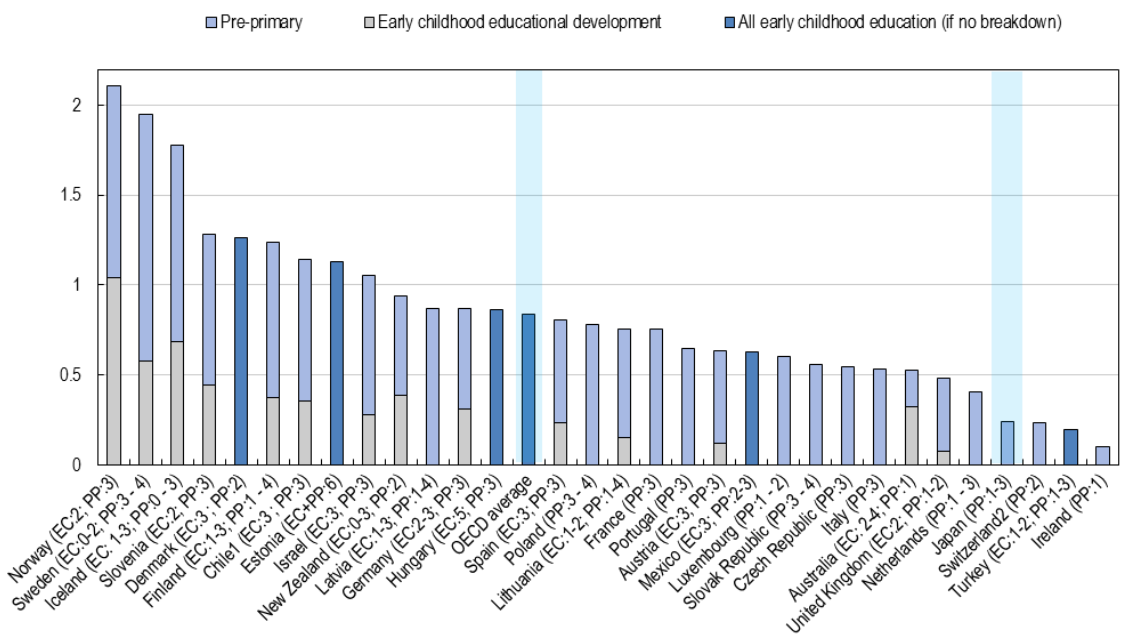
The Second Basic Plan for the Promotion of Education 2013-17 specifies the introduction of free-of-charge early-child education for all children. The rationale is to provide incentives for women to access the labour market, and/or to have more children. The Japanese government is examining potential revenue sources to fund this new initiative and has set the following objectives:

- eliminate tuition fees so that every child can access high-quality early childhood education;

- start providing free early childhood education to 5-year-olds incrementally as of 2014;
- introduce free-of-charge early childhood education at kindergarten for children whose parents are welfare recipients and alleviate financial obligations for large families starting in 2014;
- increase financial support for children whose parents get municipal tax exemptions starting in 2015.

Figure 1.22. Expenditure on early childhood educational institutions, 2014

As a percentage of GDP, by category



Note: The number in parentheses corresponds to the theoretical duration of early childhood educational development (EC) and pre-primary (PP).
1. Year of reference 2015.
2. Public expenditure only.
3. Year of reference 2013.
Source: OECD (2017[58]), *Education at a Glance 2017: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2017-en.

StatLink http://dx.doi.org/10.1787/888933558287

The objectives of the Second Basic Plan have resulted in the following incremental efforts towards free access to early child education:

- Fiscal year 2014:
  - Eliminate the childcare costs (6 600 yen/month) for households on welfare.
  - Eliminate the annual income cap (of about 6.8 million yen) for the tax breaks of half-price for a second child, and tuition-free for any children after the second one.
- Fiscal year 2015:

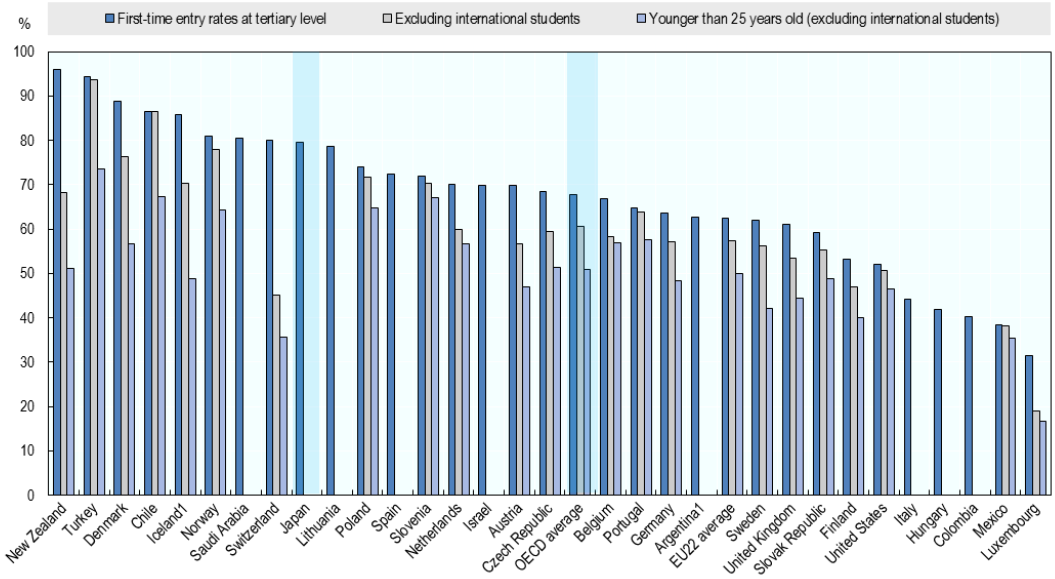
  - Reduce the monthly cost to parents in households exempt from municipal inhabitant's tax from 9 100 to 3 000 yen.
  - Expand aid to municipalities and eliminate excess burden on municipalities.
- Fiscal year 2016:
  - Allow households with annual income below about 3.6 million yen to pay half for second child and nothing for any children after the second one regardless of the age of the first child.
  - Eliminate tuition for all children in single-parent households that are exempt from municipal inhabitant's tax.
  - Allow single parents-households with income under about 3.6 million yen to pay half for first child and nothing for all future children.
- Fiscal year 2017 (budget projection):
  - Eliminate tuition for second child and any further children in households that are exempt from municipal inhabitant's tax.
  - For households with annual income below about 3.6 million yen:
    - Reduce the monthly cost to single-parents for the first child from 7 550 to 3 000 yen.
    - Reduce the monthly cost to other households for the first child from 16 100 to 14 100 yen, and from 8 050 to 7 050 yen for any other children.

Investing in tertiary education

The Japanese tertiary education system is characterised by a high participation level (Figure 1.23) and the diversity of its institutions. In total, 80% of the Japanese population is estimated to enter tertiary education over their lifetime (OECD, 2016[29]). Students can attend a wide range of institutions, from universities to junior colleges and colleges of technologies (Table 1.2). Each type is supposed to define its own function and goals in order to provide a defining character, as stated in the 2005 report of the Central Council for Education.

Another distinctive feature lies in the high proportion of private institutions by OECD standards. For instance, only 178 universities are public compared to 608 private universities (Table 1.2). Japan is one of the few OECD countries where a majority of tertiary education students are enrolled in private institutions, and the Japanese government relies heavily on private providers. In 2013, 79% of tertiary students were enrolled in private institutions (compared to the OECD average of 31%). Overall, 52% of the resourcing of tertiary education in Japan is paid for by households, one of the highest proportions in the OECD. This is partly due to a level of public funding of the tertiary sector that is half the OECD average. Japanese households contribute 2.4 times more than their OECD counterparts to the funding of tertiary education (OECD, 2016[29]).

Figure 1.23. First-time tertiary entry rates, 2014



Note: 1. Year of reference 2013.
Source: OECD (2016[29]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2016-en.

StatLink http://dx.doi.org/10.1787/888933398440

For students in a bachelor's programme in Japan, annual average tuition fees were USD 5 152 in public institutions in 2014/15 and USD 8 263 in private institutions in 2013/14. Tuition fees are lower than in England or the United States but comparable to those in Australia and New Zealand. The reason for the high proportion of the total system cost met by private sources is that a very high share of the student population is studying in private institutions with higher fees, reflecting the lower rate of government funding of private universities.

The cost of tuition fees can be understood as an investment that allows leveraging of future income. But the financial return in Japan is low by international standards. The large numbers of university graduates (linked to high enrolment rates in tertiary education (Figure 1.23) and small wage differences between different careers (the result of tradition that rewards seniority over productivity) lead to a low internal rate of return of tertiary education. In other words, the internal rate of return, or the hypothetical real interest rate equalising the costs and benefits related to the educational investment, is around 6% for Japanese students, compared to 12% in OECD countries (OECD, 2016[29]).

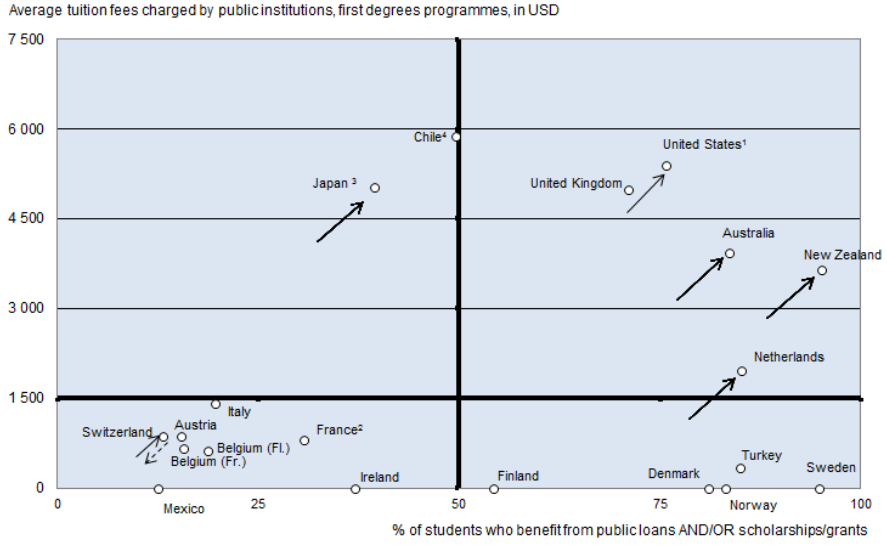
Many OECD countries have student-support systems to help students bear the cost of their studies, but Japan's systems are relatively less developed (Chapter 4). In Japan, some students who excel academically but have difficulty financing their studies can benefit from reduced tuition and/or admission fees or receive total exemptions, but most students and their families face a heavy financial burden. Tertiary students in Japan can benefit from public loans with lower interest rates than private loans, but only 38% of students use these loans, which impose a high level of debt at graduation.

Compared to other OECD countries, Japanese public institutions charge high fees, while a low level of public financial support is offered to students (Figure 1.24). This situation

places Japan between two paradigms: the "English-speaking countries" model (the United States, the United Kingdom and Australia), where a high level of public financial support for students compensates for high tuition fees and the continental European model (Austria, Belgium, France etc.), where the public funding directly addressed to tertiary education institutions makes tuition fees negligible.

Following the Second Basic Plan for the Promotion of Education 2013-17, MEXT enhanced the scholarship loan programme for students in tertiary education by developing interest-free student loans and introducing a grant-type scholarship. The repayment scheme associated with the interest-free loans is income-contingent. Students are not required to make payments until their annual income reaches JPY 3 million (around EUR 20 000) after graduation (which amounts to 70% of the median income in 2015) (Ministry of Health Welfare and Labour, 2016[60]).

Figure 1.24. Average tuition fees and student support in tertiary education, 2011



Notes: Arrows show how average tuition fees and the proportion of students who benefit from public support have changed since 1995 further to reforms (solid arrow) and how that may evolve due to changes that have been planned since 2008-09 (dash arrow).
1. Figures are reported for all students (full-time national and full-time non-national/foreign students).
2. Average tuition fees from USD 200 to USD 1 402 for university programmes dependent on the Ministry of Education.
3. Tuition fees refer to public institutions, but more than two-thirds of students are enrolled in private institutions.
4. If only public institutions are taken into account, the proportion of students who benefit from public loans and/or scholarships/grants should be 68%.
Source: OECD (2014[61]), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, http://dx.doi.org/10.1787/eag-2014-en.

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Linking tertiary education with the labour market

In Japan, a tradition called the *Shinsotsu* consists of hiring graduates right after their graduation in April. Japanese firms historically exchanged long-term employment, training and pension plans for hard work and loyalty. Job rotation is also expected to occur every three to seven years, to ensure that workers have a well-rounded understanding of the enterprise. In this system, seniority is rewarded, rather than

productivity: new employees start with low salaries with the promise of regular wage increases over time. Promotions, job rotation and vacation time are granted to the workers with the longest time in service (The Japan Institute for Labour Policy and Training, 2011[62]; Hiten Amin Reports, 2012[63]).

In 2015, 12.5% of new university graduates did not find work, above the level of 6% in 1990, but improving compared to the level of 20% in 2010 (The Japan Institute for Labour Policy and Training, 2017[64]). In fact, the start of the demographic decline in 2010 has progressively exacerbated the skills shortage in Japan and could improve the situation of new graduates entering the labour market. In 2010, 91% of students looking for a job found one, but this share reached a record of 97.6% in 2016 (MEXT and MHLW, 2016[65]).

But the work reality new graduates are now facing has changed compared to the traditional image of lifetime employment associated with the Japanese work environment. Shaken by two successive crises (the price asset bubble crisis in 1991 and the financial crisis of 2008), human resource management in Japan has followed three trends since the early 1990s (The Japan Institute for Labour Policy and Training, 2011[62]):

1. a decrease in the lifetime employment practice induced by firms narrowing the number of employees eligible for long term employment
2. a change in the employee assessment and compensation system, with a move from seniority towards performance-based employee assessment (*Seikashugi*)
3. non-regular workers as a growing share of the labour force, beyond the usual role of helping the labour market adjust.

New graduates will face a less certain working environment and are more likely to experience careers that comprise a portfolio of multiple jobs. In this context, the JILPT report (The Japan Institute for Labour Policy and Training, 2011[62]) shows that education and training for workers is more likely to be selective and targeted to high-skilled, tenured workers. Participation in lifelong learning risks falling at a time when international competition requires an increase to keep up with the pace of technological change.

Participation in lifelong learning still has to catch up with a dynamic supply

The results of the Survey of Adult Skills underline the need to move from a reliance on initial education towards fostering lifelong, skills-oriented learning (OECD, 2013[38]). The increase in the depreciation rate of human capital resulting from technical progress and globalisation should lead people to hone their skills over their lifetime, and should increase demand for tertiary education.

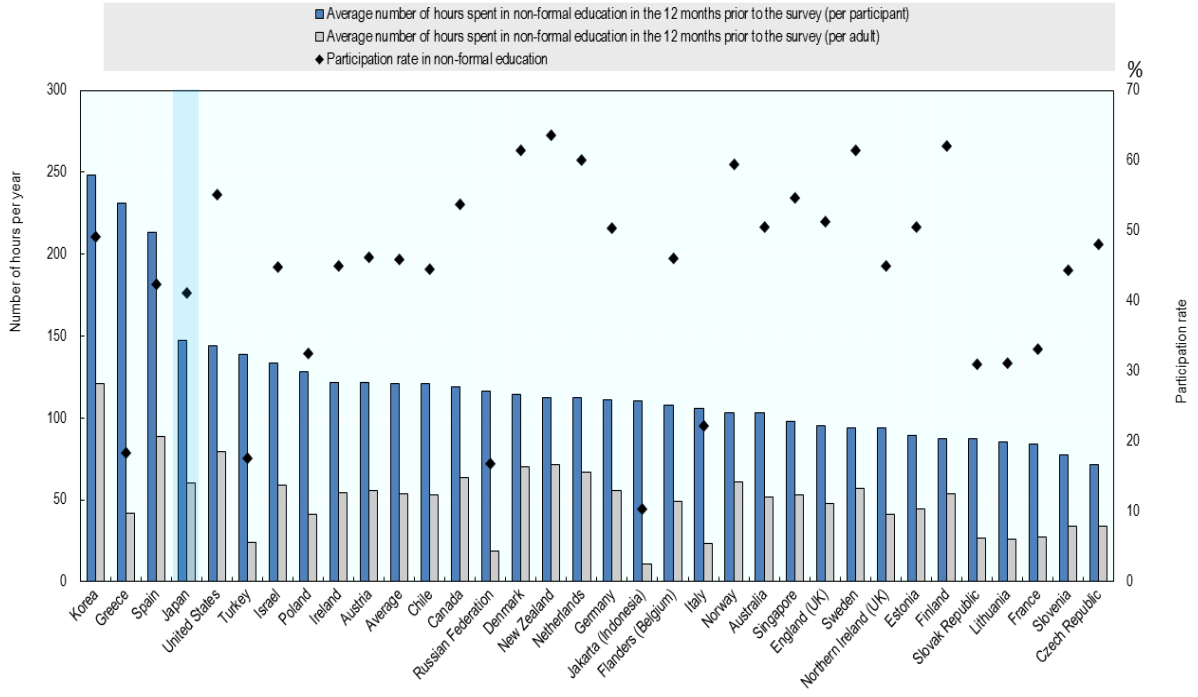
In Japan, tertiary education institutions are already developing the supply side of lifelong learning, with an increasing number of universities offering courses to local communities. According to the MEXT Country Background Report, the number of universities offering lifelong learning courses rose from 339 in 1992, to 707 in 2014. In 2016, MEXT started implementation of a certification of the quality of the lifelong learning courses offered by professional colleges and of their alignment with market needs, called the Brush-up Programme for Professional Training.

Around 42% of adults in Japan who took part in the Survey of Adult Skills participated in formal and/or non-formal education in 2012, a relatively low share compared to the 50% of adults across all countries who took part in the survey. At 48%, participation in

education among 26-35 year-olds in Japan is among the lowest across OECD countries (Desjardins, 2015[66]).

Figure 1.25. Participation and intensity of training in non-formal education, 2012 or 2015

Hours in non-formal education per participant and per adult and participation rate in non-formal education



Source: OECD (2016[29]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2016-en.

StatLink http://dx.doi.org/10.1787/888933398752

However, Japan ranks in the first decile for the intensity of participation in non-formal education, that is to say the number of hours spent in courses offered through open or distance education, seminars or workshops, structured on-the-job training or private lessons, during the 12 months prior to the interview of the Survey of Adult Skills (Figure 1.25). While Japan is 5 percentage points below the average participation rate in non-formal education, Japanese participants spend 147 hours in non-formal education, well above the average of 121 hours per participants in OECD countries. This suggests that in Japan, adult education is limited to a certain share of workers, but they are intensely trained.

The Japanese Opinion Poll on Education and Lifelong Learning (2015) also revealed that respondents would enrol more in adult education programmes if 1) financial aid was provided and 2) courses better targeted the preparation of professional qualifications or helped find jobs (MEXT, 2016[20]).

Persisting gender imbalances

In Japan, gender imbalances persist in education, subsequently in the labour market and ultimately in earnings. A majority of tertiary graduates are women in almost every OECD country, but a gender gap in graduation remains in Japan (only 32% of master's graduates

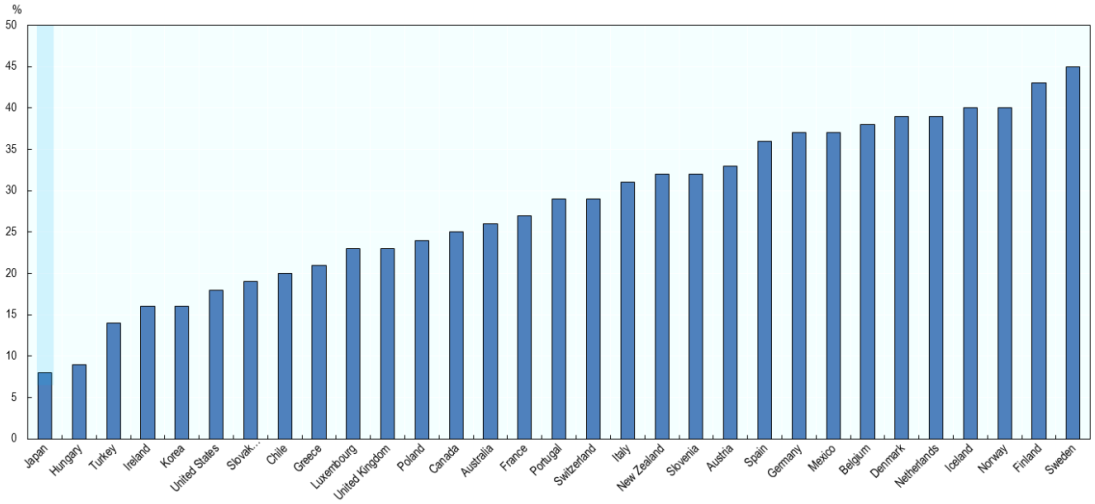
are women and 31% of doctoral graduates) (OECD, 2016[29]). Equally important is self-selection, since women in Japan tend to favour specific fields. For instance, women represent 72% of tertiary graduates in education and 76% of all tertiary graduates in the field of services, one of the highest proportions among OECD countries (compared to the OECD average of 55%). Conversely, in science, women only represent 25% of all graduates (compared to the OECD average of 40%). In engineering, manufacturing and construction, subjects in great demand in the labour market both in Japan and other OECD countries, women represent only 13% of tertiary graduates (compared to the OECD average of 26%) (OECD, 2016[67]).

The wage gap employed Japanese women face is striking. On average, women earn 26% less than men for the same job, 11.5 percentage points above the OECD average and the third-highest gap in OECD countries (OECD, 2017[68]). According to the Survey of Adults Skills, tertiary-educated men in Japan earn about 60% more than tertiary-educated women, the largest such gap in the OECD. The average across OECD countries and subnational entities is approximately 30% (OECD, 2015[69]; OECD, 2016[8]).

In addition to the question of equity in the work place, such a wage gap could lead to inefficient use of resources. If women anticipate that they will be discriminated against in the labour market, they might choose not to participate (i.e. to exit the labour force) or might choose fields where they are less likely to hit the glass ceiling. In fact, the Japanese labour market displays other differences in the treatment of women, such as the lowest rate of political representation among OECD countries, with only 8% of members of parliament being women (Figure 1.26).

While the male employment rate in Japan is 82%, the female employment rate stagnates at 64% (still higher than the OECD average of 58%). Given the high educational achievement of women in Japan and the high population skill levels reported in the Survey of Adult Skills, women represent an important untapped supply of high-quality human capital in Japan.

Figure 1.26. Political representation, share of women in national parliaments, 2014



Source: OECD (2017[70]), *Women in politics (indicator)*, https://data.oecd.org/inequality/women-in-politics.htm (accessed 4 December 2017).

StatLink http://dx.doi.org/10.1787/888933789973

How Japan can bridge the gap to the future

Japan is currently facing a double-sided challenge to its future. The rapid ageing of its population, coupled with an ailing economy and hampered by the world's highest debt-to-GDP ratio, means that the government has little leeway to find solutions. As part of the rescue plan detailed by the Liberal Democratic Party in 2012, education has been placed at the centre of the roadmap for future growth. The challenge for Japan is to find a way to engage in structural reforms to modernise the country and restore prosperity while preserving Japanese traditions and values.

To do so, Japan can rely on the numerous strengths of its high-performing education system. In Japan, education is a priority, as attested by the shared commitment of students (high enrolments in all levels of education), parents and families (high level of personal and financial investment), supportive communities and conscientious teachers, as well as schools that deliver holistic education for their students, covering not only academic education, but also values and after school activities. The system delivers high-quality education combined with equity. At the tertiary education level, the wide diversity of institutions is essential to the training of a high-skilled population. The Japanese tertiary education system has contributed to Japan's success in high-technology industries.

However, the Japanese school system faces a number of challenges. First, there is a shift in the skills and competencies required for the labour market and well-being that schools and their students will need to develop, already planned in a curricular reform. The high-stake nature of the University entrance examination also puts pressure on the whole education system, and can undermine the scope of the curriculum reform. Specific implementation actions will be required to ensure that teachers and schools are able to integrate these new types of competencies into their teaching strategies and assessment practices, especially in light of their heavy workload.

Second, as the keystone of the holistic approach to education, teachers need to maintain the equilibrium in education reached in Japan. Any change in the teaching profession jeopardises this fragile status quo and will need to be considered carefully. Third, the current education funding system, largely relying on households for non-mandatory levels of education, can lead to inequities, prevent women from participating in the labour market and deter families from having an optimal number of children. Finally, lifelong learning in Japan is limited to a share of workers who benefit from it intensively, which increases inequalities of a dual labour market.

Building on its strengths, Japan has already started to reform its education system to move forward in the globalised environment of the 21st century, increase well-being, broaden students' skills and contribute to the future economy and society. To this end, Japan is introducing a new curriculum reform that aims to foster students' competencies to thrive in the 21st century ("Solid academic ability", "richness in mind" and "sound body", see Box 2.1). School management is evolving to adapt to new needs and alleviate the burden of teachers. School community partnerships are being fostered to strengthen the holistic approach to education. In the meantime, financial support is developing both for ECEC and tertiary education, while universities have started diversifying the supply of lifelong-learning courses.

The chapters propose a set of recommendations to help ensure that the current reforms take hold to further enhance Japan's education performance and provide a bridge to transition into 2030. The recommendations build on an analysis of Japan's strengths and

challenges and are informed by research evidence and relevant practices from strong-performing education systems internationally.

Notes

[1] Tightness of the labour market measures the difficulty of filling a vacancy, by computing the ratio of vacancies to unemployment or job offers to applicants.

[2] Basic Act on Education, Article 17, Paragraphs 1 and 2.

[3] *Jukus* are private education providers which offer school-related services to students (such as preparing for tests and entrance examinations, covering extra curriculum material, supporting dropouts) or extracurricular non-academic activities.

[4] Textbooks are chosen from the lists of MEXT authorised textbooks by, local Boards of Education for public schools and by school principals for national and private schools.

[5] The index of academic inclusion is calculated as 100*(1-ρ), where ρ stands for the intra-class correlation of performance. The intra-class correlation, in turn, is the variation in student performance between schools, divided by the sum of the variation in student performance between schools and the variation in student performance within schools.

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Chapter 2. Competencies for 2030: Curriculum, assessment and teaching

This chapter introduces Japan's planned curriculum reform, which aims to balance the development of knowledge, competencies and values for students and to ensure that teachers use active learning strategies. International evidence shows that to implement curriculum reforms successfully, it is essential to target complementary policy areas, such as assessment practices and support and training for teachers.

*Japan's efforts to shift its education system to focus on 21*st *century competencies build on a strong foundation. It has a highly skilled and hard-working teaching staff, a system that delivers high equity and quality, effective teaching practices such as lesson study, a well-established curriculum implementation process and local engagement and ownership at the school level.*

This chapter explores how the reform can build on these strengths and proposes using formative and summative assessments to ensure alignment of the new curriculum and supporting teachers with professional resources and learning adapted to their needs and those of their students.

Context and main features

The Japanese government sees education as one of the keys to improving productivity, strengthening the workforce, developing social and individual well-being and investing in the future. Education policy focuses on promoting equal opportunities for all young people to receive high-quality education. Article 26 of the Constitution of Japan stipulates that "All people shall have the right to receive an equal education correspondent to their ability, as provided by law."

Student performance in Japan is among the highest across OECD countries in many international assessments. Positive student discipline is also among the highest, and the engagement of schools and teachers with their students is beyond the levels generally reported in other OECD countries, in terms of both time and extracurricular activities.

Curriculum reform seeks to balance content with competencies for 2030

Japan has adopted a broad approach to the purpose of education since the mid-1990s. In 1996, the Central Council for Education described the goals as follows:

> What our children will need in the future, regardless of the way in which society changes, are the qualities and the ability to identify problem areas for themselves, to learn, think, make judgements and act independently and to be more adept at problem-solving.
>
> […]
>
> We decided to use the term zest for living to describe the qualities and abilities needed to live in a period of turbulent change and felt it is important to encourage the right balance between the separate factors underlying this term. (quoted in Hálász (2013[1]), p. 11)

The current policy directions in the Second Basic Plan for the Promotion of Education are: developing social competencies for survival; developing human resources for a brighter future; building safety nets for learning; and building bonds and establishing vibrant communities (MEXT, 2013[2]). Specific goals are that young people should achieve independence, collaboration and creativity. The broad educational objectives of the Japanese curriculum also stress the importance of fundamental knowledge and technical skills and the need to foster skills to think, make judgements and express oneself effectively. The Third Basic Plan is currently being developed and will come into force in 2018.

Responsibilities relating to the school curriculum, assessment and teaching are divided among national and local governments and the schools themselves. Based on the School Education Act, the national government sets the National Curriculum Standards. It is developed in stages, in a process managed by Japan's Ministry of Education, Culture, Sports, and Science and Technology (MEXT) that involves political, professional and public discussion.

The National Curriculum Standards establishes the legal framework of duties and responsibilities and sets strategic objectives to maintain definite levels of education and ensure equal opportunities for quality education for all. The standards cover objectives, content, time allocation and course structure on a subject-by-subject basis, separately for primary schools, lower and upper secondary education and, if necessary, for each year group.

At the local level (prefectures and municipalities), boards of education set regulations for basic matters related to the management of schools, including the curriculum (such as the school year, the school terms and holidays, the division of school administrative duties, the procedures for defining the curriculum and the use of textbooks). Boards of education can also provide schools with additional material to help them understand and comply with the National Curriculum Standards. Prefectures elaborate arrangements for the delivery of the curriculum, including teaching materials, while municipalities establish and manage schools and are responsible for implementation (MEXT, 2016[3]).

At the school level, to deliver on the newly required competencies (specified above and in Figure 2.1), schools in Japan are expected to develop their own curricula, based on their educational goals and the situation surrounding children, the requirements of the National Curriculum Standards and the regulations set at the local levels.

Box 2.1. Revision of Japan's National Curriculum Standards

National Curriculum Standards in Japan is revised about every ten years. The latest revision aims to foster three elements of academic ability necessary in schools and children's development. These elements are key for shaping the future in a rapidly changing society:

- cultivating human nature and the ability to pursue learning so that one strives to apply learning to life and society, particularly the competencies for living (Ikiru chikara) required for the new era
- acquiring knowledge and technical skills
- developing the skills to think, make judgements and express oneself to be able to respond to unprecedented situations.

The aim is to build an education curriculum open to society that will nurture the competencies necessary for the new era, through collaboration between schools and society, with the shared goal of "creating a better society through higher-quality school education". The curriculum not only specifies what children should learn, but also how they should learn and what they should be able to accomplish. In that regard, the curriculum seeks to improve the learning process from the perspective of proactive, interactive and authentic learning (active learning). This aims to develop the qualities and abilities needed for the new era, including the acquisition of knowledge and skills, and to improve the quality of the learning process to achieve quality understanding without reducing the amount of knowledge.

The revised curriculum will be implemented in 2018 in kindergarten and, after a transition period, starting in 2020 in primary school, 2021 in lower secondary education and 2022 in upper secondary education.

Source: MEXT (2016[3]), OECD-Japan Education Policy Review: Country Background Report.
The new National Curriculum Standards (announcement, guidelines and other related materials) for all kinds of schools is available for public use on the MEXT website:
http://www.mext.go.jp/a_menu/shotou/new-cs/1384661.htm

To better equip its population for the future, Japan now aims to shift its education system to focus more strongly on competencies required for the 21st century and beyond, with increased emphasis on problem-solving abilities and the establishment of good learning

habits (see Box 2.1). Reform of the school curriculum and associated reforms of teaching and assessment are at the heart of that policy.

The reform will require a change in teaching and pedagogical approaches, moving towards more proactive, interactive and authentic learning, often described as active learning. Teachers in Japan already employ some features of active learning, but for Japan to achieve the ambitious objectives of the curriculum reform, active learning must be embraced as a system. Defining active learning as the new pedagogical standard will require sustained support from the governing institutions.

Implementation will be supported by updated textbooks based on the National Curriculum Standards and available free of charge to students in mandatory education. Similar directions for reform are reflected in the education policies of other high-performing education systems, many of which also aim to prepare and equip their youth for an uncertain future through increased capacity for knowledge, creativity and other skills (OECD, 2016[4])[1].

Both formative and summative assessments to measure student performance

Schools have scope to determine the methods they will use to assess students' learning in relation to the National Curriculum Standards. The aims of the assessments are to allow schools to measure students' progress in the subject and to improve the quality of teaching. Teachers or schools have discretion over the choice of formative assessment methods, and the OECD review team became aware that many schools use subject assessments provided by private organisations.

MEXT has been conducting the National Assessment of Academic Ability for students in Grades 6 and 9 since 2007 (except in 2011, due to the Great East Japan Earthquake). The assessments were administered to whole cohorts in 2007, 2008 and 2009, then they were based on sampling in 2010, 2012 and 2013, but they reverted to whole cohorts again in 2014. These assessments measure student achievement in mathematics and Japanese language every year and in science every three years, and also aim to check achievements and problems with national educational policies. The purpose is to maintain and improve a uniform level of education, rather than to check individual school's achievement.

Since 2014 however, local authorities are allowed to publish school-level results, and some boards use them for school accountability (according to data reported by MEXT, 116 of 1 736 boards do so). Additional assessments have recently become more common at regional and local levels to monitor students' performance in core subjects (Japanese language, mathematics and English) (MEXT, 2016[3]).

Japanese students take upper secondary education and university entrance exams that determine the schools or universities they will attend. The results of these exams are published in the press and are used to rank educational institutions. These exams "represent gateways to status in Japanese society" (OECD, 2012[5]). Their high-stakes nature has an influence on adoption of the curriculum at the school level and on student learning practices outside of school, with 61% of students in Grade 9 attending after-school private tutoring institutions (*juku*) that prepare students for these tests (MEXT, 2016[3]).

Overall, MEXT defines national achievement levels through the National Curriculum Standards. Schools have the freedom to reflect on their local characteristics to develop their own curriculum according to the national guidelines, and reach education goals set by the Basic Act on Education. In this system with very clear national guidelines and

highly professional educational staff, individual schools are less accountable for results and achievement than in many other countries (Nakayasu, 2016[6]).

Teachers and school leaders are highly skilled and hard-working

Despite teachers' critical vision of the profession (see Chapter 1), teaching is still a well-regarded profession in Japan. The status of teachers is socially prestigious and mid-career teachers' salaries are above the OECD average. At the same time, class sizes in Japan are among the largest in the OECD, with an average of 27 students in primary school (compared to the OECD average of 21) and 32 students in lower secondary school (compared to the OECD average of 23) (OECD, 2016[7]).

Teachers in Japan have notably been successful at helping students to acquire knowledge and to perform well in tests (OECD, 2011[8]). Teaching methods have traditionally emphasised direct teaching, but since the 1998-99 revision of the curriculum there have been moves towards encouraging students to learn and think for themselves and integrate different areas of learning. To achieve this, teachers have received high-quality initial and continuing training and are expected to have good levels of proficiency in the subjects they teach (OECD, 2011[8]). According to the OECD Teaching and Learning International Survey (TALIS), 92% of new teachers have access to induction programmes during their first year of practice (compared to the TALIS average of 70%) and 58% participate in them (compared to the TALIS average of 52%), while 33% of teachers report having an assigned mentor to support them (compared to the TALIS average of 13%) (OECD, 2014[9]). Local Boards of Education are required by law to provide induction training for teachers in their first year of employment and a training programme for mid-career teachers.

The responsibilities of teachers in Japan extend beyond classroom-based learning and teaching to encompass a more holistic approach to practice. Total working time is among the longest in the OECD, although net teaching time in Japan is still relatively short (OECD, 2014[9]; OECD, 2016[7]) [2] . Their duties are extensive and involve engaging in teaching subjects, student guidance and extracurricular club activities to provide integrated education for developing competencies for living required for the new era (*Ikiru Chikara*) in a balanced manner. For example, teachers and students undertake tasks such as serving school lunches and cleaning classrooms, with teachers supervising students. In other countries, these tasks tend to be the responsibility of other staff, but they are an integral part of the Japanese model of school education.

To become school leaders in Japan's public schools, teachers must take an examination conducted by prefectural boards of education (see Chapter 1). They need to have solid preparation at master's level to become school leaders and are expected to have both a sound theoretical background and applied skills to exercise leadership in communities and schools. Professional Graduate Schools for Teacher Education in Japan are designed to help experienced teachers become mid-level school leaders with a thorough knowledge of leadership theories and practical and applied skills. Principals in Japan have the longest teaching experience among TALIS countries (30 years, compared to the TALIS average of 21 years). This gives them the experience to legitimately exercise leadership in communities and schools (OECD, 2014[9]).

Strengths and challenges

Japan's curriculum reform programme has many existing strengths to build upon as it seeks to develop competencies for the future. These strengths provide a strong foundation for successful and sustained implementation as Japan seeks to embed new competencies in the curriculum. However, both in Japan and elsewhere, curriculum reform faces significant challenges: preventing overload by being clear about priorities and resource implications; avoiding a time lag in responding to fresh imperatives that can arise during a ten-year cycle of centrally driven change; and securing the commitment of stakeholders to the reform goals.

The curriculum reform: an ambitious attempt to prepare young people for the future

After a period in which the prime focus of education policy has been to improve the effectiveness of schools against generally well-established curriculum frameworks, countries around the world are now posing more fundamental questions about the purposes of school education, against the background of our increasingly complex and fast-changing world. Education policy is increasingly being shaped by developments in the wider environment: the impact of globalisation, involving the complex interaction of greater interdependence and increased competition; equally complex patterns of migration; and technological developments in computerisation, robotics and artificial intelligence.

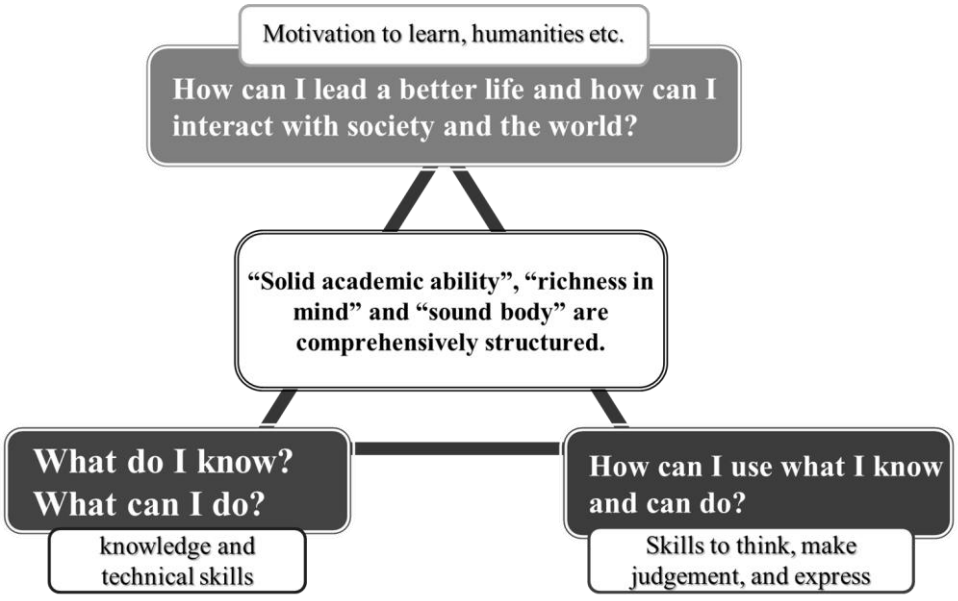
Many countries are rethinking the purpose, nature and scope of the school curriculum in ways that go beyond entitlement to specified academic subjects to focus more directly on 21st century competencies. Research commissioned by the Welsh Government, for example, concluded that: "Although expressed differently in the policy documents of each of the high performing countries, there is a common general aim to develop in their learners the necessary attitudes, values, skills and knowledge they need in order to achieve success and fulfilment as engaged thinkers and ethical citizens with an entrepreneurial spirit." (NFER and ARAD Research, 2013[10]) Similarly, the OECD Education 2030 Project is exploring the types of global competences required for the future in terms of knowledge, skills, attitudes and values (Taguma, Rychen and Lippman, 2016[11]). On this occasion, Japan has been working closely with the OECD, sharing its experience in curriculum reform to contribute to an international framework (OECD EDU/EDPC, 2017[12]).

In response to this changing global context and to the impact of increased longevity, a low birth rate and a significant gender gap in employment, Japan has identified the need to develop a broader range of competencies in its young people. It sees the need to address values in the school curriculum as part of societal adjustment to the changing context for the lives of its people. In Japan's country background report for this report, the drivers for reform are summarised as being designed "to allow school education to nurture the competencies necessary for the coming era" (MEXT, 2016[3]).

Japan is already highly successful in a number of international assessments. PISA data have demonstrated the high performance of Japanese students in reading, mathematics and science (see Chapter 1). The strong performance of Japanese students on the more demanding items in PISA tests also suggests that current approaches are already developing the ability to apply learning. A 2011 OECD report on education reform in Japan notes that "… the biggest rise in its PISA performance in Japan has occurred on

open-ended higher-order thinking tasks, not in the reproduction of subject matter that is the focus of *juku.*" (Jones, 2011[15]).

Figure 2.1. Model of the three pillars of competence that underpin curriculum reform, 2016



Source: MEXT (2016[18]), Presentation materials provided by the Ministry of Education, Culture, Sports, Science and Technology.

While Japan's revised National Curriculum Standards maintain the broad shape and content of the previous set, they now include a greater focus on the promotion of proactive, interactive and deep learning. Concerns about potential curriculum overload have led to the incorporation of new competencies without introducing new learning areas or simply adding new requirements to the curriculum. Still promoting academic ability, the new curriculum aims to align existing learning content areas to the three pillars of competence: acquisition of knowledge and technical skills; skills to think, to make judgements and to express oneself; and motivation to learn and humanities (Figure 2.1).

In addition to developing individual competence, the new curriculum will seek to foster a sense of social responsibility for the future, covering independence, interdependence and the development of values such as a "rich sense of humanity". Educational objectives and the content of the subjects taught in primary school, lower and upper secondary education will be organised around these pillars. According to the Japanese holistic education model, these objectives go beyond academic achievement (e.g. appreciation of arts and music, cultivation of healthy habits through practice of sports and physical activity, and the respect for life and human dignity). Table 2.1 gives a few examples of how the new curriculum aims to structure knowledge acquisition around the three pillars of competence.

Japan's curriculum reform is an ambitious attempt to build on existing educational practice to better prepare its young people for the future. A challenge for Japan's reform programme will be to meet its ambitious policy objectives to adapt students to the future

without detracting from existing strengths, such as high equity and strong performance on higher-order skills of Japanese students.

Table 2.1. Description of the three pillars of competence that underpin curriculum reform, 2016

	What we know What we can do	How we use what we know and what we can do	How we engage in society and the world, and live a better life
Japanese	Knowledge and skills necessary to speak, listen, write and read. Understanding of the Japanese language culture including classics.	Communication skills to be used in real life. Ability to use traditional language culture in modern life.	Appreciation of the Japanese language and its cultural significance.
Mathematics	Systematic understanding of the basic concepts and principles. Skills to mathematize events, interpret them and explain mathematically.	Ability to consider and explain events mathematically, make a decision on the basis of mathematical reasoning, and solve problems. Ability to develop mathematical concepts.	Recognition of the merit of mathematics. Readiness to make decisions based on mathematical reasoning.
Health and Physical Education	Understanding of how to enhance physical strength. Skills of exercise and physical expression. Understanding of scientific knowledge and cultural significance of sports. Understanding of health and safety.	Ability to pursue sport throughout life. Ability to understand one's own health, make healthy choices, and manage their health effectively.	Fairness, cooperation, responsibility, motivation to participate. Enjoyment of exercise, and promote culture of health and safety. Readiness to communicate for the improvement of health of oneself and others. Motivation to participate proactively in the healthy society.

Note: This table shows the three pillars of competence required in the new curriculum using examples from three subjects.
Source: MEXT (2016[18]), Presentation materials provided by the Ministry of Education, Culture, Sports, Science and Technology.

Schools already exhibit some features of the curriculum reform, but significant efforts are still required

Practice in Japanese schools already exhibits important features of the curriculum reform. However, meeting the full implications of the proposed changes for teachers' skills will pose challenges for professional learning and other forms of support.

In considering active learning approaches, Watkins et al. (2007[19]) identify behavioural, cognitive and social dimensions to the forms that such approaches can take in school classrooms: "From the perspective of the students, active learning engages them in ways that can involve working individually and collaboratively, taking responsibility, posing and answering questions, creating solutions and reflecting on their own learning and that of others." In relation to teachers, Pellegrino (2017[20]) identifies major implications for professional learning to "... support teaching that encourages deeper learning and the development of transferable knowledge and skills."

Current practice seen by the OECD review team in Japanese schools, particularly primary schools, already involves important aspects of learning that reflect the kind of reciprocal teaching and feedback that is integral to the reform. As such, there is scope to build on accepted and proven aspects of existing practice. Lessons observed by the OECD review

team were extremely well-planned and organized, with different learning sequences (observation, reflection, exchange) seamlessly succeeding each other, with teachers constant attention and efforts on maintaining all the children engaged. The content quality and the scientific management of the lesson also reflect the support provided by the Lesson Study.

However, lower secondary education marks the transition to a more traditional content-oriented instruction approach. In secondary education, schools are ranked according to their ability to place their students in the best high-schools or universities. Teachers are held responsible for the prestige of the school, and as students get closer to entrance examinations, the pace of learning quickens to cover the broad curriculum defined by the National Curriculum Standards. In that regard, in an analysis of the OECD-Tohoku School Project following the tsunami disaster in 2011, Hálász (2013[1]) states, with particular reference to Japanese secondary schools:

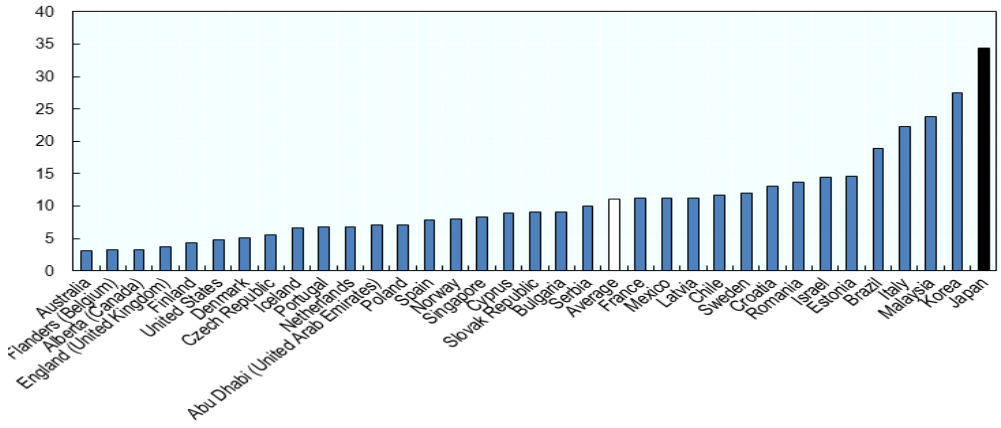
> The fact that Japanese adults show an outstanding level of literacy skills is probably the best existing indicator of the actual high performance of the Japanese educational system. But, on the other hand, there are also some negative characteristics of Japanese education often described by features such as […] teachers using one-way methods of information transmission, the lack of individualised learning and the frequent suppression of creativity.

Proactive, interactive and authentic learning can also be interpreted in ways that may not reflect the pedagogical intentions behind such approaches. There is a need for clarity on what such approaches actually imply for the skills of Japanese teachers and school leaders, including the ability to tailor approaches to the learning needs of students. Drew and Mackie (2011[14]) have suggested that, although the use of active learning has been "… promoted as an inclusive approach to education, particular groups of pupils may be less comfortable with this form of pedagogy." It will thus be important to ensure that improving lessons from the perspective of active learning is beneficial for all students and does not give rise to inequity in Japan.

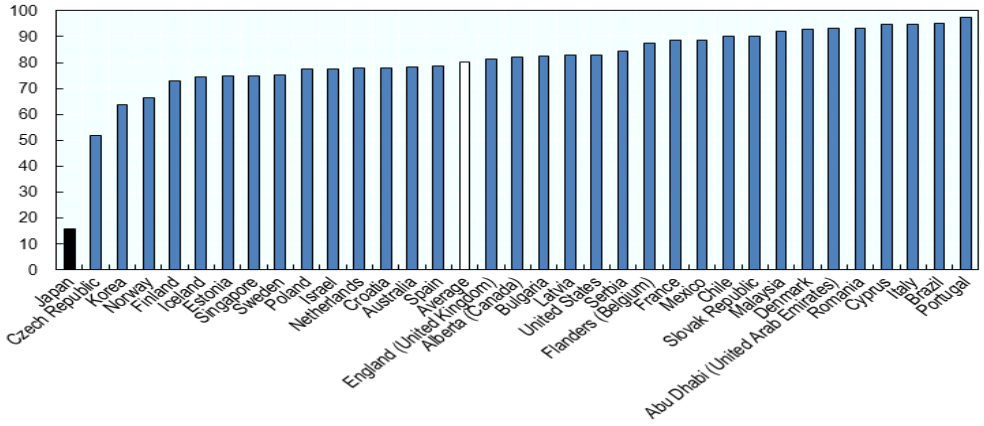
MEXT has recognised that the success of its reform programme will depend on the quality of the teaching workforce and teachers' ability to grow professionally and develop (Central Council for Education, 2015[21]). It has strengthened the role of the National Centre for Teachers' Development (NCTD), which trains leading teachers and staff members who will advise other teachers in their schools or municipalities. In 2017, the NCTD was restructured and renamed the National Institute for School Teachers and Staff Development. According to TALIS, almost 35% of lower secondary teachers report a need for professional development in teaching cross-curricular skills. On the other hand, only 16% of lower secondary teachers feel that they can help students to think critically (Figure 2.2). In both cases, Japanese teachers are at the extreme end of international results. Implementation of the new curriculum could further exacerbate these proportions, if teachers are not well-prepared and supported to carry it out. The effectiveness of national and local training support systems will directly determine the ability of teachers to implement the reform as envisaged.

Figure 2.2. Teachers' views on their ability to provide cross-curricular skills, 2013

a) Percentage of lower secondary education teachers indicating they have a high level of need for professional development in teaching cross-curricular skills (e.g. problem-solving and learning-to-learn)



b) Percentage of lower secondary education teachers who feel they can help students think critically



Notes:
Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: OECD (2014[9]), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en, Table 4.12, Table 7.1.

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MEXT has also recognised the need to address issues associated with the expectations placed on teachers, which can lead to an overly heavy workload. Current arrangements, including the wide range of tasks undertaken by teachers, have led to significant pressure on teachers and insufficient scope for the deep and sustained professional development

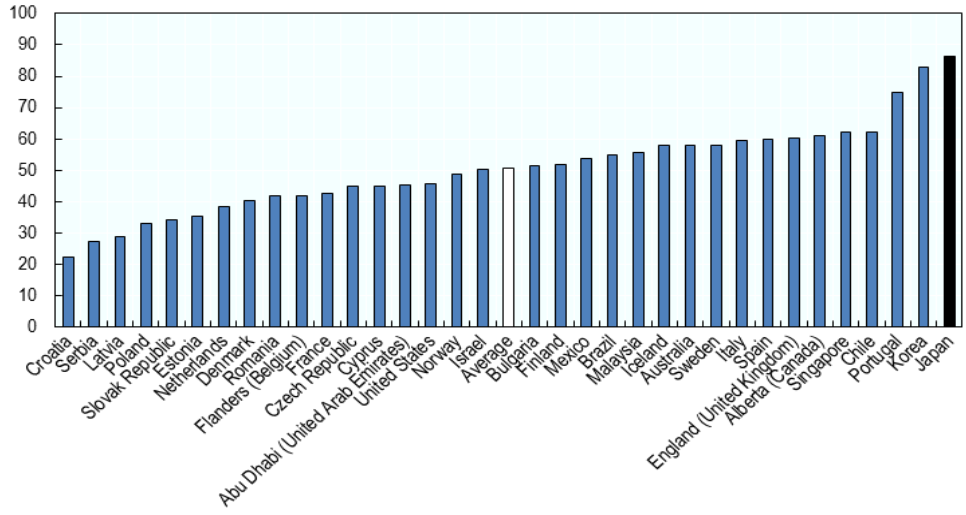
that successful reform will demand. MEXT reported to the OECD review team that there has been some progress in this area, with the Central Council for Education planning to consider measures to facilitate the shift towards active learning.

For Japan to fully realise the ambitions of the reform, it will be important to further explain the nature of its intentions for teaching and learning and to enhance support mechanisms, so that teachers will feel confident about their role in the reforms and have the ability to develop appropriate approaches. Enhanced support should be directed towards helping teachers to create the necessary context for proactive, interactive and authentic learning, to monitor progress in student learning and to intervene as appropriate. If teachers do not fully understand and master the range of required skills, the impact of the curricular reform is likely to be diminished (Snyder, 2003[22]).

Given the existing heavy workload of Japanese teachers, it is difficult for them to participate in in-service training. Fully 86% of lower secondary teachers in Japan indicate that professional development conflicts with their work schedule (Figure 2.3). Therefore, one of the key tasks for Japan will be to help schools create the time for necessary planning and professional development by finding new alternatives.

Figure 2.3. Conflict between professional development and work schedule, 2013

Percentage of lower secondary education teachers indicating a conflict



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Source: OECD (2014[9]), *TALIS 2013 Results: An International Perspective on Teaching and Learning, OECD Publishing*, Paris, http://dx.doi.org/10.1787/9789264196261-en, Table 4.14.

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Other forms of support for implementation of the reforms will also be important. Teachers and schools have been supported by the systematic development and free distribution of print-based textbooks to support curriculum reform. These textbooks, which are produced by the private sector, are revised based on the National Curriculum Standards and supplied to students in mandatory education free of charge. Local boards of education (for public schools) and school principals (for national[3] and private schools) choose books from the lists of MEXT-authorised textbooks. The move to teaching methods that encourage greater creativity and problem-solving will raise questions about the most appropriate forms of resources for different forms of learning. For instance, over-reliance on print-based resources could limit learning opportunities.

Creativity in the 21st century will increasingly demand high levels of digital skills, and students without such skills will be at a considerable disadvantage, both in school and afterwards as part of a modern workforce. The pace of change in the wider environment also means that resources for both teachers and students will need to be updated and supplemented. A challenge for implementation of the reform in Japan will be to ensure that the resources provided support more active teaching methods and can also be amended quickly and easily.

While the proposed reforms in Japan have strong bases to build upon, the implications for professional learning and other forms of support remain significant.

Implementation and monitoring experience, but a need to align assessment practices

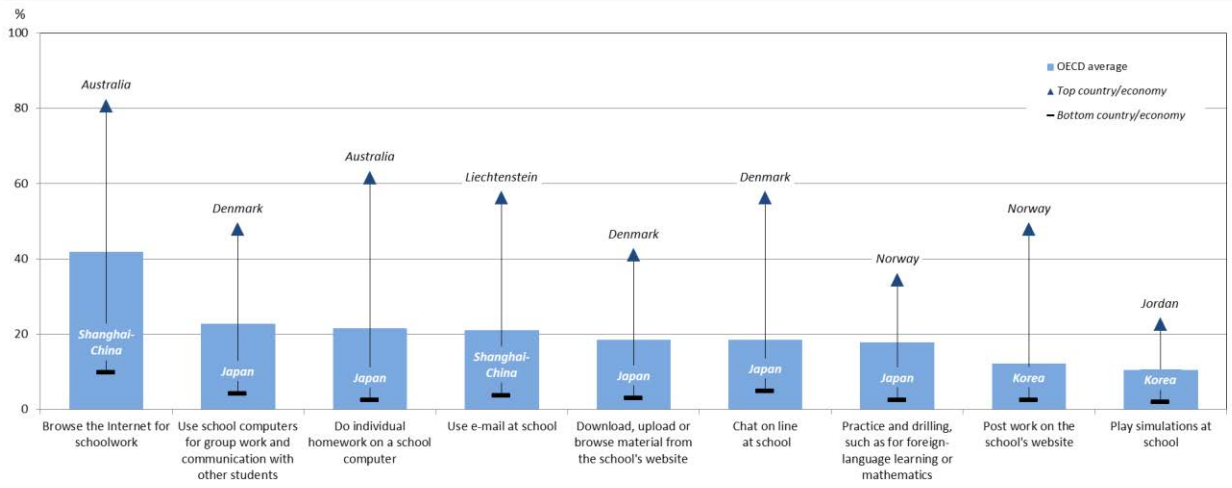
The established curriculum review strategy (see Chapter 1 and Box 2.1), together with a policy of greater decentralisation, provides a sound platform for reform. As the reform takes shape, there will be a need to ensure that there is scope for continuing responsiveness to the pace of change in the wider environment and to win full understanding and support of the purposes of the reform.

The nature and pace of change in the 21st century pose significant challenges for the management of education reform. The OECD Education 2030 Project identifies economic, social, demographic and technological developments that demonstrate how the world is becoming more volatile, uncertain, complex and ambiguous. A 2015 review of the curriculum in Wales summed up the challenge as follows: "What our young people learn during their time at school has never been more important yet, at the same time, the task of determining what that learning should be has never been more challenging." (Donaldson, 2015[23]).

In addition to responding to emerging trends in the external environment, Japan needs to tackle the areas it has already identified as needing improvement, such as development of digital and global competencies, problem-solving skills and proficiency in foreign languages (particularly English). The OECD Survey of Adult Skills found that Japanese young people (age 16-24) performed less well than their international peers in their ability to solve problems in technology-rich environments (OECD, 2013[24]). Figure 2.4 shows that Japanese students exhibit the lowest index of ICT use outside of school for schoolwork, and the second-lowest index of ICT use at school (after Korean students) (OECD, 2015[16]). In a survey led by Education First in 2016, Japan scored "low" on the English proficiency scale, at the second-lowest grade on a five-item scale (Japan ranked 35 out of the 70 countries surveyed) (Education First, 2017[25]).

Figure 2.4. Use of ICT at school, 2015

Percentage of students who reported engaging in each activity at least once a week



Source: OECD (2015[16]), *Students, Computers and Learning: Making the Connection*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264239555-en.

StatLink http://dx.doi.org/10.1787/888933252687

Japan's systematic approach to identifying needs and evaluating learning and teaching approaches provides a strong basis for ensuring that reforms are well planned and relevant. Its established ten-year curriculum review cycle provides a potentially supportive context for the proposed curriculum reform. Review is conducted on a systematic basis, with phased implementation that allows time for consideration, development and assimilation into practice. The Central Council for Education began its most recent review process in 2014, described in Chapter 1, and dissemination of the new curriculum will start with kindergarten reforms in 2018 and end with upper secondary education implementation in 2022. The shared expectation across the main stakeholder groups that change will take place provides a good starting point for the reform.

Schools are expected to develop a locally relevant curriculum that reflects the standards set in the National Curriculum Standards and pursues the goals specified in the Basic Act on Education. MEXT also provides supplementary guidance to aid consistency in interpretation of national documents. The National Institute for Educational Policy Research (NIER) conducts a National Curriculum Standards Implementation Survey to help schools formulate, offer, and improve their educational curricula in accordance with national requirements. In addition, each board of education has an assigned supervisor of school education who provides guidance and advice on education courses, learning instructions and other matters concerning school education. The Ordinance for Enforcement of the School Education Law stipulates annual standard school hours for each subject. The specific amount of time for teaching is decided in each school, taking into account the characteristics of the communities, schools and students, thus allowing scope for local determination of timetables. Japan is therefore seeking to promote national consistency while encouraging local autonomy within defined parameters set by the National Curriculum Standards. The policy intention is to go further in establishing "an environment to encourage originality and ingenuity in local regions." (MEXT, 2016[3])

Piloting and review processes already exist in Japan

At the local level, schools are required by law to conduct and publish their own self-assessments of overall school processes, and also commonly follow a PDCA (plan/do/check/act) cycle of development and implementation, which was in evidence during the review visit. Lesson study is a particular and widely respected characteristic of Japanese teaching, which facilitates improvement through collaborative reflection and networking around the effectiveness of identified teaching approaches. Operating on a team basis, teachers prepare and analyse teaching materials and methods and then apply the approach in their teaching. The next stage involves reflection and discussion on the impact of the lesson on students. The effectiveness of lesson study both encourages and is enhanced by a culture of collaboration among teachers and others.

More generally, the established network of Research and Development schools, which are usually linked with universities, develops and evaluates new approaches to the curriculum and teaching and links with other schools. Staff are also encouraged to publish support materials, such as lesson plans. This network of schools provides a valuable bridge between policy and practice.

Curriculum reforms are also monitored through the NIER National Curriculum Standards Implementation Survey, and MEXT also conducts a biennial survey of all public primary and lower secondary schools on the ways in which the school curriculum is being applied. The results of these processes contribute to the evidence of the success of reform and provide signposts towards future development.

Overwhelmed teaching staff might hinder effective reform implementation

There are concerns among some stakeholders that the reform programme will prove too demanding for schools and teachers. Teachers' unions, for example, believe that the accumulation of reforms is likely to lead to overload for the already hard-pressed teaching profession. New content and more interactive teaching methods are seen as significant additional pressures. It will be important to clearly communicate the importance of the proposed changes, secure support for their implementation from those who will have to make them work effectively, and address the implications for successful implementation.

Japan has among the highest proportion of staff resisting change, according to principals (38%, compared to the OECD average of 30%) (OECD, 2016[17]). In addition, the accountability of upper secondary schools in Japan is based on the share of students who are accepted by top universities. School principals and teachers, explicitly or implicitly supported by parents, may thus be reluctant to comply with the reform, especially if high-stakes examinations do not reflect the new curriculum requirements. While public comments were integrated during the design of the reform, that consultation will not guarantee successful and sustained implementation if the nature and extent of the reform programme as a whole is not endorsed by stakeholders.

Leadership, particularly pedagogical leadership, has also been demonstrated to play a role in successful reform and in school improvement overall (Leithwood, Harris and Hopkins, 2008[26]; Pont, Nusche and Moorman, 2008[27]; Leithwood and Day, 2008[28]; Donaldson, 2011[29]; Branch, Hanushek and Rivkin, 2012[30]). While schools in Japan have high levels of autonomy in curriculum and assessment, school principals scored below the OECD average in the index of instructional leadership (OECD, 2016[17]), and there appears to be a high turnover of principals' service in any one school. Leadership at all levels needs to understand, engage with and support the reform, and have the capability to bring about

the desired changes in classroom practices. The challenge will be particularly strong for leaders in secondary schools, where the pressures to prepare students for high-stakes examinations with an emphasis on content are greater than in primary schools. However, more positively, discussions during the review suggested that there is broad support among many leaders for the direction of the reform and its possible benefits.

The 2016 OECD report *Governing Education in a Complex World* suggests that: "A key element of successful policy reform implementation is ensuring that local stakeholders have sufficient capacity […] In particular, they need adequate knowledge of educational policy goals and consequences, the ownership and willingness to make the change, and the tools to implement the reform as planned." (OECD, 2016[4]) Successful implementation of the Japanese education reform programme will require careful analysis of the full meaning and implications of the enhanced approach to teaching and learning for schools and teachers.

A further challenge relates to the apparent implications of the length of the current curriculum reform cycle compared to the fast pace of change in the external environment. Some commentators have referred to a conservative approach to educational change in Japan (Hood, 2001[31]). However, the OECD has more recently noted that "Japan has already seen a significant shift from one of the more centralised to one of the more decentralised education systems." (OECD, 2012[5]) Hálász confirms this view in his analysis of possible messages from the OECD-Tohoku School Project that followed the catastrophe in that region in 2011. He notes that the Japanese education system is governed in a much less centralised way than most external observers would think, with local administrators having quite large discretion to use specific solutions to specific local problems (Hálász, 2013[1]).

To achieve both consistency and flexibility in the ways in which the current reform programme is realised in practice, MEXT will have to set the strategic direction for local authorities and schools in ways that allow sufficient scope for them to respond to emerging needs without having to wait for the next stage in the formal reform cycle. It will, therefore, be important to ensure that the evaluation framework continues to monitor ongoing implementation of changes to practice and that quick action is taken to respond to evidence of need for adjustments.

Additional assessment expertise is required

International analyses of curriculum development and implementation highlight the importance of distinguishing between the formal curriculum outlined in policy documents and the enacted curriculum that learners actually experience. One of the most important modifiers of curriculum intentions is the way in which learning is assessed. In many countries, both external and classroom-based assessments have remained focused primarily on reproducing knowledge and applying basic skills, with less attention paid to measuring complex competencies (OECD, 2013[32]). Pellegrino highlights the essential role of formative assessment in the kind of deeper learning envisaged in the Japanese reforms. However, he also identifies the challenges in going beyond more traditional forms of formative assessment. In addition to psychometric complexities, he notes significant implications for the expertise and capacity of teachers and administrators (Pellegrino, 2017[20]):

> In the areas of teacher education and professional development, current systems and programmes will require major changes if they are to support teaching that encourages deeper learning and the development of

> transferable knowledge and skills. Changes will need to be made not only in the conceptions of what constitutes effective professional practice but also in the purposes, structure and organisation of pre-service and professional learning opportunities (Darling-Hammond, 2006; Garrick and Rhodes, 2000; Lampert, 2010; Webster-Wright, 2009). For example, Windschitl (2009) proposed that developing 21st century competencies in the context of science will require ambitious new teaching approaches that will be unlike the science instruction that most teachers have participated in or even witnessed.

Similar issues are identified in the 2013 OECD publication, *Synergies for Better Learning: An International Perspective on Evaluation and Assessment* (OECD, 2013[32]).

Within the broad parameters set by the National Curriculum Standards (education objectives, broad content, time allocation and course structure on a subject-by-subject basis…), the freedom accorded to Japanese schools on methods of assessment allows them to select and apply approaches that are more closely tailored to the nature of learning and teaching in each school. To achieve the changes envisaged in the curriculum reform, this diversity among schools must be taken into account when developing new practices in assessment. The Japanese reform programme faces the task of integrating assessment into its framework in ways that promote valid approaches to assessing the creativity, problem-solving skills and independent learning that underpin the reform's objectives. If assessment practices do not reflect national standards, there will be a lack of valid evidence upon which to judge how well or to what extent students' learning is meeting expectations.

Japanese students participate in high-stakes testing as they progress towards the latter stages of mandatory education and beyond. Tests that emphasise memorising facts and mastering procedures, rather than analytical thinking, creativity and the capacity for innovation will give rise to teaching and learning that reflects limited learning of that nature. An increasingly strong focus on teaching to the test can lead to a narrowing of the curriculum. The importance of these tests in shaping the educational experience of Japanese students in the latter years of schooling should not be underestimated.

The high-stakes nature of entrance tests (to upper secondary schools or universities for instance) can also have a powerful effect on students' and parents' attitudes towards education. Jones (2011[15]) cites Japan's share of students attending after-school lessons as one of the highest in the OECD. While he says that "the growing investment in jukus suggests that they positively influence students' school performance and their success rate on school entrance exams … [and] they may also contribute to Japan's results on the PISA assessments", he identifies a number of possible negative effects. These include exacerbating inequality and imposing a heavy financial burden on families due to the high costs of *jukus* and reducing leisure time, thereby undermining well-rounded development for children.

The government has recognised the importance of aligning future high-stakes testing with its new curriculum goals. MEXT has established a Council for Reform on the System of Articulation of High Schools and Universities, which has developed practical proposals to promote alignment of university entrance exams with the reform of the school curriculum. However, creating appropriate instruments will be complex, and there are likely to be transition issues between the former and the new curriculum.

If future high-stakes tests do not give due weight to the three pillars of the proposed curriculum reform, students are likely to experience a curriculum that is much more limited than the reform intends.

Policy recommendations: *Prioritise implementation of the curriculum reform*

Align the key factors that influence implementation and further encourage local responsiveness

Successful reform must take into account interactions across the critical interdependent factors and stakeholders. Linear approaches to reform are likely to have limited impact in plural environments with varied levels of decision-making, diverse forms and sources of information, and established norms of practice and success. Increasingly, the nature and pace of change in the external environment can overtake sequentially planned reform programmes. It is important that feedback loops allow modifications to be put in place as reform is implemented (Blanchenay and Burns, 2016[33]).

Generally, school improvement reforms that focus on promoting better student learning have had success when the reforms cover a range of complementary areas that support the core reform, including:

- targeting classroom practice directly through the introduction of new curricula, a focus on pedagogy, and constructive use of assessment data,
- focusing directly on the organisation and leadership of schools, together with relevant professional development to build teachers' confidence and capacity,
- aligning policy with outside factors, such as external pressure and support, and well-judged timelines for implementation (OECD, 2015[34]).

Selected curriculum reform examples shed light on the need for complementarity and alignment in the reform process:

- In Finland, the development of the national curriculum has been used to steer overall policy direction and set broad frameworks that local municipalities and schools adapt to their own context (Hargreaves, Hálász and Pont, 2008[35]). Curriculum reforms are undertaken approximately every ten years and are informed by a national consultation. The current comprehensive curriculum reform aims to modernise teaching and learning through the use of new pedagogies, developing new learning environments and promoting a new school culture. The factors taken into account in the overall strategy include: clarifying the vision; determining the actions required to develop the curriculum; identifying the new or enhanced skills required for teachers; and providing standards to clarify the curriculum to practitioners.
- Like Japan, Wales is currently engaged in a major reform of its curriculum that is geared towards 21st century competencies. The development and implementation strategy recognises the importance of alignment across key dependencies. Reform of the Welsh school curriculum is thus accompanied by developments in the professional learning of teachers and leaders and the establishment of a constructive accountability culture (Donaldson, 2015[23]; OECD, 2017[36]). The Welsh Government has also recognised that successful and sustained realisation of its ambitious and radical aims will require a move away from a centrally-driven model of change to one that promotes ownership locally, through the devolution

of key aspects of development to the level of local authorities and schools. To ensure effective implementation at the school level, a particular focus on the role of school leaders aims to ensure that they are well versed in the implementation of the curriculum, in the specific training required for teachers and in providing support to introduce learning and teaching that aligns to the curriculum (Welsh Government, 2016[37]).

- In Australia, the major programme of curriculum reform that followed the Melbourne Declaration on Education Goals for Young Australians in December 2008 encompassed ongoing curriculum review, a much stronger focus on professional learning for teachers and leaders and an improved and transparent approach to evaluation and assessment. The aligned nature of the programme was reflected in the leadership role of the Ministerial Council on Education, Early Childhood Development and Youth Affairs. It has established the Australian Curriculum, Assessment and Reporting Authority, a dedicated curriculum and assessment co-ordination and review body, and the Australian Institute of Teaching and School Leadership, which is charged with promoting excellence in teaching and school leadership.

A number of countries are seeking to establish local ownership of reform and to create a degree of agility within the reform cycle:

- Singapore pursues a strategy of "centralised decentralisation", resolving the tensions between maintaining national consistency while encouraging local diversity and creativity. Policy expectations are set nationally, while schools are expected to interpret policy in ways that meet strategic national requirements but also match local needs. Ng describes the system in Singapore as being "tight at the strategic level and empowering at the tactical level" (Ng, 2017[38]).
- In Finland, a consistently high-performing country in international surveys of student performance, the approach to school governance combines national strategic leadership with significant local autonomy. Finland places a high degree of trust in its well-qualified and highly-regarded teaching profession, with limited external accountability. While the National Framework Curriculum sets the context in terms of guidance and regulation, it does not specify detailed standards or intended learning outcomes. Curriculum planning takes place at the level of schools and teachers.

Japan's policy of giving greater freedom to prefectures, municipalities and schools within a framework of clear national direction provides scope to combine strategic direction with local creativity and responsiveness. The established leadership role of MEXT, allied with the policy moves towards greater decentralisation, presents both opportunities and challenges for future curriculum reform in Japan. As the reform moves from policy to practice, it will be important to maintain the commitment to greater local ownership and to align significant developments in building capacity with the pace of implementation.

In addition, for monitoring purposes, communication must be clear on how school progress in the reform implementation should be reported to prefectures (and other parts of the system), the data to be provided and the areas on which schools will receive feedback. This can include school reporting, improvement planning, performance management and interactions with superiors, peers and other staff.

Ensure this positive curriculum reform also encompasses new priorities

Increasingly, education systems have introduced curricular reforms that focus on combining knowledge, skills and values. Most present a national vision that describes the characteristics they aspire to develop in young people, such as confidence, connectedness, lifelong learning and innovative dispositions. New Zealand's national learning framework, for example, has an overall vision for young people to be confident, connected, actively involved and lifelong learners, which is then elaborated in terms of values, principles, key competencies and learning areas.

It is important for the curriculum to also take into account or integrate additional educational issues in the country, as evidenced by the plan to enhance initial training of teachers in certain topics (MEXT, 2016[3]). For example, the development of digital skills and/or foreign language learning must not be simply add-ons to already crowded programmes.

- Singapore's education system is in transition to ensure that curriculum, pedagogy and assessments work together to develop complex skills required for the 21st century. Since 2005, it has followed a strategy of "Teach Less, Learn More" with less dependency on rote learning, repetitive tests and standardised instruction (Ng, 2017[38]). Its 21st Century Competencies Framework emphasises values of respect, responsibility, resilience, integrity, care and harmony. These values are embedded in every subject, with a particular focus on character and citizenship education. This is in addition to setting high standards, focused on curriculum development in mathematics, science, technical education and languages, and further work to ensure that teachers have a strong background in these subjects and are pedagogically well prepared to teach them. The curriculum as a whole is designed to nurture each student as a confident person, a self-directed learner, a concerned citizen and an active contributor.
- Scotland (United Kingdom) has been developing a curriculum based on the development of four capacities in its young people. The goal is that through their school experience, young people should receive a broad general education that will promote a holistic understanding of what it means "to be a young Scot growing up in today's world". More specifically, the aim is that they should become successful learners, confident individuals, effective contributors and responsible learners. The curriculum is structured in six areas, while literacy, numeracy and health and well-being are expected to be developed across teaching and learning. The approach builds on the broad shape of the existing curriculum, but it sets new priorities for the elaboration of content and the classroom experience of students. A recent OECD review found it to be an important and coherent reform (OECD, 2015[39]).
- British Columbia (Canada) is developing a concept-based, competency-driven model. Core competencies, together with literacy, numeracy and essential content and concepts are at the centre of the new curriculum. Its "know-do-understand" approach reflects content, curricular competencies and a structure based on "big ideas" (generalisations, principles and the key concepts important in an area of learning). Detailed curriculum descriptors for each subject are available on line[4] with related instructional examples.

The reformed curriculum in Japan maintains the broad direction and nature of the curriculum as it has developed over the last twenty years, and some of the newly

introduced pedagogical features are already in place in classroom practice. However, it includes important new elements, both in content and in teaching and learning approaches. It will be important to take into account additional educational issues in the country, such as development of digital competence and proficiency in foreign languages. It will also be important to be clear about curriculum priorities and what might be perceived as competing demands.

Align both formative and summative assessments to the new curriculum

A number of countries have recognised the central role that assessment can play in embedding successful reform, but also recognise how assessment can undermine reform.

- New Zealand sees assessment as integral to effective teaching and learning and formative assessment as central to its overall assessment strategy. Schools are expected to use a range of assessment practices and multiple sources of evidence to measure students' progress in relation to national standards. Students are actively involved in assessment and are expected to regulate their own learning through self-assessment. The *OECD Review of Evaluation and Assessment in New Zealand* concluded that "… student assessment of learning is part of teachers' professional learning, which in turn makes teachers' professional judgement increasingly suited to support students' learning". (Nusche et al., 2012[40])
- Singapore has adopted a holistic assessment approach that gathers evidence about a range of aspects of a child's development. Parents are given a profile of their child that reflects this broader range of assessment evidence.
- Current reform in Wales (United Kingdom) places assessment at the heart of an ambitious curriculum reform programme that is also seeking to promote creativity and problem-solving (Donaldson, 2015[23]). The Welsh Government has recognised that too strong an emphasis on assessment for accountability can compromise its central, formative role in learning and teaching (Welsh Government, 2016[37]).

If curriculum changes are to take root, alignment of assessment practice to support the intentions of reform should be one of the main priorities for the professional development of teachers. Assessment of deep learning is complex and teachers may not have the necessary knowledge and skills to fully assess students' progress in such areas as creativity, problem-solving or independent learning. To ensure teachers are well-prepared on this front, systematic training on how to assess students according to the new curriculum should be available for every teacher.

A number of countries are attempting to develop approaches to assessment that support schools and teachers in responding to the learning needs of their students.

- In Finland, reading, mathematics, and science as well as other subjects identified on the basis of needs analysis are evaluated in national sample assessments in three-year or four-year cycles. Evaluation also assesses a student's capacity for self-motivated learning, problem-solving and the ability to evaluate (Sahlberg, 2011[41]; OECD, 2013[32]). The explicit purpose of these tests is to inform policy and practice in ways that will improve teachers' ability to match learning and teaching to students' needs.

- Similarly, in New Zealand, the National Education Monitoring Project, established in 1995 (replaced in 2010 by the National Monitoring Study of Student Achievement), covered all curriculum areas on a four-year cycle and incorporated both competency and values elements. It was designed to provide a system-level overview of learning outcomes at Grades 4 and 8 to inform policy and practice and to provide assurance to society more generally about trends in the performance of New Zealand students. The assessment methods and items used to measure more complex learning outcomes in these national surveys could serve as useful examples for teachers.
- In Denmark, computer-based adaptive testing was introduced in 2010 to provide diagnostic analyses of students' learning and allow teachers to address learning needs quickly and in a targeted manner.

The extent to which the ambitions of Japan's curriculum reform are realised in practice for its students will be strongly influenced by the ways in which learning outcomes are assessed. An OECD review of evaluation and assessment (OECD, 2013[32]) recommended that the development of teachers' expertise in assessment should be a priority if curriculum goals are to be pursued successfully. The increased emphasis on deep learning will require further development of the assessment skills of Japanese teachers.

Research also emphasises the powerful effect of high-stakes tests on teaching and learning, particularly in upper secondary schools. If these tests, including university entrance examinations, do not reflect the central learning goals of the curricular reform, then real change is likely to be minimal (Posner, 1994[42]; Torrance, 1996[43]; Barnes, Clarke and Stephens, 2000[44]):

- In China, different versions of the College English Teaching Syllabus (1985/1986, 1999) and the College English Curriculum Requirements (2007) have framed unified syllabus and assessment practices in teaching English. Chen and Klenowski (2009[45]) detail how the successive versions of assessments tried to correct a system with "low efficiency and effectiveness" in order to incentivise teachers to teach the actual curriculum, and not only to the test.
- In the United States, Supovitz reviewed 20 years of assessment practices to document how high-stakes tests have become a widely utilised and relatively inexpensive American federal and state policy instrument to stimulate change in districts, schools, and classrooms (Supovitz, 2009[46]). These assessments do motivate teachers and administrators to change their instructional practices and align their efforts with the high-stakes exams. However, Supovitz remarks that the changes they motivate might only result in superficial adjustments.
- In Finland, there are no standardised tests prior to the National Matriculation Examination administered as students leave upper secondary school. Sahlberg (2011[41]) refers to empirical research findings (Häivälä, 2009[47]) that raise issues about limiting backwash effects from the final examination on teaching in upper secondary schools.

The established impact of competitive tests and examinations on teaching and learning in Japanese secondary schools highlights the need to align the content of these assessments with the new curriculum goals.

Ensure that professional development for teachers and resources for teaching and learning are an integral part of the implementation strategy

Significant curricular reform implies investment in professional development and support. Significant reform is likely to require that teachers not only change their roles and take on increased responsibility, but also that they modify attitudes and beliefs. They therefore require support in understanding both the requirements of the new curriculum and the implications of proposed changes for their practice (Kennedy and Kennedy, 1996[48]). New approaches to teaching require teachers to become learners, and teacher professional development is crucial (Michael, 2006[49]). It is therefore important to integrate and invest in teacher training when rolling out the curriculum reform, as that will determine its success.

Research from nine case studies (Anderson, 1995[50]) highlights the dilemmas facing practitioners seeking to implement a new pedagogical approach to education. Overall, the conclusions of the research emphasise the need to provide significant support to ensure that teachers' values, beliefs and competencies are aligned with the requirements of the reform. The role of students and the nature of the work expected from them in the new system must also be clearly defined, since they will progressively have greater ownership of their own learning, as the focus shifts from passive learning to active learning.

The OECD Initial Teacher Preparation study has also highlighted the need to invest in initial teacher education and induction to ensure that candidate teachers are also able to adapt to the new curriculum. A potential incentive to ensure the knowledge, competencies and values of teacher candidates in ITE are in line with the new curriculum would be to align national examinations for teachers and accreditation standards for ITE programmes.

In analysing the Finnish case of active learning in teacher education, Niemi (2002[51]) underlines pitfalls for both students and teachers associated with a lack of knowledge about and familiarity with changes to learning methods and strategies. Students need to get used to these methods, especially to the learning strategies required to seek and process knowledge. They also need more knowledge of how to develop their own learning, as well as of the social skills called for in this type of learning. Teachers need encouragement to sustain the approach and more opportunities to practice it during teacher education. The study concludes that building communities of teachers and fostering collaborative working relationships may help to better root active learning in the school culture.

Hargreaves (1996[52]) points out that schools, as well as teacher educational institutions, rely more on experience and intuition than research and the road to significant changes in practice is often a long one. In addition, although results may not be immediately apparent, they may nonetheless have an indirect impact. In a literature review on active learning, Prince (2004[53]) concludes that teachers who adopt problem-based-learning are unlikely to see improvements in student test scores, but are likely to see a positive influence on student attitudes and study habits. Evidence from the literature suggests that active learning methods will help students to retain information longer and perhaps to develop enhanced critical thinking and problem-solving skills.

Some relevant country practices illustrate how support for teachers and school leaders, including investment in professional development, can be used effectively to support curriculum reform.

- In Wales (United Kingdom), the current curriculum reform is associated with an effort to raise the level of initial teacher education and offer lifelong opportunities

for professional development across the career stages (Furlong, 2015[54]). The new Professional Teaching and Leadership Standards, implemented in 2016, reflect the vision in the curriculum reform and aim to develop teaching and leadership capacity. The standards promote professionalism in the workforce. Teachers are expected to strive to develop and grow their expertise, take responsibility for their own development and seek better ways to improve the life chances of children (OECD, 2017[36]).

- After a public consultation in 2002, Scotland (United Kingdom) developed the Curriculum for Excellence (CfE) as a coherent 3-18 curriculum. *Teaching Scotland's Future*, a review of teacher education in Scotland, (2011[29]) provides a vision of the future teaching profession in Scotland that was accepted by the Scottish Government. In particular, it offers a series of measures to answer the growing needs of teachers since CfE was implemented. An important feature was the creation in 2014 of the Scottish College for Teaching and Leadership, a government agency that provides support and coherence to leadership development across the education system at all levels of responsibility.

Implementation of new curricula has also raised the issue of the use of different types of media, including both ICT and printed materials in the learning process. Despite excellent broadband infrastructure, Japanese schools are not rich in the application of ICT to teaching and learning (Figure 2.4), and more than one in four teachers reported a high level of need for professional development in the area of ICT skills for teaching (OECD, 2015[16]).

Schools and teachers are now increasingly using a range of materials, combining print and technology that can promote more active learning by students. The 2015 OECD report, *Students, Computers and Learning: Making the Connection*, (OECD, 2015[16]) highlighted the role of technology in significantly expanding students' access to knowledge. In the foreword, Andreas Schleicher asks: "Why should students be limited to a textbook that was printed two years ago, and maybe designed ten years ago, when they could have access to the world's best and most up-to-date textbook?" He goes on to point out that technology allows teachers and students to access specialised materials well beyond textbooks, in multiple formats, with few time and space constraints. Technology provides great platforms for collaboration in knowledge creation, where teachers can share and enrich teaching materials. Perhaps most importantly, technology can support new pedagogies that focus on learners as active participants, with tools for inquiry-based pedagogies and collaborative workspaces. For example, technology can enhance experiential learning, foster project-based and inquiry-based pedagogies, facilitate hands-on activities and co-operative learning, and deliver formative real-time assessment. It can also support learning and teaching communities with new tools, such as remote and virtual labs, highly interactive non-linear courseware based on state-of-the-art instructional design, sophisticated software for experimentation and simulation, social media and serious games' technology.

The introduction of new aspects to the curriculum based on skills, knowledge and values provides an opportunity to explore the use of different teaching and learning materials for schools, teachers and students, many involving ICT. Tablet and hand-held computing are featuring increasingly across education systems in the OECD. Used imaginatively, tablet computers give greater flexibility and are more amenable to change and improvement in fast-moving environments. However, the evidence on the use of ICT in education more broadly is not clear. It offers potential and promise, but there are challenges relating to the

disruption of existing traditional teaching and learning practices, costs, training of teachers, equity and issues around data privacy and security. According to an international study for policy makers on the use of ICT in education (Trucano, 2016[55]), policy makers need to carefully consider how best to utilise and integrate ICT, especially in the context of a new curriculum.

- In China, an experiment carried out in 166 primary schools showed that using an e-book or printed book made no significant difference to students' reading accuracy. However, the tracking technique of the tablet can provide detailed logs about the actual learning processes and allow further assistance to individual learners. This study concludes that a tailor-made e-book-learning system could achieve a more personalised learning experience for primary school students (Huang et al., 2012[56]).
- ICT is represented in two ways in the Australian Curriculum, within the curriculum for the technologies learning area and through the general ICT capability embedded across all learning areas of the curriculum. The learning continuum for the general ICT capability describes the knowledge, skills, behaviours and dispositions that students can reasonably be expected to develop at particular stages of schooling. The framework guides teachers and industry in creating the educational resources that promote proficiency in the use of electronic sources of information, and helps to ensure that students develop useful skills in their time on line, such as planning a search, locating information on a website, evaluating the usefulness of information, and assessing the credibility of sources (OECD, 2015[16]).
- Wales has developed a Digital Competence Framework as the first element in its curriculum reform. The Framework[5] was developed by practitioners from pioneer schools chosen to help lead the development of the new curriculum, with the support of external experts. Through the four strands outlined below, it aims to encourage the development of digital competence across the curriculum:
    - Citizenship: identity, image and reputation; health and well-being; digital rights, licensing and ownership; and online behaviour and cyberbullying.
    - Interacting and collaborating: communication; collaboration; and storing and sharing.
    - Producing: planning, sourcing and searching; creating; and evaluating and improving.
    - Data and computational thinking: problem-solving and modelling; and data and information literacy.

There remains scope for more imaginative use of ICT to support the ambitious education reform programme in Japan. Continued reliance on print-based textbooks, for example, sets their content at the date of publication and limits the scope for more interactive styles of knowledge and skill development.

In addition to capacity, the success of curriculum reforms can depend on the organisation of the workload for teachers and staff in schools. In many countries, workload has become a central issue for the teaching profession, and it is becoming a concern for governments. Countries appear to be considering reorganising working time for teaching staff, reducing class sizes, hiring additional teachers or other approaches to alleviate the burden of teachers and ensure quality teaching (OECD, 2015[57]).

- A 2014 Canadian report highlighted the struggle teachers face in terms of workload. On average, teachers in this pan-northern study are found to work 50-55 hours a week on tasks as diverse as teaching, administrative and clerical work and extra-curricular activities. With little or no time remaining during the day for lesson planning or marking, those are done during evening or weekends, which can lead to stress and burnout (Northwest Territories Teachers' Association, 2014[58]).
- In England (United Kingdom), the rising concern about teachers' workload drove the government to launch the Workload Challenge (2014), a survey focusing on three areas of inquiry: 1) reducing unnecessary or unproductive tasks; 2) identifying strategies that work in schools to manage workload; and 3) defining what the government and schools can do to minimise workload. The survey revealed that marking, planning, and managing data were especially wasteful in teaching resources. In 2015, the government made the commitment to:
  - give schools more time to prepare for any government change made to accountability, the curriculum or qualifications,
  - share examples of successful practices schools have used to deal with teaching tasks that can cause unnecessary workload,
  - track teacher workload by running a large-scale survey every two years (Department for Education, 2015).

The proposed reforms in Japan are likely to have a significant impact on the experience and learning of students. The implications for cumulative demands on teachers' time, for professional development and for supporting teaching and learning resources should be planned as an integral part of the implementation strategy.

MEXT is aware of the need to address workload issues, and it is important for Japan to consider this as part of its curriculum reform. In that regard, MEXT has informed the OECD that there have been proposals from the Central Council for Education to reduce work pressures on teachers by adding more teachers, promoting work efficiency and making use of external staff (MEXT, 2017[59]). Finding complementary arrangements or options to alleviate the burden on teachers and ensure that they have enough time for training is discussed in Chapter 3 of this report.

Notes

[1] More broadly, the OECD is developing a framework focused on 21st century skills through its Education 2030 Project (OECD, 2016). Japan has been participating in this project and has shared the concept of *chi, toku, tai* (knowledge, attitudes, values and skills) in its curriculum.

[2] For more detailed data, see *Teachers in Japan: A highly productive but fragile population* and Figure 3.3, *Working hours of lower secondary education teachers, 2013*.

[3] National schools are public schools where the book selection is done by the school principal and not by the Board of Education.

[4] https://curriculum.gov.bc.ca/.

[5] http://learning.gov.wales/resources/browse-all/digital-competence-framework/?lang=en.

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Chapter 3. Into the future: Preserving holistic education and school-community relationships

This chapter analyses Japan's unique system of holistic education and explores ways to sustain it to both support curriculum reform and respond to challenges in the areas of socio-demographic change, student well-being and teacher workload.

Japan has targeted efforts in the area of school management and school-community partnerships to support its holistic approach, in which schools engage students in practices such as serving lunch, working together to clean their school or providing extracurricular activities. International evidence points to the role school-community partnerships and effective management structures and leadership can play in enhancing school outcomes, but it also points to potential inequalities when such additional services are not supported for the more disadvantaged.

To effectively sustain the holistic model, Japan should enhance school organisation by ensuring effective school management teams and leadership and should clarify the focus of school-community partnerships. To prevent and mitigate potential inequalities, Japan should support partnerships with disadvantaged communities as an alternative to shadow education.

Context and main features

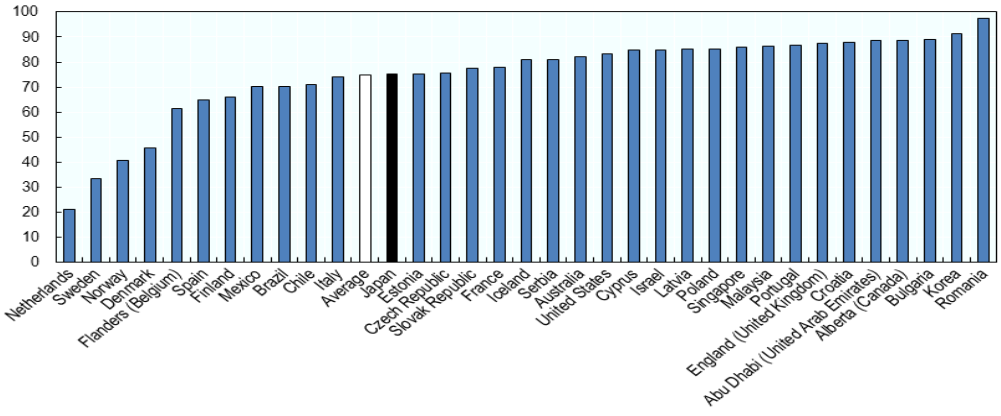
Japanese school education is about to undergo extensive reforms to improve the type of learning in which students engage. In conjunction with these reforms, there are efforts to improve the quality and management of schools and build more effective school-community partnerships. These initiatives could be ways to support the holistic approach to education, respond to sustainability and teacher workload challenges, nurture student competency and promote student well-being.

The OECD Teaching and Learning International Survey (TALIS) suggests that three-quarters of lower secondary teachers in Japan already work in schools where principals report high levels of co-operation between their school and the local community (Figure 3.1). The Japanese government has launched a series of initiatives to further strengthen the existing partnerships and to respond to demographic and social challenges, the need to develop new skills and the heavy teacher workload, including:

- establishing the Community Co-operation Network for Learning and Education to promote activities in which communities and schools co-operate
- developing school management councils that include community representatives
- introducing specialist staff such as counsellors in schools as part of the *Team Gakkou* [school as a team] initiative.

Figure 3.1. School-community co-operation in lower secondary schools, 2013

Percentage of lower secondary education teachers whose school principal reports that there is a high level of co-operation between the school and the local community



Notes: Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: OECD (2014[1]), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en, Table 2.22.

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These practices and partnerships could significantly contribute to supporting the holistic approach to education in Japan. Community partners can bring new or additional resources to schools, enrich and support school staff, enhance parental engagement and complement the curriculum through mentoring or providing links to local communities. They can also offer students opportunities to address social and environmental problems or community needs. But this will only occur if reforms are designed with a view to supporting holistic education, interact seamlessly with other reforms across the system and are effectively implemented.

Strengths and challenges

Sustainability of holistic education, a key objective for the education system

An objective of many efforts to improve school-community relationships is to create a more well-rounded or holistic education for students. For many years, Japan has built and leveraged a unique model of holistic education. It forms the springboard and a solid base on which to build and reinforce management and school-community partnerships.

The OECD review team observes that teaching in Japanese schools takes a holistic approach that is not limited to academic content, with students involved in a broad range of activities. To achieve this, schools engage in practices not seen in schools in most other parts of the OECD, such as serving their own lunches and working together to clean the school. These activities build a shared responsibility for the quality of the school and for education overall. In addition, schools conduct numerous extracurricular activities in academic, sporting, musical and other pursuits. These activities can lead to long school days for students, but they create schools that offer much more than traditional academic subjects, schools that develop the values and competencies that are increasingly required to nurture 21st century skills.

The transversal role adopted by teachers and the partnerships with communities have created the opportunity to strengthen the holistic model of education in Japanese schools. For example, through extracurricular activities, mentoring and academic support, these partnerships directly anchor the school in its local community, and help students develop strong ties to it. But societal and labour market changes, such as the sharp demographic decline in Japan and the rise in non-regular employment (refers usually to workers who do not enjoy employment security), could lead to significant changes in Japanese communities and weaken their contribution to the holistic model. Teachers' long working hours and the low level of leadership exerted by school principals (see next section) could also jeopardise how well schools are equipped to preserve the holistic features of education, especially at a time when a significant curriculum reform calls into question the traditional model of Japanese education. These limitations highlight not only the need for reforms and effective implementation, but also the opportunity to promote school-community partnerships as a response to the new challenges.

Distributed leadership and heavy workload for teaching staff

School leaders

According to the OECD Programme for International Student Assessment (PISA), the most effective schools are associated to principals who define, communicate and build consensus around the school's education goals, ensure that the curriculum and instructional practices are aligned with these goals, work to enhance teacher collaboration

and development, and foster healthy social relationships within the school's community (OECD, 2016[2]).

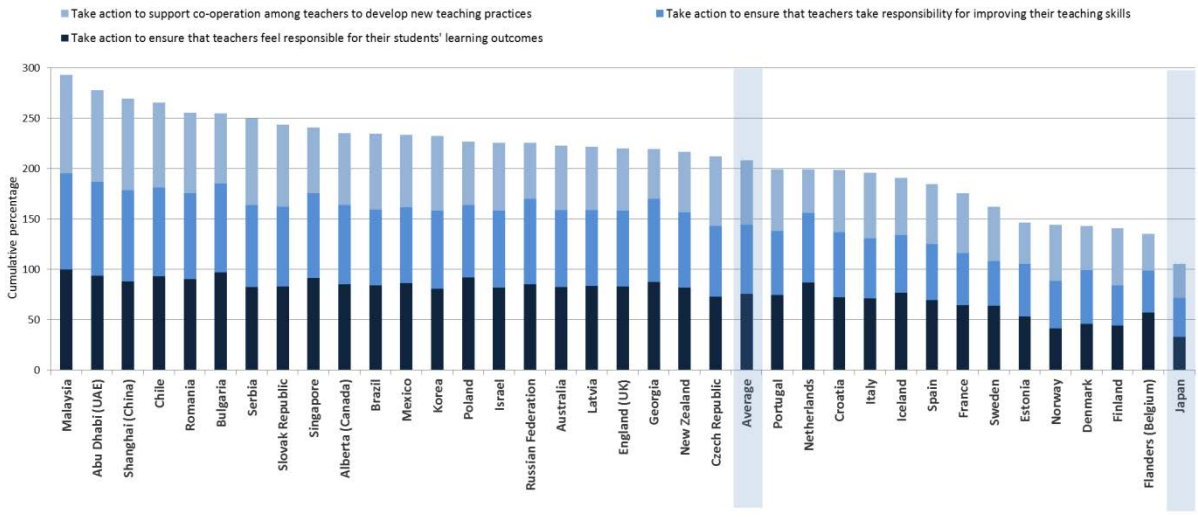
There is abundant evidence on the positive and indirect influence of school leaders on student outcomes (Robinson, Rowe and Lloyd, 2009[23]; Hallinger, 2014[24]; Branch, Hanushek and Rivkin, 2012[25]). Increasing empirical and international evidence suggests that, after the role of teachers, school leadership is key in establishing the environment for effective teaching and learning, leading schools and collaborating with and supporting teachers and the school community (Hattie, 2015[26]; Leithwood and Louis, 2011[27]; Robinson, Rowe and Lloyd, 2009[23]; Hallinger, 2014[24]). A study on the impact of school leaders in Texas by Branch, Hanushek and Rivkin (2012[25]) found that effective principals improve the results of all students in the school, and this effect increases with poverty rate. Furthermore, investing in school leadership appears to be an efficient policy investment, with a large multiplying effect, since school leaders have an indirect but significant effect on schooling, teachers, students and the educational community.

In Japan, the role of the school leader is diffused, and teachers take on greater responsibilities than in other countries, for example, in terms of instructional practices. Japan is a good illustration of the concept of distributed leadership, as detailed by Pont et al. (2008[3]).

International surveys led by the OECD cast light on the low-profile role endorsed by lower secondary school leaders in Japan. In PISA 2015, Japan scores the lowest on the index of instructional leadership (OECD, 2016[2]). It also scores in the last decile of the index of professional development leadership and teachers' participation leadership. According to self-reported data from the OECD Teaching and Learning International Survey (TALIS), Japanese school principals are less likely than their peers in other OECD countries to support teachers to improve their instruction (Figure 3.2).

Figure 3.2. Engagement in instructional leadership in lower secondary education, 2016

Percentage of lower secondary education principals who report having engaged "often" or "very often" in the following instructional leadership activities during the 12 months prior to the study



Source: OECD (2016[4]), *School Leadership for Learning: Insights from TALIS 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264258341-en, Figure 3.1.

StatLink http://dx.doi.org/10.1787/888933369579

Therefore, the amount of change required in schools due to the curriculum reform may be a direct challenge for school leaders who exert limited decision-making authority. Fashioning schools to undertake curricular reform, while preserving the holistic model creatively and strengthening school-community partnerships, requires effective school leaders who have the capability, mind-set, and power to drive school practices. In addition, there is a high turnover rate for school principals: between 3 and 5 years for upper secondary principals and 2.9 years for primary and lower secondary principals. (MEXT, 2011[5]) This frequent turnover, decided at the prefecture level according to the situation of schools and regions, limits the long-term prospects of school leaders in individual schools and constrains bonding initiatives between schools and communities, with potentially long-lasting effects.

However, all prefecture boards of education and most municipality boards implement leadership training. In addition to this territorial network of leadership training, the National Institute for School Teachers and Staff Development defines and implements leadership training for school leaders recommended by prefecture boards of education. This ensures homogeneity of training across the country.

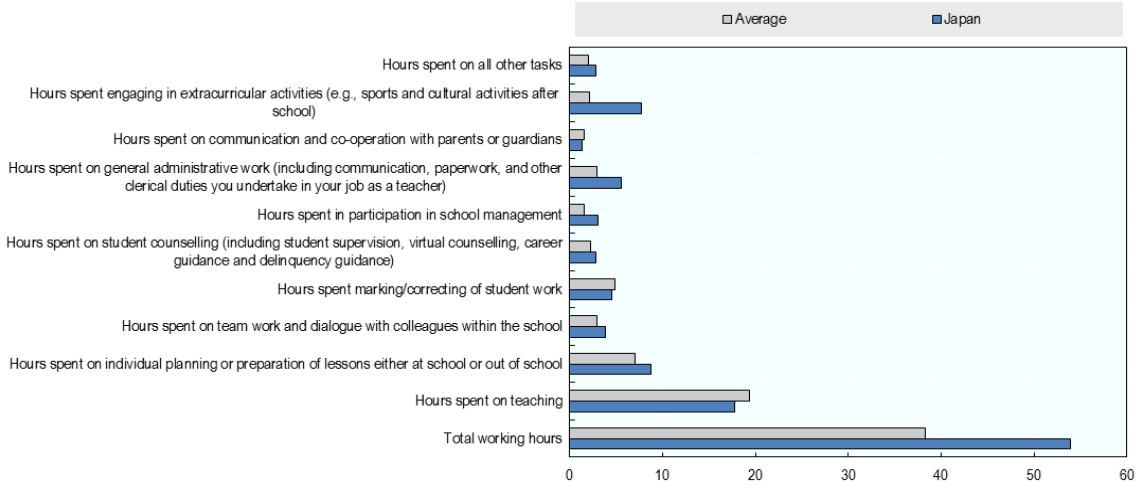
On the resource side, Japanese school leaders may not have the scope to change their school to better use the features of the local community. PISA data suggest that only 28% of the allocation of school resources depends on principals in Japan (compared to the average of 39% in OECD countries) (OECD, 2016[2]). This can prevent principals from further developing partnerships or lead them to rely on superficial ties with the local community.

Teachers

According to TALIS data, lower secondary teachers in Japan work more hours per week (54 hours) than any other teachers across participating countries (compared to the TALIS average of 38 hours) (Figure 3.3). But the amount of time they spend teaching (17.7 hours) is below the TALIS average (19.3 hours). As previously stated, this is because teachers in Japan contribute more than the average in leadership activities, such as participation in general administrative work (2.6 hours per week more than the TALIS average) or in school management (1.5 hours more per week) (OECD, 2014[1]). Japanese teachers especially stand out from their counterparts in the time they invest in extracurricular activities (7.7 hours, compared to the TALIS average of 2.1 hours) on tasks that are potentially strongly related to links with community (OECD, 2014[1]).

In Japan, the number of students who require extra support is increasing, and special needs education is an emerging issue. For instance, between 2004 and 2014, the number of students with Japanese citizenship who require Japanese-language support has more than doubled (an increase of 152%) (MEXT, 2016[6]). In addition, the forecast decline in the teaching labour force linked to demographic trends (MEXT, 2017[7]) may further exacerbate tensions concerning teachers' long working hours if the number of teachers were to decrease due to high levels of retirement.

Figure 3.3. Working hours of lower secondary education teachers, 2013



Source: OECD (2014[1]), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264196261-en, Table 6.12.

StatLink http://dx.doi.org/10.1787/888933790049

In that sense, transitioning into a new curriculum and sustaining the holistic education model should take into account the burden teachers are already carrying, between teaching, lesson planning, student and parent relations, and organising extracurricular activities. Finding arrangements and structures that can alleviate the burden, including having additional staff, such as teachers and/or administrative staff, and partnering with communities to organise extracurricular activities could help teachers to focus on the curriculum reform.

Multiple reforms attesting to strong political will

A number of reforms are underway to strengthen school-community partnerships and complement existing programs. The objectives of these reforms include:

- strengthening both schools and communities through effective partnerships,
- maintaining the holistic approach to children's education with support from the community,
- reducing work-loads and responsibilities for teachers and schools through partnerships that leverage greater engagement from parents and the community.

This requires revising and changing how schools operate and, particularly, how teachers work in schools. New roles will be created, and the responsibilities of teachers will have to change, at least to some extent. School leadership will have to evolve to develop and sustain school-community partnerships as part of the mandate. To be effective, school leaders and teachers will have to leverage their knowledge and understanding of students and their families.

Three reforms in particular aim to make the shifts required for effective school-community partnerships:

1. *Team Gakkou* [school as a team], a new reform that will change school management structures and operations,
2. the creation of community schools with new school councils that have been slowly implemented over the last decade or so,
3. *Chiiki Gakkou Kyoudou Honbu*, a collaborative network designed to promote collaboration between schools and local communities.

Team Gakkou

A reform of school management called *Team Gakkou* (school as a team) is in process to enhance a school management structure that can broaden leadership capacities to respond to diversified school issues. It proposes the establishment of a team system based on expertise, strengthening of the management function of schools and improvements to support teachers on issues of human resource development, health and training (Central Council for Education, 2015[8]). The development of *Team Gakkou* could consolidate a structure of school management that clarifies the role of principals and teachers and provides additional staff to support teachers and schools in the promotion of holistic education. By promoting role sharing between teaching staff and specialist staff as a team under the leadership of school principals, the teaching staff can focus more on guidance to students (MEXT, 2016[6]; Kurokawa, 2017[9]).

The term *Team Gakkou* was first advocated by the Headquarters for the Revitalisation of Education, an advisory body of the Liberal Democratic Party of Japan, in its proposal in May 2013. The Headquarters proposed "increasing schools' team power and allowing teachers to focus on students' education" by: 1) reorganising schools into more hierarchical organisations; 2) promoting smaller class sizes and deploying staff for specialised subjects, special education and the issue of bullying; 3) introducing 300 000 external personnel for specialised subjects, ethics education, club activities and instruction during weekends; 4) enhancing school-community partnerships; 5) redefining teachers' responsibilities and mobilising administrative staff; and 6) strengthening the distribution of leadership within schools.

Following this, in a report submitted in July 2014, the Council for the Implementation of Education Rebuilding at the Cabinet Secretariat (the Prime Minister's Office) also proposed enhancing schools' administrative systems, and establishing a system that allows deployment of specialist staff, such as school counsellors and school social workers (Kurokawa, 2017[9]). At that time, the Central Council for Education was also consulted on what should be *Team Gakkou* and school staff's responsibilities for future education. In September 2014, a working group was set up to answer these two questions.

In the budget for fiscal year 2015, MEXT allocated funds for school management functions in order to: 1) increase the placement of senior teachers in leadership positions; 2) improve staffing levels of teachers and other personnel including the deployment of school librarians, ICT experts, and other staff with specialist knowledge; 3) deploy more school counsellors and school social workers; and 4) make use of assistants to support learning and external mentors for sport activities.

In December 2015, the Central Council for Education proposed actions to address the issues of teachers' challenges and their working conditions, in a report entitled School as a Team: Improvement Measures. It proposed organising a framework necessary to realise *Team Gakkou* by allocating the teachers, personnel, and staff specialising in mental care, welfare and other relevant fields, and by improving schools' management functions (MEXT, 2016[6]).

In January 2016, MEXT announced the Plan for Creation of Next-Generation School and Communities, which included a proposal to reform the management structure of schools by: 1) increasing teaching staff; 2) establishing a team with school counsellors, school social workers, club activity advisors, nurses and special education staff; and 3) enhancing schools' managerial functions by introducing more middle managers and increasing administrative staff. Since the announcement of the Plan, the government has been revising laws and regulations to implement the initiative.

Community schools

In Japan, the term Community Schools is used to refer to public schools with school management councils. The Community School programme (the school management council system) is a framework designed to transform conventional schools into community-based schools that can be managed by teachers, local residents, parents, and other relevant parties working together. Adopting this system is expected to enable schools to reflect local residents' views and opinions in school management, thereby developing schools with distinctive features that reflect the creativity of local communities (MEXT, 2005[10]; MEXT, 2011[11]; MEXT, 2016[6]; MEXT, 2016[12]; National Commission on Educational Reform, 2000[13]; Hayashizaki, 2008[14]).

The Community School was first proposed in 2000 by the National Commission on Educational Reform, an advisory body to the Prime Minister, in its report "17 Proposals for Changing Education" (National Commission on Educational Reform, 2000). The Commission proposed promoting the establishment of alternative schools, including Community Schools, which it defined as public schools that involve communities in school management to reflect specific needs unique to each community. Ikuyo Kaneko, a member of the Commission, conceptualised the model of Community School based on the school council/board system in England and charter schools in the United States (Hayashizaki, 2008[14]; MEXT, 2011[11]).

In 2004, the Law concerning Organisation and Functions of Local Education Administration was amended, and the school management council system ("Community Schools") was established, enabling the participation of non-professionals education workers in school management (MEXT, 2005[10]). The School Management Councils, composed of parents, guardians and local residents, have the following three functions:

- To approve basic policies on school management compiled by the principal: The School Management Council is involved in formulating policy designed to improve the school with the principal and teachers and other personnel.
- To express opinions to boards of education or schools on matters concerning school management: The School Management Council is established as a consultative body in school management, and its members are therefore entitled to state their opinions on school management issues in general, not only on the school's basic policy on education.
- To express opinions to boards of education concerning the appointment of teachers and other personnel: The School Management Council is composed so as to be able to state its opinions directly to boards of education, which recruit teachers and other personnel, on personnel matters concerning teachers and other personnel.

Since the system began in 2004, the number of Community Schools has been increasing steadily. As of April 2016, 2 661 primary and lower secondary schools were operating as

Community Schools. This represents 9% of public schools, with great variation across regions. Almost 100% of the schools in Yamaguchi Prefecture and 43% of schools in Kyoto Prefecture were Community Schools, while Fukui Prefecture has not yet introduced the system, and Community Schools constitute less than 1% of public schools in several other prefectures (MEXT, 2016[12]). In 2015, however, the Central Council for Education formulated a proposed law to make Community Schools mandatory for every municipality. The law was amended and implementation began in April 2017. In addition, MEXT also increased the budget for the support programme targeting cities and prefectures in order to promote the Community School policy.

There also are an increasing number of schools with other types of management councils that allow parents and community members to participate in school management. In 2016, there were 6 814 schools with such councils, including Community Schools, compared to 2 944 in 2012 (MEXT, 2016[12]).

Collaborative development network

The Community Co-operation Network for Learning and Education (*Chiiki Gakkou Kyoudou Honbu*), launched by MEXT in 2016, is a system designed to promote collaboration between schools and local communities and encourage local residents and organisations to participate in an open network. (MEXT, 2016[6]; MEXT, 2016[12]; MEXT, 2016[15]; MEXT, 2016[16]).

The Network is based on a number of previous projects, including the following:

- The School Support Regional Headquarters initiative (*Gakkou Shien Chiiki Honbu*) was launched in 2008, with the aim of promoting the participation of local volunteers to support schools. The school support activities range from relatively easy tasks, such as patrolling school routes and tending school flower beds, to more systematic tasks, such as setting up a community centre within a school.
- The Programme to Promote After-School Classes for Children (*Houkago Kodomo Kyoushitsu*) was launched in 2007 to provide children with learning support and opportunities for various hands-on activities after school, with participation of community members.
- The Saturday Educational Activities project, launched in 2014, aims to provide children with educational activities on Saturdays, in partnership with community members and organisations.
- The Community Tutoring School for the Future project (*Chiiki Mirai Juku*), launched in 2015, is community-based learning support for lower and upper secondary education students who need learning assistance.

Table 3.1. Implementation of MEXT's school-community co-operation projects, 2016

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
National subsidies (in million JPY)	4 649	4 870	5 071	6 340	6 466
Number of School Support Regional Headquarters	3 036	3 527	3 746	4 146	4 527
Number of After-School Classes for Children	10 098	10 376	11 991	14 392	16 027
Number of schools providing Educational Activities on Saturdays	-	-	4 845	10 412	11 895
Number of Community Tutoring School for the Future (*Chiiki Mirai Juku*)	-	-	-	1 751	2 587

Source: MEXT (2016[15]), *Gakkou, katei, chiiki no renkei kyouryoku suishin jigyou oyobi chiiki no yutakana shakai shigen o katsuyou shita doyoubi no kyouiku shien taisei tou kouchiku jigyou jisshi joukyou* (Implementation status of the Promotion of Co-ordination and Collaboration among Schools, Families and Communities project and the Development of Educational Support System for Saturdays Based on Rich Social Resources of Communities project), http://manabi-mirai.mext.go.jp/assets/files/H28jissijoukyou/28jissijokyo.pdf.

By 2016, around 10 000 of the 29 453 public mandatory education schools in Japan (19 974 primary schools and 9 479 lower secondary schools) were working with about 4 500 School Support Regional Headquarters across the country. About 16 000 After-School Classes for Children were conducted at public primary schools (Table 3.1). In addition, Saturday educational support activities, carried out with the help of local residents and companies or other organisations, are conducted at about 12 000 public primary, lower and upper secondary schools (MEXT, 2016[12]; MEXT, 2016[15]). The newly launched Community Co-operation Network for Learning and Education is expected to allow comprehensive co-ordination of school-support activities by local residents that have been provided independently (MEXT, 2016[6]).

PISA 2015 confirmed that Japan is one of the leading countries in providing additional support to students. In Japan, 96% of students attend a school that provides a homework room (compared to the OECD average of 74%), and 80% of students attend a school where school staff help with homework (compared to the OECD average of 60%). According to principals' reports, 65% of students attend schools that offer extracurricular activities (compared to the OECD average of 57%). The most represented activities are, in descending order: sports, arts, volunteering and music activities (Table 3.2).

Table 3.2. Extracurricular activities offered at school, 2015

Less than half of students
From 50% to 75% of students
More than 75% of students

	Percentage of students in schools where the following extracurricular activities are offered						
	Band, orchestra or choir	School play or school musical	School yearbook, newspaper or magazine	Volunteering or service activities	Science competitions	Art club activities	Sports activities
Korea	86	55	85	100	86	97	99
United States	93	84	95	98	72	92	98
United Kingdom	96	88	78	91	72	94	100
New Zealand	96	82	88	99	83	77	100
Canada	88	88	88	97	76	91	100
Poland	65	81	61	99	95	88	100
Australia	92	74	69	85	91	71	98
Slovenia	69	70	86	86	87	71	98
Slovak Republic	35	47	73	86	81	71	99
Luxembourg	85	77	53	93	81	67	100
Latvia	78	74	55	80	85	86	96
Germany	78	62	55	94	59	75	93
Japan	91	51	48	91	24	97	100
Estonia	81	50	57	76	94	75	96
Hungary	50	45	49	82	93	57	98
Portugal	26	57	69	89	89	58	97
Turkey	39	50	42	75	58	55	97
Chile	73	58	30	60	63	87	97
OECD average	61	58	54	73	66	63	90
Ireland	81	43	45	66	65	63	100
Israel	54	48	55	98	57	55	85
Czech Republic	42	25	54	63	85	54	89
Italy	21	68	49	66	66	44	92
Mexico	42	50	33	56	69	63	86
France	45	70	39	37	67	72	97
Netherlands	52	60	49	94	51	63	82
Iceland	48	75	70	31	26	58	69
Greece	50	60	26	62	71	46	85
Finland	81	40	41	36	86	37	85
Switzerland	71	57	31	36	24	63	90
Spain	29	46	48	62	66	36	80
Belgium	28	53	37	72	69	36	86
Austria	47	34	42	87	31	28	76
Sweden	62	47	22	41	61	29	76
Denmark	43	40	28	18	33	29	71
Norway	24	33	26	52	12	8	35

Note: Countries and economies are ranked in descending order of the percentage of students in schools offering extracurricular activities (average of the 10 activities). For readability purposes, the three less common activities (chess club, science club and clubs with a focus on computers) are not displayed here.
Source: adapted from OECD (2016[2]), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264267510-en.

StatLink http://dx.doi.org/10.1787/888933436425

Policy recommendations: *Focus school organisation and school-community partnerships on the curriculum reform and preserving holistic education*

While a significant curriculum reform is underway in Japan, a different broad set of reforms has been introduced in all Japanese schools to support the holistic model of education and the teacher profession by fostering school-community partnerships: *Team Gakkou*, the creation of community schools and the development of a collaborative network between schools and local communities.

Selected studies suggest potential positive effects of school-community partnerships on outcomes for students, schools and communities (Blank, Melaville and Shah, 2003[17]; Heers et al., 2016[18]). But there has not been evidence indicating that investing in such partnerships is more efficient than implementing other types of school or teacher interventions for student learning.

While changes to school management or school-community partnerships are considered important, introducing changes concurrently to broader reforms such as curriculum can lead to challenges for adoption at the school level. Country practices suggest aligning such changes to facilitate reforms in curriculum and pedagogy or sequencing the introduction of new programmes (OECD, 2015[19]). From a strategic perspective, an important issue is how reforms in curriculum and pedagogy are prioritised and how they interact with school-community partnerships or enhancing school management.

The literature on school-community partnerships is diverse. For the most part, the link with students' outcomes is ambiguous. The only clear message to be drawn is that introducing this type of partnership has high transaction costs (it is time-consuming and work-intensive), requires significant change in schools and impacts school leaders and teachers, as well as the communities it intends to target. Two further issues add to the complexity: long teacher working hours and the current role of school leadership in Japan.

Japanese teachers already work some of the longest hours in the OECD. The scope of the curriculum and school-community partnership reforms will increase pressure on teachers, even though some policy objectives are aimed at alleviating their burden. If teachers do not have enough time to be trained and assimilate the content of reforms, this can potentially dilute their impact.

In addition, the success of many of these reforms will depend on the abilities of school leaders to manage change and implement programmes effectively in schools. Relative to their international peers, Japanese school principals are currently less involved in key aspects of the kind of leadership required of them to make these reforms a success, and the high level of turnover could reduce their incentives to produce the optimal level of effort.

Given this, a number of policy options are proposed to help increase the effectiveness of efforts to improve school-community partnerships and broader reforms in Japanese education. In fact, much of the discussion below highlights the need to prioritise not only the objectives and scope of reforms aimed at school-community partnerships, but also the complete range of reforms currently on the agenda. When considering priorities, policy makers should focus on the impact on teachers (especially teacher working hours), the need for training and role clarity (especially for school leaders) and the importance of tackling inequalities across schools and students.

Sustain the holistic model at the school level

Introducing additional support for schools or school-boards is at the heart of the reform package currently being implemented in Japan (*Team Gakkou* and Community-School). The dual purpose of these measures is to enhance management efficiency to effectively deliver holistic education and to allow schools to link to their local community. The extent to which these initiatives support the role of teachers will condition the success of the curriculum reform.

Team Gakkou and Community-Schools are indeed intended to cover additional social and welfare needs at the school level often undertaken by teachers, in order to relieve teachers of these non-teaching and time-consuming tasks. Similar measures of external support have already been successfully implemented in other OECD countries:

- To respond to low upper secondary education graduation rates, which stood at 68% in 2003, Ontario (Canada) launched the Student Success initiative, aiming to increase the graduation rate to 85%. The province observed that the path for dropping out started early: failing one or more courses in Grade 9 was a strong predictor of future failure. The Ministry of Education started funding one Student Success Leader in every school board to help implement initiatives in its schools and one Student Success Teacher per secondary school to provide support to students at risk of not graduating. The upper secondary education graduation rate steadily increased to reach 81% in 2010 (Office of the Auditor General of Ontario, 2011[20]).
- In Finland, school management has supported effective student learning with additional staffing resources in schools. The model has been highlighted as one of the reasons for Finland's educational success (OECD, 2009[21]). Its multidisciplinary approach to preventing failure is based on observation by staff engaged for that purpose and interventions to provide support for children. These interventions include intensification to give children more time with instructors and alternative approaches to teaching and learning. While teachers are responsible for identifying students who may be underperforming and can work with such students directly, teachers' assistants can then intervene at the next level. In additional, schools have qualified special-needs teachers. In consultation with teachers, they work with students who have not been adequately helped by the first two types of intervention. Finally, a multidisciplinary team exists in schools for students whose lack of progress may be associated with broader home or social problems. The team consists of the teacher, the special-needs teacher, the school counsellor and several individuals from outside the school, including a psychologist, a social worker from the department of social services, representatives of the health and mental health systems as necessary, and individuals from the public housing system, if that seems to be part of the problem (Field, Kuczera and Pont, 2007[22]). This approach has been successful in preventing student underperformance before the end of the school year or dropout and providing support for teachers.

In Japan, enhancing support services at school level could not only cover extra social or welfare needs for students and potentially enhance students' well-being, but it could also alleviate the burden of teachers. MEXT highlights that the rise in special needs education and the forecast decline in the teaching labour force could worsen the situation for teachers. To alleviate teachers' workload and ensure they have enough time for training, the following options could be examined:

- The possibility of having additional teachers or administrative staff. By itself this measure would not necessarily alleviate individual teachers workload, it would require to clarify what tasks the new teachers would take on, how that would reduce the workload of incumbent teachers, and who would decide how to distribute the workload across teachers (at the school or local level). Options include having rotating teachers to support classroom teachers, defining smaller student/teacher ratios or co-teaching, for example. Other issues need to be considered, such as the physical space for teachers to have good working conditions and availability of space to open up additional classrooms.
- Building on *Team Gakkou* and on school community partnerships. This would provide additional staff to support teachers and schools in the promotion of holistic education and with the organisation of extracurricular activities more effectively. This would also require clarity in the distribution of tasks to support teachers.

These complementary options would ensure that teachers can focus on effective implementation of curriculum reform. However, it is important for Japan not to rush into a more Tayloristic work organisation within schools, as the broad set of responsibilities that Japanese teachers have towards their students is one of the keys to the success of its education system. Japan should therefore aim to assess what tasks can be outsourced to external workers without jeopardising the holistic model, monitor the potential gains in terms of work release for teachers and the impact on students' well-being.

A key to success of this reform is how it will impact teachers' working hours, their responsibilities and their welfare. Monitoring could include regular national data collection on teachers' working hours, including how teachers' work time is distributed among various activities. Data on different practices in school-community partnerships could be analysed to learn more about the impact of various approaches. This can contribute to collecting information on good practices or on partnerships with a negative impact on teachers that should be reviewed. Broad data collection could be supplemented, with case studies of specific schools, to understand the impact of reforms on teachers and assess what is and is not working.

Focus leadership towards 2030

Evidence points to some of the key tasks related to effective school leadership as those focused on providing a vision for the school, supporting and developing teachers and securing a collaborative environment focused on learning (Leithwood and Louis, 2011[27]; Leithwood, Harris and Hopkins, 2008[28]; Hattie, 2015[26]; Hallinger, 2014[24]; Pont, Nusche and Moorman, 2008[3]). In addition, school leaders are integral to introducing education reforms.

To provide greater leverage for school leaders to take on these tasks, governments have established specific leadership training, defined standards for principals to clarify their role and launched other policies, including changing recruitment practices and introducing evaluation. An OECD study of school leadership policy and practice suggested a policy framework that can contribute to enhance school leadership by:

- providing clear definitions of the roles of school leaders focused on improving school outcomes,
- having professional selection processes,

- providing specific leadership training at different stages of their careers,
- developing evaluation and incentives to ensure that school leadership is an attractive profession (Pont, Nusche and Moorman, 2008[3]).

In Japan, school leaders have specific training as school leaders at the master's level in Professional Graduate Schools of Education. Their practice however, focuses more on administrative tasks and facilitating the work of teachers. In this way, and reflecting their culture and practices, leadership is distributed, as teachers have high levels of responsibility in the curriculum and in school performance.

The reforms being introduced have the potential to change the nature of school leadership practices to look forward to 2030 skills. On the one hand, the curriculum reform will require that schools focus on the development and assessment of new types of skills and competencies for their students. On the other hand, the development of school-community partnerships and other school management organisations, including *Team Gakkou*, will require principals to manage larger teams, to lead the curriculum reform process and to engage proactively and forge relations with the community. It is not clear whether the current training or the skills of current principals are suited to these types of new tasks, whether their current tasks encompass these actions or whether they will require additional time and engagement.

To ensure that school leaders support the current reform strategy, MEXT can explore whether current descriptions of the role of school leaders and their teams cover tasks and responsibilities encompassing these new responsibilities. These include: leading the curriculum reform process in the school and finding new assessment tools to measure the types of competencies to be developed; leading new teams in the school (*Team Gakkou*); and extending and broadening the responsibilities to focus more on school community partnerships. This may require reviewing the financial capacity or autonomy to develop these relationships to strengthen after-school activities outside of the school. In addition, school leadership training may need to be revised to include development of the required skills.

Selected international examples provide guidance in school leadership development and standards:

- Ontario (Canada) has defined a specific leadership strategy which has a leadership framework as its centrepiece. The framework describes the school-level practices that research has shown to have a positive impact on student achievement and the actions associated with each practice for principals and vice-principals at the school level. These are meant to be used for selection and recruitment of school leaders, but also to underpin training and to clarify for school leaders what their main tasks are and how to achieve them.
- The Australian Professional Standard for Principals is a public statement which defines what school leaders are expected to know, understand and do to be successful in their job. It has three leadership requirements within five areas of professional practice, which provide a shared vision and common language for practice. These have been developed and validated with the profession. The Standard and associated profiles are directed towards leaders and future leaders in their learning pathways. The Australian Institute for Teaching and School Leadership has been in charge of development and updating of the Standard.

In addition to reviewing the practices of school leaders and the required training, the high turnover rate (2.9 years in primary and lower secondary schools) (MEXT, 2011[5]) may also merit reflection, with a view to ensuring the sustainability required for forging school-community partnerships and implementing the new curriculum. Having leadership teams as part of *Team Gakkou* can be an alternative approach to ensure sustainability of the actions. Another alternative may be to extend the duration of school leaders' tenure in schools during implementation of selected reforms.

Set clear objectives for school-community partnerships

There is a wide range of school-community partnership initiatives across countries and communities. This diversity reflects the potential ambiguity in reforms to improve school-community partnerships. Not only do different education systems have different objectives, but schools in different communities may also have different priorities or objectives in building partnerships with their local community, depending on the local context and needs.

There is mixed evidence on whether school-community partnerships can contribute to overall students' learning more effectively than other interventions (Ikesako, n.d[29]), but some evidence suggests that strengthening the links with parents and the community can contribute to more conducive learning environments for students with disadvantaged backgrounds (OECD, 2013[30]). Examples of partnerships with communities that respond to extracurricular needs or provide holistic coverage of children's needs include the following:

- Partnerships linked to the provision of extracurricular activities: Denmark implemented a reform of the public school system in 2014, which included the Open School (*Åben Skole*) initiative, which requires schools to reach out to their local communities to support student learning. Schools are obliged to co-operate with local partners, such as cultural and sports organisations. In Norway and Sweden, there have been initiatives that encourage schools to collaborate with community professionals and organisations to enhance students' access to arts and culture.
- Partnerships linking schools with other support services for the communities: This approach can streamline provision of government services, through better linkages between education and welfare services. Most importantly, the provision of multiple services in one geographic location facilitates a more comprehensive approach to addressing economic, education and social issues. This is commonly observed in the Netherlands, the United Kingdom and the United States. Blank, Melaville and Shah (2003[17]) review evidence on community schools in the United States and conclude that they produce positive outcomes in four areas: 1) student learning; 2) family engagement; 3) school effectiveness; and 4) community vitality.

In Japan, where the package of school-community partnership reforms is running alongside a significant curriculum reform, it is vital to keep the impact on teaching and learning in the classroom at the forefront of decision-making. Implementing the important curriculum reforms will require considerable effort to review how teachers are led, supported and developed and how they are held accountable for changing their practice and using the new curriculum in their classes.

Given this and the challenge of long working hours for teachers in Japan, the design and implementation of reforms to develop and improve school-community partnerships must be targeted in a way that supports broader reforms to teaching and learning. Large programmes have been developed to improve school-community partnerships. The detail of their design and implementation (including how the programmes interact in schools) will determine their effectiveness, particularly their impact on teachers.

The proposed reforms to school-community partnerships are ambitious and complex, covering a range of areas, as they may be designed to serve the specific needs of the school and the local population. Moreover, their composition and effectiveness may vary, due to factors such as resource constraints and policy objectives. For example, during the OECD review visit, some schools were having parents and volunteers supervise children's daily walk to school for security reasons. Interviews with stakeholders during the visit identified five objectives for school-community partnerships:

1. promoting community regeneration so that partnerships help build social and economic infrastructure in the community
2. creating a hub for multiple services and activities
3. providing after-school resources for low-income students and families
4. assisting students to learn actively
5. reducing pressure on teachers and school leaders.

The main premise of school-community partnerships is the idea of education being open to society. However, the OECD team found that the current reform of school-community partnerships does not clearly identify objectives related to the curriculum reform agenda. Since the review visit, the Japanese government revised the Social Education Act (in March 2017) and established guidelines to promote Community Co-operation Activities for Learning and Education, which include some objectives related to implementation of the new curriculum from 2020. It is important to ensure that these objectives are at the heart of collaboration between schools and communities, to ensure that schools are able to deliver competencies for the 21st century and that teachers have support and collaboration to do so.

Better targeting will ensure that these reforms do not detract from other reforms and will allow teachers to focus on curriculum and pedagogical reforms. Four questions should be considered when implementing reforms that promote school-community partnerships:

1. Do these reforms free up resources for teachers to undertake pedagogical and curricular reforms?
2. Do they decrease teachers' workload or give teachers more hours per day or week for pedagogical tasks?
3. Do they require teachers to learn and change more of their practice (i.e. do these reforms ask teachers to change even more of what they do each day)?
4. Do they enable school leaders to better implement change and help them to support teachers in implementing new curriculum and pedagogical approaches?

These questions obviously target resourcing and freeing up teacher time. They also emphasise how much change Japanese teachers are being asked to undertake, reflecting the risk of potential reform fatigue. The government has rightly prioritised curricular and pedagogical reforms. Asking teachers to undergo extensive changes in other areas will divert their efforts from curricular changes.

Therefore, it is important to make school-community partnerships an integrated part of the curriculum reform, so that schools understand that they are complementary to the

reform. Schools should also be given the capacity to decide when it is best to introduce such partnerships, in order to take into account teachers' workload and to ensure a seamless transition to the new curriculum. At the moment, it is not clear how reforms to school-community partnerships will significantly free up resources for teachers and support the curriculum reform.

Tackle inequalities across schools and students

Effective school-community partnerships can contribute to reducing inequality across communities. In a number of countries, school-community partnerships are focused on low-income neighbourhoods, providing academic support for struggling students, helping with welfare and other social issues and targeting after-school activities for at-risk youth.

- In the United States, school-based and community-based mentoring activities that match a child with a non-family adult have been widely implemented. The Big Brothers Big Sisters programme has been proved to be effective in improving a number of school-related student outcomes among at-risk youth, including overall academic performance, quality of class work, number of assignments turned in, serious school infractions, academic self-confidence and skipping school (Herrera et al., 2007[31]).
- In the Netherlands, community-schools (*brede scholen*) link education with other services that are important to children and parents, such as education support, childcare and health centres. In the 1990s, community schools were located in disadvantaged areas, particularly those with high rates of migrant inhabitants. The evaluation of Dutch community schools by Claassen et al. (2008[32]) did not find that the approach had effects on either the cognitive or the socio-emotional front, possibly because various characteristics of community schools were also observed in other schools (OECD, 2009[21]).

Some education systems have emphasised partnerships linked to provision of additional instruction and academic support. The provision of out-of-school private tutoring (shadow education) is an increasing phenomenon internationally. A comparative study on the provision of private tutoring in European Union countries analysed the reasons behind this increase and concluded that it has implications for equity, for schools, children and their families that need to be further researched and placed on the agenda of policy makers across countries (Bray, 2011[33]).

Particularly in Western European countries, social competition, school performance rankings, examination-based learning and the pressures transmitted to families and children have been a force driving the expansion of shadow education. The study concludes that, if left to market forces, tutoring maintains and exacerbates inequalities. Families with higher income can afford both greater quantities and better quality of tutoring. In this light, school-community partnerships appear as an interesting measure to promote equity. Different examples of partnerships have focused on reducing inequality in learning opportunities, as families in higher socio-economic groups tend to have more opportunity to invest in out-of-school private tutoring.

- In Australia, the Extended Service School Models Project includes some learning facilitation programmes, such as homework clubs and reading and spelling clubs, to assist in lifting educational outcomes and to aid in developing good study habits (TNS Australia, 2014[34]).

- In the United States, parents of low-income students in low-performing schools are offered a choice of Supplemental Educational Services (SES) for their children. SES include tutoring or other academic support services offered outside the regular school day, at no charge to students or their families, by public or private organisations approved by the state as SES providers. School districts are required to offer SES to all students from low-income families attending a disadvantaged school who do not make progress toward meeting state standards. However, participation is low with less than 20% of eligible students participating, and research suggests that SES can be effective only when students receive a certain amount of tutoring (Barley and Wegner, 2010[35]; Heinrich, Meyer and Whitten, 2010[36]; Deke et al., 2012[37]).

However, there may be some risks in a greater emphasis on community partnerships if there are no control mechanisms. Efforts to develop these partnerships might increase inequality across communities. Wealthier communities, by definition, have greater financial and human capital than poorer communities, so children from these neighbourhoods may benefit more than others from school-community partnerships. Differences between urban and rural communities must also be acknowledged.

Japan could identify such risks and mitigate them by developing a safety net for its schools. This would imply determining a standard level of quality for school-community partnerships. A structure at the level of the prefecture, for example a network of all the schools related to that prefecture, could ensure that economies of scales are realised, more resources are provided to schools in disadvantaged communities, and specific mechanisms are established to help students in deprived neighbourhoods. Such an approach could help achieve a high standard of quality in all schools across Japan.

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Chapter 4. Lifting the contribution of education to the Japanese skills system

This chapter reviews the issues of participation and funding of non-mandatory education, i.e. early childhood education and care (ECEC), tertiary education and lifelong learning. Participation in ECEC and tertiary education is high in Japan, but there is room for improvement in adult learning supply and demand.

Non-mandatory education is mostly provided by the private sector in Japan, which imposes a significant financial burden on households. Financial support for students is of limited scope, which potentially reduces the efficiency of resource allocation and raises equity concerns.

Our main findings suggest that Japan should: 1) strengthen lifelong learning and financial arrangements for non-mandatory education to support equity; and 2) design lifelong learning to meet the skills needs of both employers and the population.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Context and main features

The Basic Act on Education specifies three objectives for the Japanese education system. First, the system aims to help children to become independent individuals with well-balanced knowledge, a will to keep on learning, a sense of morality and a healthy body. Second, it should also prepare people to respect the public spirit and actively participate in building the Japanese society and state. Third, it should foster the integration of Japanese citizens who live in the international community, while respecting the traditions and culture of their country (MEXT, 2016[1]).

In educating people to contribute to society, the education system contributes to the economy by providing the skills employers seek. The Japanese government is conscious of the challenges it faces in building the skills of its population, and it sees the education system as a means of addressing the coming skills shortages due to its declining and ageing population. The following three areas of focus are among those identified to strengthen the skills system:

- lifelong learning – to facilitate upskilling and reskilling of current workers
- the tertiary education student financial support system – to help ensure that all young people have an opportunity to lift their skills through the education system
- the early childhood education and care (ECEC) system – to build strong foundation for all for learning and ensure that new parents have incentives and opportunities to return to the workforce.

The government has encouraged tertiary education institutions to explore opportunities to expand lifelong learning, promoted participation in tertiary education through reforms to the tertiary student financial support system and extended ECEC subsidies to help encourage women to remain in the workforce following childbirth.

A challenging economic situation intertwined with demographic decline

Japan has been experiencing economic stagnation for more than 20 years, resulting in a decline of GDP per capita from 7th place in the OECD in 1990 to 18th place in 2015. Recurring budget deficits and the 2008 global financial crisis have pushed the government's debt to 216% of GDP. This is the highest level of debt in the OECD, with the next highest (Greece) at 183% and the OECD average at 114% (OECD, 2017[2]).

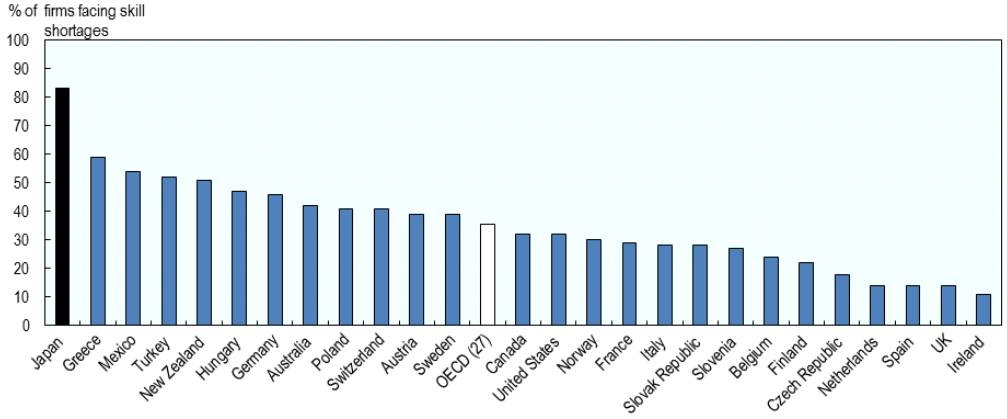
By mid-century, Japan's population is forecast to fall by around 25%, from 128 million in 2010 to less than 100 million by 2050. At the same time, the population is ageing, with the elderly (age 65 or older) rising from 5% of the Japanese population in 1950, to 27% in 2015 – the highest share in the OECD (OECD, 2017[3]).

While Japan faces a challenging economic outlook, the unemployment rate of 15-64 year-olds in Japan (3.5% in 2015) is the lowest in the OECD (the average was 7.0%). Youth unemployment was also the lowest in the OECD (5.5%, compared to the OECD average of 14%). At 10%, the proportion of young people neither employed nor in education or training (NEET) was also among the lowest in the OECD (OECD average at 14%) (OECD, 2016[4]).

Because the labour market is approaching full employment, Japanese firms struggle to find suitable applicants to fill vacancies. The 2015 Manpower Talent Shortage Survey found that 83% of Japanese employers reported that they struggled to fill vacancies. This was the highest level among the 42 participating countries, for which the average was

38% (ManpowerGroup, 2015[5]) (Figure 4.1). This difficulty in filling vacancies confirms that a shortage of skills has emerged in the Japanese labour market.

Figure 4.1. Skills shortage in selected countries, 2015



Note: Firms are classified as facing a skill shortage if they report having difficulties filling jobs.
Source: ManpowerGroup (2015[5]), *Talent Shortage Survey*, www.manpowergroup.com/wps/wcm/connect/db23c560-08b6-485f-9bf6-f5f38a43c76a/2015_Talent_Shortage_Survey_US-lo_res.pdf?MOD=AJPERES (accessed 25 July 2017).

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With the skills shortage likely to intensify as a consequence of forecast demographic changes, Japan will need to make greater use of the skills of its population and keep enriching and adapting the skills of the workforce to meet changes in labour market requirements and technology.

A skilled population, but sub-optimal skills matching

The OECD Survey of Adult Skills shows that the Japanese adult population has the highest literacy and numeracy in the OECD, reflecting the country's history of excellent educational performance. In the third dimension of the survey, problem-solving in technology-rich environments, 35% of Japanese workers scored at the highest levels (2 or 3), slightly above the OECD average of 31%. However, this result masks the fact that a high proportion of the adult population (37%), especially in older age groups, did not take part in the test because they were unable to perform basic tasks with a computer (for instance, use a mouse, scroll through text, highlight text, use drag and drop functionality). It implies that a significant share of the population lacks the most basic information-technology skills, making them especially vulnerable to technology-related changes in the knowledge economy (OECD, 2013[6]).

The survey found that, while Japanese adults had the highest scores in numeracy and literacy, the use of those skills in the workplace was around the OECD average. This means that a high proportion of Japanese workers have skills beyond what is required in their job. In addition, 31% of workers in Japan reported in the Survey of Adult Skills that they consider themselves overqualified for their job (10 percentage points above the OECD average). These findings suggest that utilisation of workers' skills in Japan is sub-optimal and that the economy is not capturing the benefits of the high levels of skill in its population. The mismatch is more significant among employed women, possibly

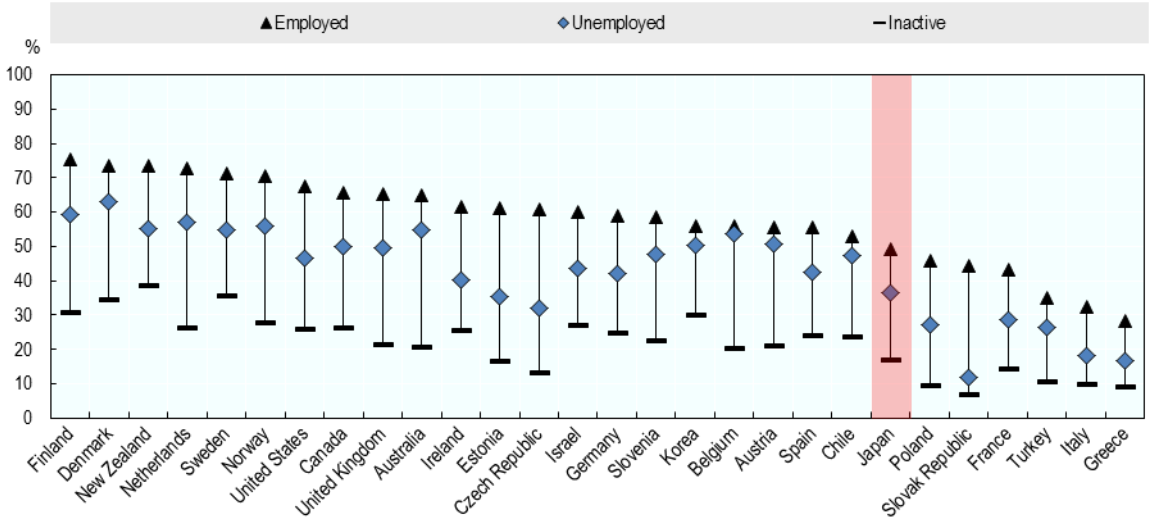
reflecting the fact that women are over-represented among those in temporary employment (OECD, 2016[4])[1].

The skills shortage, already evident in the difficulty employers face in sourcing appropriately skilled people to fill vacancies, raises questions about the take-up of upskilling or lifelong learning in Japan.

Lifelong learning (adult education, continuing education, professional development and skills training) is a means of boosting productivity, reducing human capital depreciation, improving workers' outcomes in the labour market and helping them to enjoy a better life. It can also be used as a way of developing and enhancing workers' non-cognitive or "soft" skills, which are increasingly valued by employers (OECD, 2016g). However, the Survey of Adult Skills shows that there is limited participation by adults in lifelong learning in Japan (around the bottom quartile of participating countries) (OECD, 2016[7]; OECD, 2017[8]) (Figure 4.2), despite the fact that more than two-thirds of Japanese workers (69%) consider they need further training (compared to the OECD average of 34%) (OECD, 2012[9]).

Figure 4.2. Adult participation in education and training by employment status, 2017

Percentage of adults, 25-64 year-olds, 2012 or 2015



Note: Participation in formal and/or non-formal education refers to participation in the 12 months prior to the survey.
For Chile, Greece, Israel, New Zealand, Slovenia and Turkey the year of reference is 2015. For all other countries, the year of reference is 2012.
Data for Belgium refer only to the Flemish Community of Belgium, and data for the United Kingdom refer to England and Northern Ireland jointly.
Source: OECD (2017[10]), *OECD Skills Outlook 2017: Skills and Global Value Chains*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264273351-en.

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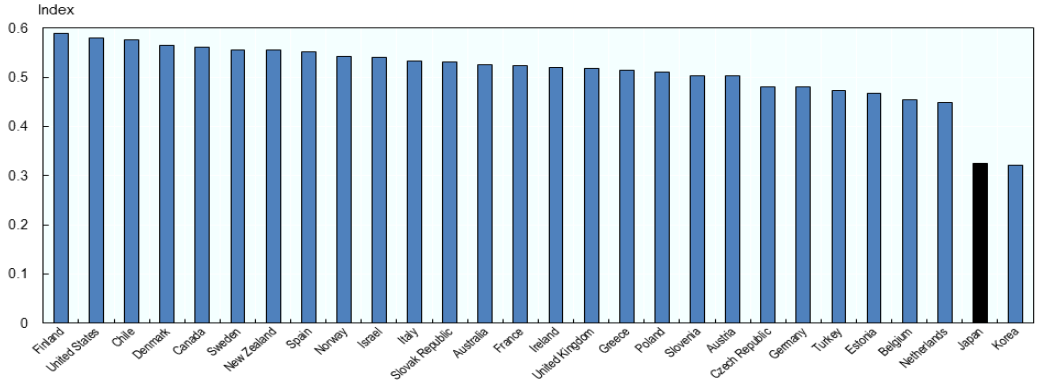
The OECD has constructed a "readiness to learn" index from the background questionnaire in the Survey of Adult Skills, a synthesis of respondents' answers to a number of questions on how they deal with new ideas, relate ideas to the world and source information.[2] This index is well linked to the goals of the curriculum reforms currently being developed in the school system in Japan, which aim to prepare students

for 2030 by developing their acquisition of knowledge and skills, their ability to think, make decisions and communicate, and their readiness for learning. The survey results suggest that Japanese adults are less open to acquiring new skills than adults in most other developed economies. Of the participating countries, the Japanese population is among the lowest on the readiness to learn index (OECD, 2017[10]) (Figure 4.3). Yet, as previously stated, 69% of workers in Japan consider they need further training in order to cope well with their present duties (OECD, 2012[9]).

Figure 4.3. Readiness to learn, 2012 or 2015



Note: The index of readiness to learn summarises the answers to the question of how intensely the respondents did the following things: "Relate new ideas into real life", "Like learning new things", "Relate to existing knowledge when coming across something new", "Get to the bottom of difficult things", "Figure out how different ideas fit together" and "Look for additional information".
For Chile, Greece, Israel, New Zealand, Slovenia and Turkey, the year of reference is 2015. For all other countries, the year of reference is 2012.
Data for Belgium refer only to the Flemish Community of Belgium, and data for the United Kingdom refer to England and Northern Ireland jointly.
Source: OECD (2017[10]), *OECD Skills Outlook 2017: Skills and Global Value Chains*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264273351-en.

StatLink http://dx.doi.org/10.1787/888933474282

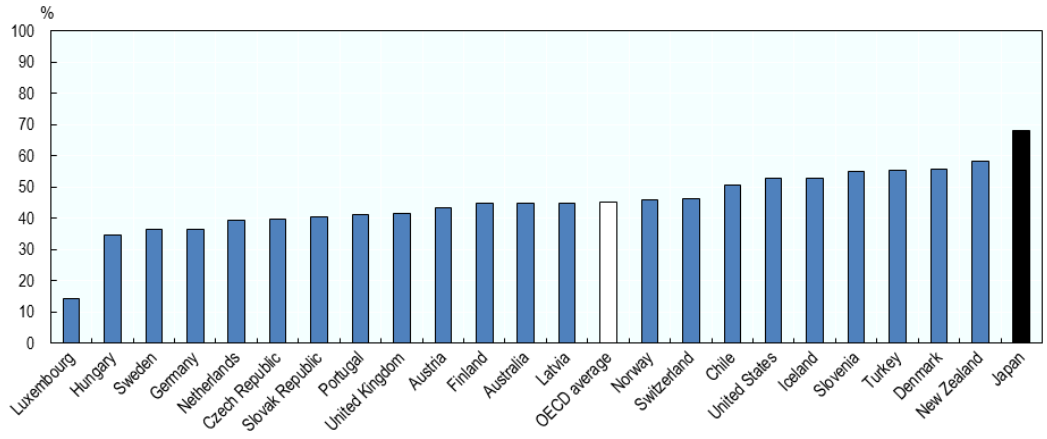
Lifelong learning allows people to fill gaps in their skill sets, prepare themselves to advance in their careers or keep up to date as technology develops and approaches to work evolve (OECD, 2016[4]). The European Union has also highlighted the major role lifelong learning can play in achieving the Europe 2020 goals (Council of the European Union, 2011[11]). Japan, along with European countries, has recognised the importance of lifelong learning as a response to technological and economic challenges and to changing demography.

High enrolment and completion rates in tertiary education

While the take-up of lifelong learning in Japan is low, Japan has high participation and high levels of completion in initial tertiary education. Japan has a relatively high entry rate in tertiary education, with 80% of people accessing this level of education at some point, compared to the OECD average of 68%. Graduation rate data shows that 68% of Japanese young people graduate from tertiary education at some point in their life, compared to the OECD average of 45% (Figure 4.4) (OECD, 2016[12]).

More than a third of the tertiary enrolments and around a third of graduates have taken short-cycle qualifications (tertiary qualifications below bachelor's level). Women are a majority of short-cycle entrants (more than 60%) and of short-cycle graduates (62%). The high participation of women in short-cycle qualifications also means that Japan (along with Germany and Switzerland) is one of the few OECD countries where men outnumber women graduating with bachelor's or higher degrees (OECD, 2016[12]). Women comprise only 45% of bachelor's entrants in Japan and around 30% of those entering master's and doctoral programmes. Across the OECD, women represent 54% of entrants to bachelor's degree programmes (OECD, 2016[12]).

Figure 4.4. First time tertiary graduation rates, excluding international students, 2014



Source: OECD (2016[12]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris. http://dx.doi.org/10.1787/eag-2016-en.

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But low returns to investment in tertiary education

Tertiary education provides people with additional skills and leads to social and economic gains. Individuals who participate in tertiary education and get qualifications benefit through higher earnings and greater job satisfaction, as well as through a range of non-financial outcomes (OECD, 2016[12]). Increasing the educational attainment of the population has also a positive impact for society, since it is negatively correlated with unemployment, poverty rates, welfare support and risky behaviours (Baum, Ma and Payea, 2013[13]; OECD, 2016[14]).

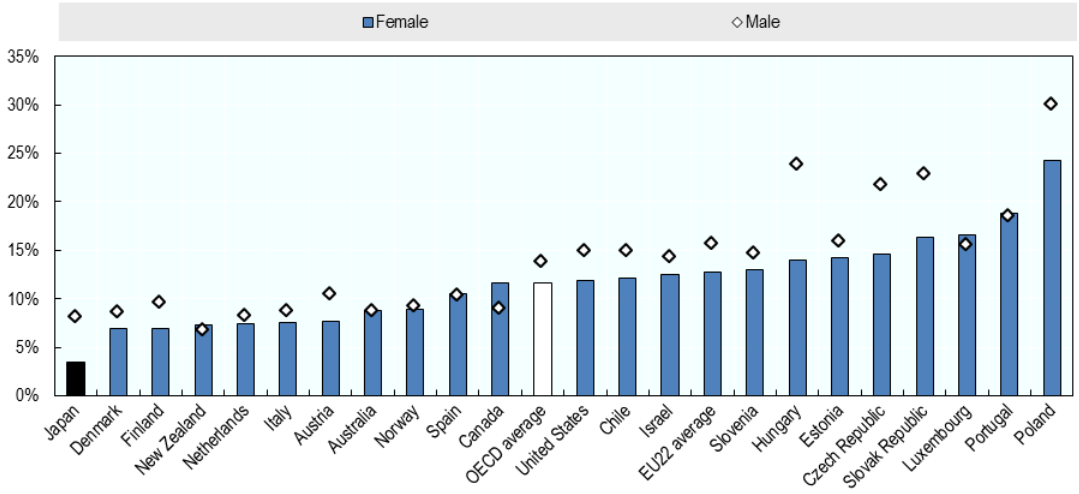
Given the shared benefits of tertiary education, many countries expect students and their families to share the costs through paying tuition fees. The principle of cost sharing is well-established in Japan. Japanese families value tertiary education and are prepared to pay a high share of the costs. They pay more than half of the full cost, higher than in all other OECD countries except Chile, and more than double the share across all OECD countries (OECD, 2016[12]).

However, the financial returns to tertiary education are low in Japan, compared with most other OECD countries (OECD, 2016[12]). Japanese men have a relatively low net financial return from tertiary education (8%, compared to the OECD mean of 14%). In part, this is a consequence of the high cost to students of a tertiary education in Japan. The net

financial return from a tertiary education for women is even lower (around 3%), the lowest among countries for which data is reported (Figure 4.5) (OECD, 2016[12]).

The difference between men and women in the rate of return is largely a result of labour market factors. Tertiary-qualified women in Japan have a low rate of participation in the labour market. The Survey of Adult Skills showed that 67% of tertiary-qualified Japanese women aged 25-64 were in employment, compared to 92% of men and 81% of tertiary-qualified women in all participating countries (OECD, 2016[12]).[3] This is largely a result of many women taking on caring roles and hence not pursuing high-earning careers. In addition, the very high rate of temporary employment among women, noted above, is likely a contributing factor.

Figure 4.5. Financial return on gaining a tertiary education degree, 2012



Source: OECD (2016[12]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris. http://dx.doi.org/10.1787/eag-2016-en.

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The discrepancy between the private rate of return on investing in tertiary education in Japan and that in other OECD countries raises questions about the appropriateness of the current relatively high contributions of students to the costs of tertiary education. This is especially problematic for students from disadvantaged backgrounds, as international evidence suggests that they are more risk-averse and less likely to make the high financial commitment necessary for tertiary education in Japan (Usher, 2006[15]).

Strengths and challenges

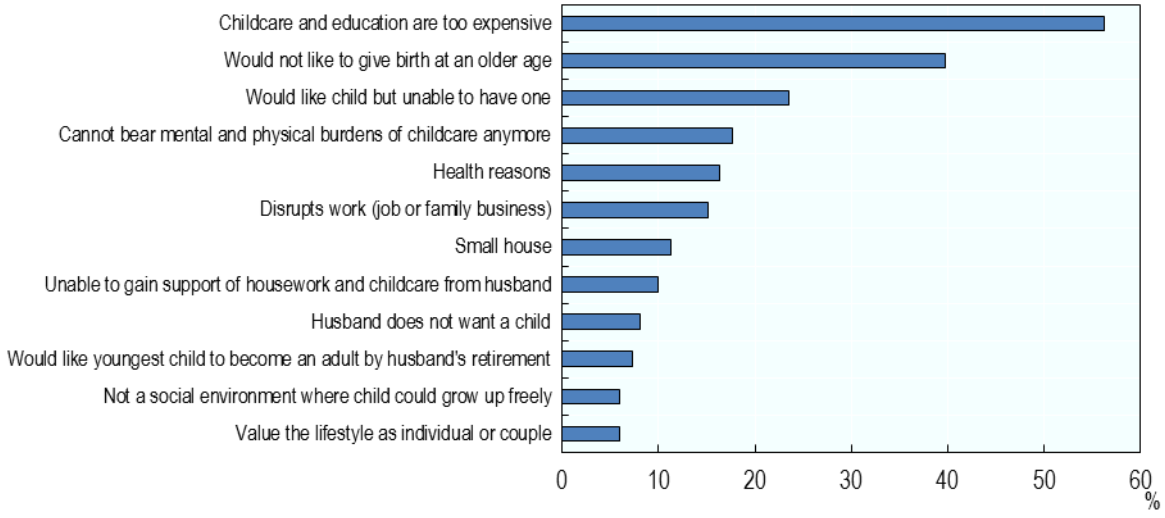
A low level of public support for ECEC may hinder labour market participation and demographic growth

The early childhood education system not only provides children with learning foundations, well-being and social and emotional development, it also supports the return to work of parents who take time out of the workforce to care for their children. A 2011 report showed that if extending coverage does not compromise quality, widening access to preschool can improve performance and equity by reducing socio-economic disparities

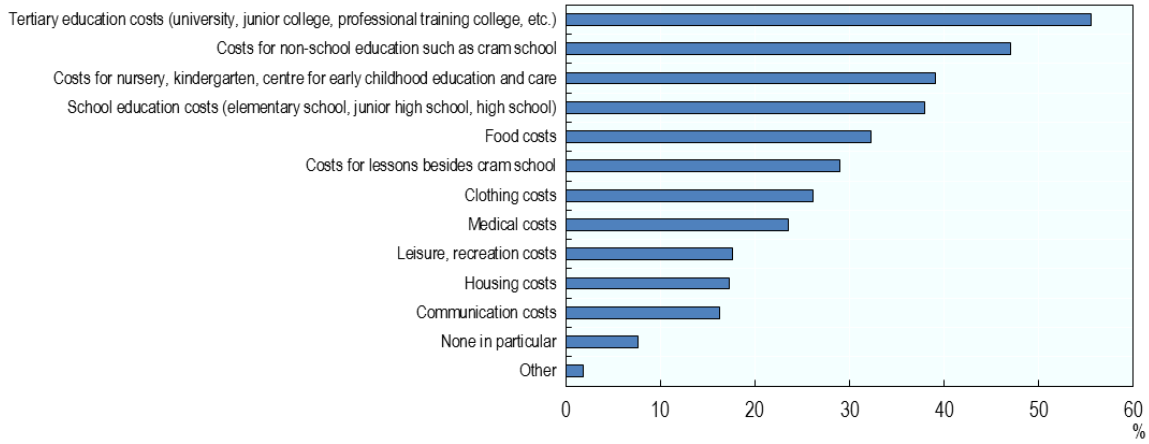
(OECD, 2011[16]). Early childhood education is seen in the economic literature as having high public benefits and hence justifying public support (Heckman, 2011[17]). One way for the Japanese labour market to access more skills is to encourage more tertiary-educated women to take on employment. That would require an expansion of access to day-care centres.

Figure 4.6. Impact of the education financial burden on Japanese households, 2016

a) Reasons for not having the ideal number of children



b) The largest perceived financial burdens for education



Source: National Institute of Population and Social Security Research (2016[19]), The 15th Japanese National Fertility Survey: National Survey on Marriage and Childbirth, www.ipss.go.jp/ps-doukou/j/doukou15/doukou15_gaiyo.asp, Cabinet Office (2012[20]), *Heisei 24-nendo Kodomo, Kosodate Vision ni Kakaru Tenken, Hyouka no Tameno Shihyou Chousa Houkokusho* [FY 2012 Report Indicator Assessment on Evaluation of Children and a Vision of Childcare], www8.cao.go.jp/shoushi/shoushika/research/cyousa24/shihyo/index_pdf.html.

In Japan, 44% of the costs of pre-primary education come from public sources, below the OECD average of 83%. Japan is in the lowest decile among OECD countries for public expenditure on ECEC as a percentage of GDP (OECD, 2016[12]). This low level of public support for ECEC imposes a financial burden on some families. While the uptake of

ECEC among 4-year-olds is high (96%, compared to the OECD average of 86%), there is lower-than-average take-up of places for 0-2 year-olds in day-care centres (31%, compared to the OECD average of 34% in 2014) (OECD, 2016[12]; OECD, 2017[18]). This can limit birth rates and incentivise women to take longer career breaks, which can exacerbate labour market disparities (Figure 4.6).

In Japan, responsibility for day-care centres and kindergartens is assigned to different government ministries. Although historically developed for different purposes, these two types of ECEC establishments perform a similar role – helping children's education and enabling mothers to return to the labour force. Ensuring better integration of the two systems could improve ECEC coverage at earliest ages, and provide women with opportunities to return to work at a time of their choosing, while also ensuring that children benefit from participation in ECEC.

Financial support for students in tertiary education is low, but the system is improving

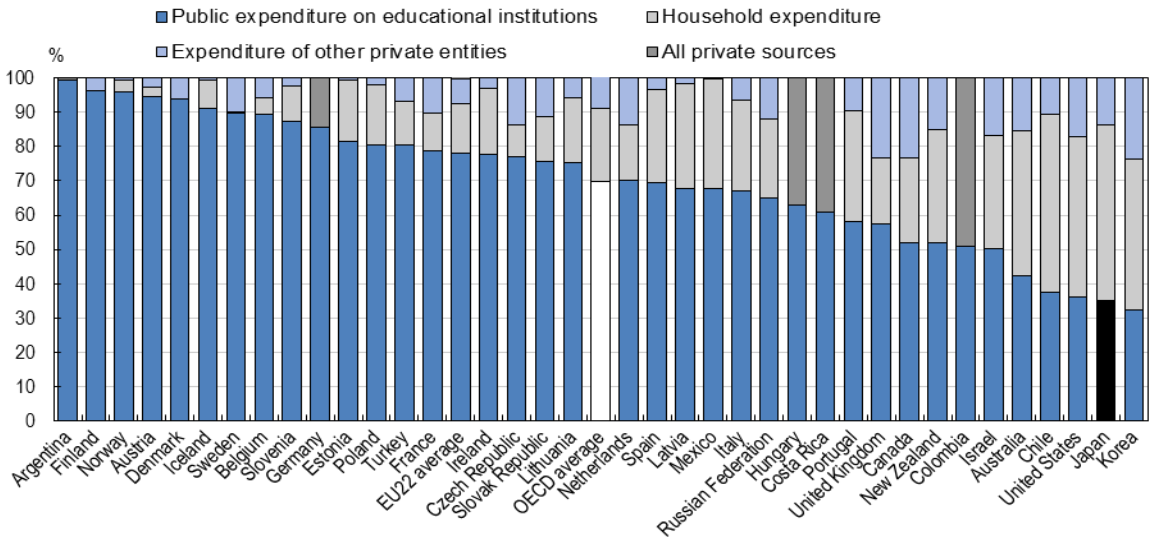
As noted above, the Japanese public accepts that students and their families should make a contribution to the costs of a tertiary qualification, as students gain a private benefit from completing it. As a result, there is wide acceptance of the notion of tuition fees as a charge on those participating in tertiary education.

Japan has a strong private tertiary education sector. Around 77% of all Japanese universities are private, and 79% of tertiary students are in private institutions (MEXT, 2016[1]). Given this substantial dependence on the private sector and the resulting high fees (an average of USD 8 200 per year for a bachelor's degree in a private institution and USD 5 100 in a public institution) (OECD, 2016[12]), the level of private funding for tertiary education is high. According to data from the Research Institute for Higher Education at Hiroshima University, in 2014, public funding to public universities accounted for 0.23% of GDP, and public funding to private universities for 0.07% of GDP (Research Institute for Higher Education, 2014[21]). With 79% of tertiary students enrolled in private institutions, that means that a student in a public institution is around 11 times more subsidised by public funding than a student in a private institution[4].

Japan is the second highest (after Korea) in the OECD in the share of private expenditure on tertiary education (65%, compared to the OECD average of 30%) (Figure 4.7). On average, Japanese households contribute 51% of the costs of tertiary education, compared to 21% across OECD countries (OECD, 2016[12]).

The high contribution made by students and their families to the costs of study is one of the factors that drive the low rate of return to tertiary education in Japan. The government's student financial support system is managed by an independent administrative agency established in 2004 for this purpose, the Japan Student Services Organization (JASSO). It is an important mechanism for reducing the risks to both participation in tertiary education and access to it that result from the low rate of return.

Figure 4.7 Sources of expenditure on tertiary education institutions, 2013



Notes: Household expenditure refers to expenditure funded by households such as tuition fees and other student or household payments to educational institutions (e.g. fees paid for laboratory materials and art supplies).
Other private entities include private businesses and non-profit organisations (e.g. religious organisations, charitable organisations, and business and labour associations).
Source: OECD (2016[12]), *Education at a Glance 2016: OECD Indicators*, OECD Publishing, Paris. http://dx.doi.org/10.1787/eag-2016-en.

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Japan has begun to reform its student support system. As of 2016, JASSO provides two types of mortgage-style loans (i.e. loans with predetermined, fixed repayments). In addition, some students may qualify for a loan with interest concessions and income-based repayment systems (MEXT, 2016[1]). The Japanese government has also planned to launch a grant-type scholarship that will complement the two types of student loans (MEXT, 2016[1]):

- Category 1 Loans: These are interest-free scholarship loans. These loans are provided to students who are academically outstanding but have significant difficulty in pursuing their studies due to financial reasons. They include:
    - Income-based repayment postponement for Category 1 Loans: Those who meet the standards for Category 1 Loans (excluding those for graduate school) and who meet financial conditions may receive a postponement in their payment period until their salary and income reach a specified level after graduation.
    - Exemption from repayment for graduate school students with particularly outstanding academic achievements: Graduate school recipients of Category 1 Loans, whom Jasso recognizes as having achieved particularly outstanding academic results, may be partially or wholly exempted from repayment of the loan.
- Category 2 Loans: These are scholarship loans which bear interest. These loans are provided to students who are academically excellent but have significant

difficulty in pursuing their studies due to financial reasons. Category 2 loans are interest-free before graduation and during the postponement of payment.

During the review visit, we were told that there are other sources of financial support for students that complement the Japanese government's loans and help some students meet their study costs. For instance, some municipalities also give loans to some students, and most universities manage scholarship funds that they allocate to students who meet their criteria.

Overall, Japanese student loans provide lower levels of support for participation in tertiary education than those in countries with well-developed systems for student support. Student loans in Japan are limited in two ways. First, since JASSO's financial resources are constrained, the loan system targets eligibility: only 38% of higher-education students qualify for (and take up) student loans. In 2016, 13.8% of students got a Category 1 Loan and 24.2% of students got a Category 2 Loan. Second, entitlements are low: loans cover only around 20% of the income needed by a student, while part-time work covers a further 16%. This leaves students in the position of having to make multiple applications for financial support and to rely on their families. Although borrowing entitlements under JASSO's schemes are higher for students in private universities (to help meet the higher cost of tuition fees), the coverage of the loan system is low, meaning that those who miss places in national and public universities are worse off.

Nevertheless, first-time tertiary entry rates are well above the OECD average (OECD, 2016[12]). However, the international literature suggests that people from low socio-economic status groups are more risk averse, tend to apply unrealistically high discount rates to the costs of tertiary education, are financially constrained, and may therefore opt out of tertiary education or choose shorter tracks to avoid the financial risks (Santiago et al., 2008[22]; Usher, 2006[15]; Jacobs and van Wijnbergen, 2007[23]; Hartlaub and Schneider, 2012[24]; Gary-Bobo and Trannoy, 2015[25]).

The lifelong learning system needs further analysis and development

As technological change accelerates, firms need to adapt and to ensure that their employees acquire appropriate skills. The forecast decline and ageing of the population of Japan is likely to shrink the labour force and threaten the supply of skills. In mitigation, Japanese employers will need to upskill and reskill existing workers. Japan will also need to make greater use of the skills of those who have traditionally had lower workforce participation (such as people over 65, women and the 38% of the workforce who are non-regular workers[5]). And it will also need to boost productivity. Currently, the labour productivity of Japanese workers is about 25% below the top half of OECD countries (OECD, 2017[2]).

However, as noted above, the Survey of Adult Skills suggests that participation in lifelong learning in Japan is low (Figure 4.2), while readiness to learn among Japanese adults is close to the lowest of countries participating in the survey (Figure 4.3). There are four broad reasons for the reluctance of workers to take up lifelong learning:

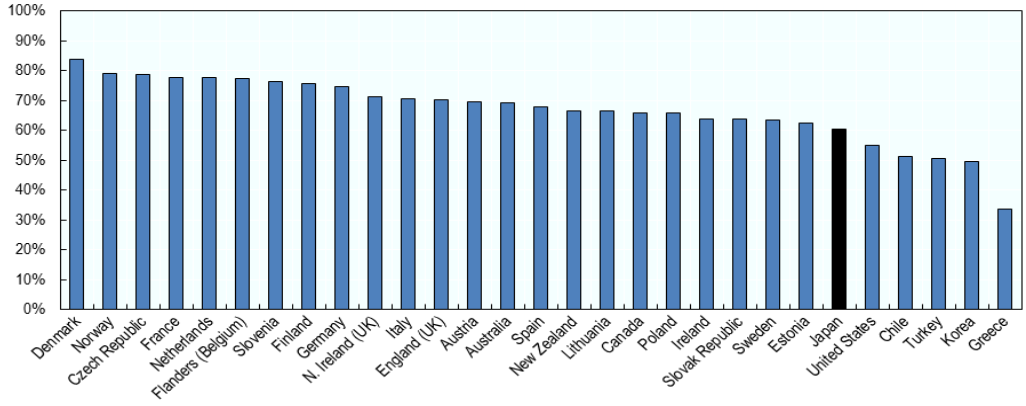
- Time constraints: Many Japanese workers are expected to work long hours to meet the demands of their jobs, and the requirement to undertake additional learning adds to demands on them. Nagamachi and Yugami (2015[26]) review the literature on working hours in Japan. While the number of working hours has trended downward from 2 100+ hours per annum in 1980 to approximately

1 700+ hours in 2015, they state: "Much of the observed reduction … stemmed from an increase in the number of part-time workers." Citing Kuroda (2010[27]), they state that "... the average number of working hours among full-time employees has not changed much over the last 25 years." They also note that Genda (2005[28]) found that "there was an increase in the ratio of employees working 60 hours or more per week from the late 1990s through to the start of the 21st century."

- Financial constraints: In the Survey of Adult Skills, the proportion of Japanese workers undertaking lifelong learning who were supported financially by their employer was in the lowest quartile of participating countries (Figure 4.8). In the absence of adequate funding, there is a risk that the pattern of take-up of adult education will mirror the distribution of power and resources, and will reinforce or increase inequity (Rubenson, 2006[29]). Moreover, apart from the direct cost of undertaking lifelong learning, there is a high opportunity cost, especially given the time constraints and the consequent high value of leisure time.

Figure 4.8. Employers' financial support for participation in training, 2012 or 2015

Percentage of employees receiving employer financial support for participation in formal and non-formal education and training



Note: Only data for Chile, Greece, Lithuania, New Zealand, Slovenia and Turkey are from 2015.
Source: OECD calculations based on OECD (2017[30]), *OECD Survey of Adult Skills (2012, 2015)*, OECD Survey of Adult Skills (database), www.oecd.org/skills/piaac/ (accessed 13 September 2017).

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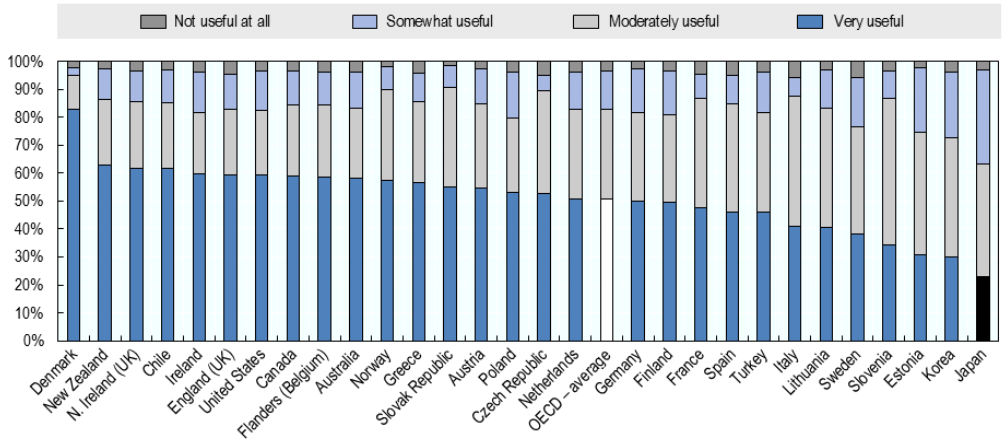
- Relevance of lifelong learning: Japanese adults undertaking lifelong learning were less likely than those in any other country to rate their learning as useful for their work (Figure 4.9). The UNESCO framework for adult education places the relevance of the educational experience at the core of the multifaceted concept of quality. According to the UNESCO definition, relevance means that the learning in programmes must represent an effective route to, and support for, personal and social transformation, a source for improving the quality of life (UNESCO Institute for Lifelong Learning, 2009[31]). There is a risk of lack of congruence between workers' needs, employers' needs and providers' preferences. Misalignment between the three risks low take-up of adult learning.

Figure 4.9. Share of workers who found education and training useful for their job, 2012 or 2015

25-65 year-olds participating in formal or non-formal education and training for job related reasons



Note: Only data for Chile, Greece, Lithuania, New Zealand, Slovenia and Turkey are from 2015.
Source: OECD calculations based on OECD (2017[30]), *OECD Survey of Adult Skills (2012, 2015)*, OECD Survey of Adult Skills (database), www.oecd.org/skills/piaac/ (accessed 13 September 2017).

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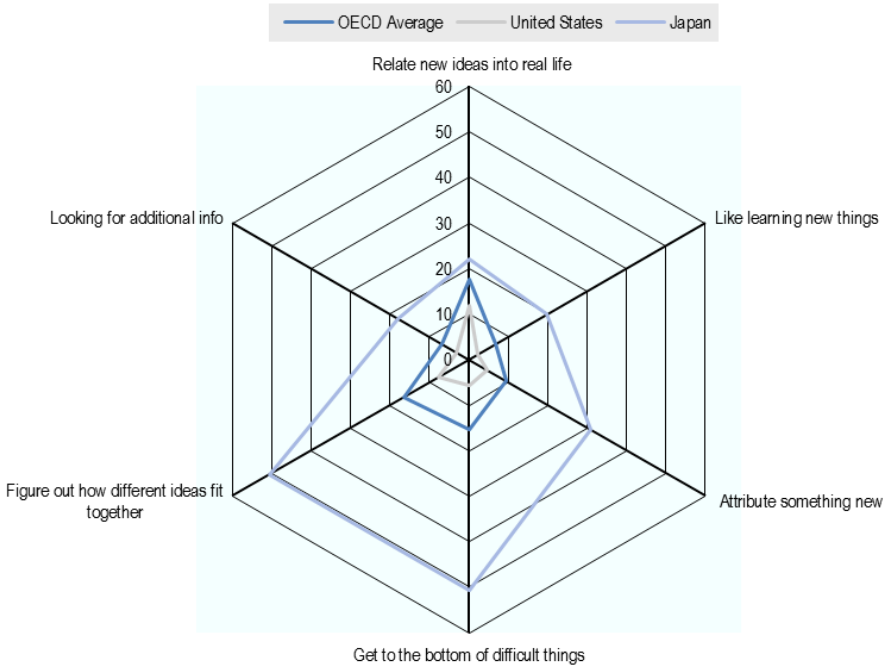
- Lack of interest or motivation: This refers to psychological factors that may impede an individual decision (UNESCO Institute for Lifelong Learning, 2009[31]). In the Survey of Adult Skills, adults in Japan were among the lowest in the readiness to learn index (Figure 4.3). Figure 4.10 breaks down this indicator into sub-categories. It shows that adults in Japan are below their OECD counterparts when it comes to liking to learn new things, looking for additional information, getting to the bottom of difficult things and figuring out how different ideas fit together.

During the OECD review visit, the team noted that tertiary education institutions are taking on older adult students as the size of the core age group for tertiary education declines, presumably because they see lifelong learning as a means of assisting their sustainability. However, it appeared that some of the current tertiary education institutions lifelong learning initiatives are focused on qualifications traditionally developed for younger students. It is unclear if such qualifications will satisfy the needs of older workers. Degrees and similar formal qualifications are of significant duration and cover a broad range of topics. But employees, most of whom will have completed an initial tertiary qualification, have specific and narrow learning needs and limited time to devote to learning. As a result, they are more likely to want shorter (and hence lower-cost) programmes that cater to their immediate learning needs. Nor is it clear that such traditional qualifications would meet the needs of employers. In addition, there is no clear data on the likely returns to individuals (and their employers) of qualifications undertaken by those in employment and, hence, whether the costs of lifelong learning can be justified.

Figure 4.10. Readiness to learn, 2012 or 2015

Percentage of adults answering using the learning strategy very little or not at all



Source: OECD calculations based on OECD (2017[30]), *OECD Survey of Adult Skills (2012, 2015)*, OECD Survey of Adult Skills (database), www.oecd.org/skills/piaac/ (accessed 13 September 2017).

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Policy recommendations: *Strengthen lifelong learning and financial arrangements for non-mandatory education to support equity*

The fiscal situation in Japan limits the government's scope for action to address the challenges and opportunities raised in this chapter. In these circumstances, the Japanese government needs to weigh its options carefully and ensure that it targets its expenditure to best effect, identifying those individuals and families who will benefit most from support and are at risk in the absence of support. For that purpose, the government can rely on the existing commitment of Japanese households to funding education, and it should focus on interventions that target lower-income groups in the population (Usher, 2006[15]). The government needs to ensure that the system develops competencies for the 21st century, while ensuring efficiency and equity. International evidence and country practices can provide examples on which to base policy choices.

As noted above, Japanese families value education and, hence, contribute a substantial share of the costs of education at all levels, especially in tertiary education. However, in a system where returns to investment in education are low and with rising poverty levels in Japan, the system faces equity risks. Some families will be unable to meet the expected contribution to the costs of education. This means that the Japanese government will need to continue its policy of targeting new investments to those at risk of missing out on the benefits of education. The increase in non-regular jobs has generated a "working poor" population, and the poverty rate is among the highest in the OECD, with one in six living

below half the median income (OECD, 2017[32]). Under current settings, these people are at risk of being excluded from tertiary education and lifelong learning. They are also more likely to be deterred from taking up ECEC and participating in the labour market. Different options to get the best value of expenditures to be more equitable in non-mandatory education and achieve higher participation in lifelong learning are presented below.

Consider that demographic trends provide some financial leeway

An OECD report (OECD, 2006[33]) estimated the impact of demographic trends on total expenditure on educational institutions between 2005 and 2015. Under the assumption that participation rates and rates of expenditure per student remain at their current levels, the decline in the number of students under age 20 would have decreased the education system's share of Japan's total government expenditure by 10 percentage points. As enrolments in tertiary education decline over the next decade, it may be possible to reprioritise some of the savings to the public budget allocated to tertiary educational institutions, to help fund some of the tertiary education initiatives discussed in this report.

The financial health of tertiary education institutions depends on economies of scale. Therefore, the demographic trends also open up the possibility of gains from the consolidation of institutions. In countries experiencing demographic decline, governments may need to support the health and quality of institutions as the student age cohort dwindles, institutional revenues fall and economies of scale decline. In the short term, increasing recruitment of international or older students could compensate for declining cohorts.

However, in countries where the student/teacher ratio is falling, encouraging the rationalisation of institutions has helped to maintain standards of quality and efficiency:

- In Wales, the risks to the financial viability of tertiary education institutions led the government to provide incentives for mergers between institutions between 1995 and 2010 (Tight, 2013[34]).
- In Finland, a foreseen demographic downturn and the ambition to create a world-class university triggered a reduction in the number of tertiary education institutions from 20 to 15 (Välimaa, Aittola and Ursin, 2014[35]).

In both cases, institutional financial viability, leadership and governance have been improved, a critical mass of shared services has been achieved and performance has improved (European Commission, 2016[36]).

As student numbers decline in tertiary education, the Japanese government should seek efficiencies in the tertiary education system in order to reallocate funding to the priorities identified in this chapter. Redirecting funding to higher priorities could be achieved by a combination of:

- retaining in the tertiary education budget a share of the savings as student numbers fall (rather than returning all of the savings to the Treasury) and allocate them to the student support system,
- encouraging institutions to seek efficiencies (for instance by using new educational technologies and approaches),
- supporting mergers of institutions as student numbers fall.

Provide higher subsidies in early childhood education and care

A growing body of research recognises that ECEC brings a wide range of benefits: better child well-being and learning outcomes as a foundation for lifelong learning; more equitable child outcomes and reduction of poverty; more female labour market participation; and better social and economic development for society at large (OECD, 2011[37]). Research also shows evidence of increased longer-term benefits from longer duration early childhood education (Horwood and McLeod, 2017[38]). As a consequence, international trends show that many countries have seen value in increasing subsidies in ECEC (OECD, 2016[12]).

- A literature review on the impact of ECEC conducted by Mitchell et al. (2008[39]) shed light on the positive outcomes (cognitive, learning dispositions, and social-emotional) of ECEC participation for learners in the short and long term. Their work highlights the importance of the quality of ECEC to achieve positive outcomes, especially for low-income families. In particular, cognitive gains in mathematics and literacy for children from disadvantaged homes could be greater than for most other children, if their ECEC centre was of good quality.
- A more recent literature review (Melhuish et al., 2015[40]) extends these results and underlines complex pathways in children's development, particularly in the early years. The potential effects of ECEC experience are moderated by family factors, such as deprivation and parental sensitivity, as well as by child factors, such as gender and temperamental reactivity.
- Horwood and McLeod (2017[38]) find that participation in early childhood education was associated with benefits for later cognitive and academic outcomes over the life course and that these benefits persisted at least up to age 30 and showed no evidence of declining with age.
- In light of the general agreement that quality matters to gain significant pay-offs, *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care* (OECD, 2011[37]) listed five key levers for effective promotion of quality in ECEC, based on policy observation and research:
    1. setting out quality goals and regulations,
    2. designing and implementing curriculum and standards,
    3. improving qualifications, training and working conditions,
    4. engaging families and communities,
    5. advancing data collection, research and monitoring.
- Building on *Starting Strong III*, a report from the European Commission (2014[41]) notes that access to universally available, high-quality, inclusive ECEC services is beneficial for all. This is why, in situations where public funding is available, provision should usually be free or parents' fees should be related to their income so that that ECEC services are affordable for low-income families.
- Across OECD member economies and beyond, the share of children enrolled in ECEC services is on the rise, increasingly for children under age 3. This has been made possible, in part, by the extension of legal entitlements to a place, and by efforts to ensure free access for the older age group (age 3-5) and selected population groups, such as the younger age group (age 0-2), or those who are

disadvantaged. Some countries (such as Australia, Germany and New Zealand) make a base level of early childhood education free or at low cost to families, reducing barriers to women's return to work after childbearing, and improving the educational experience of children (OECD, 2011[37]).

- The research literature suggests that the costs of childcare have an important influence on parents' participation and re-entry into the workforce (Del Boca, 2015[42]; Gathmann and Sass, 2012[43]; Berlinski, Galiani and Mc Ewan, 2011[44]).

In some countries (such as Austria and France), the organisation of ECEC is made up of different types of centres for which responsibilities fall under different ministries. Conversely, another group of countries has designed an integrated service for the provision of child rearing before primary school:

- In Latvia, children from age one to age seven can attend unitary pre-school education settings (*pirmsskolas izglītības iestādes*), which follow the curriculum developed by the Ministry for Education and Science.
- In Sweden, the ECEC system consists of unitary pre-school centres (*förskola*), aimed at children aged between age one and age six, under the responsibility of the National Agency for Education.
- In Finland, children are legally entitled to a publicly subsidised ECEC place from the end of the parental leave period. The majority of children who participate in ECEC attend day-care centres (*päiväkoti/daghem*), aimed at the 0-7 age group, which fall under the responsibility of the Ministry of Education and Culture.

For those countries, the seamless provision of services before primary school makes it easier to have high-quality ECEC standards. It can also be seen as an instrument promoting increased birth rates and women's participation in the labour market, as well as aiming to meet educational goals.

In the light of these countries' examples, the Japanese government could:

- continue its efforts to increase subsidies for ECEC, as resources permit, and accelerate those measures if possible,
- maintain and extend its approach of targeting ECEC subsidies to disadvantaged families,
- review the relationship between the kindergarten system and the day-care centre system that caters to children age 0-2, with a view to ensuring greater alignment between the systems and a stronger educational focus for the day-care system.

Increase financial support for tertiary students

In mostly privately funded education systems, there is a risk that some high-performing students may choose not to study (or may choose shorter, lower-level courses) due to tight financial constraints as well as debt aversion (reluctance to get into debt while future gains remain uncertain, or applying an unrealistically high discount rate to their investment in education). This reduces the efficiency of resource allocation. From an equity point of view, individuals should not be denied education opportunities as a result of a specific disadvantage (socio-economic status, gender, region of residence, ethnicity etc.). Economic theory indicates that, even if an equilibrium is efficient, it is not

necessarily fair. This is why public intervention might be needed to restore both efficiency and fairness (Santiago et al., 2008[22]).

There are many strategies that can ensure that a country provides equitable opportunities and does not discriminate against high-performing students who may not necessarily be able to cover the costs:

- Many OECD countries (Australia, Hungary, Korea, New Zealand, the Netherlands and the United Kingdom) have adopted a form of income-contingent student loans (OECD, 2016[12]). A comprehensive, income-contingent loan system allows a government the scope to manage its tertiary education resourcing policy and to share the costs between state and students by improving access and equity (Chapman, 2016[45]; Chapman and Ryan, 2005[46]).
- In addition, many of those countries, as well as others that have not implemented income-contingent loans, make their loans available to a broad cross section of their students, and the loans cover a high proportion of the full cost of study. For instance, in Australia, more than three-quarters of students take loans. The proportion is 83% in England, 71% in New Zealand and around 70% in Norway (del Rey and Schiopu, 2015[47]; New Zealand Ministry of Education, 2016[48]).
- A recent study led by Murphy et al. (2017[49]) analysed the England's shift from free tertiary education to a system with some of the highest tuition fees in the world. Their findings suggest that the shift has resulted in increased funding per head, rising enrolments and a narrowing of the participation gap between advantaged and disadvantaged students. The income-contingent loan system implemented in English tertiary institutions keeps tertiary education free at the point of entry and provides students with assistance for living expenses.

The network of private universities is critical to the Japanese national tertiary education system. But government funding for private universities is lower than for public institutions, despite the fact that public and private institutions make equal contributions to national educational goals, deliver very similar services to similar quality standards and face similar costs. This raises questions about the disparity of the rates of funding provided to public and private universities. At present, the disparity in government revenue is made up by the higher fees charged by the private universities, mitigated by differences in entitlements paid out under the government's student loan programmes. However, given the low coverage of student financial support in Japan, students in private institutions end up paying more, and this disparity raises equity risks.

To mitigate those risks, and extend to tertiary education the high standard of equity that characterises mandatory education in Japan, the government could:

- reconsider the design of its financial support for tertiary students with a view to extending the income-contingent student loan system as resources allow (particularly to increase the support for disadvantaged students)[6],
- consider the parameters of the loan system (such as how the eligibility for loans is targeted, the interest rate, the repayment threshold, and loan entitlements) as a means of managing the costs of the loan system,
- review the relationship between the funding of private and public universities, with a view to reducing the disparity in the funding rates.

Strengthen and target lifelong learning

Globalisation and technological change are transforming our societies and economies, strengthening competition between workers. High-skilled workers need to adapt quickly to an ever-changing technological environment, while low-skilled workers have to become more flexible and more skilled to retain employability, in a world of increasing automation. Lifelong learning is thus crucial both to keep workers' knowledge up to date and to redirect workers towards economic sectors less threatened by technological replacement. An OECD report (OECD, 2013[6]) has underlined the need to move from a complete reliance on initial education towards fostering lifelong and skills-oriented learning. In an uncertain environment, lifelong learning and training can tackle the depreciation of human capital and the shrinking of the talent pool by targeting key competencies.

This section examines lifelong learning in three contexts:

- Foundation education: Language, literacy and numeracy targeted at the small number who failed to gain those skills in mandatory education and at new migrants.
- Vocational education: Targeted at updating the skills of those in occupations that are changing or are likely to change as a result of new technologies and automation.
- Tertiary education: Targeted at professionals and managers whose skills need to be enhanced in order to remain competitive.

As noted above, the UNESCO Institute for Lifelong Learning (2009[31]) argues that lifelong learning can provide a route to, and support for, personal and social transformation and can, hence, improve the quality of life. The Council of the European Union (2011[11]) has stated that lifelong learning is crucial in developing tomorrow's society, with a special focus on the low-skilled and older workers to improve their ability to adapt to changes in the labour market and society. Adult learning provides a means of upskilling or reskilling those affected by unemployment, restructuring and career transitions, as well as making an important contribution to social inclusion, active citizenship and personal development.

Therefore, the benefits of lifelong learning are not only financial. They also enhance individuals' career choices and well-being and may influence health, while employers can gain through workers' increased productivity. Lifelong learning also offers the opportunity for adults to gain some of the 21st century soft skills that are increasingly valued by employers and will be promoted to the next generation of Japanese school students through the coming curriculum reforms.

Where the benefits of lifelong learning are shared between workers and employers, there is a case for splitting the costs between them. Where lifelong learning aims to support unemployed people or those who are out of the labour force to find employment, public intervention should be considered, because there are significant social benefits (Santiago et al., 2008[22]).

However, reaping the benefits of lifelong learning is not straightforward. There may be financial or non-financial benefits, which are not easy to demonstrate or to quantify. According to UNESCO, although the systematic collection of relevant information has increased since 2009, there is still a shortage of information on the outcomes of lifelong learning and education (UNESCO Institute for Lifelong Learning, 2016[50]). In some

countries, for instance, research shows variable or low financial returns to qualifications taken later in life, once a person has already completed initial post-secondary education:

- In the United Kingdom, Jenkins et al. (2003[51]) do not find general evidence of positive wage effects of lifelong learning. Only men who left school with low-level qualifications are found to earn more than their peers who did not do any lifelong learning. Conversely, there is strong evidence of employment effect: undertaking training is associated with a higher probability of being in the labour market.
- Another study in United Kingdom concluded that lifelong learning has an effect on subsequent earnings for women, but not for men (Blanden et al., 2012[52]).
- In Australia, a study found that the impact of adult education differs by gender and level of study, with small or zero labour market returns in many cases (Coelli and Tabasso, 2015[53]).
- Research in New Zealand found that male workers who completed a qualification had no additional earnings gain compared to similar workers who hadn't taken formal study. Some women did gain from an additional qualification, but only if that study was at an advanced level (Crichton and Dixon, 2011[54]).

These findings suggest that lifelong learning benefits are context-dependent. Identifying country-specific factors would inform the design of a more coherent and efficient lifelong learning system. This suggests a need for a thorough analysis of the needs of society and the labour market in order to tackle this issue strategically. Lifelong learning in Japan will continue to have low take-up unless its relevance to the individual and to employers is clear and it can meet the needs of learners and employers at a reasonable cost. This requires leadership that will ensure that the needs of employers, workers and disadvantaged groups in Japanese society are articulated and communicated to education providers.

The literature and a range of the international evidence highlight a number of approaches that could boost the efficiency of training to respond to the objectives:

- Aligning training systems to the needs of the economy would reinvigorate skill development (International Labour Office (ILO), 2010[56]). Identifying the skills needed in a 21st century economy, the specific needs of employers and the kind of institutions suited to deliver the training would boost training take-up.
    - In 2012, the Australian government launched a website called My Skills, which provides information to connect individuals and employers with training organisations that best suit their needs.
- Targeting specific subgroups (those in work, those who have not succeeded in their first experience of education, men and women etc.) allows for programmes to be tailored to the specific needs of workers.
    - The Basic Competence in Working Life Programme in Norway, the Adult Education Initiative in Sweden, and the WeGebAU programme in Germany are three examples of learning programmes for adults who have not attained upper secondary education (OECD, 2013[6]).
    - Jenkins (2004[55]) estimates, based on a UK sample of 1 443 women, that lifelong learning which led to a qualification substantially increased the likelihood that a woman would return to employment.

  - In Ireland, the Springboard initiative, launched in 2011, provides free, part-time upskilling and cross-skilling courses in tertiary education as a means of helping unemployed people back into sustainable employment. Springboard qualifies participants in areas where there are identified skills needs, based on up-to-date analysis for Ireland by the Expert Group on Future Skills Needs.

- Full qualifications are unlikely to be suitable for upskilling those in employment who already have an initial qualification and who seek to enhance their skills to improve their work. Smaller, more flexible, modules of learning and timetabling to suit busy workers would be likely to increase take up. The development of micro-credentials and nano-qualifications, as well as new approaches to delivering training (such as via Massive Open Online Courses [MOOCs]), offer opportunities to close skill gaps quickly. These qualifications could potentially have an early bearing on the labour market.

Overall, the distribution of the benefits from lifelong learning is not clear. Understanding the costs and benefits from different types of lifelong learning would encourage a more appropriate split of costs between employers, workers and the government and would incentivise workers to take part in relevant and useful lifelong learning (International Labour Office (ILO), 2010[56]).

  - In the United Kingdom, 58% of workers consider that the cost can prevent them from training (McNair, 2012[57]).
  - The European Centre for the Development of Vocational Training (Cedefop) estimated, with 2010 data, that among enterprises not delivering any training, 31% blamed the high costs (Cedefop, 2014[58]).

Time constraints on workers are likely to hinder the take-up of lifelong training. Assessing an appropriate balance between on-the-job and off-the-job learning could reconcile conflicting schedules (Hyde and Phillipson, 2014[59]; International Labour Office (ILO), 2010[56]).

  - McNair (2012[57]) showed that 42% of UK respondents consider the lack of time as a potential barrier to future learning.
  - In the Cedefop study, among firms surveyed by Eurostat who were not delivering any training, 32% considered there was "no time available" because of high staff workload and limited time available (Cedefop, 2014[58]).

As noted above, time pressures on Japanese workers, the high costs of lifelong learning, the relative reluctance of Japanese employers to support their workers' participation in further training and the expectation of some tertiary institutions that lifelong learning should be moulded to traditional qualifications have restrained participation in lifelong learning in Japan. Those who have participated have questioned the usefulness of what they learned. These issues all need to be addressed if lifelong learning is to make a significant contribution to solving Japan's future skill supply and productivity problems.

The Japanese government could consider:

- Commissioning analysis of:

  - the need for upskilling of different groups in the workforce and in the population, such as women, people in employment at various levels, non-traditional workers and people below the poverty line,
  - the needs of employers for the upskilling of their staff,
  - the distribution of the benefits of different types of upskilling between employers, employees and the broader society.
- Using the results of that study to design an approach to lifelong learning that addresses the weak uptake of lifelong learning in Japan by:
  - fostering collaboration between employer groups, representatives of potential users of lifelong learning and providers of lifelong learning, to ensure the relevance of provision to the users,
  - encouraging the design of programmes that make use of micro-credentials and new educational technologies to enable workers to gain meaningful and relevant skills in a shorter time and at lower cost,
  - encouraging more flexibility in scheduling and timing of lifelong learning courses to reduce the time constraints that deter participation,
  - developing mechanisms that allocate costs between employees, employers and the government to create incentives that will boost the use of lifelong learning to improve the performance of the economy.

Notes

[1] Women's share of temporary employment in Japan is 60%, the highest among OECD countries. The flip side of this statistic is that a high proportion of Japanese men who are unemployed fall into the category of long-term unemployed. Of unemployed men in Japan, 45% were long-term unemployed (compared to the OECD average of 34%).

[2] The index is drawn from responses to questions in the survey that explore respondents' views on the following: liking to learn new things; relating ideas to real life; searching for additional information; working out how ideas fit together; and getting to the bottom of ideas that are difficult to understand. See Figure 4.3 for more details.

[3] The difference in the employment rate between tertiary qualified men and women in Japan (24 percentage points) was among the highest in the OECD. Among OECD countries that took part in the Survey of Adult Skills, only Korea had a higher difference between men and women on this measure.

[4] Computed as: $\frac{0.23/0.21}{0.07/0.79}$.

[5] Non-regular employment is a category that includes fixed-term, part-time and dispatched workers. It has risen in Japan from 20.3% of total employment in 1994 to 38% in 2016 (OECD, 2017[2]).

[6] In this case, it may be necessary to introduce some fee control so that the benefits of the additional student financial support are not captured by the higher education institutions.

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Annex A. Overview of strengths, challenges and policy options

Competencies for 2030: Curriculum, assessment and teaching

Strengths

- The curriculum and reform are focused on developing knowledge, skills and attitudes (and values) for students with a long-term focus on 2030.
- The curriculum reform process is well established (every ten years) and understood by stakeholders.
- There are pilots in place to test the teaching strategies to introduce the new curriculum.
- The lesson study is well known and operationalises the culture of reflection, team work and impact.

Challenges

- The magnitude of the reform should not be minimised, and there are risks that proactive, interactive and authentic learning may be adopted only as superficial change.
- There is a need for a clearer strategy for schools and teachers to adopt the concept of active learning.
- Significant efforts are required to align assessments with the new education objectives to ensure full adoption of the revised curriculum (upper secondary education and university entrance examination are driving incentives).
- There is a need to ensure that conditions exist for teachers and schools to develop and be able to practice new curriculum, including subjects and skills development, and to target the heavy teachers' workload and large class sizes.

Suggested policy recommendations

Towards 21st century competencies: Prioritise implementation of the curriculum reform

- The implementation of the new curriculum requires a carefully crafted strategy that sets policy priorities around the curriculum and communicates its value to parents and communities to ensure adoption and support.
- While the reform strategy can build on existing strengths and continue the measured move towards more active learning, it also needs to take into account additional educational issues in the country, such as development of digital competence and proficiency in foreign languages.
- The approach to assessment, including upper secondary education and university entrance examinations, needs to reflect the broader purposes of the new curriculum. Training to ensure teachers are able to assess students aligned to the new curriculum should be systematic.
- Investing in the continuing training of teachers will be key, ensuring that teachers are able to focus on effective teaching and learning and that they have flexible resources that reflect active learning and encourage cross curriculum learning. Aligning ITE to the new curriculum will also be key.

Holistic education and school-community partnerships

Strengths

- Japan has adopted a model of holistic education in which schools also work with children to take care of their own environment, and deliver after school activities. School-community partnerships contribute to this model.
- The recent reform package (Team Gakkou, Community School and Community Co-operation Network for Learning and Education) attests to a strong political will to design schools for the 21st century.
- The commitment of families and communities for schools already exists and contributes to holistic education.
- In Japan, there is a shared commitment to improve equity

Challenges

- Teachers' long working hours and the lack of leadership on the part of school principals may hinder the sustainability of holistic education.
- The reforms on school management and partnerships with community require investing in leadership capacity at the school level.
- There is a lack of clarity on the objectives of school-community partnerships which can divert efforts from the core curriculum reform agenda.
- External extracurricular activities and juku, financed by families, place a financial burden on the more disadvantaged.

Suggested policy recommendations

Focus school organisation and school-community partnerships on the curriculum reform and preserving holistic education

- Enhance support service at school level by considering the possibility of having additional teachers or administrative staff who could cover extra social or welfare needs, enhance students' well-being and potentially alleviate the burden of teachers. However, it is important to ensure that the holistic model of Japanese education is maintained without resorting to a Tayloristic model of work organisation that promotes the segmented allocation of tasks across different staff.
- Focus leadership towards 2030 by redefining the role of school principals according to long-run objectives, developing professional selection processes, providing specific training at different stages of the career and implementing evaluation and incentives to make the profession more attractive.
- Target the objectives of the school-community partnerships to promoting activities that contribute to holistic education, to allow schools and teachers to focus on the curriculum reform.
- Consider establishing specific structures and sparing resources to mitigate the risk of increased inequalities that could result from school-community partnerships. In addition, support more partnerships in disadvantaged communities as an alternative to prevailing shadow education, while also studying its impact on inequalities.

Lifting the contribution of education to the Japanese skills system

Strengths

- Education is a priority for individuals and families; the principle of cost sharing is widely accepted.
- There is high-level recognition by the government of the need for change in the skills system. This creates opportunities to address longstanding issues: the need to broaden the skill base, in terms of the types of skills in the population and the retention of more skilled people in the labour force (especially women and older people).
- The existing high-performing tertiary education institutions provide a strong base from which to meet the emerging challenges. There are signs of growing innovation in the higher-education sector.
- The government has an efficient student financial aid system that provides subsidised loan schemes and a new grant-type scholarship to provide support for tertiary education students.

Challenges

- There is a high financial burden on families who take up early childhood education and care (ECEC), especially for the most disadvantaged.
- The government's student financial support is low by international standards, so most students have to rely on family support and income from part-time jobs.
- There are two functions for lifelong learning: upskilling the working or retired (qualified) population and second-chance education. There seems to be little recognition of the need to provide second-chance adult education.
- Take-up of lifelong learning is low. There is evidence that current lifelong learning provision is of low relevance and poor value for money.

Suggested policy recommendations

Strengthen lifelong learning and financial arrangements for non-mandatory education to support equity

- As tertiary education student numbers decline, the Japanese government needs to take advantage of the headroom created in the tertiary education budget to find efficiencies and to reallocate funding to higher priorities. The government needs to target support to those who are most disadvantaged and to initiatives that will have the greatest impact on the challenges the skills system faces.
- As resources permit, the Japanese government should continue its efforts to increase subsidies for ECEC, while maintaining its approach of targeting subsidies to disadvantaged families. In the medium term, ensuring better integration of the day-care and kindergarten systems could boost female participation in the labour market.
- Reconsider the design of the tertiary student financial support system with a view to extend income-contingent loans as resources allow, and use the parameters of the scheme (such as interest rates, repayment threshold and loan entitlements) as a mean of managing the costs of loans.
- With employers and workers' representatives, redesign the approach to lifelong learning to focus on the needs of employers and of the population for upskilling, while ensuring the affordability and relevance of lifelong learning provision, as well as innovative delivery approaches and flexibility in scheduling.

Annex B. Agendas of the OECD review visits

Fact-finding visit: 30 November – 2 December 2016

Wednesday 30 November

09:30–10:00	Briefing from National Co-ordinator from the Ministry of Education (MEXT)
10:00–10:15	Welcome from Ms. Ikuko Arimatsu Director General, Lifelong Learning Policy Bureau
10:15–10:30	Welcome from Mr. Takimoto, Deputy Director General, Elementary and Secondary Education Bureau
10:30–12:00	Country Background Report Briefing 1 (School Education) MEXT Officials
13:30–14:30	Country Background Report, Briefing 2 (Collaboration between school and community) MEXT officials
14:45–15:45	Country Background Report, Briefing 3 (Lifelong learning and tertiary education) MEXT officials
15:50–16:20	Meeting with Hiroshi Suzuki, Special Advisor to the Minister
16:30–17:30	Meeting with Prof. Takashi Muto (Curriculum Reform)
18:30	Dinner with MEXT officials

Thursday 1 December

09:20–11:30	Yaguchi Elementary School (Ota City, Tokyo): Visit, Discussions with teachers and children concerning school based curriculum improvement.
13:30–15:30	Meiji University (Chiyoda City, Tokyo): Meeting with university officials in charge of student support and lifelong learning.
16:30–18:00	Dai-ni Enzan Elementary School: "Shinagawa Smile School" (School Community Collaboration Activity)

Friday 2 November

10:00–11:15	Meeting with officials from Japan Student Support Organisation
11:30–12:30	Meeting with Prof. Hajime Shirouzu, University of Tokyo
14:00–15:00	Informal discussion on the outcome of the visit
15:30–17:30	Preparation of the January Review visit (National Coordinator and others).

Main review visit: 23-27 January 2017

Monday 23 January

09:30–10:00	National Co-ordinator from the Ministry of Education (MEXT)
10:00–10:30	Ms. Ikuko Arimatsu, Lifelong Learning Policy Bureau, MEXT
10:30–12:00	Country Background Report, Briefing 1 by MEXT officials (School education)
13:30–14:30	Country Background Report, Briefing 2 by MEXT officials (Collaboration between school and community)
14:45–15:45	Country Background Report, Briefing 3 by MEXT officials (Lifelong learning and tertiary education)
16:00–17:00	Prof. Motohisa Kaneko, University of Tsukuba, expert on lifelong learning in tertiary education institutions

Tuesday 24 January

09:30–10:30	Secretariat of the Council for Implementation of Education Rebuilding
13:00–14:00	Prof. Takashi Muto, Shiraume Gakuen University, expert on the curriculum reform
14:15–15:15	Dr. Reiko Kosugi, Japan Institute for Labour Policy and Training, expert on lifelong learning in tertiary education institutions
15:30–16:30	Prof. Shigeki Matsuda, Chukyo University, expert on pre-primary education

Wednesday 25 January

Group 1:

08:30–09:30	Akita Prefecture Board of Education
10:00–11:00	Akita Prefecture Education Centre (teacher training institute)
11:20–15:00	Visit to Tennou Elementary School, Katagami City

Group 2:

13:00–16:30	Visit to Nagoya University of Commerce and Business

Thursday 26 January

Group 1:

09:00–10:30	Visit to Community House of Higashi Yamata Junior High School, Yokohama City
11:30–14:00	Visit to Ushioda Elementary School, Yokohama City
14:20–16:10	Visit to Science Frontier High School, Yokohama City
16:30–17:00	Visit to Ushioda Junior High School, Yokohama City

Group 2:	
09:45–10:45	Japan Student Services Organization
13:00–14:45	Visit to Waseda University
15:00–16:00	Prof. Kiyotake Oki, Waseda University, on the university entrance examination reform
16:30–17:30	Mr. Hiroshi Inoue, Japan Business Federation (Keidanren)
Friday 27 January	
10:00–11:30	Ms. Seiko Ogawa, Principal of Minami Kawara Elementary School and Ms. Rie Hirakawa, Principal of Nakagawa Nishi Junior High School
12:45–13:45	Prof. Tetshuya Kajisa, independent expert on teacher education
14:00–15:00	Summary discussion with MEXT officials

Annex C. OECD review team members

External experts

Graham Donaldson, a former teacher, headed Her Majesty's Inspectorate of Education (HMIE) from 2002-10. As chief professional advisor to ministers on education, he has taken a leading role in a number of major reform programmes, including Scotland's major reform of its curriculum.

After his retirement from HMIE, his report *Teaching Scotland's Future* (2011), made 50 recommendations about teacher education in Scotland, which have all been accepted by the government and are the subject of an ongoing reform programme. He has also undertaken a review of the national curriculum in Wales, and the 68 recommendations in his radical report, *Successful Futures* (2015), have also been accepted in full and embodied in a major, long-term reform programme.

Graham has worked as an international expert for the OECD, participating in reviews of education in Australia, Portugal and Sweden. He was made a Companion of the Order of the Bath by the Queen in 2009 and given the Robert Owen Award as an Inspirational Educator by the Scottish Government in September 2015. In addition to various forms of consultancy and continuing to act periodically as an international expert to OECD projects, he was appointed as an Honorary Professor in Glasgow University in 2011 and an advisor to the Minister for Education and Skills in Wales in 2015. Graham is also a member of the First Minister of Scotland's International Council of Education Advisors (2016).

Ben Jensen has extensive experience in education reform, advising governments in Australia and numerous international systems. He is the founding CEO of Learning First, an organisation committed to reforming school education. Learning First uses research, consulting and development to help improve education systems in Australia and around the world.

Before founding Learning First, Ben was Director of the School Education Program at the Grattan Institute for five years. His reports had a significant impact in Australia and internationally, focusing on areas such as school improvement programmes on teaching and learning, education reform strategy and cost effectiveness. Prior to this, he was at the OECD Directorate for Education, conducting international research on education policy and school and teacher effectiveness. While there, he led an expert group examining how to accurately and meaningfully measure school performance and an international network comparing public policies that affect how schools operate and are organised.

Ben has served on the Australian Government Teacher Education Ministerial Advisory Group, the Rodel Foundation International Advisory Group for the State of Delaware school education strategy and the OECD Teaching and Learning International Survey (TALIS) expert group.

Roger Smyth has thirty years' experience in senior management in tertiary education. In addition to his in-depth knowledge of the New Zealand tertiary education system, Roger has a strong understanding of the political and policy context that governs tertiary education.

Roger had 14 years in university management and planning before moving to the New Zealand Ministry of Education in 2002, where he led the group responsible for the tertiary education policy programme. He was responsible for enhancing policy design and reform content by ensuring that policy advice is informed by research and analytical findings. By building linkages between research and analysis work and the tertiary education policy programme and advocating for the use of analytical results in support of policy advice, his group was able to better anticipate emerging policy questions and produce policy-relevant analysis.

Roger has been an active analyst and researcher on tertiary education, having published more than 25 papers and journal articles and written a large number of book chapters. He previously worked for the OECD as a member of the team that reviewed Iceland's tertiary education system in 2005 and as national co-ordinator for New Zealand's involvement in the OECD Thematic Review of Tertiary Education between 2005 and 2007. Since mid-2017, Roger has been working as a consultant in tertiary education policy.

OECD analysts

Beatriz Pont is a senior education policy analyst at the OECD Directorate for Education and Skills. With extensive experience in education policy reform internationally, she currently leads OECD Education Policy and Implementation Reviews and recently led the comparative series on education reforms, Education Policy Outlook. She has specialised in various areas of education policy and reform, including equity and quality in education, school leadership, adult learning and adult skills and has also worked with individual countries, including Mexico, Norway, Sweden and the United Kingdom (Wales) in their school improvement reform efforts.

Previously, Beatriz was researcher on education and social policies in the Economic and Social Council of the Government of Spain and also worked for Andersen Consulting (Accenture). She has a PhD in Political Science from Complutense University, Madrid, a Masters in International Relations from Columbia University and a Bachelor of Arts from Pitzer College, Claremont, California. She has been research fellow at the Institute of Social Sciences (Tokyo University) and at the Laboratory for Interdisciplinary Evaluation of Public Policies (LIEPP, Sciences Po, Paris). She holds an honorary doctorate from Sheffield Hallam University.

Pierre Gouëdard is an analyst at the OECD Directorate for Education and Skills. An economist specialised in economics of education, he has researched in areas of teacher careers and positive action in high schools, written on a range of related topics and taught in the field of economics. Formerly a researcher from the Laboratory for Interdisciplinary Evaluation of Public Policies (LIEPP, Sciences Po, Paris), he developed an analytical framework to study aspirations of students when they apply to tertiary education. Pierre holds a PhD from Sciences Po, Paris, a Master's in Analysis of Economic Policy from the Paris School of Economics and a Master's in Economics from the University of Montreal.

Hiroko Ikesako is a research assistant at the OECD Directorate for Education and Skills. She has worked for the OECD Education and Social Progress project and several education policy reviews in the OECD Country Reviews Programme. She holds master's degrees in International Education Policy and Educational Research Methodology.

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Reviews of National Policies for Education

Education Policy in Japan

BUILDING BRIDGES TOWARDS 2030

Japan's education system is one of the top performers compared to other OECD countries. International assessments have not only demonstrated students' and adults' high level of achievement, but also the fact that socio-economic status has little bearing on academic results. In a nutshell, Japan combines excellence with equity.

This high performance is based on the priority Japan places on education and on its holistic model of education, which is delivered by highly qualified teachers and supported by the external collaboration of communities and parents. But significant economic, socio-demographic and educational challenges, such as child well-being, teacher workload and the high stakes university exam, question the sustainability of this successful model.

Policy makers in Japan are not complacent, and as Japan starts implementing its Third Basic Plan for the Promotion of Education (2018-22), they are carefully analysing tomorrow's threats to Japan's current success.

This report aims to highlight the many strengths of Japan's education system, as well as the challenges it must address to carry out reforms effectively and preserve its holistic model of education. The ultimate goal is to ensure that the education system delivers the best for all students, and that Japanese learners have the knowledge, skills, attitudes and values they need for the 21st century.

Consult this publication on line at ***https://doi.org/10.1787/9789264302402-en***.

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