

Chapter 4

Japanese Education Reform Towards Twenty-First Century Education



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Abstract This chapter describes an education reform towards twenty-first century education in Japan. The Ad Hoc Council on Education which was established in 1984 by Prime Minister was the starting point of the reform. Japanese society was also undertaking a transition from twentieth century industry to twenty-first century industry. Education reform was a part of it. That was the reason this education reform involved national wide debate including industry people, union people, mass media people, politicians as well as education people. This education reform covers all aspects of education, that is contents, teachers, facilities, school management system, education administration system and fundamental laws. At first this chapter focuses on reform of national standard curriculum from 1990 until 2020. The basic stance of this reform was that the teaching style must take the transition from cramming to help students acquiring the ability to learn and think on their own. And then other reforms such as introduction of national academic ability test, reform of teacher training system, reform of university entrance examination and reform of school management system are also described. This chapter describes the continuous efforts and challenges during this education reform.

4.1 Overview

Japan is currently undertaking reforms in school education toward twenty-first century education. These comprehensive reforms include a wide range of changes, such as reform of national curriculum standards, a new school evaluation system, introduction of a national academic performance test, teacher training, reforms in university entrance examinations and admission policies, and improved coordination between schools and society.

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These reforms aiming to better prepare students for the twenty-first century began in the 1980s. The starting point was a report by the Ad Hoc Council on Education set up by the Prime Minister in 1984. The report stressed that respect for the individual should be the fundamental principle upon which education reforms are built. It urged Japan to shift its focus from standardized, conventional rote learning towards learning that would help children develop the flexible and independent mindsets needed to think, judge, and take responsibility for their actions. After the report, Japanese education began to steer towards twenty-first century education with comprehensive policies to ensure the success of new approaches to teaching and learning.

However, the process of transforming into a twenty-first century education system has not been without challenges. For example, when Japanese students scored low on the PISA (Program for International Student Assessment) in 2003 and 2006, the public blamed the curriculum reform as the main reason for the decline and claimed public education should focus on helping children acquire academic knowledge. Nevertheless, Japan didn't alter the direction of its educational reform. Instead, in response to mounting public criticism, the National Assessment of Academic Ability was introduced in 2007. The purpose was to assess children's academic performance as a basis for further reforms. Since 2009, efforts such as employing more teachers, including assigning more teachers to schools with academic and behavioral problems, and introducing morning reading sessions at schools were implemented nationwide and have begun to demonstrate success. In 2012, Japanese children achieved the highest total PISA score among all the member states of the OECD.

On the other hand, although students' academic performance had improved, issues such as low motivation to learn and self-esteem remained. Further, the government had to consider making further changes to social and employment structures to prepare for anticipated technological advancements (such as artificial intelligence [AI]) and discussions of the OECD Education 2030.

With these conditions in mind, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) thoroughly reviewed the abilities and skills which children should aim to acquire and subsequently revised the National Curriculum Standards. The new standards will be implemented from 2020 to 2022 and include active learning (i.e., independent and interactive in-depth learning) in all school courses. The standards also include new subjects such as scientific exploration, general exploration, public comprehensive history, and comprehensive geography. The government has also improved university entrance examinations by reforming the selection process to evaluate applicants' broader competencies beyond academic ability and the mere quantity of their knowledge.

Furthermore, MEXT implemented reforms in teacher training programs in line with changes in the National Curriculum Standards: launching the induction training system; introducing the teacher's license renewal system; and improving training programs for working teachers to enhance their skills and abilities.

As for coordination between schools and society, the government established the School Management Council System (Community Schools) to incorporate local

communities' needs into school management. Additionally, a reform of the teaching certificate system aimed to employ people who were in non-teaching careers as full or part-time teachers.

The reform toward twenty-first century education is closely connected to the transition underway in the larger Japanese society. After the Meiji Restoration in 1868, when Japan became a modern nation-state, Japan focused on industrialization as a mean of national development to "catch up" with Western developed countries. A similar process has also occurred with the Japanese education system before and after World War II. In the 1980s, when Japan's GDP was the second highest in the world, Japan had to begin setting its own goals for prosperity without imitating the model of Western countries.

Recently the world has also undergone a great transformation due to globalization and the development of information and communications technology (ICT), including AI. To adapt to these major social changes and establish a twenty-first century education system, Japan has continued to prioritize education reforms.

4.2 Structure of the Chapter

All countries are now facing similar challenges to their societal and educational institutions due to the information revolution, globalization, and environmental changes. In response to these changes, Japan has been making comprehensive education reforms since the 1980s to bring its education system to the twenty-first century. This chapter starts by explaining the background of the educational reform in Japanese society and education.

Second, the chapter describes the National Curriculum Standards. Reform of the Curriculum was the starting point of the education reform in Japan. The National Curriculum Standards stipulate objectives, content, time allocation and course of study for each subject for each school level: primary, junior, and senior high schools. The revision of the National Curriculum Standards also required the revision of textbooks, as well as changes to teacher training, teaching facilities, and numbers of teachers. Based on these reforms, revision of the National Curriculum Standards was implemented to each local government and school.

Third, this chapter describes the National Assessment of Academic Ability for students which has been conducted by MEXT since 2007. The aim of the assessment is to measure students' academic achievement and identify any weaknesses with national and local educational policies, including the National Curriculum Standards.

Fourth, this chapter discusses the reform of University Entrance Examination. In Japan, the university entrance exam is still focused on assessing the amount of academic knowledge students acquired in school education. All efforts to reform primary and secondary education are in danger of failure unless the university entrance exam is successfully reformed.

Finally, the chapter describes the reform of the educational administrative system, including the relationship between national and local government and the partnership between schools and local communities.

This chapter is mainly based on the papers of the Central Council for Education and its sub-committees in MEXT, as well as reports of the Education Rebuilding Council and other education councils established in Cabinet Office.

Generally speaking, Education Councils established in Cabinet Office make recommendations on educational reform, then the Central Council for Education (CCE) established in MEXT makes more concrete recommendation taking into account of them. MEXT carries out educational policies based on the CCE's recommendations.

4.3 Background of the Reforms

4.3.1 *Ad Hoc Council on Education*¹

In the 1980s, the Ad Hoc Council on Education stated that Japan's education system needed to be transformed from the twentieth to the twenty-first century. The Ad Hoc Council on Education was established as an advisory panel to the Prime Minister to support education reforms that were not only beneficial to educators, but also to society as a whole and the people of Japan. The Ad Hoc Council on Education was created in response to a deteriorating education system. The problems included children's problematic behaviors such as bullying, school violence, and truancy; psychological and physical pressure placed on students due to the excessively competitive entrance examinations; and schools' inaction in the face of problematic teachers.

Two sets of issues were identified as causes of this deteriorating state of education: issues with the whole Japanese society and the Japanese school education in particular.

¹ The reports of Ad Hoc Council of Education Reform are as follows.

Monbusho, (1985, June), The First Report on Education Reform, *The monthly journal of Monbusho*, p. 50–76.

Monbusho, (1986, April), The Second Report on Education Reform, *The monthly journal of Monbusho*, p. 27–129.

Monbusho, (1987, April), The Third Report on Education Reform, *The monthly journal of Monbusho*, p. 4–91.

Monbusho, (1987, September), The Forth Report of Education Reform (Final Report), *The monthly report of Monbusho*, p. 8–49.

See also, Monbusho, (1989), Japanese Government Policies in Education, Science and Culture 1989, http://www.mext.go.jp/b_menu/hakusho/html/hpae198901/index.html

4.3.2 *Issues in Japanese Society*

Japan undertook industrialization in the 1860s during the Meiji period and achieved dramatic economic growth after World War II. By 1968, Japan's GNP ranked second highest in the world. These achievements came with the economic mechanisms of mass production, mass distribution, and mass consumption. The results were people were lifted out of poverty and became wealthier; had an improved standard of living; lived in peace; had a higher standards of welfare, education and culture; had enhanced public safety; and a higher average life expectancy. In the 1970s, however, developed nations, including Japan, suffered the side effects of wealth, including environmental, resource and energy problems; the disintegration of large family units and local communities due to urbanization; and the growth of the number of nuclear families. Japan's natural ecosystems and living environments suffered damage, people's physical and emotional health declined, and stress and frustration levels increased. Furthermore, as people's values became increasingly diverse and relative, traditional values lost their influence. This weakened the unifying power in society and made it difficult for people to form close interpersonal relationships and connect with nature. These pathological and sociocultural phenomena had an enormous impact on children's lives.

In the twentieth century, Japan successfully adopted the science and technology industries that were the fruit of Western developed nations' research and development efforts. After becoming the nation with the world's second largest economy, Japan found itself needing to explore new scientific and technological creations. This marked Japan's transition from following the model of Western countries' industrialization to setting its own goals without a model.

On the other hand, the growing tide of internationalization required Japan to work with foreign countries to deal with global issues shared across national borders, including international economic issues and environmental problems. This meant that Japan could no longer focus only on its own interests in international settings, as it had from the Meiji period until the post-war economic growth period. The country now needed to actively contribute to international peace and prosperity and help solve various problems across the globe.

Moreover, advances in information technology resulted in a transition from conventional hardware to software, which involved further development of information technology, AI and integrated systems. This change indicated an individual's ability to process information, make choices, and share information would rise to a higher level of importance. This technological progress fundamentally changed the systems to produce, distribute and consume knowledge, information and technologies in both education and research. This change led to the need to nurture intellectual, productive, creative and emotionally-healthy individuals, rather than those with standardized skills and intelligence.

As these facts indicate, Japan's education reforms launched in the 1990s also involved efforts to keep up with the maturation of society, internationalization, and advances in science and technology, which were all phenomena shared across

developed countries in the 1970s and 1980s. The reforms also aimed to transition the country from the age of pursuit of the Western model to the future-oriented, creative society geared for international services. The education reforms were also expected to adjust to the rapid changes that the whole society was undergoing. Hence, it was essential to clearly define the actor of the reforms and their specific responsibilities to ensure coordination between society and the education system.

4.3.3 Issues with Japan's Education System

The following two problems were identified as the major contributing factors to Japan's deteriorating education system: (a) Excessively competitive university and high school entrance examinations and "cramming-style" education that focused on rote learning; (b) The inflexible, standardized educational approaches and the non-transparent culture of the education system which leads schools and the board of education to conceal 'bad news' from the outside world. For example, a school will generally not disclose the existence of bullying.

After Japan adopted the modern school education system in 1872, school education thrived rapidly due to people's enthusiasm for education and growing national income. In the 1980s, the high school enrollment rate reached ninety-four percent and the college enrollment rate reached thirty-seven percent. The improvement in equality of educational opportunity for public and higher education served as the driving force of Japan's economic growth. To achieve society's goal of catching up with Western developed countries, school education focused on teaching science, technology, and other knowledge from the Western countries. This led to standardized learning approaches centered on the "cramming-style" rote learning.

The excessive competition in entrance examinations further drove the education system to focus on rote learning. Before World War II, government agencies and major corporations favored employees who were alumni of specific universities and determined their employees' salaries and benefits according to their educational backgrounds. This school record-oriented employment favoring alumni of specific elite universities remained after the war. Major corporations had "designated school systems" in which they gave preference to job applicants from prestigious universities. While the college enrollment rate was rising, competition for admission to these prestigious universities became increasingly intense because of the preferential treatment given to job applicants from those universities. University entrance examinations in Japan tend to focus on scores that applicants have obtained in academic achievement tests in order to maintain objectivity and fairness in the selection process. Hence, applicants needed to achieve high scores in entrance examinations to be accepted at prestigious universities. This fact prompted high school education to adopt rote learning as an approach to score high in university entrance examinations. The competition for admission to prestigious universities led to competition among junior high school students aspiring to enroll at prestigious senior high schools. Competition in entrance examinations took hold of students in their early

teens. This fierce competition took away the joy of learning and the time to have fun with friends and families from children, which had serious adverse effects on children's physical and psychological development. The negative aspects of industrialization in the modern world also had a negative impact on children's psychology. The excessive competition in university and high school entrance examinations overly distressed students, including much younger children, physically and psychologically. These factors were believed to have caused emotional disturbances which led to problem behaviors, including bullying.

The Ad Hoc Council on Education emphasized the importance of helping children develop their creativity and ability to think and express themselves. The Council stated that these were the qualities and abilities needed to handle rapid changes in society with flexibility and a positive attitude. It proposed that schools should teach students to apply the knowledge and information they acquired to their own thinking processes, creative efforts, and self-expression because Japan would need more creative talent with individuality in the twenty-first century.

The Council developed the following proposal to prepare students for the twenty-first century:

- Set clear goals for school education and change teaching content in order to help children develop their qualities and abilities as the foundations of their lifelong learning, which will lead to twenty-first century education
- Adopt diverse assessment approaches that value children's individuality
- Implement reforms in the university and high school entrance examinations so that applicants' abilities are evaluated on multiple dimensions
- Establish a framework for responsibility in school education and coordination with society

The conventional approach of teaching content and methods was not the only issue the Ad Hoc Council on Education's report raised as the problem in Japanese education. The report severely criticized the secretive nature of Japanese schools in their preference for concealing problematic information such as that pertaining to bullying, use of physical punishment by teachers, sexual harassment by teachers and the line, which hindered early detection of the deteriorating education system and damaged public trust in schools and teachers. To provide a solid twenty-first century education, it was vital to establish responsible and trustworthy educational administrative systems and school management systems.

The report also stated that the government should review the rigid authorization, standard and guidance system by the national and local government and promote deregulation. The goal of these efforts was to eliminate excessive standardization, unnecessary focus on details and the exclusive nature of schools; all of which characterized educational administration in general. These reforms would encourage creative approaches in the classroom and dynamic teaching that would value children's individuality. The Council also proposed that schools as education providers and municipal boards of education should act more autonomously, independently and responsibly and take initiative in order to ensure their freedom, autonomy and self-reliance. Hence, a basic outline of education should be compiled from the

National Curriculum Standards and other requirements specified by the national government, and more options should be offered to schools and the boards of education. This would encourage schools and boards to act at their own discretion in developing various systems and trying new approaches.

In Japan's educational administrative system, the local board of education has authority and responsibility over school education. The Council's report criticized the boards of education for lacking the necessary sense of responsibility, mission, autonomy, initiative, and vision for twenty-first century education. The report identified the reason for the inaction was a lack of awareness that the boards should act on their own initiative and responsibility. This was attributed to the deep-rooted mindset of educators that school education was granted by the national government, even in the post-war period when local governments became the major actors of education. The report also stated that educational institutions and school educators tended to regard each other as family. This meant they favored the exclusive nature of schools that kept problems hidden and unresolved under the guise of "educational considerations". They also waited for upper echelons to make decisions and give them instructions so they would do nothing different than others. They valued the stability and continuity of education. For these reasons, the institutions and educators were not likely to change.

As specific measures to revitalize the boards of education, the Council proposed to improve the selection and training of members; establish a framework for responsibility for complaint handling procedures; take proper action to handle incompetent and problematic teachers; and coordinate with the governor and mayor's offices. It also proposed establishing a framework of responsibility for school management and ensuring principals fully exercise their leadership.

The Council stated that the decentralization of the educational administrative system and school management system, along with the establishment of a framework of responsibility, was key to Japan's efforts toward twenty-first century education.

4.3.4 Recent Issues in Japan

The Ad Hoc Council on Education in the 1980s identified problems in Japan's education at the time and proposed a direction for educational reform. However, modern Japanese society is considerably different from that of 30 years ago. Nevertheless, the Council for the Implementation of Education Rebuilding, which was established in 2013, identified the same problems as the Ad Hoc Council 30 years prior and proposed the government continue the educational reforms toward twenty-first century education. The agenda of the 2013 Council included reforms in curricula, educational administrative systems, university entrance examinations, and partnerships between schools and local communities.

The following sections examine to what extent the reforms for twenty-first century education have been implemented since the 1980s, their outcomes, and what

reforms are currently in progress. This includes reforms in curricula, university entrance examinations, educational administration, school management, and the reform of the National Assessment of Academic Ability.

4.4 Curriculum Reforms

Japan has National Curriculum Standards that specify requirements for curricula. MEXT revises them almost every 10 years. The National Curriculum Standards establish the legal framework of duties and responsibilities to maintain a level of education prescribed for elementary, junior high and senior high school education. It covers general requirements for curricula, objectives, teaching content for each subject, key points of teaching, time allocation and course structure on a subject by subject basis. Examining the revisions to the National Curriculum Standards helps demonstrate how twenty-first century education is implemented in the framework of a school curriculum.

4.4.1 Reforms in the 1990s

MEXT revised the Courses of Study to incorporate the proposals by the Ad Hoc Council on Education in order to prepare Japan's school education for the twenty-first century. The revised National Curriculum Standard was implemented from 1992 to 1994.² The National Curriculum Standards in the 1990s emphasized the importance of "viewing children's academic performance from a new perspective." This meant educational guidance should motivate children to learn independently and help them develop the qualities and abilities to think, judge and express themselves. In other words, the revised Standard were designed to help children voluntarily identify problems and take initiative in thinking, judging and expressing themselves. Therefore, teachers were encouraged to adopt teaching approaches which focused on children's individuality, hands-on learning and problem-based learning. National and municipal projects were launched to provide workshops for teachers, prepare documents which explain the pedagogy of the new approach, and offer models of teaching at model schools designated for pedagogical research. All of these efforts were to promote school education based on the "new perspective on academic ability." Another initiative was the introduction of the new subject, "life

²National Curriculum Standards Database (2014), National Institute for Educational Policy Research

<https://www.nier.go.jp/guideline/h01e/index.htm>

<https://www.nier.go.jp/guideline/h01j/index.htm>

<https://www.nier.go.jp/guideline/h01h/index.htm>

environment studies”, to first and second graders in elementary schools. However, while some schools effectively implemented the new approach, many schools had difficulty making the transition from a teaching style focused on the acquisition of knowledge to the application of knowledge. MEXT revised the National Standard Curriculums to address this challenge in the 2000s.

4.4.2 Reforms in the 2000s

The National Curriculum Standards developed in the 2000s³ took further steps to achieve the purposes of the curriculum reforms in the 1990s. It stated that children in the twenty-first century need to acquire “a zest for life”. In order to foster this zest for life, “Period of Integrated Study” was introduced to cultivate competencies to think, make judgement, express and act by oneself through cross-curricular and project-based learning. Additionally, teaching content allotted to each subject were reduced to make time for students to think and study by themselves. The National Curriculum Standards in the 2000s represented a shift from a teaching style focused on helping students cram for exams to helping students acquire the ability to learn and think independently. The Curriculum Standards stated that school education would focus on helping children develop “a zest for life” built upon “the qualities and abilities to find issues, learn and think on their own, use their initiative in making decisions and taking action and find better solutions”, “a sense of true humanity that encompasses self-discipline, the ability to cooperate with others, empathy and emotional health to let external events touch their hearts” and “the health and stamina to stay resilient throughout the life.”

The National Curriculum Standards listed several examples of themes for the newly introduced “Period of Integrated Study,” such as international understanding, information and the environment. Schools were allowed to freely decide what to do during the class hour according to their students’ interests, and thus the Standards did not dictate a particular content or pedagogy for this period. Schools were encouraged to engage students in integrated studies by actively introducing learning activities for: problem-solving in cooperation with others; using written or visual materials to express their views and opinions; outdoor activities in natural settings; volunteer activities; arts and crafts; observation and experiment; and hands-on learning such as research tours.

These curriculum reforms did not develop smoothly. The reforms in the 2000s introduced a five-day school week, which resulted in a reduction in the overall

³National Curriculum Standards Database (2014), National Institute for Educational Policy Research

<https://www.nier.go.jp/guideline/h10e/index.htm>

<https://www.nier.go.jp/guideline/h10j/index.htm>

<https://www.nier.go.jp/guideline/h10h/index.htm>

number of instructional hours. Since schools also had to adopt new hours for integrated study, hours for other subjects including mathematics, science and Japanese were reduced by 15%. In addition, teaching content decreased by 30% in order to give students a time to study by themselves.

The dramatic reduction in the content of curricula resulted in a decline in children's academic performance. The public severely criticized the reduced instructional hours as “*Yutori* (relaxed) Education” that would weaken the basis of Japan's strength. “The Period of Integrated Study” was also criticized as a part of “*Yutori* Education” that led to the decline in academic performance. Moreover, in the PISA 2003 and 2006, the ranking of Japanese students' scores for reading performance dropped to 14th and 15th place from the 8th in 2000, and the scores for mathematics dropped to 6th and 4th place from 1st in 2000. The media reported the results as “the PISA shock,” and the public strongly demanded the “*Yutori* Education” be abolished. The criticism was connected to Japan's sluggish economy during the period called “the lost two decades” that came after the collapse of the “bubble economy” in the 1990s. In 2010, China's GDP ranked 2nd and Japan's GDP fell to 3rd place. With the rise of other emerging economies, the Japanese public was deeply concerned that Japan might be losing its global competitiveness. The criticism of “*Yutori* Education” led to the revision of the Courses of Study in the 2010s and the introduction of the National Assessment of Academic Ability. Yet, this period did not set back the general direction towards twenty-first century education.

4.4.3 Reforms in the 2010s

Following the severe criticism of the National Curriculum Standards in the 2000s, MEXT made partial amendments in 2003. The partial amendments were mainly to allow textbooks to include content not stated in the Curriculum Standards Courses, since the content of textbooks had declined by 30% compared to the previous one. The full amendments were made in the 2010s.

The National Curriculum Standards were revised in the 2010s in accordance with reports by the Council for Education Rebuilding established in 2006 on the initiative of the Prime Minister and reports recommended by the Central Council for Education at MEXT based on the Education Rebuilding Council's reports. The Education Rebuilding Council's report in 2007⁴ stated that Japan's school education faced extremely serious problems and that it was not an exaggeration to say that public education was in dysfunction. These problems included children's declining academic ability, bullying, truancy, school violence, school education without leadership, and the lack of a sense of responsibility at schools and boards of education. The report also pointed out that since these problems had already been raised

⁴Education Rebuilding Council (2007, January 24), Education Rebuilding by Society as a Whole-First Step toward Rebuilding the Public Education System,- First Report, Cabinet Secretariat. <http://www.kantei.go.jp/jp/singi/kyouiku/houkoku/eibun0124h.pdf>

20 years ago, school education was losing trust from children's guardians and the public.

The Council's report made the following proposals regarding the curricula: (a) Review *Yutori* Education to give priority to help children acquire a solid foundation of learning, including basic reading, writing and mathematical ability, especially in compulsory education, and increase the class hours by 10%. (b) Aim to help children learn to apply the knowledge they acquired. The Central Council for Education recommended detailed measures based on this report.

The report stated that it would always be important to help develop the basic foundations of learning for the twenty-first century and foster children's qualities and abilities to find issues; learn and think on their own; use their initiative to make decisions and act based on the decisions; and find solutions. What was equally important for children was to develop a "a zest for life" which encompassed the ability to cooperate with others, empathy, a sense of true humanity, health and stamina. As for academic ability, the report emphasized the importance of helping children acquire all three elements of academic ability, namely knowledge and skills; the ability to think, judge and express; and motivation to learn. Japan's education should overcome the conflict between "*yutori*" (the twenty-first century education for knowledge application) and "rote learning" (the twentieth century education for memorization of knowledge). The discussion also referred to international education movements, including the key competencies the OECD put forward as qualities people need to develop in a "knowledge-based economy" and the idea of education suggested by the United Nations for sustainable development.

In 2008 and 2009, MEXT revised the National Curriculum Standards⁵ on the basis of the report by the Central Council for Education to specify the following: (a) Aim to further foster "a zest for life" of children. Help them acquire and apply knowledge and skills and develop the ability to think, judge and express themselves independently (the twenty-first century academic proficiency); (b) Increase instructional hours at elementary and junior high school by 10 percent to expand teaching content; (c) Slightly decrease hours for the "Period of Integrated Study," yet maintain it and develop it as a part of curriculum.

⁵National Curriculum Standard Database, National Institute for Educational Policy Research,

<https://www.nier.go.jp/guideline/h19e/index.htm>

<https://www.nier.go.jp/guideline/h19j/index.htm>

<https://www.nier.go.jp/guideline/h20h/index.htm>

4.4.4 *Reforms in the 2020s*

The New National Curriculum Standards to be implemented from 2020 to 2022 were announced in 2017. The revisions made for the 2020s were based on the report by the Central Council for Education in December 2016.⁶ The new National Curriculum Standards are the developed version of the curriculum reforms toward twenty-first century education which began in the 1990s. The revised National Curriculum Standards feature teaching methods as well as the goal of education and teaching content.

The Central Council for Education's report stated that the National Curriculum Standards had always been focused mainly on "what teachers have to teach" and that this convention must be changed to specify "what students will be able to do and how can they learn." To make the transformation, it is vital to adopt the perspective of "independent and interactive in-depth learning" and active learning. This will help children to develop a deep understanding of what they learned in connection with their life and how society works; acquire qualities and competencies which will be required in their future; and continue to learn throughout their lives.⁷

Based on this recommendation, the new National Curriculum Standards⁸ incorporated the following new features: (a) Descriptions of all subjects it specifies, with (i) Knowledge and skills to acquire, (ii) Skills to develop the ability to think, judge and express oneself, and (iii) Motivation to learn and the sense of humanity which should be fostered; (b) Provisions for the way classroom teaching should be improved from the perspective of independent and interactive in-depth learning and active learning as "learning methods" shared across all subjects.

While curriculum reforms in the 2000s and 2010s have been implemented, Japan improved its ranking in international academic ability assessments. For example, in PISA 2006, Japan ranked 12th, 10th and 6th in reading, mathematics and science, respectively. These rankings improved to 8th, 9th and 5th in 2009; 4th, 4th, and 4th in 2012; and 8th, 5th, and 2nd in 2015. This demonstrates that academic performance by children in Japan as measured by international standards is improving. When examining the overall results among OECD member states, Japan's total score ranked 1st in 2012 and 2015.

⁶Central Council for Education (2016, December 21), Improvement of National Curriculum Standards for Kindergartens, Elementary Schools, Lower and Upper Secondary Schools, and Schools for Special Needs Education (Recommendation), MEXT. http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/toushin/1380731.htm

⁷Central Council for Education (2016, December 21), *ibid.*, Section 1, Chapter 3 and Chapter 4.

⁸Ministry of Education, Culture, Sports, Science and Technology (2017–2018, March),

National Curriculum Standard for Elementary School, http://www.mext.go.jp/component/a_menu/education/micro_detail/__icsFiles/afieldfile/2019/09/26/1413522_001.pdf

National Curriculum Standard for Lower Secondary School, http://www.mext.go.jp/component/a_menu/education/micro_detail/__icsFiles/afieldfile/2019/09/26/1413522_002.pdf

National Curriculum Standard for Upper Secondary School, http://www.mext.go.jp/component/a_menu/education/micro_detail/__icsFiles/afieldfile/2019/09/26/1384661_6_1_2.pdf

4.4.5 Curriculum Reforms and Assessment

The curriculum reforms towards twenty-first century education began in the 1980s. From the beginning, however, educators as well as the public expressed concern that education focused on knowledge application might lower students' levels of academic ability. Hence, MEXT needed to prove that the reforms would not lead to a decline in children's academic ability. Especially after the curriculum reforms in the 2000s, they were severely criticized by the public for leading the "*Yutori* Education" and were forced to examine children's academic ability and measure improvements based on facts.

Another challenge was how to assess students' ability to apply knowledge, rather than merely acquire knowledge. The OECD PISA survey played a significant role in Japan in regard to this challenge. The PISA survey aims to assess how capable children are in applying knowledge they have acquired to address different real-life issues. Educators in Japan considered the questions in the PISA 2000 survey to be a good model to assess this kind of ability.

Given this background, MEXT introduced the National Assessment of Academic Ability in 2007 to assess the outcomes and problems in the curriculum reforms.

4.5 The National Assessment of Academic Ability and Decentralization

The National Assessment of Academic Ability was launched in 2007. This was partly a response to the criticism to the revised National Curriculum Standards in the 2000s. It was also proposed as part of the structural reforms in the compulsory education system, which were triggered by the argument about the national government's subsidy for compulsory education.

Japan's compulsory education consisted of elementary and junior high school, and municipalities are responsible for establishing these schools. Public schools account for ninety-six percent of all elementary and junior high schools in Japan. This means that public schools play a major role in Japan's compulsory education. The national government subsidizes compulsory education to ensure equal opportunities for compulsory education and maintain a high level of education nationwide. Under this system, the national government covered half the costs of salaries for teachers at elementary and junior high schools across Japan. This maintained high level of salaries for public elementary and junior high school teachers everywhere in the country, enabling schools to employ teachers with solid qualifications regardless of the municipalities' financial conditions. In the 2000s, however, government-led reforms toward decentralization were in progress. The changes involved structural reforms in the national and local governments' finances, which aimed to curtail the national government's subsidies to local governments and transfer

financial resources to local governments for the purpose of promoting their autonomy. Since the national government's subsidy to compulsory education was huge, the subsidy was a primary target of the reform. As a result, the law was revised so that the national government would cover one-third of the costs of salaries for teachers at public elementary and junior high schools.

Along with discussion of the reform of the national subsidiary system, the Central Council for Education reviewed the relationship between MEXT and prefectural and municipal governments as well as subsidiary systems. In the report published in 2005,⁹ they stated that the government should carry out the following structural reforms in Japan's compulsory educational system: (a) The national government would take responsibility for setting goals of the compulsory education and providing infrastructure necessary to achieve the goals; (b) Municipalities and schools would have more autonomy and responsibility as a result of decentralization; and (c) The national government would take responsibility for reviewing the outcomes of school education to ensure the quality of compulsory education. In other words, the national government would be responsible for providing foundational educational inputs (e.g., covering one-third of the costs of salaries for teachers at public elementary and junior high schools, establishing the National Curriculum Standards, etc.), municipalities and schools would implement the process (e.g., classroom teaching), and the national government would review school outcomes in order to ensure the quality of compulsory education.

The National Assessment of Academic Ability was proposed as a tool to implement the PDCA (Plan, Do, Check, Act) cycle of the structural reforms of compulsory education. It also served to check the outcome of the curriculum reforms. Since the survey was introduced as part of the reforms in compulsory education, it was conducted as a national test for students in elementary and junior high schools.

MEXT conducted the National Assessment of Academic Ability for students in sixth and ninth grades. These assessments measure students' achievements in mathematics and Japanese language. Each test consists of Sections A and B. Section A mainly asks questions designed to test students' ability to acquire knowledge, while Section B tests students' ability to apply knowledge. In 2015, the survey also began a triennial test in science. A triennial test in English will be started in 2019.

The National Assessment of Academic Ability covers all public elementary and junior high schools across Japan (there should have been a sampling survey from 2010 to 2013 but this was canceled in 2011 due to the Great East Japan Earthquake and tsunami). It has played a significant role in enabling the government to examine the progress of reforms in curricula and the compulsory education system. For example, the Central Council for Education, which proposed the revision to the Courses of Study for the 2020s, stated¹⁰ that the results of the National Survey

⁹Central Council for Education (2005, October 26), Creating Compulsory Education in New Era (Recommendation), MEXT. http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/toushin/1212703.htm

¹⁰Central Council for Education (2016, December 21), Part 1 Section 1 of Improvement and Necessary Measures of National Curriculum Standards for Kindergartens, Elementary Schools,

coupled with international tests including PISA showed a narrowing gap between underachieving prefectures' scores and the national average. This indicates that academic achievement has improved nationwide under curriculum reforms and other efforts to improve the quality of education. This evidence strongly supports the direction of the curriculum reforms.

The National Survey also assesses educational conditions, teaching methods and students' motivation for learning. Hence, it is used for analysis to improve many areas in education policy. Furthermore, questions in Section B, which was designed to assess the ability to apply knowledge, helped to improve the quality of classroom lessons to adapt to teach knowledge application.

Since 2019, the National Survey no longer has Sections A and B and gives integrated questions to assess the ability to acquire and apply knowledge. This change is based on the new National Curriculum Standards¹¹ which include three interrelated pillars: "skills and knowledge", "the ability to think, judge and express oneself", and "the motivation to learn and a sense of humanity". Using the integrated questions to assess academic ability aims to help schools understand the idea of the National Curriculum Standards and the MEXT's message about the curriculum reforms.

A survey of academic proficiency that covers senior high school students is set for 2019 as a "basic assessment of academic ability for senior high school students." Unlike the National Survey for elementary and junior high school students, this survey will not be prepared and conducted by MEXT. The government will adopt tests produced by a private company that meets MEXT's requirements, and schools will choose an academic ability assessment at their own discretion. This process is expected to enable the implementation of the PDCA cycle of reviewing the outcomes of the education reforms to make improvements in senior high school education.

4.6 Reforms in University Entrance Examinations

The curriculum reforms have been in progress to enable elementary and secondary school education to develop twenty-first century skills. However, it would be difficult to provide a twenty-first century education for senior high school students preparing for university entrance examinations, as the abilities required to pass the exams are those developed by conventional twentieth century education. The college enrollment rate in Japan is over fifty percent, which means university entrance examinations heavily influence senior high school education. Therefore, a wide range of changes have been made to the entrance examination to better assess the

Lower and Upper Secondary Schools, and Schools for Special Needs Education, MEXT. http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/toushin/1380731.htm

¹¹ See 36.

ability to apply knowledge. However, as noted by various national councils for reforms in university entrance examinations, these efforts have not worked well enough. Fundamental changes to the university entrance examinations are needed to better align with the reforms for twenty-first century learning at the elementary, junior and senior high school levels.

MEXT plans to introduce further changes in university entrance examinations 2021. These changes are part of reforms in high school and university education which address integrated change in senior high school education, the selection of university applicants and university education. What underlies these changes is the awareness that university examinations still focus too heavily on how much knowledge applicants have acquired and too little on how well they apply solutions. The transition of Japan's education system to the twenty-first century will make little progress unless university entrance examinations also evolve.¹²

In 1979, Japan introduced the common primary examination administered by the National Center for University Entrance Examinations. The new examination system had a massive impact on senior high school education, particularly on what students were required to learn to pass the exams, because all public universities adopted the new system. In the 1980s, the Ad Hoc Council on Education proposed changes in the common primary examination system. Based on the proposal, the system was replaced by the National Center Test for University Admissions in 1990, and private universities also adopted this new system. Before these systems were introduced, university entrance examinations included so-called “knotty” or “tricky” questions that had nothing to do with the teaching content of senior high school education. This made high school students' exam preparation excessively difficult. The common primary examination and the National Center Test were introduced to address this overly demanding exam preparation process and to implement a system to select applicants who fulfilled the National Curriculum Standards for senior high school. Public universities, which hold two-stage selective examinations, have adopted the systems as their preliminary exams. Private universities have also adopted the National Center Test as their general entrance examinations. In 2015, 527 public and private universities (90% of all universities in Japan) used the National Center Test. As the number of applicants taking the Test has risen to 560,000 (about 80% of university applicants), the National Center Test has played an important role in the progress of reforms in university entrance examinations.

However, the National Center Test consists of fill-in-the-bubble exams to assess the knowledge and skills applicants have memorized. Hence, it will be reformed to be a “Standardized Test for University Admissions” scheduled to start in January 2021. The new standardized test is designed to evaluate applicants' “knowledge and skills” and “ability to think, judge and express themselves.” While the National Center Test was a set of fill-in-the-bubble exams, the new test will also include

¹² See, Council for Reform on the System of Articulation of High Schools and Universities (2016, March 31), The Final Report by the Council for Reform on the System of Articulation of High Schools and Universities, MEXT. http://www.mext.go.jp/component/b_menu/shingi/toushin/_icsFiles/afieldfile/2016/06/02/1369232_01_2.pdf

short-answer questions. Moreover, fill-in-the-bubble exams will be designed to assess not only applicants' memorized knowledge but also their ability to think and make decisions. The new standardized test in 2021 is expected to have a significant impact on senior high school education and promote the progress of twenty-first century education.

4.7 Decentralization of Education and Maintenance of Education Standards

A twenty-first century education should help students become individuals who view society and the world from a broad perspective and contribute to the improvement of society and the international community. Education should foster children's qualities and abilities to face reality and become involved in society and the world. To implement education that meet this demand, it is vital for schools and boards of education to have autonomy and discipline within the framework of the school system. Autonomy and discipline will help schools and boards of education use their ingenuity to optimize their local school education.

The outline of Japanese educational system is as follows. MEXT regulates the educational system from childhood education to higher education and responsible for higher education institute. Municipal boards of education are responsible for public elementary and junior high schools, and prefectural boards of education are responsible for public senior high schools. School principals are responsible for curriculum planning and day-to-day educational activities, which provides schools with autonomy and discipline in a wide range of areas.

However, the prefectural boards of education have a strong influence on education at public elementary and junior high schools because prefectural governments cover all costs of salaries for teachers at municipal elementary and junior high schools, and they also have the authority to manage personnel affairs at municipal schools. Moreover, because the subsidies of the national government to compulsory education cover one-third of the personnel costs of teachers at public elementary and junior high schools (prefectural governments paid the remaining two-third), educators tend to adhere to the education standards set by the national government. In other words, educators were excessively conscious of the national policy and preferred to stick to it. In addition to this culture, many educators believed that following the state policy and standards would make it easier for them to ensure accountability to children's guardians and avoid criticism.

The education reforms launched in the 1980s toward twenty-first century education also made changes to the education system in order to transfer authority and responsibility to schools. The transfer started from the national government to prefectural governments and then to municipalities and schools. However, these reforms also faced difficulties due to the attitudes deeply rooted in the educational world.

Further, allowing schools and local governments to have autonomy generated educational gaps between regions. Several systems were introduced to narrow these inter-regional gaps. The National Assessment of Academic Ability was launched as a system for reviewing the effects of education. Additionally, the School Management Council System (Community Schools) was designed to encourage local communities to participate in school management to ensure the quality of education in their region.

The school evaluation system was proposed by the Central Council for Education¹³ in MEXT and the National Commission on Educational Reform¹⁴ in the Cabinet Office. Since 2002, it has been a system for schools to ensure the quality of education to a variety of stakeholders. In 2006, provisions were added to the School Education Act to establish it as a legal system. The provisions specify the following: (a) Schools are required to self-evaluate their educational activities and school management and publish the results; and (b) Schools are required to make an effort to conduct a third-party evaluation by children's guardians, local residents and other people related to schools and to publish the evaluation results. Active publication of the school information was also prescribed.

Schools are required to set their goals for education and launch educational activities aligned to the goals for twenty-first century education specified in the National Curriculum Standards. They also need to self-evaluate the progress of their efforts toward the goals and publish the evaluation results. Schools which adopt a third-party evaluation will have an extra evaluation to conduct, and the results must be published as well. The school evaluation system aims to help schools review their educational activities and management to guide improvements. It is also expected that schools, children's guardians and local communities share the goals of education so that they will work together to enhance the quality of education.

The School Management Council is a system that provides children's guardians and local residents an opportunity to become involved in the development of basic policies on school management and teacher personnel affairs. It was established as a legal system in 2004 on the basis of proposals by the Cabinet's National Commission on Educational Reform¹⁵ and MEXT's Central Council for Education.¹⁶ The system became a legal obligation in 2017. The School Management Council at each school consists of children's guardians and local residents. The functions of

¹³Central Council for Education (1998, September 1), Local Education Administration in the Future (Recommendation), MEXT. http://www.mext.go.jp/component/b_menu/shingi/toushin/_icsFiles/afieldfile/2013/12/18/1342455_1.pdf

¹⁴The National Commission on Educational Reform (2000, December 22), Report by the National Commission on Educational Reform – 17 Proposals for Changing Education, Cabinet Secretariat. <https://japan.kantei.go.jp/education/report/pdfs/report.pdf>

¹⁵The National Commission on Educational Reform (2000, December 22), Report by the National Commission on Educational Reform – 17 Proposals for Changing Education, Cabinet Secretariat. <https://japan.kantei.go.jp/education/report/pdfs/report.pdf>

¹⁶Central Council for Education (2004, March 3), School Management in the Future (Recommendation), MEXT. http://www.mext.go.jp/component/b_menu/shingi/giji/_icsFiles/afieldfile/2014/03/19/1345472_001.pdf

the Council are: (a) To approve basic school management policies developed by the school principal; (b) To state their opinion about school management to the school principal and the board of education; and (c) To state its opinion about the assignment of teachers to the board of education.

The School Management Council is expected to make schools accessible to local communities so that school management incorporates the views and opinions of local communities. This will ensure reforms toward twenty-first century education garner support and help from local communities.

4.8 Education Reform in Japan Now and the Future

Japan has been working hard to transform its education from twentieth century education to twenty-first education in these 40 years. And its reforms have brought fruitful results.

For example, “Education Policy in Japan” of OECD (2018) highly evaluates Japanese education. It states “Compare to other OECD countries Japan’s education system is one of the top performers among both youth and adult population. Japanese students have among the best performance in scientific, mathematics and reading literacy in the OECD Programme for International Student Assessment (PISA). -- 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.”¹⁷

On the other hand, the OECD report also pointed out that “this transition may require adaptation of the curriculum, teaching and school practices and of student assessments, such as university entrance examination”¹⁸ and recommends that to “Prioritize the curriculum reform through a strategy that sustain alignment across interdependent components and communicate 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.”¹⁹

It also recommends that to “Preserve the provision of well-rounded holistic education by enhancing school organization and school-community partnerships. Review the role and training of school leaders in light of 2030 objectives. Focus on management practices and partnerships with local communities on supporting the introduction of the new curriculum and alleviating teacher’s workload.”²⁰

¹⁷ OECD (2018), *Education Policy in Japan: Building Bridges Towards 2030*, Reviews of National Policies for Education, OECD Publishing, Paris, p. 15. <https://doi.org/10.1787/9789264302402-en>

¹⁸ OECD (2018), *ibid.* p. 16.

¹⁹ OECD (2018), *ibid.* p. 17.

²⁰ OECD (2018), *ibid.* p. 17.

I think these recommendations are to the point. Japanese education reform has been carried out as a part of social transition of Japanese society, from twentieth century-style society to twenty-first century-style society. That is the reason why its discussion has been involving not only education world people but also wide range of society including parents, local community, business and labor community. And to maintain and enhance school-community partnership and discussion among all stakeholders should be the 1st priority for the successful advancement of education reforms.

As for the individual school education, many Japanese schools are referred to as a model of twenty-first century education. For example, Andreas Schleicher features a lesson in Hiroshima Nagisa High School in Japan as a carefully designed creative leaning time.²¹ He also describes Kosen School in Japan as a very successful case to develop cross-curricular capabilities through their unique blend of classroom-base and hands-on project-based learning.²² N High School in Japan was invited by OCCAM's Infopoverty World Conference as a new school that uses ICTs to provide high quality education at a low cost and post-graduation opportunities.²³

On the other hand, the OECD report also pointed out that "The magnitude of the (curriculum) reform should not be minimized" "there are risks that proactive, interactive and authentic leaning may be adapted only as superficial change"²⁴ as a challenge of Japanese education reform. I think this is a very important point. Curriculum reform is a starting point. How to implement is a further important and difficult task. Schools and teachers are expected to play the leading part. Twenty-First century education expects students to attain competencies and skills to think, make judgement and act by themselves. Also, each school should be a twenty-first century education school. That is schools should recognize how they can cultivate competencies and skills of their students to lead better life and interact with society and the world. And based on their recognition, think, make judgement and express (implement twenty-first century education) by themselves. Education system should support efforts of each school and teacher to become a main player.

²¹ Schleicher, A (2018), *World Class: How to build a twenty-first-century school system*, Strong Performers and Successful Reformers in Education, OECD Publishing, Paris. p. 103. <https://doi.org/10.1787/4789264300002-en>

²² Schleicher, A (2018), *ibid.*, p. 242.

²³ The Observatory on Digital Communication (OCCAM) (2019, April 12), XIX Infopoverty World Conference Final Declaration, OCCAM. <http://www.occam.org/news/xix-iwc-final-declaration/>

²⁴ OECD (2018), *Education Policy in Japan: Building Bridges Towards 2030*, Reviews of National Policies for Education, OECD Publishing, Paris, p. 157. <https://doi.org/10.1787/9789264302402-en>

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