Asia Society | Center for Global Education

Advancing 21st Century Competencies in Japan

By Daisuke Kimura and Madoka Tatsuno, Global Incubation x Fostering Talents (GiFT)

Advancing 21st Century Competencies in Japan

February 2017

Case Study Authors:

Daisuke Kimura and Madoka Tatsuno, Global Incubation x Fostering Talents (GiFT)

ASIA SOCIETY

Asia Society is the leading educational organization dedicated to promoting mutual understanding and strengthening partnerships among peoples, leaders, and institutions of Asia and the United States in a global context. Founded in 1956 by John D. Rockefeller 3rd, Asia Society today is a global institution—with offices throughout the United States and Asia—that fulfills its educational mandate through a wide range of cross-disciplinary programming. Across the fields of arts, business, culture, education, and policy, the Society provides insight, generates ideas, and promotes collaboration to address present challenges and create a shared future.

The Center for Global Education at Asia Society brings together leaders and institutions from around the world to tackle one of the most critical education challenges today: how to educate all students for employability and citizenship in a global era. Our mission is to develop global competence in students, young leaders, and educators as the foundation for understanding between people in the Asia Pacific region and throughout the world. We accomplish this by working with educators, school districts, parents, and communities to ensure that they have the tools and support they need to globalize learning and prepare young people for our global future.

ACKNOWLEDGMENTS

TABLE OF CONTENTS

PREAMBLE

Historically, the notion of 21st century competencies has been embedded in the principles and objectives of education, especially in the affective domain. A current education concept called "Zest for Life," which first appeared in 1998, aimed for holistic development of students academically, morally, and physically (Chi-Toku-Tai知 • 德 • 体) with the illustration of competencies at the system level. In addition, the government of Japan has been discussing enculturation, contextualization, and elaboration of 21st century competencies through implementation of a new Course of Study (Curriculum Guidelines) and the reform of national-level university entrance exams.

This paper aims to illustrate how the concept of 21st century competencies is mainstreamed into the curriculum and schools, by looking at the changes from the central government's perspective. Chapter 1 provides an overview of 21st century competencies and historical commonalities, Chapter 2 highlights the reality that surrounds schools and teachers, Chapter 3 focuses on institutional reforms that support the advancement of 21st century competencies, Chapter 4 introduces some current school case studies, Chapter 5 elaborates challenges and issues for the advancement of the policy, and Chapter 6 concludes the argument with possible recommendations.

Chapter 1:
General Background—Understanding the Reality

1-1. CONCEPTS

Japan has recently started its discussion on the implementation and practices of norms of 21st century competencies that will be gradually mainstreamed within the education system. It should be noted that the concept of 21st century competencies and parts of competencies are already in the current Japanese education system's core concept "Zest for Life" and in addition—as in other Asian economies—those competencies, particularly social and emotional skills, were embedded in history, at least in the 19th century Imperial Rescript on Education.

Japan's core educational concept is "Zest for Life," which first appeared in 1998. The principle is based on principles of the traditional holistic approach "Chi-Toku-Tai" (academic prowess, moral, physical, and mental health). Zest for Life is a goal of the current education system, and its values and concepts are embedded in the revised Basic Act on Education (2006). Thus, the framework of 21st century competencies aims to achieve the goals—i.e., 21st century competencies—under the umbrella of Zest for Life.
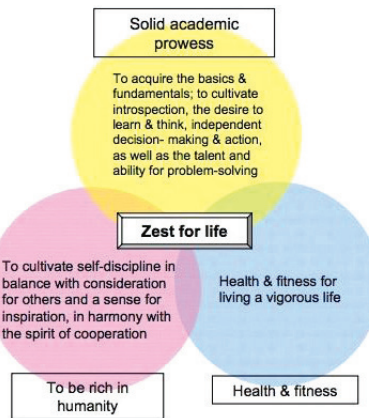
Chart 1: General Principles of Zest for Life
Source: MEXT

With regard to the education reform discussion, one of the focuses is how the 21st century competencies should be implemented into practice. The goals of education under the Basic Act on Education show its vision of education, but in reality schools and the curriculum do not show remarkable progress to foster competencies-based education.
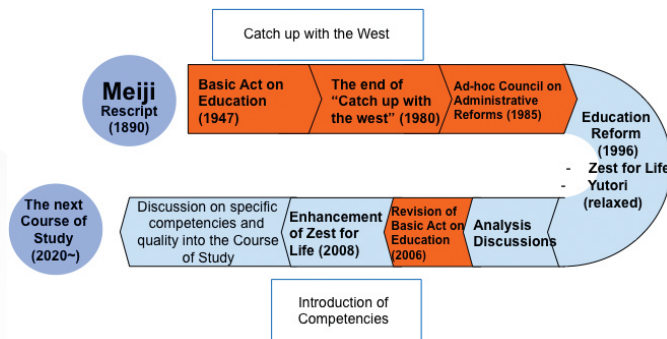
Chart 2: Transition of Education Reform

Table 1. Transition of Education Reforms in 20 Years

Year	Reform	Brief Description
1996	Zest for Life (Living) and "Yutori" education	First appeared in the 15th Central Council for Education report "Priorities and Prospects for a Lifelong Learning Society" - *Qualities and the ability to identify a problem, to learn, think, make judgments, and act independently, and to be imbued with a rich sense of humanity (self-control, cooperation with others, spirit that feels emotion, and physical health)* "Yutori" education (reducing classroom hours) expected to achieve learning shift
1998	Revision of the Couse of Study	Announcement of Zest for Life and Yutori as central concept
2002–	Commencement of the Course of Study	Implementation of Yutori and Zest for Life into curriculum - Reduction of approximately 30% of learning contents - Start of five-day school week - Implementation of "Integrated Studies" into curriculum
2006	Revision of the Basic Act on Education	Enforcement of "Zest for life" concept with three components into the Act - Attainment of wide-ranging knowledge and culture - Cultivation of a rich sensitivity and sense of morality - Development of physical health
2008–	Revision of the Course of Study	Enforcement of Zest for Life and retreat from "Yutori" education - Expansion of math and science education - Prioritization of language activities including foreign language in higher years of primary school - Reduction of Integrated Studies unit of classes
2013	Proposal of 21st century competencies by NIER	21st century competencies in Japanese context - Basic literacy - Thinking ability - Practical ability to act for the world
	Second Basic Plan for Promotion of Education	Institutional support to advance autonomy, cooperation, and creation with four policy directions and eight missions - Developing social competencies for survival - Developing human resources for a brighter future - Establishing learning safety nets - Establishing vibrant communities based on bonds, nurturing people who build society
2014	Discussion on new Course of Study	The then Minister for Education Mr. Shimomura oversaw a revision to the Course of Study to enhance students' qualities and abilities (competencies) - Concept, pedagogies, and evaluation of the competencies-based education - Revision of existing subjects toward competencies-based education in globalizing society

1-2. DEFINITION OF TERMINOLOGY

The Panel on Educational Objectives, Contents and Evaluation, which is a preparatory discussion group within the Ministry of Education (MEXT), has summarized these terminologies related to 21st century competencies for their further integration into curriculum guidelines. Competencies contain quality and abilities, and these terminologies work as the basis for the advancement of competencies-based education in Japan.

(1) Definition of "Competencies"（能力・資質）

Research by the National Institute for Educational Policy Research (NIER) introduced "competencies" as "holistic qualities and abilities that include not only knowledge but skills and attitudes."

The second paragraph of Article 5 of the Basic Act on Education (revised) describes the objectives of compulsory education as "the form of compulsory education, shall be to cultivate the foundations for an independent life within society while developing the *abilities* of each individual, and to foster the basic *qualities* necessary for those who form our state and society." The term "quality" shall include ability, attitude, and personal character.

(2) Personal Values（価値観）

Personal values (morals) are described as one of three pillars of Japanese education (i.e., Chi-iku: cognitive development, Toku-iku: morals/virtue, Tai-iku: physical development). Thus, Japan has been conducting moral education since the establishment of its origin in 1873 (Educational System Ordinance, Gaku Sei).

Morality is described in Chapter 3 of the Course of Study (2008): the goal of moral education is "students' morality, including moral mentality, judgment, engagement, and attitude, by all the education activities in school."

The Course of Study defines four types of morality to deal with in classroom instruction:

(i) About the self; people are independent, they do what they can do themselves and live moderately

(ii) About relationships with others; people know the importance of courtesy and communicate honestly with other people

(iii) About relationships with nature and sublime things; people are moved by the magnificence and wonder of nature, and feel the importance of nature and living things

(iv) About groups and society; people keep promises, follow rules, and have a sense of public duty

1-3. 21ST CENTURY COMPETENCIES FRAMEWORK

The Panel on Educational Objectives, Contents and Evaluation has introduced a framework for the qualities and abilities that should be developed in school education. The summary will be a benchmark of the Central Council for Education's discussion toward the revision of the next Course of Study (curriculum guidelines). NIER has introduced a tentative framework of 21st century competencies with a Japanese interpretation, under the current education concept "Zest for Life."

Although its framework might be revised or developed, the NIER's framework of 21st century competencies is a basis for the advancement of competencies-based education.

There are three domains within the proposed framework.

Zest for Life

21st Century Competencies

Practical ability to act for the world
- **Autonomous activities**
- **Relationship building**
- **Motivation to social participation**
- **Responsibility for building a sustainable future**

Collaborative thinking & problem solving ability
- **Problem finding &solving**
- **Logical, critical thinking**
- **Meta-cognition, adaptability**

Basic Literacy as thinking tools
- **Literacy**
- **Numeracy**
- **Information literacy**

*Original in Japanese, translation by author

Chart 3: Framework of Japan's 21st Century Competencies Proposed by NIER

(i) Basic literacy:
- Literacy, numeracy, and information/communication technology literacy (and manners and morals for ICT)

(ii) Thinking ability:
- Finding and solving problems, creativity, critical thinking, logical thinking, metacognition, and adaptive learning skills

(iii) Practical ability to act for the world:
- **Independence and autonomous action** (self-understanding and self- responsibility, promotion of health, decision-making skills, and life-planning skills)
- **Relationship building** (collaboration and responsibility, sensitivity/expression, establishing good relationships with others)
- **Responsibility for building a sustainable future** (responsibility, rights, and work, understanding of society, culture, and the natural environment, application of language and information, application of knowledge and technology, and problem-finding and problem-solving skills)

These domains are interrelated. Basic literacy, which is a foundation of learning, supports thinking ability and practical ability to act for the world. It directs and guides students "where to go." Thinking abilities, as generic skills, enable students to think and to deepen how to use the knowledge. The practical ability to act for the world plays a significant role to develop personal attributes and to form values.

The Panel has reviewed and analysed possible frameworks and competencies, and has concluded with proposals for the advancement of 21st century competencies, requesting:

(a) Further research and consideration of a framework of qualities and abilities from other countries, and also the 21st century competencies framework proposed by the National Institute for Educational Policy Research (NIER). The qualities and abilities should include (i) independence and autonomous action, (ii) relationship-building ability, (iii) problem-solving skills, (iv) the ability to utilize information technology, (v) the quality/ability to live with globalization, and (iv) the practical ability to act for a sustainable society and so on

(b) Consideration of the interrelation among (i) generic skills such as logical thinking and problem solving, communication skills, and metacognition, (ii) essential points of view of each subject (e.g., what history is, how science works), and (iii) specific knowledge or skills of each subject

(c) Improvement of learning evaluation; evaluation should be covered not only "to know (acquisition of knowledge)" but also "what we can do with the knowledge"

(d) Revision of each school's education objectives and curriculum, in order for the school to put the qualities and abilities (competencies) into practice

Chapter 2:
The School System in Japan and Its Transition

Before focusing on the policy mainstreaming of 21st century competencies, we shall look at the changes of the school environment. There are a number of changing contexts, such as demography and social/economic shifts, that affect the role of schools and teachers in society.

2-1. GENERAL STRUCTURE OF SCHOOLING

(1) School age

In Japan, compulsory education is nine years, which consist of six years of primary education and three years of secondary education under the School Education Act. Practically, the education system in Japan is called the "6-3-3" school year system because 98.5% of students go to high schools (including part-time and specialized training colleges)[1] or technology colleges. There are exceptions for students who go to a five-year specialized training college or a technology college.

School Category	Compulsory Education (6+3= 9 years)																					
	Primary Education						Secondary Education						Higher Education									
AGE	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	-
GRADE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	-
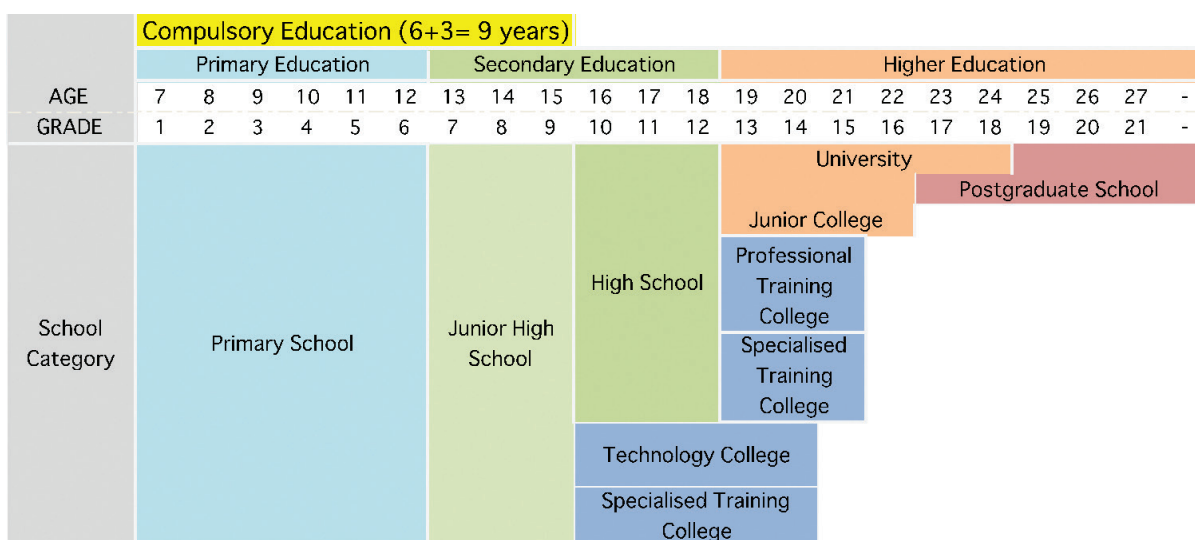
Chart 4: School Education System in Japan
Source: MEXT

(2) Class Size, Number of Schoolchildren, Staff, and Teachers

The number of junior high school students has decreased nearly 24% since 1995 (with nearly a 30% decrease in high school students), and schools declined nearly 7% in junior high schools and 10% in high schools. Almost 76% of classrooms consist of 26–40 students in junior high school. The number of full-time teachers and staff has declined in 20 years, reflecting the decline in the number of students.

---

[1]MEXT (2010), "School Basic Survey."
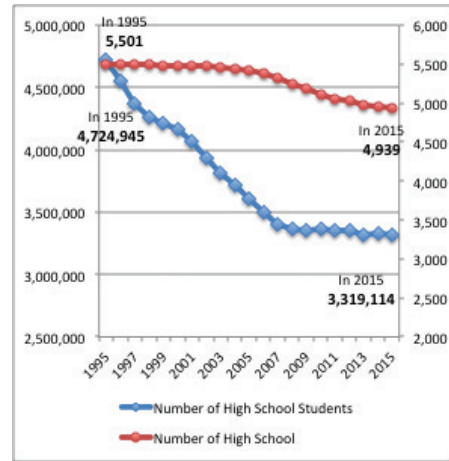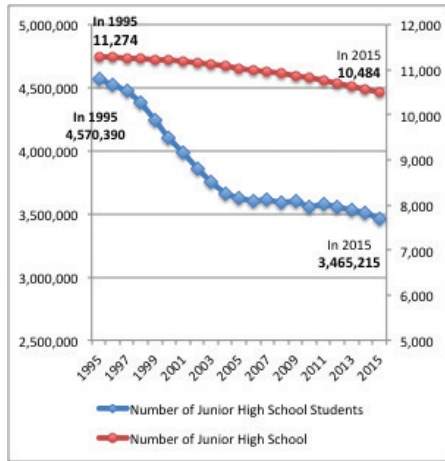
Graphs 1 and 2: Number of Junior High Schools and High Schools and Number of Students, 1995–2015
Source: MEXT and National Statistics Bureau, Government of Japan
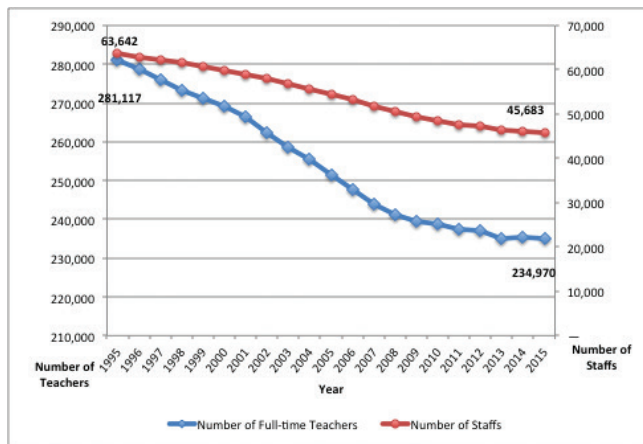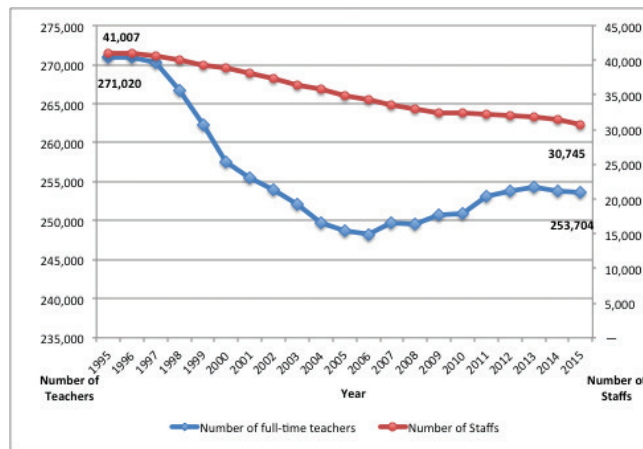
Graphs 3 and 4: Number of junior high school and high school Teachers and Staff, 1995–2015
Source: MEXT and National Statistics Bureau, Government of Japan

2-2. CHANGING CONTEXTS

The decline in the number of young people, the aging society, the shrinking economy, globalization, singularity (artificial intelligence), and the economic crisis have changed Japanese society. Manufacturing, industrialization, and automation drove Japan's "economic miracle" in the 1950s–1970s, and more recently social and economic development has been driven by information/communication technology. Society has changed rapidly. The impacts of social changes affect education; public needs and changing contexts drive the pressure for educational reform. The role of schools has expanded to career development, protection of students' safety, and communication with parents and other stakeholders. In addition, the central government's initiative has required schools and teachers to learn new pedagogies and learning concepts; for example, Education for Sustainable Development, "Active Learning (Interactive Classroom)," and "Career Education." Furthermore, the policies of boards of education at the prefectural level are closely collaborating with local government policies. Some local governments, suffering from a shrinking economy and "brain drain" to larger cities, request collaboration with schools for the prevention of brain drain under the name of "local revitalization."

(1) Role of Schools and Teachers

(i) Role of School
The roles of schools are changing. The government of Japan, seeing its changing needs from society (and families), adds higher expectations to schools, and the public voices are reflected in school education.

In jurisdictions, the common schools' role in compulsory education is used to provide education based on the laws and the course of study, and traditionally schools give students guidance such as career guidance, club activity (sports, culture, and others), and school events (cultural festivals, athletic meets, excursions, school trips). However, schools' roles are becoming wider as the governments see public needs for schools to expect more holistic development of individual students. For example, currently school education and its activities extensively cover many fields—e.g., mental and welfare support, student guidance out of school, special-needs education, and communication with parents and stakeholders (community and society).

Those public needs have been embedded in school education, under the direction of the government of Japan, which has increased schools' duties and tasks, resulting in an increase of teachers' working hours.
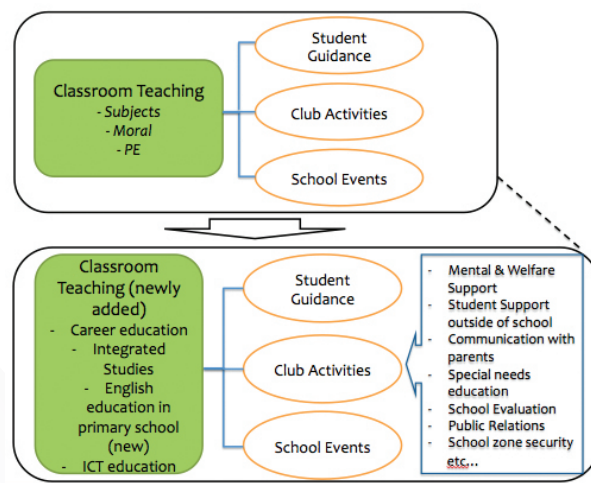
Chart 5: Shift of Roles of Schools
Source: Council on Economic and Fiscal Policy, Cabinet Office, 2015

(ii) Teachers Becoming Busier

The more the roles of school in society have expanded, the more teachers' duties and responsibilities become broader. Teachers used to engage mainly in classroom preparation, evaluation, school events, and club activities, which are the substance of education. However, nowadays, teachers are not only teachers but also administrative staff.

Teachers become busier and busier, and teachers' roles are expected to be widespread, by reflecting social needs. According to the survey by MEXT, teachers' overtime work has increased to 42 hours (for full-time teachers) a month in 2006, compared with 8 hours in 1966. According to the research by OECD *Teaching and Learning in Primary and Upper Secondary Education 2013,* average working hours in Japan are 53.9 hours per week, 15 hours more than the average of TALIS countries. Teachers in Japan spent more time in school management, administrative work, and extracurricular activities than teachers in other countries. The research conducted by MEXT (2006) shows similar results in school. In comparison with the past research in 1966, in 2006, teachers spent 5.4 hours in student guidance, 2.8 hours in club activities, 1.4 hours in administrative tasks, and 0.3 hours in training, resulting in 6.4 hours of overtime working hours per week.

	Total Working Hours/Week	Teaching time per week (hours)	Individual time per week spent planning and preparing lessons (hours)	Time spent marking and correcting work (hours per week)	Time spent meeting, working with colleagues	Time Spent with student guidance
Japan	53.9	17.7	8.7	4.6	3.9	2.7
TALIS Average	38.3	19.2	7.1	4.9	2.9	2.2

	Time spent school management	Time spent administrative work	Time spent communication with Parents	Time spent extracurricular activities	Time spent other related tasks
Japan	3	5.5	1.3	7.7	2.9
TALIS Average	1.6	2.9	1.6	2.1	2

Chart 6: Teachers' Working Hours Comparison
Source: OECD, *Teaching and Learning in Primary and Upper Secondary Education 2013*

The government has been tackling the improvement of school administration and the development of teacher quality and ability, providing guidelines and their related policies at the central and regional government levels. Various models have been proposed, including the involvement of school social workers and school counselors, and the improvement of the ICT infrastructure so that teachers can focus on their primary responsibility; nevertheless, there seem to be no drastic changes in schools.

Graphs 3 and 4 indicate a decline of administrative staff and expansion of schools' roles. This results in teachers' engagement in school management. Graph 5 shows tasks that burden teachers; those are mainly from activities outside the classroom.

Reasons of teachers' busyness (multiple answers)

Task	Percentage
Student Evaluation	31.8%
Preparation of classroom teaching	27.3%
Administrative tasks	25.3%
Student Guidance (individual)	24.1%
School Activities	21.8%
Club Activities	18.4%
School Management	16.8%
Parents Teachers Association	16.2%
Student Guidance (classroom)	13.9%
Lecture	11.1%
In-school training	10.3%
Classroom management	10.3%
Meeting	9.8%
Regional activities	9.2%
Off site training	6.0%
Communication with organisations	5.2%
Study guidance	4.4%
Student Council guidance	4.1%
Morning meeting	3.1%

Administrative tasks-related works dominant in working hours

Less time for training and development of new skills and learning new concept

Graph 5: Tasks That Burden Teachers
Source: MEXT, Survey on Teachers' Busyness, 2006

There is also an increase of teachers' mental illness sick leave. The average number of teachers' mental illness sick leave in 2004–2008 was 4,561, and 5,235 in 2009–2013. This implies that teachers feel burdened by their overtime working hours and pressure from work. This is a psychological issue; the number of overtime hours does not always matter, but the teachers' feeling that they are too "busy" matters for their motivation.

Chapter 3:
Education Reforms Relate to the Advancement of 21st Century Competencies

The government has gone through various education reforms (jurisdiction, course of study, and action plans) for decades, but school-level education does not seem to have significantly changed, particularly in high school education. One of the possible reasons is the university entrance exams. Therefore, the government of Japan now tries to revise the university entrance system, together with revision of the course of study, which might accelerate the shift to competencies-based education.

In Japan's case, the central government proposes concepts, general objectives, and the direction of education. Regional governments and boards of education take part in the implementation of the concepts through supplementary policy direction. Schools work closely with boards of education to bring those into a classroom.

3-1. REVISION OF THE COURSE OF STUDY FOR BETTER IMPLEMENTATION OF 21ST CENTURY COMPETENCIES
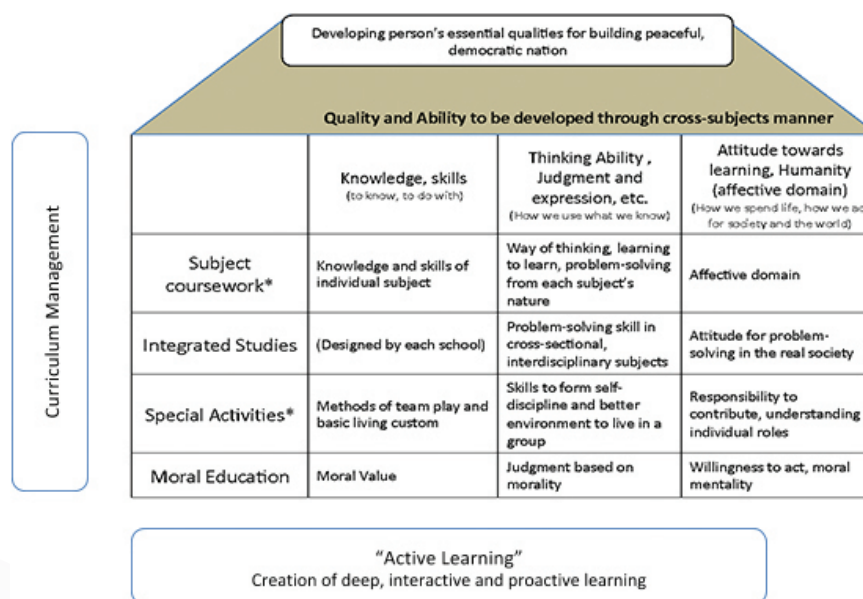
First, revision of the Course of Study shall be the first action toward the advancement of competencies-based education. The Central Council for Education's report (August 2015) announced the general concept of the new Course of Study. Minister for Education Mr. Hase (2016) announced three points of major Course of Study revision.

Developing person's essential qualities for building peaceful, democratic nation

Quality and Ability to be developed through cross-subjects manner

Curriculum Management		Knowledge, skills (to know, to do with)	Thinking Ability , Judgment and expression, etc. (How we use what we know)	Attitude towards learning, Humanity (affective domain) (How we spend life, how we act for society and the world)
	Subject coursework*	Knowledge and skills of individual subject	Way of thinking, learning to learn, problem-solving from each subject's nature	Affective domain
	Integrated Studies	(Designed by each school)	Problem-solving skill in cross-sectional, interdisciplinary subjects	Attitude for problem-solving in the real society
	Special Activities*	Methods of team play and basic living custom	Skills to form self-discipline and better environment to live in a group	Responsibility to contribute, understanding individual roles
	Moral Education	Moral Value	Judgment based on morality	Willingness to act, moral mentality

"Active Learning"
Creation of deep, interactive and proactive learning

* Some new subjects will be implemented for High School Curriculum: Public Citizenship, Integrative History, Integrative Geography, Science Inquiry and Social Science Inquiry. In primary school level, English language classes will be introduced earlier years.

* Special Activities are non-academic activities such as club activity, classroom cleaning, student council, class cleaning.

Chart 7: Overview of the new Course of Study (tentative)
Source: MEXT, 2015

(1) The new Course of Study aims to pursue both knowledge and thinking abilities (there will be no return to two extreme arguments: Yutori—reduction of classroom hours, or intense classroom hours).

(2) The new Course of Study aims to foster specific abilities through school education (introduction of competencies). In order to advance the competencies, the new Course of Study pursues the improvement of learning process quality and pedagogies as well as retaining quantities of knowledge. "Active learning (interactive classroom to make student an active learner)" shall be a tool for maximizing knowledge to develop competencies

Three points of active learning: interactive, proactive, and deep learning.

(3) Revise existing subjects and establish new subjects under the direction of the new Course of Study. (English education in public primary schools)

The revision of the Course of Study will be the key driver for competencies-based education at the system level. The existing concept of Zest for Life already includes specific competencies in each subject, and the new Course of Study will put more priority on the development of competencies that 21st century society needs. The major change is that all subjects function on a cross-curricular basis to foster competencies. The ambitious guidelines envision how the acquired knowledge is understood and put into practice, through inquiring what happened, why it happened, and how the things impact real society so that students can relate the subject study to their life. It should be noted that implementation of the new Course of Study should be accompanied by development of teachers' competencies through training.

3-2. REFORM OF NATIONAL-LEVEL UNIVERSITY ENTRANCE EXAMINATION

Second, the government of Japan started discussing the reform of the university entrance examination for a smooth bridge from high school to the university and enforcement of the development of students' qualities and abilities (competencies). It reflects social changes and the current situation (e.g., a learning shift from "to know" to "to do with," and the rising importance of non-cognitive skills from various sectors). Therefore, "active learning" is introduced to maximize student learning ability and to develop personal qualities.

Despite the central government's policies and the Course of Study's stress on the importance of the learning shift, high school education shows less progress in classrooms. One of the reasons is the national-level university entrance exams. High schools should focus on university entry, and the exams do not require "depth" of knowledge but mainly "quantity" of knowledge.

This stands as a huge obstacle for high schools, particularly in university-track high schools. According to the National Statistics Bureau, 56.5% of students go to a university or junior college, hence high schools had to focus on the university entrance exams. Benesse's Survey on School Education (2010) shows there were few changes in classroom teaching styles from those found in its previous research in 2002. Despite that the concept of Zest for Life and its tools (such as Integrated Studies) were introduced in 1998 and that proactive participating classrooms were recommended by the central/local level, classrooms remain traditional, "to know"–based learning environments.

Japan is one of the best performers in international tests such as PISA and TIMSS (Trends in International Mathematics and Science Study), demonstrating the highest standard in scores and learning ability. However, students are not confident themselves; 72.5% of high school students feel they are "not useful," 52.5% of them are "satisfied with their life," and 55.7% of them perceive that they have "decent abilities." The survey indicates

lower self-esteem in comparison with the United States, China, and the Republic of Korea and lower motivation to learn. Education would have room to foster their competencies such as self-confidence, openness, and autonomy. This is not because of education, but reflecting society. However, these facts should be considered: many students have less confidence in their capability and less motivation to learn.

The Reform Action Plan to Articulate High Schools and Universities announced its proposal for the reform of university entrance exams in the report "Integrated Reforms in High School and University Education and University Entrance Examination Aimed at Realizing a High School and University Articulation System Appropriate for a New Era" (December 2014). "Prospective University Entrant Scholastic Abilities Evaluation Test" is an alternative proposed examination that will take place from 2019 onward. The exams put more priority on examining students' thinking ability, expression, and reasoning; hence the test shall include a written questionnaire. A computer-based testing system is proposed so that students can have more chances to challenge.

(1) Background of the Reform of the National Center for University Entrance Exams

There are a total of 1,125 universities and junior colleges in Japan, and nearly 75% of those use the once-a-year National Center Test for University Admissions (known as the "Center Test") for their first-round admission process. The objective of the exam is "to assess the level of fundamental academic achievement attained by the applicant at the high school stage,"[2] and the exam itself has been reviewed and developed according to social changes.

Since the entrance exam is a "gateway" to university entrance, it has been strongly influential on both high schools and students for its preparation. The test is conducted with multiple-choice questions to "ensure high quality of tests by excluding too difficult and ambiguous items," to assess students' academic performance equally, and to "promote individuality and diversification of the admissions systems by universities, through the integration of the test and respective university examinations." Therefore, the exams assess students' cognitive skills based on simplified questions so that the results reflect students' level of knowledge. The exam is effective for universities to assess applicants' academic knowledge, and at the same time it reduces universities' burden of administrative tasks for admissions.

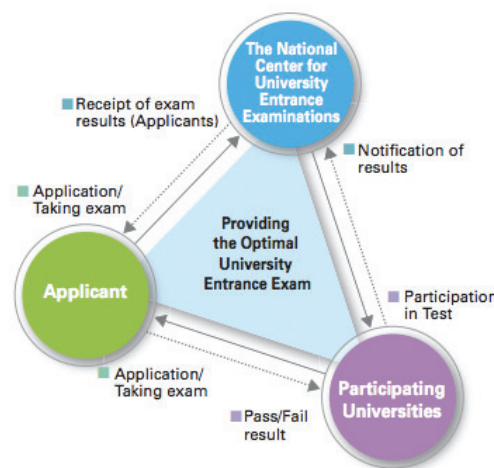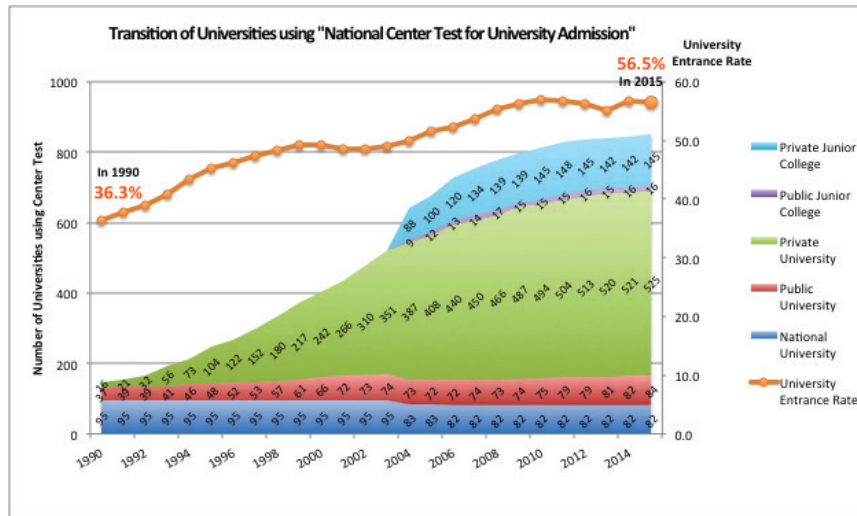Chart 8: Structure of the National Center Test and University Entrance
Source: National Center for University Entrance Exams

---

[2] National Center for University Entrance Examinations, "Annual Report 2015," retrieved from its official website, http://www.dnc.ac.jp/albums/abm.php?f=abm00006725.pdf&n=2015%E5%A4%A7%E5%AD%A6%E5%85%A5%E8%A9%A6%E3%82%BB%E3%83%B3%E3%82%BF%E3%83%BC%E8%8B%B1%E7%89%88.pdf.

Transition of Universities using "National Center Test for University Admission"

Graph 6: Transition of Higher Education Institutes That Use the National Center Test and University Entrance Rate
Source: MEXT, National Statistics Bureau, Government of Japan, School Basic Survey

Meanwhile, 56.5% of high school graduates enrolled in universities in 2015, whereas it was 36.3% in 1990. This is partly because entry to universities is getting easier for students: The number of high school students has declined nearly 30% from 4,724,945 (1995) to 3,319,114 (2015), but the number of universities and their capacity have remained stable (1,169 universities and colleges in 1995, and 1,125 in 2015, a decline of 3%). This caused the number of universities to face a shortage of their quota, resulting in changing the university's role in society (to reeducate students as remedial and/or to provide vocational training rather than higher academic skills and research ability) and making their business hard to maintain.

In general, students go through one of the admission processes: (1) university entrance exams, (2) principals' recommendation process, and/or (3) AO (Admissions Office) entrance examination. The National Center Test is often or sometimes combined with these exams as the first stage of the admissions process. The AO entrance exam helps each university to select suitable candidates whose capacities and achievements meet the university's admission policy. It is based on an overall evaluation of applicants' personal achievements, goals, and academic performance, which is usually conducted with essays, interviews, and the National Center Test (mostly by national universities). The recommendation process is a selection process whereby a university selects a certain number of students who are recommended by school principals. These are often held earlier than the National Center Test in January.

The admissions process has made university admissions diversified. One positive side is that it enabled students to have further learning opportunities regardless of their academic performance. On the other hand, a negative aspect is that universities now accept students who do not have the motivation to learn and/or have an insufficient level of performance and competencies—i.e., less competition has made it much easier than in the past for students to go to universities. According to the survey by MEXT, 56.2% of students go through general university entrance examinations, 34.8% of students go through the recommendation process, and 8.5% take AO entrance exams, in comparison with the FY2000 survey (65.8%, 31.7%, and 1.4%, respectively).
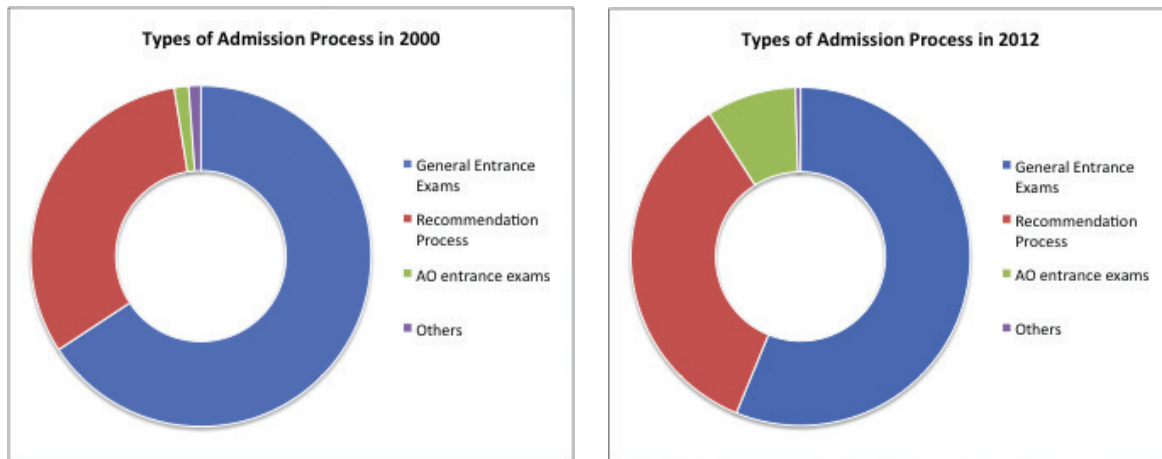
Charts 9 and 10: Change of University Admissions Process from 2000 to 2012
Source: MEXT (2014)[3]

However, universities still accept the National Center Test as one of their selection processes even in AO entrance exams because universities are struggling with students particularly from AO entrance exams because of their lack of academic performance (Riches, 2010). Students who enter universities through the AO exam or the recommendation process might face difficulty in catching up with the lectures in higher education. Graph 7 illustrates the changes in students' study time; it shows a significant drop for students whose deviation value (academic performance as normally examined through standardized tests) is around 50–55 (average to upper).[4] Many students at this level go to universities or colleges, thus universities need tests to examine students' basic academic skills.
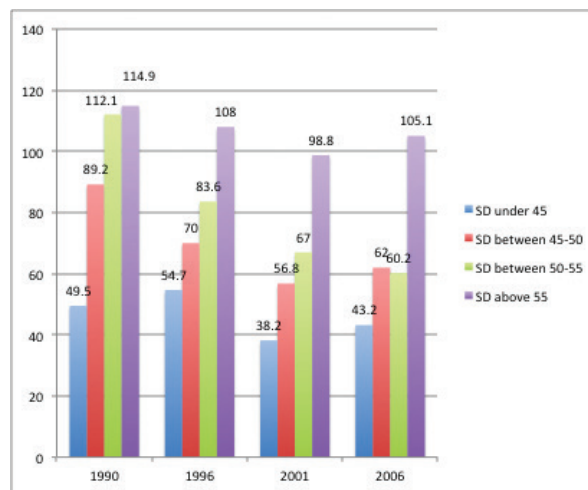
Graph 7: Change in Students' Study Hours Outside School, 1990–2006
Source: Benesse (2006), "The 4th Survey on School Education"

---

[3] Central Council for Education, MEXT (2014), *Integrated Reforms in High School and University Education and University Entrance Examination Aimed at Realising a High School and University Articulation System Appropriate for a New Era.*

[4] For students whose standard deviation value is higher than 55, study time remains the same. This is partly because those students study at "Juku," which focuses primarily on preparation for university exams.

This makes high schools remain focused on traditional classroom teaching (preparation for multiple-choice tests). Therefore, the current central government conducted a review to reform the fundamentals of university admissions that enable universities to evaluate potential students and enable high schools to advance competencies-based education.

3-3. THE GOVERNMENT'S FUNDING AND SUPPORT FOR DEVELOPING 21ST CENTURY COMPETENCIES–RELATED POLICIES

In order to accelerate the learning shift toward developing personal qualities and abilities, the central government has provided support both at the policy level and at the financial level. Local governments also have budget and policy support for schools; the following are examples of financial support.

(1) MEXT has budgeted support for teachers' salaries, to support teachers' recruitment. Each prefecture recruits teachers in public education, except for high schools attached to national universities. The total budget is 1,527 trillion yen, which enabled an increase of 190 new teachers who specialize in science, English, and PE in primary schools, and teachers who engage in the promotion of "active learning" and pedagogical research. In addition to that, the budget enabled an increase of 80 staff members and teachers for the enforcement of school management functions.

(2) Teachers' training and pedagogical research: The total budget is 124 million yen, and a total of 1,169 million yen to support the National Center for Teachers' Development's expanded functions.

    (i) Career and Professional Education: The total budget is 537 million yen, to promote career and professional education. It includes competencies such as future planning, entrepreneurship, and autonomous action.

    (ii) Global competencies in primary and secondary education: The total budget is 22,001 million yen, to enforce English education, and support for the internationalization of selected high schools.

    (iii) Collaboration with international organizations and promotion of Education for Sustainable Development (ESD): The total budget is 708 million yen, to collaborate with UNESCO and with United Nations University, and for the development of the International Baccalaureate DP in Japanese.

3-4. LOCAL GOVERNMENTS' FUNDING AND SUPPORT FOR THE PROMOTION OF COMPETENCIES

In addition to MEXT's budget, each prefectural board of education and local governments individually secured a budget to promote learning innovation from tradition. Especially, local revitalization, which is one of the core visions of the current administration, would accelerate interactive, experiential learning opportunities at the regional level. A collaboration among local governments, universities, local companies, and non-profit organizations started working closely with schools in the region. Some of the programs are project-based learning like Hiroshima Innovation School, and collaborative ESD programs for fostering proactive and autonomous students by the Board of Education in Okayama City.

Case Study: Autonomous Action by Hiroshima Prefecture in Japan

Hiroshima Board of Education (Hiroshima is a member of the Global Cities Education Network) has a new learning challenge under the framework of Japan's education concept and beyond the concept, Hiroshima Action Plan for Learning Innovation.

Hiroshima Board of Education has set the framework for the "Hiroshima Action Plan for Learning Innovation," in support of OECD, which is to promote learning innovation aimed at fostering individuals who have a high ethical standard with pride at having grown up in Hiroshima, and who can create new values through co-creation with people living in the world. The Plan stipulates its own concept of 21st century competencies in order to create a learning environment at the prefectural level by 2018.

The framework of 21st century competencies in Hiroshima categorizes four components: (1) knowledge, (2) skills, e.g., critical thinking, communication, (3) motivation, attitudes, resilience, and (4) values and ethics, e.g., empathy and self-awareness. There are four steps to promote its action plans.

(a) Seminars for Key Educators
   - Providing learning-innovation training for key teachers
   - Training 10 times a year at 60 primary, junior high, and high schools

(b) Hiroshima Innovative School (supported by Innovation School Network, OECD, and East-West Center in Hawaii)
   - Three-year project to implement project-based learning for 60 high school students regionwide
   - Collaboration with students from Hawaii and Cebu, the Philippines, for the project
   - Objectives: to develop new education programs to foster proactive, cooperative, and moral education

   Four pillars of the project:
   - All School Conference (every three months): All participants join to have workshops for development competencies.
   - Area School Conference (once a month): 10–15 student group from 13 high schools engage in a community revitalization project.
   - Global Schools Conference: Program in Hawaii, together with students in Hawaii, to engage in collaborative activities
   - Global and Local (Glocal) Schools Conference: All students gather in Hiroshima to share their project outcome.

   There are three types of evaluation methods: rubric assessment, real-time video reflection, and project-based learning using the digital platform "Classi."

(c) Flexible School: a learning place for working students and people who missed the compulsory education
   - Offers various learning experiences (career design, experiential learning, vocational training, professional ethics, etc.)
   - Individual care (counseling, career consultation)
   - Flexible curriculum to meet the needs of students

(d) Global Leader School: To educate global leaders who can contribute to building a *sustainable society*—creating a more *peaceful and developed world*
   - 360 students from junior high school to high school: 50 from each year in junior high school, 70 (20 students are from overseas) from each year in high school
   - Project-based learning with international institutions
   - Experiential learning in the community
   - International Baccalaureate–based curriculum
   - Boarding school with diverse cultural backgrounds
   - Under the national education policy and the Course of Study
   - Cooperation with multiple sectors (NGOs, UN, corporations, local authorities, and so on)

The Action Plan also expects to involve parents for cultivating a 21st century competencies–based learning environment.

Local governments actively initiate regional collaboration. For example, local high schools that are subsidized by MEXT's "Global High School" initiative promote global education and competencies in cooperation with multiple stakeholders, including local government. The local government's policy, the university's intellectual resources, and private-sector experience are values of the local community, and the resources are supplementary to high school education. For instance, high school students can experience joint research, intern, and volunteer services as well as deepen understanding of their hometown. In doing so, students can learn about their local cities, raise social-contribution awareness, and experience real business.

Chapter 4:
Learning Experiences Expected in Future Classrooms and Case Studies

Since the first appearance of the Zest for Life concept, Japan's education policy and curriculum guidelines have enforced learning in a lifelong learning society. The introduction of 21st century competencies will be a mainstream part of school education, together with the traditional values of education. There are changes in classroom activities.

4-1. PATTERN OF ACTIVITIES

(1) Recommendation of "Active Learning" in Classrooms
The central government now recommends "active learning" in classrooms, which aims at making each student an "active" learner. This is expected to maximize students' academic performance through a proactive attitude in learning. Active learning will be a key tool for the advancement of student competencies.

(2) Integrated Studies' Role in the Advancement of 21st Century Competencies
Integrated Studies is an interdisciplinary study that deals with society, family, global issues, the environment, local communities, and so on. The cross-curricular studies are expected to enable students to put their subject study into practice, and to contribute to bringing about a shift from teaching to learning. Through experiential learning and peer-to-peer learning, Integrated Studies plays a role in the formation of personal values, and the development of communication skills and problem-solving skills as such.

(3) School Events Including Club Activities Encourage Students' Learning
Special activities such as school events, club activities, and school trips are traditional ways of Japan's holistic education, embedded in part of the official curriculum. Children learn emotional stability, values, love of their hometown, and social skills to live in harmony. Before the introduction of active learning, school teachers already conducted various learning methods in class. Those classroom activities include experiential learning and peer-to-peer learning, self-directed learning, and so on.

4-2. CASE STUDIES

For the case studies of 21st century competencies' development outside the classroom, I shall describe cases from Ageo Higashi Junior High School (in class), OECD Tohoku School (outside school), and Global Incubation x Fostering Talents' (GiFT) education programs (outside jurisdiction).

(1) Case 1. Global Citizenship Subject by Ageo Higashi Junior High School in Saitama Prefecture (in-school activity)

Overview
Ageo City Higashi Junior High School was selected as a research and development school by MEXT, and in 2015 established a new subject called "Global Citizenship." This school has conducted the one-hour subject every week (35 hours per year).

Objective: The program aims at cultivating an active actor in sustainable society, by fostering each student's social-participation awareness and developing the student's personal qualities and abilities as a global citizen.

Expected Student Growth
  (i) A student who participates in society with their own opinions and a set of arguments
  (ii) A student who can live together with diverse cultures, customs, and mindsets
  (iii) A student who can find problems and can think with multidimensional perspectives
  (iv) A student who can think critically, and who can autonomously explore and express his or her opinions
  (v) A citizen who can collaborate with others for the betterment of society

Pedagogies and Concept
Unlike in traditional classroom teaching, teachers focus on facilitation rather than teaching. Teachers select topics to go over in the classroom and conduct various workshops, group work, reflection, and individual research work so that students can learn by themselves. Teachers also learn from their facilitation experiences and from students.

Structure of the Subject
The Global Citizenship subject covers various fields: community development, school development, the environment, gender, peace and conflicts, human rights, education, refugees, poverty, and international cooperation. The topics covered include:

  (a) Think about our society—20 years later (first semester)
      This session is designed to describe society 20 years from now. Students will imagine their ideal future and the ideal society.
  (b) Students' General Assembly (first semester)
      This session is designed to foster their participation in school management. Each student expresses his or her voice for the betterment of school activities.
  (c) Think about refugee issues (first semester)
      Students will experience and learn from refugee role-play. It enables students to feel global issues closer to their lives.
  (d) Research work
      Students form small groups, and each group chooses a topic to research such as international cooperation, the environment, energy, or the economy. Each research group engages in group research and presents the output at the end of the school year.
  (e) Guest speeches
      In cooperation with the non-profit sector and other organizations, the school invites guest speakers to visit the school to present their professional work and real situations in overseas countries.

(f) Institutional visits

Students visit NGOs, the Ministry, and social enterprises as a process of group research work. Each group organizes the visit on their own, and interviews professionals.
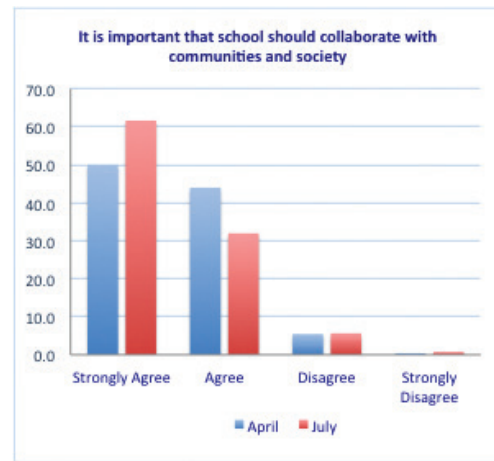
(g) Teachers' training

Teachers have a training session every month, to reflect on their facilitation experiences and to exchange feedback. Sessions are generally based on peer-to-peer learning, and sometimes professionals are invited to have special training.

Outcome of the Subject

School-conducted questionnaires survey the changes in students' mindset. The first survey was in April (beginning of the school year), and July (end of the first semester). There were slight increases in "It is important to learn about the world" and "It is important that schools should collaborate with communities and society."

With regards to students' self-esteem and social-participation awareness, Ageo Higashi Junior High School students show a higher rate than the average of Japanese youth attitude research. For example, in their responses to the statements "I think I am valuable in society," "I believe I can contribute to change society," and "I am concerned about the future," Ageo Higashi Junior High School students show slightly better results than the average of Japan.

Graphs 8 and 9: First Changes of Students' Awareness toward Society

I think I am valuable in society

■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

	Strongly Agree	Agree	Disagree	Strongly Disagree
Ageo-Higashi	5.6	38	42.2	10
Japan	7.5	28.6	46	16.7
USA	57.2	31.9	6.4	3.2
China	42.2	45.5	10.2	1.8
South Korea	20.2	54.9	20.4	4.3

I believe I can contribute to change society

■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

	Strongly Agree	Agree	Disagree	Strongly Disagree
Ageo-Higashi	13.7	48.0	27.2	7.3
Japan	10.2	27.1	40.9	18.6
USA	14	39.3	19.5	9.5
China	17.4	40.9	29.4	9.9
South Korea	11.7	54.8	26.9	5.1

I am concerned about future

■ Strongly Agree ■ Agree ■ Disagree ■ Strongly Disagree

	Strongly Agree	Agree	Disagree	Strongly Disagree
Ageo-Higashi	19.6	43.7	25.0	7.6
Japan	32.2	45.5	17.1	4.5
USA	27.4	33.2	19.4	17.4
China	16.5	41.5	33.2	8.4
South Korea	27.7	51.8	15.3	4.8

Graphs 10, 11, and 12: Self-esteem of Junior High School Students in Comparison with Existing Research
Data: Japan Youth Research Institute, "Research Report on Junior and High-School Students'
Life and Attitude, 2009," and Ageo Higashi Junior High School

Throughout the observation, students' social and citizenship awareness saw some behavioral changes: watching news broadcasts, reading newspapers (and becoming interested in global issues and world news), relating global issues to their lives, and so on. This happens to teachers as well. Teachers were also challenged to organize the new attempts, and gradually became confident and excited to have the class. Through the periodical surveys, most of the teachers were at first confused, and felt difficulty and concern, but gradually changed to "relieved," "fun," and "excited." Together with the positive changes, teachers' global awareness and behavior made progress. Comments from teachers imply that their attitude shifted from "teaching to learning." They became aware of global issues, related social issues in the classroom, listened to students' voices and learned from them, learned new teaching pedagogies, and experienced excitement to seek questions with no correct answer.

(2) Case 2. OECD Tohoku School Program (outside-school activity)
On the occasion of the official visit of the Secretary-General of OECD, Mr. Angel Gurria offered OECD's commitment to the recovery of Tohoku (northern) region from the Great East Japan Earthquake. In cooperation with MEXT and Fukushima University, OECD Tohoku School was established to support the education recovery of the region.

Objectives and Expected Growth
OECD Tohoku School is an "educational project to foster a workforce that can lead the local recovery from the Great East Japan Earthquake." The objectives of the project are recovery from the disaster, and more importantly, "opening a new way for the future." This program aims not only at fostering key players for recovery but also at forming an "unprecedented inter-regional network" to create a bridge to education reform.

Through the two-and-a-half-year project, students are expected to develop "capabilities for driving innovation, leadership, creativity, planning, critical and constructive thinking, getting things done, negotiation, cooperation" and global competencies.

Pedagogies and Concept

This project is project-based learning. One hundred students from junior high schools and high schools in disaster areas in Fukushima, Miyagi, and Iwate prefectures gather for the preparatory intensive training sessions, and work together for their mission to produce an event in Paris to showcase the wonders of the Tohoku region to the world.

The trainings are a competencies-based education program, focusing on development of students' competencies mentioned above. The project consists of various types of experiential learning: workshops, art workshop, dialogue, interview, research project, and so on.

Structure

The project consists of five intensive training schools, regional schools, thematic group activities, and the event in Paris. There are also associated events and attendance at the OECD Forum (representatives participated).

Chart 11: Schedule of OECD Tohoku School

(i) Intensive Schools

Intensive schools started with the project mission "In 2014 from Paris to the World, appeal to the Wonders of Tohoku." The sessions' contents are lectures, presentations, discussion sessions, thematic workshops, research, charity events, and events organizing.

(ii) Regional Schools

Regional schools are held twice a month, as extracurricular activities. The aim is to plan, and to practice their recovery plans.

(iii) Thematic Activities

Students are divided into several groups to organize the Paris event. Each student belongs to a group: scenario group, public-private-academic partnership group, public relations group, documentary group.

(iv) WA—The Rebirth of Tohoku in Paris

This is the goal of the project. Students go through five intensive trainings and regional schools, thematic group activities, and related activities for the success of the event.

(v) Related Events and Activities

There are related activities and events that students join—e.g., fundraising event, preliminary visit to Paris, open rehearsal, and an invitation to the OECD Forum in 2014 to deliver speeches and presentations.
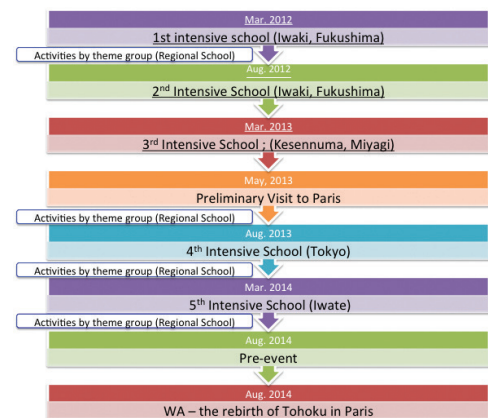
Evaluation

The project set its KPI (Key Performance Indicators) of the OECD Tohoku School, from self-evaluation of its growth. The results are as follows.
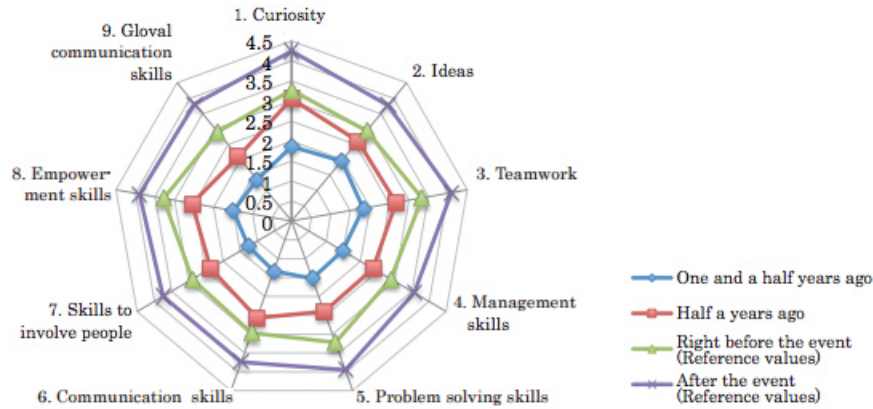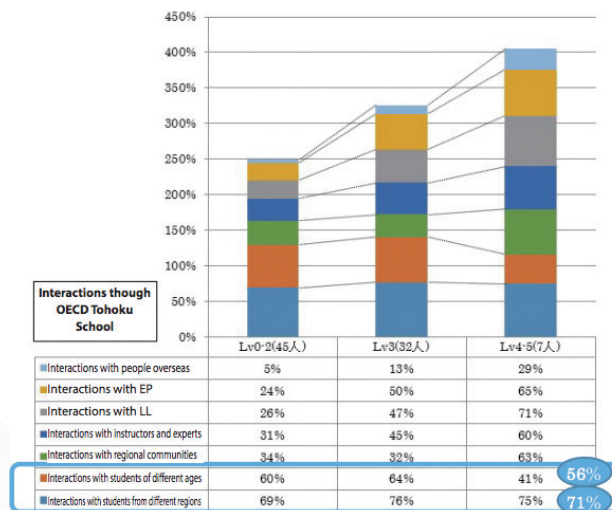

Chart 12: KPI of OECD Tohoku School
Source: OECD Tohoku School Report, 2014

Through the two-and-a-half-year project, 100 students' self-evaluation showed its growth in each indicator. All of the indices show significant development: curiosity, ideas, teamwork, management skills, problem-solving skills, communication skills, skills that involve people, empowerment skills, and global communication skills. Most of the students' beginning self-evaluation was lower around levels 1–2, and it grew up to levels 3.5–4.5 at the end of the project.

The growth factor analysis conducted by organizers indicates interaction with students from different regions (71% average), interaction with students of different ages (56% average), and discussions and activities about the region's future (54% average) in each level. This project succeeded in proving that interactive learning has strong impacts on students' competencies and their self-confidence.

Interactions though OECD Tohoku School	Lv0-2(45人)	Lv3(32人)	Lv4-5(7人)
Interactions with people overseas	5%	13%	29%
Interactions with EP	24%	50%	65%
Interactions with LL	26%	47%	71%
Interactions with instructors and experts	31%	45%	60%
Interactions with regional communities	34%	32%	63%
Interactions with students of different ages	60%	64%	41% (56%)
Interactions with students from different regions	69%	76%	75% (71%)

Graph 13: Growth Factor Analysis of OECD Tohoku School
Source: OECD Tohoku School Report, 2014

(3) Case 3. GiFT's Global Citizenship Education Program "Diversity Voyage" (outside of jurisdiction)

GiFT has been engaging in the promotion of global citizenship (in other words, global awareness) with the cooperation of MEXT and MOFA (Ministry of Foreign Affairs) in Japan, providing in-house, outside-school training as well as training programs outside Japan. The objective of GiFT's program is to nurture the citizens who participate in the society by taking responsibility for their actions, and to foster citizens who can create new values with diversity (people with diversified backgrounds).

Its programs are organized for developing participants' competencies, values, and attributes mainly related to personal values and the affective domain such as self-understanding, collaboration with others, social responsibility, understanding of the social, cultural, and natural environment, problem-finding and problem-solving skills, and so on.

GiFT's training structure is based on four key elements to foster global citizenship:
  (i)   Grounding: Understanding and accepting self
  (ii) Connecting: Understanding others with empathy
  (iii) Co-creating: Co-creating for the collaboration
  (iv) Participation: Participating/contributing to society for a better future

Chart 13: GiFT's Global Citizenship Promotion Processes

By processing through those four competency fields, GiFT aims to promote students to become able to work together with diverse people, to accept and respect each other, to act and behave as a member of global society, and finally to create new values with active participation in the society.

GiFT Diversity Voyage Program (Collaboration with Universities or High Schools)

The "Diversity Voyage" program is an experiential learning and participatory educational program designed for the promotion of global citizenship awareness. The program is a short-term (9–10 days) intensive program, which takes place in one of the South East Asian countries. It targets students who have no or few experiences in overseas countries, with the aims of:
  (a) To encourage students to challenge themselves in an overseas country in the future
  (b) To raise awareness of being a "global citizen" through interaction/dialogue with local students
  (c) To mobilize students toward social participation/contribution

Overview of the Program

During the program, participants engage in a project with local students and present possible solutions or proposals at the end of the program. The project assignments are given by a partner organization (generally a social entrepreneur working on the social issues in the community), and the assignments are based on the real issues and challenges that the entrepreneur is actually tackling. Japanese students will work with local students and the partner organization for the entire 9–10 days, make on-site visits to communities to have dialogue with local people, listen to their voices and analyze the situation, and discuss the possible proposals to present as a gift to the local community. However, the program does not only focus on project output. The goal of the program is their learning and the development of their competencies related to the awareness of global citizenship through the project work.

The entire program is organized and conducted by professional facilitator(s), initiating deep dialogue to maximize people's empathy and facilitating project design and reflection from their daily learning experiences.

Pedagogies and Learning Concept

GiFT's training programs are organized with various learning approaches—e.g., experiential learning, self-directed learning, peer-to-peer learning, coaching, and service learning. The Diversity Voyage program structure is based on a combination of project-based learning and "personal story" dialogue-based learning. Through sharing personal stories (success, failure, tough times, and stories of how they faced the challenges), students will get inspired by others, and understand individual values with empathy, which leads to deepen their learning and create mutual trust, as well as impact personal values. It is the belief that heart-to-heart interaction affects the formation of personal values, the development of personal attributes, and human behavior, as researched by OECD, "Skills for Social Progress—The Power of Social and Emotional Skills" (2015).

Structure of the Program

Diversity Voyage is organized with various stakeholders:
- (i) GiFT diversity facilitators (bilingual facilitators who create a participatory, experiential learning environment and deal with diversity among individuals)
- (ii) Japanese students (approximately 20 students)
- (iii) Local students (approximately 10–20 students)
- (iv) The local community
- (v) Social entrepreneur working for the local community

Chart 14: Structure and Concept of Diversity Voyage

Program contents are designed with these components.

(a) Connecting: for Building Mutual Trust
Students from Japan and the destination country are divided into several groups, each working on the real project that the social entrepreneur is engaged with. Participants first listen to individual personal stories to understand and accept others, and listen to the social entrepreneur and local people's stories and the background of their challenges and issues.

(b) Understand the Background of the Project
Second, students learn the background of the project. Listening to the social entrepreneur's story, they understand why he or she is working on the development of the community. Then students have a dialogue with local stakeholders and beneficiaries to understand the system and the reality.

(c) Group Work (Co-creation with Others)
The main component of the program is teamwork. Students will engage in discussion and dialogue among themselves and with others, working together to conduct research and listening to the local community. Participants will present a "gift"—sometimes possible solutions and sometimes things they learned from the community—at the end of the program.

(d) Reflection from Experiences
Students will reflect on their learning and feelings at the end of the day so that they have a sense of responsibility for the community's issues and challenges, and to face themselves. The reflection plays an important role for students to realize the values of social participation/contribution.

Outcome of the Program

Since its commencement, Diversity Voyage programs have had approximately 300 participants from six countries. Participants' experience and learning vary in each country, thus cannot be easily evaluated. Nevertheless, according to the students' self-assessment, their competencies have progressed by the end of the program.

GiFT's global citizenship self-assessment consists of four components with 24 questions to assess individual growth: understanding self, understanding others, collaboration (co-creation), and awareness of social

participation or contribution. Each pillar consists of personal attributes and values that are expected for the citizen who creates value for society. This assessment covers Japan's 21st century competencies, especially the category of "practical ability to act for the world." For example, the assessment covers "independence and autonomous action" (self-understanding, self-responsibility, judgment), "relationship building" (collaboration, expression, sensitivity, establishing good relationships with others), and "responsibility for building a sustainable future" (understanding of society, rights, culture, and natural environment, application of knowledge, and problem-finding and problem-solving skills).

Graph 14 shows the change in students' self-evaluation. All of the pillars show growth both in Japanese students and in overseas students. There is a tendency for self-understanding to be lower than the other components in both sets of participants. Japanese students have less confidence in co-creation (collaboration) with others and their mindset toward social participation (contribution). At the end of the program, most of the students showed growth in all pillars, and the level of self-awareness was the same. Japanese students demonstrated remarkable growth in self-understanding and social participation. In particular, Japanese students became confident to "work with multinational teams," to "communicate with others with language and other means," and to be able to be "aware of the relation between self and the society (world)" and "to draw the image of a global citizen."
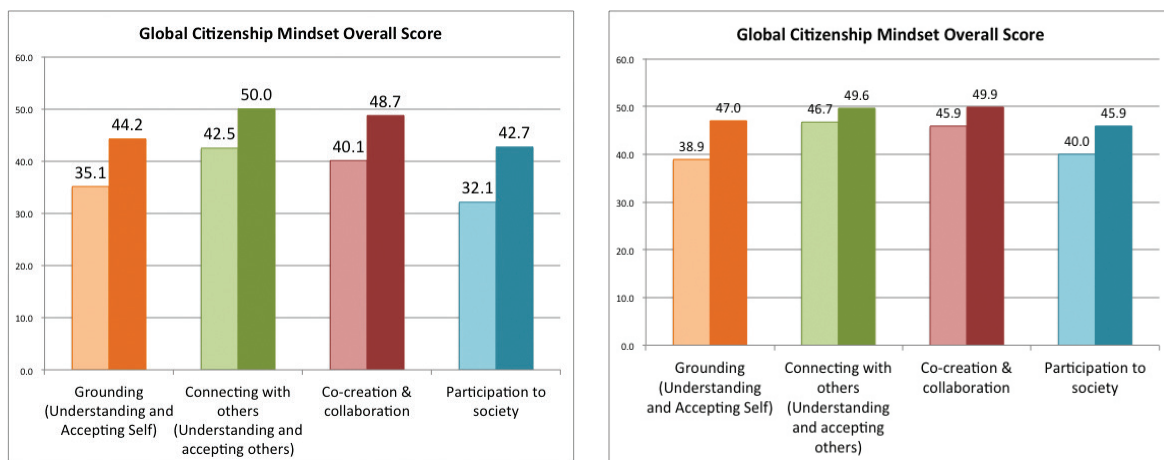
Graph 14: Changes in Participants' Four Pillars of Competencies
(Left: Japanese students, Right: overseas students)
Source: GiFT's Diversity Voyage Participants' Self-assessment

This program successfully showed that non-formal education can contribute to motivating students to become proactive, and to gain self-confidence regardless of their country of origin. Although it should be thoroughly researched, there are indications that participants of the Diversity Voyage program proactively engage in various activities and further their social contribution, such as study abroad, organizing student events, volunteering, establishing student organizations, going back to the community for further volunteer activities.

Chapter 5:
Issues and Challenges

This paper has followed how future education in Japan is formed with the concept relevant to 21st century competencies from the system level into the classroom. The combination of a revision of the Course of Study and national-level university entrance exam reform would accelerate to advance competencies-based education for building a better future. However, there are concerns and challenges to be seriously considered: a balance among academic performance, thinking ability, and creation of personal quality.

5-1. ACTIVE LEARNING AS A "BUZZWORD" IN THE EDUCATION SECTOR IN JAPAN

Since the official appearance of "active learning," schools and teachers have given increasing attention to the new learning methodologies. Some of them are confused, concerned, or excited, or have refused to mainstream the new methodologies into the classroom. A rising concern is that active learning might be an objective of the classroom, but in fact, active learning should be "tools" for variation and the enhancement of student active engagement. In addition, the term "active learning" could be new to teachers but in reality, teachers and schools have organized "active" learning in their "traditional" classroom activities (i.e., special activities, integrated studies, and extracurricular activities).

Active learning itself may encourage students to learn proactively, but it is important that learning should always be accompanied by sufficient knowledge and thinking ability. Kariya (2002) stressed that student-centered education does not always bring about a positive outcome in academic performance, stressing that some experimental outcomes are not always applicable to the whole society. Loveless (1998) analyzed the failure of progressive education reform in California. California "profoundly" changed "traditional" teaching to "holistic" teaching, and it resulted in the lowest performance in the 1994 National Assessment of Education Progress. The reform regarded "instruction focused on specific objectives, assignments featuring drill and practice, and expecting student mastery" as presumably bad. We should bear in mind that thorough research shall be needed before implementing "active learning" in schools, analyzing how it is effective to whom, what is effective to motivate students to learn, and how best we can maximize students' academic performance. Active learning could be discouraging students to learn and making students more "passive," unless their knowledge and thinking ability are sufficient. There are no "one-size-fits-all" policy and practices.

## 5-2. STRONG NEED FOR DEVELOPMENT OF TEACHERS' COMPETENCIES

Second, in order to achieve the ambitious vision, the development of school capability and teachers' competencies is essential. In the latest statement by the Minister for Education, Mr. Hase, he announced that education in Japan would pursue both higher academic performance as well as depth of learning. MEXT has tried to implement active learning in the classroom for deeper learning and for the development of students' competencies, which also depends on teachers' capabilities.

The objectives of an "active" interactive classroom are to mobilize students to be proactive learners, not making students "passive" by applying a fixed set of patterns. As previously mentioned, active learning does not always work well in the classroom, and the creation of a proactive atmosphere depends on teachers' competencies.

Therefore, teachers should be competent enough to conduct and apply active learning pedagogies.

Teachers should be familiar with the curriculum design as well as the classroom design and evaluation, and teachers should consider how they can best conduct lectures with traditional methods and learning. We must recognize that the traditional-style classroom has already proved that Japanese students have the highest standards of academic ability and thinking ability, which teachers should be proud of.

There was a period of change in classroom teaching between 2002 and 2010. It was the period when Integrated Studies became an official subject, which generally requires an "active"-style classroom. Despite the expectation of MEXT, drastic changes in teaching methodologies did not happen.

**Changes of teaching methodologies**
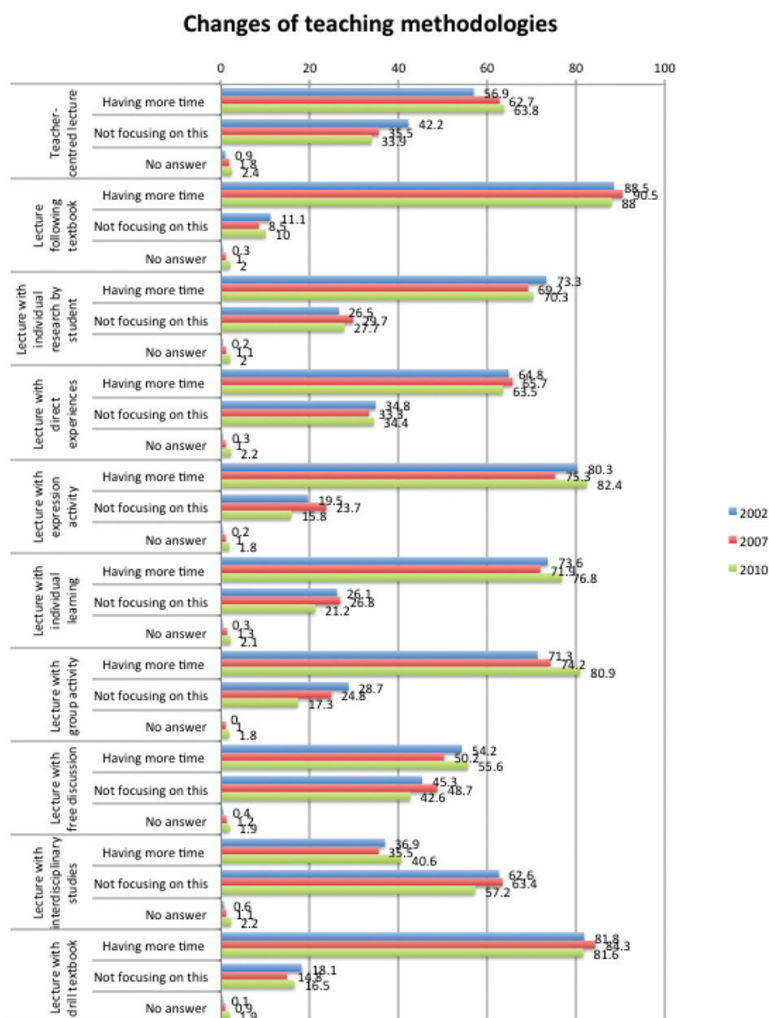
Graph 15: Changes in Classroom Teaching, 2002–2010
(Junior High School)
Source: 5th Basic Survey on School Education (2010) data extracted from junior high school survey,
Benesse Educational Research and Development Institute

Recent research conducted by Benesse (2015) shows that active learning is already embedded in the classroom at the primary and junior high school level. Additionally, those classes practicing active-style learning perform generally better than those not practicing it (except for mathematics in primary and junior high schools, and science in junior high schools).

Question: In your classroom, did you organize agenda/goal setting, discussion and summary, presentations among students?
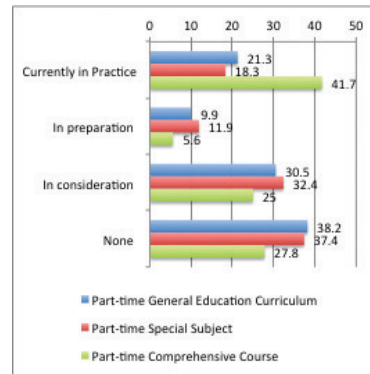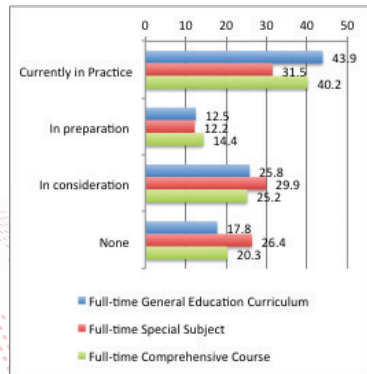
Primary School   Junior High School
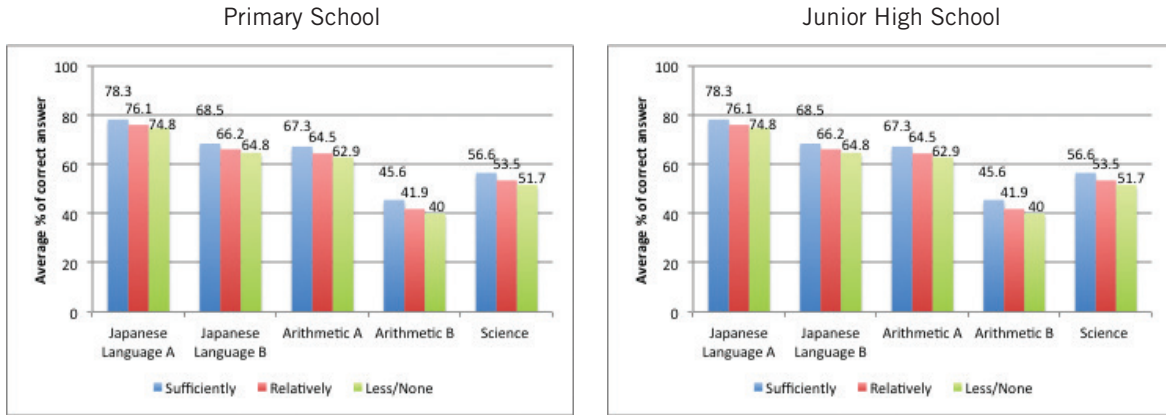
Graphs 16 and 17: Relation between the Proactive Classroom and Average Percentage of Correct Answers
Source: Benesse (2015), "Survey on Learning Conditions and Academic Performance"

MEXT's research shows that 48.9% of primary schools and 45.7% of junior high schools conduct active learning in the classroom; meanwhile, high school results vary depending on the course.
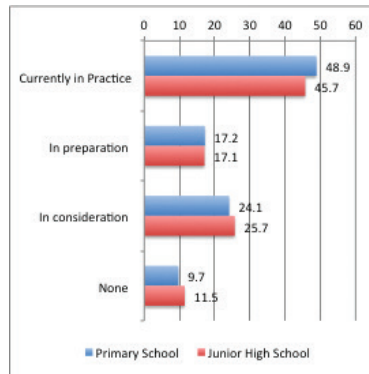
High School Level

Graphs 18, 19, and 20: Rate of Schools Adopting Active Learning in Primary, Junior High, and High Schools
Source: MEXT

This result does not imply that active learning was completely successful in making students active and it does not always mean that all teachers are familiar with the concept, pedagogies, and evaluation, hence the development of teachers' skills and qualities matters for further integration.

(1) Fundamental Reform of School Management System

Lastly, reform of school management will be the key driver for the advancement of 21st century competencies and the mainstreaming of the new Course of Study. Teachers have become busier than before, as previously mentioned; and the roles of school are changing. According to the Cabinet Office report, on teachers' time spent having external training, each school's average working hours per week was 1,144 hours 36 minutes (school size of 20 teachers) in 2006, which is 120 hours more than in 1966. Teachers' time spent for training declined by 70% from 1966. This tendency may hinder the development of teachers' competencies and the advancement of competencies-based education.

MEXT distributed "the guideline of school management improvement" in 2015, in order for teachers to have more focus on classroom teaching–related tasks. However, it is doubtful if the guideline works and is feasible. One of the reasons that teachers are busier is MEXT's and the regional boards of education's reform plan and policies, and their research and surveys. Various surveys, including MEXT's survey, suggest that teachers feel burdened by the referrals and inquiries from the government and from research institutes. The more that teachers' and schools' roles expand, the greater their responsibilities and the more accountability is needed.

The guideline suggests the use of ICT tools for smooth and faster administration; however, the budget to install ICT devices and software is limited, the government has strict security policies that cause a restriction of technology (it is reasonable that schools deal with sensitive personal information), and more importantly, teachers do not have sufficient time to learn new technology due to their hectic schedules. Additionally, the current government administration and documentation management are paper-based according to the regulations under the central and local governments.

The government should seriously consider and put more priority on the school management system and teachers' busyness. Schools will need more administrative staff (administrative staff has decreased 25% in junior high schools and 28% in high schools). I strongly believe that those small, tiny improvements will contribute to the effectiveness of the working environment, governance, and work-style (revision of the decision-making process).

Chapter 6:
Conclusions and Suggested Proposals

In summary, this paper explored the transition of recent education reforms, from the beginning concept "Zest for Life" to the new Course of Study, and its policies and institutional supports to advance a learning shift to the 21st century. Zest for Life has been the central concept for education in Japan, a visionary ahead of current competencies discussion at the global level. The growth of competencies, particularly in the affective domain, has been a central objective for centuries, as in other East Asian countries.

Currently, the Central Council for Education has been discussing a new Course of Study, which is expected to become competencies-based education curriculum guidelines. The government of Japan is determined to bring learning innovation to pursue higher academic performance as well as to envision fostering students with desirable qualities and abilities. Active learning is expected to accelerate the learning shift into classrooms.

Since the implementation of Zest for Life and its subordinate goals (maturity of intelligence, physical strength, and ethics, with development of competencies therein) were introduced, Japan was confronted with challenges for its mainstreaming. There have been gradual changes seen in primary and junior high schools, although there has been no significant progress seen in 20 years, especially in high schools. Additionally, Japan's international academic performance dropped, the economy stagnated, and a steep decline in population made Japan review its previous education reform.

In order to tackle the situation, the government of Japan decided to reform the national-level university entrance exams (from multiple-choice to inquiry-based questions) and to smooth the connection from high schools to universities so that schools can put a new Course of Study into practice to shift their learning style into competencies-based learning.

This paper mainly highlighted teachers' hectic schedule. The roles of schools have expanded, and teachers' responsibilities have also expanded; a decline in administrative staff automatically forced teachers into school management and lost their opportunities for competencies development. The situation may bring concerns of failure of the learning shift. Active learning in reality is to make students proactive learners, but if teachers do not have opportunities to master the learning, teachers are unintentionally creating "passive learners" by applying a fixed set of patterns through active learning classes.

Public needs and local needs are supporting the learning shift; growth of competencies will contribute to local and regional society. Schools have easier access to various stakeholders for the provision of learning opportunities.

(1) Possible Advocacy
   Throughout the research, there are some possible proposals to be discussed for the better advancement of the 21st century competencies framework.

   (i) Review the framework of 21st century competencies (practical ability to act for the world).

   (a) The current proposed 21st century competencies tend to focus on employability (and skill sets), but should pay more attention to personal attributes and the formation of personal values. As Cummings (2014) indicated, Japan's education policy is strongly influenced by the conservative ruling party, and it is reasonable that the framework puts emphasis on employability and its background context to "survive" in a changing, globalizing, and uncertain world. However, we also have to think about students' freedom of choice, not only fostering students to contribute to

Japanese society but at the same time we have the responsibility to cultivate global citizens to "act for the sustainable world." Therefore, the 21st century competencies should be broadly discussed on the basis of global public benefit.

(b) Previous discussions always considered "globalization" and acting for the world, but the current framework does not explicitly clarify "global competencies." "Global competencies" shall be desirable competencies and would need further discussion, whether they should stand as a pillar or constituent of the 21st century competencies framework such as "global citizenship" stated in the transversal competencies proposed by UNESCO.

(c) As Abiko (2014) suggests, the Central Council for Education should discuss "values" and the formation of personal values. The concept of ESD as such plays a role for the formation of personal values but it is within the category of "practical ability to act for the world." ESD and global citizenship can stand up on the higher level of the discussed competencies; it contributes to control personal behavior and to develop competencies such as self-restriction and judgment.

(ii) Provide policy-level support for teachers' development: increase the number of teachers going to postgraduate-level training; recruit teachers who have sufficient expertise in other sectors with flexible promotion and salary scales.

(iii) Have more autonomy for local government to implement their education policies in order to best advance 21st century competencies at the school level.

There are research opportunities to look in depth at the advancement of 21st century competencies in cities—e.g., the difference between the expected competencies in big cities and in local (rural) cities; statistical analyses of schools from 47 prefectures to see how 21st century competencies are received and understood; panel analyses of the effectiveness of traditional classrooms and active learning in terms of self-confidence, a proactive attitude, and academic performance; and comparison of the effectiveness of competencies-based education in low and high achievers.

REFERENCES

Abiko, T. (2014) *Designing Classes beyond "competency-based" classes (Competency-Base wo koeru jugyou zukuri).* Tosyo Bunkasha.

_____. (2015). *Latest educational trends and directions of scholastic ability towards next Course of Study (Saishin no kyouiku doukou to jiki gakusyu shido youryou no gakuryokukan no houkousei).* Bulletins of Japan–UK Education Forum, 19, ISSN 2189-678X.

Asanuma, S. (2015). *Japanese teachers' struggle for active learning.* Paper presented at the 10th East Asia International Symposium on Teacher Education, International Consortium for Universities of Education in East Asia.

Benesse Educational Research and Development Institute. (2006). *4th Basic Survey on School Education.*

_____. (2010). *5th Basic Survey on School Education.*

_____. (2015). *Survey on learning conditions and academic performance.*

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university,* 4th ed., 19–26. Open University Press.

Bonwell, C. C and Eison, J. (1991) *Active Learning: Creating Excitement in the Classroom,* Jossey-Bass 1 edition.

Council on Fiscal and Economic Policy. (2015). *Working group report on MEXT.* Working Group on non social-security, Cabinet Office.

Cummings, W. (2014). *Education and equality in Japan.* Chapter 8, 206–235. Princeton University Press.

Duke, B. (2009). *The history of modern Japanese education: Constructing the national school system, 1872– 1890.* Rutgers University Press.

Fish, R. (2015). *Japan: Recent trends in education reform,* Asia Society website, http://asiasociety.org/global-cities-education-network/japan-recent-trends-education-reform.

Hiroshima Board of Education. (2014). *Hiroshima Action Plan on Learning Innovation.*

_____. (2016). *Basic plan on the leading school for learning innovation: Global Leaders School (tentative),* http://www.pref.hiroshima.lg.jp/uploaded/attachment/198010.pdf.

Ishida. (2004). *How can we evaluate "Zest for Life" (Ikiru chikara wo dou hyouka suruka).* CS Ken Report, Keirinkan, 18.

Kariya, T. (2002). *Illusion of education reforms (Kyoiku Kaikaku no gensou).* Chikuma Shobo.

_____. (2012). Is everyone capable of becoming a "good citizen" in Japanese society? Inequality and the realization of the "good citizen" education. *Multicultural Education Review, 4*(1), 119–146.

Loveless, T. (1998). The use and misuse of research in educational reform. *Brookings Papers on Education Policy No. 1,* 279–317. Brookings Institution Press.

Maruyama, H. (2013). *Moral education in Japan.* National Institute for Educational Policy Research, Education in Japan, http://www.nier.go.jp/English/educationjapan/.

MEXT. (1996). *Priorities and prospects for a lifelong learning society: Increasing diversification and sophistication, Chapter 3. The future of lifelong learning, Section 3. Encouraging zest for living.* White Paper, http://www.mext.go.jp/b_menu/hakusho/html/hpae199601/hpae199601_2_042.html.

_____. (2008). *Improvement of the Course of Study in kindergarten, primary school, junior high school, high schools and schools for special needs education.* Central Council for Education.

_____. (2013a). *2020: Toward a new growth.* White Paper, Special Feature 1, http://www.mext.go.jp/b_menu/hakusho/html/hpab201301/detail/1360673.htm.

_____. (2013b). *"New Competencies" and Framework of Learning Evaluation.* Paper presented at the Panel on Educational Objectives, Contents and Evaluation, MEXT.

_____. (2014a). *Summary of the Panel on Educational Objectives, Contents and Evaluation (based on the quality and competencies to be developed) (ikusei subeki shishitsu/nouryoku wo fumaeta kyouiku mokuhyou/ naiyou to hyouka no arikata ni kansuru kentoukai).* Panel on Educational Objectives, Contents and Evaluation, MEXT.

_____. (2014b). *Consultation on standards of curriculum in primary and secondary education (Shoto Chuuto Kyouiku ni okeru kyouiku katei no kijuntou no arikata ni tsuite).* Central Council for Education, MEXT.

_____. (2014c). *For realisation of high school and university connection appropriate to a new age: Integrated reform on high school and university education and university admissions.* Central Council for Education, MEXT.

_____. (2015a). *Current situation on schools, teachers and staffs.* Presentation at the Primary and Secondary Education Working Group, Central Council for Education.

_____. (2015b). *Japan's educational reform for 2030.* Presentation by Mr. Hiroshi Suzuki, Special Advisor to the Minister of Education, Culture, Sports, Science and Technology at the OECD/Japan Seminar.

_____. (2015c). *Research on curriculum arrangement and implementation in state schools.* MEXT.

Ministry of Finance. (2014). *Working group report of education and science.* Council on Fiscal System, Ministry of Finance.

Motani, Y. (2005). *Hopes and challenges for progressive educator in Japan: Assessment of the "progressive turn" in the 2002 educational reform.,* Comparative Education, 41(3).

Nakano, H. (2012). Key competencies and PISA literacy (Key competencies to PISA literacy). *Keiwa Gakuen University Research Bulletin, 21,* ISSN 0917-8511.

NIER. (2013). *Basic principles of curriculum design for competencies and skill building towards societal changes.*

_____. (2014). *Overview of "principle of curriculum organization towards comprehensive development of competencies," Report No. 7, Basic Research on Curriculum Organization.*

_____. (2014). *Summary of TALIS 2013,* http://www.nier.go.jp/kenkyukikaku/talis/imgs/talis2013_summary.pdf.

_____. (2015). *Research on improvement of education in teacher training: Focus attention on active learning.*

_____. *Education in Japan: Past and present,* http://www.nier.go.jp/English/EducationInJapan/Education_in_Japan/Education_in_Japan.html.

OECD. (2005). *The definition and selection of key competencies: Executive summary.* Definition and Selection of Competencies (DeSeCo).

_____. (2014). *New insights from TALIS 2013: Teaching and learning in primary and upper secondary education.* OECD Publishing.

Okada, A. (2012). *From human capital to market values in education, 1980s–present day., Education Policy and Equal Opportunity in Japan,* 1st ed., 108–138. Berghahn Books. http://www.jstor.org/stable/j.ctt9qd3hj.13.

Riches, D. (2010). *The practices of university admissions and entrance examinations: Their impact on learning and educational programs,* No. 5:1. Association of Social Innovation Studies, Seijo University.

Tokyo Gakugei University Curriculum Center for Teachers (2016) *"21st Century Competencies" and the Teacher's Role,* Tokyo Gakugei University Creative Curricula & Teaching Newsletter http://www.u-gakugei.ac.jp/~currict/english/pdf_en/CCT_newsletter14_en.pdf

United Nations Educational, Scientific, and Cultural Organization (UNESCO). *Definition of Education for Sustainable Development (ESD),* http://www.unescobkk.org/education/esd-unit/definition-of-esd/.

_____. (2014). *Education Systems in ASEAN+6 Countries: Comparative Analysis of Selected Educational Issues,* Education Policy Research Series Discussion Document No. 5, UNESCO Bangkok

_____. (2015). *Transversal Competencies in Education Policy & Practice (Phase I) Regional Synthesis Report.,* Education Research Institutes Network Regional Policy Series

_____. (2016). *School and Teaching Practices for Twenty-first Century Challenges- Lessons from the Asia-Pacific Region, Regional Synthesis Report.* Education Research Institutes Network Regional Policy Series

Willis, D., Yamamura, S., Rappleye, J. (2008) *Japan as "Global Model" or "Nation at Risk"?,* International Review of Education, Vol. 54, No. 3/4, Living Together: Education and Intercultural Dialogue (May-Jul., 2008), 493-515.