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Reform in Articulation between High School and University as an Urgent Task of Japanese Public Policy

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1. INTRODUCTION

Management guru, Peter F. Drucker said in an article published in 2001, that, “The Next Society will be a knowledge society. Knowledge will be its key resource, and knowledge workers will be the dominant group in its workforce.”¹⁾ After advent of mass production, a new era of innovation in industrialized countries followed. This is not the first time such a remark has been made,²⁾ but it may have made the concept of a ‘knowledge-based society’ popular. The effect of a knowledge-based society, has been, on one hand, to intensify competition in the global economy. As emerging economies enter industrial fields of mass production, industrial economies are forced to create high value-added economic fields. On the other hand, a knowledge-based society brings about inequality based on a skills gap. Acemoglu (2002), Autor, Katz and Kearney (2006) etc. showed that in the 1980s, college wage premiums grew over averaged wages, and the number of university or graduate school graduates increased while jobs of traditional industrial workers decreased. The advent of a knowledge-based society, globalization and economic inequality formed a trilogy that made education policy the focus of public policy in the twenty-first century.

Since 2008 in the United States, the annual report of the Council of the Economic Advisers (CEA) has devoted a chapter in the *Economic Report of the President*. This inclusion, remarkable because it includes education policy, and stress the need for reform and articulation between K-12 and higher education, underlines the urgency to address this new paradigm of the marketplace to deal with labor market and education. This urgency is worldwide. The Organization for Economic Co-operation and Development (OECD) in their series of *Education Policy Analysis* recommended building relevant education policy that corresponds

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1) Drucker (2002), p. 237.

2) The importance of knowledge was stated by Reich (1991). According to his analysis, symbolic-analytical services that include all the problem-solving, problem-identifying, and strategic-brokering activities emerged as a dominant factor in the world economy, and the widening gap of income between symbolic analysts and other people is closely related to the level of education (see, ‘Part Three: The Rise of the Symbolic Analyst’, pp. 171-240).

to a knowledge-based society paradigm. The pressing need to create education policy that promotes quantitative expansion and qualitative development in higher education is the common objective, and reforming the education system is now an urgent issues in the industrialized world.

This reformation is also prompted by the need to reform the generalization of secondary education and to deal with the drastic increase of the percentage of students participating in higher education, since quantitative growth of students in both high school and higher education has not necessarily meant qualitative increase or preservation of educational level. Before World War II, except in the United States, fewer than half of the same generation completed high school.³⁾ Those that did went on to become a mass-elite that fulfilled professional or leadership roles in local society. Further, people graduating from universities made up less than 15% of this generation, and made up elites that filled posts in national leadership.⁴⁾ In Japan, due to the enforcement of the School Education Act established in 1947, about 30% of the same generation (about 600,000 of about 2.1 million) entered high school in 1948, and less than 6% (110,000) entered university in 1951⁵⁾. In 1970 people entering high school exceeded 80% of the same generation as Table 1 shows, but due to the lack of most high schools to sufficiently prepare their students for higher learning and the shortage of enrollment quota of universities, the number of students entering university was below 30% until 1995. As Figure and Table 2 show, enrollment quota of universities increased from 195,000 in 1966 to 302,000 in 1976, but after then it stayed about 400,000 until 1985 according to the plan of MEXT, and again increased to more than 450,000 toward 1991.⁶⁾ When children of the baby boomer generation entered universities in 1992, the enrollment quota was only 23% of the same generation, and ratio of applicants to enrollment quota was 1.94. The percentage of students enrolling in universities reached 27.3% in 1976, but declined to 23.6% in 1986. After 1992, universities increased their enrollment quotas from 473,000 in 1992 to 525,000 in 1999 and to 572,000 in 2009, and the 18 year old population rapidly decreased from 2.049 million in 1992 to 1.212 million in 2009. These occurrences precipitated changes such as reducing barriers to enter university, and as a result, many universities ceased to maintain their rigorous standards. Rapid expansion of numbers of high schools undermined the educational level required for entry to university entrance, and actually ended up undermining the actualization of a knowledge-based society. Thus, improvement in the

3) Goldin and Katz (2008), pp. 18-30, and 230-235.

4) Trow (1974) distinguishes between elite, mass, and universal stages in higher education.

5) MEXT (2010), pp. 10-11.

6) Figure shows that MEXT controlled the enrollment quota following its plan for higher education during 1976-1985, and then allowed universities to increase their enrollment quota according to the plan for higher education from 1986 to 1993.

Table 1 Comparison of High School and University Enrollment: 1955-1999[#]

School year	The percentage of students going on to high schools			The percentage of students enrolling in universities		
	Total	Males	Females	Total	Males	Females
1955	51.5	55.5	47.4	7.9	13.1	2.4
1960	57.7	59.6	55.9	8.2	13.7	2.5
1965	70.7	71.7	69.6	12.8	20.7	4.6
1970	82.1	81.6	82.7	17.1	27.3	6.5
1975	91.9	91.0	93.0	26.7	40.4	12.5
1976	92.6	91.7	93.5	27.3	40.9	13.0
1977	93.1	92.2	94.0	26.4	39.6	12.6
1978	93.5	92.7	94.4	26.9	40.8	12.5
1979	94.0	93.0	95.0	26.1	39.3	12.2
1980	94.2	93.1	95.4	26.1	39.3	12.3
1981	94.3	93.2	95.4	25.7	38.6	12.2
1982	94.3	93.2	95.5	25.3	37.9	12.2
1983	94.0	92.8	95.2	24.4	36.1	12.2
1984	93.9	92.8	95.0	24.8	36.4	12.7
1985	93.8	92.8	94.9	26.5	38.6	13.7
1986	93.8	92.8	94.9	23.6	34.2	12.5
1987	93.9	92.8	95.0	24.7	35.3	13.6
1988	94.1	92.9	95.3	25.1	35.3	14.4
1989	94.1	93.0	95.3	24.7	34.1	14.7
1990	94.4	93.2	95.6	24.6	33.4	15.2
1991	94.6	93.5	95.8	25.5	34.5	16.1
1992	95.0	93.9	96.2	26.4	35.2	17.3
1993	95.3	94.2	96.5	28.0	36.6	19.0
1994	95.7	94.6	96.8	30.1	38.9	21.0
1995	95.8	94.7	97.0	32.1	40.7	22.9
1996	95.9	94.8	97.1	33.4	41.9	24.6
1997	95.9	94.8	97.0	34.9	43.4	26.0
1998	95.9	94.8	97.0	36.4	44.9	27.0
1999	95.8	94.8	96.9	38.2	46.5	29.4

[#]Source: MEXT (annual from 1956 to 2001). MEXT's statistical annual survey was published from 1956, and it included data before 1956.

articulation between high school and university is an urgent task of public policy wherever large numbers of the same generation are entering universities.

In Japan, the need to reform the articulation between high school and university was first raised by the Japan Association of National Universities (JANU)⁷⁾ in 2007. JANU played a critical role in reforming the university entrance system after World War II and more recently, investigated the basic framework of the reform of the articulation system. The JANU committee working on admissions submitted a report on November 5, 2007,⁸⁾ proposing a national test for reconstructing articulation between high school and university, and in the general meeting of JANU, a proposal based on the admission committee report was released.⁹⁾

7) JANU is comprised of 86 national universities that account for 21.4% of all university students, 58% of master's course students, and 68.8% of doctoral candidates in graduate schools in 2015.

8) JANU (2007 b).

9) JANU (2007 a).

Table 2 Comparison of Enrollment Quotas to University Applicants 1966-2011*

	18 year old population (millions)	Number of students completing high school (millions)	Universities			
			A: Enrollment quota (thousands)	B: Applicants (thousands)	$\frac{B}{A}$	Enrollees (thousands)
1966	2.491	1.557	195	513	2.63	293
1976	1.543	1.325	302	650	2.15	421
1992	2.049	1.807	473	920	1.94	542
1999	1.545	1.363	525	756	1.44	590
2009	1.212	1.065	572	669	1.17	609
2010	1.216	1.071	575	680	1.18	619
2011	1.202	1.065	578	675	1.17	613

* Source: MEXT (2014). Attached referenced data, p. 18.

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) accepted the proposition of JANU, and as a result, announced they would launch a consultation and study group to propose a common test to articulate the path from high School to university. This policy was contained in a report of the Central Council for Education (CCE)¹⁰⁾ released on December 24, 2008, titled, *Toward the Creation of Undergraduate Education*.¹¹⁾ Along with this, MEXT commissioned a committee for consultation and study led by Hokkaido University to study on ‘a device that objectively assesses and utilizes academic achievement of high school’ to concretize a consultation and study group prearranged in the CCE report. This consultation and study committee was composed of representatives from major groups concerned with the articulation between high school and university—JANU, the Japan Association of Private Universities and Colleges (JAPUC)¹²⁾, the Association of Private Universities of Japan (APUJ)¹³⁾, the National Association of Upper Secondary School Principals¹⁴⁾, the Japan Private High School Federation, the Association of Prefectural Board of Education Superintendents, and the National Center for University Entrance Examinations (NCUEE). The committee presented a final report titled, *The Report on a Device that Objectively Assesses and Utilizes Academic Achievement of High School Education* on September 30, 2010 based on a consensus of all members.¹⁵⁾ After two years of deliberations, the committee proposed introducing a national common criterion-referenced test for evaluating scholastic ability to realize appropriate articulation between high school education and higher

10) Major policies of the MEXT have been deliberated at CEE whose members are selected by the MEXT.

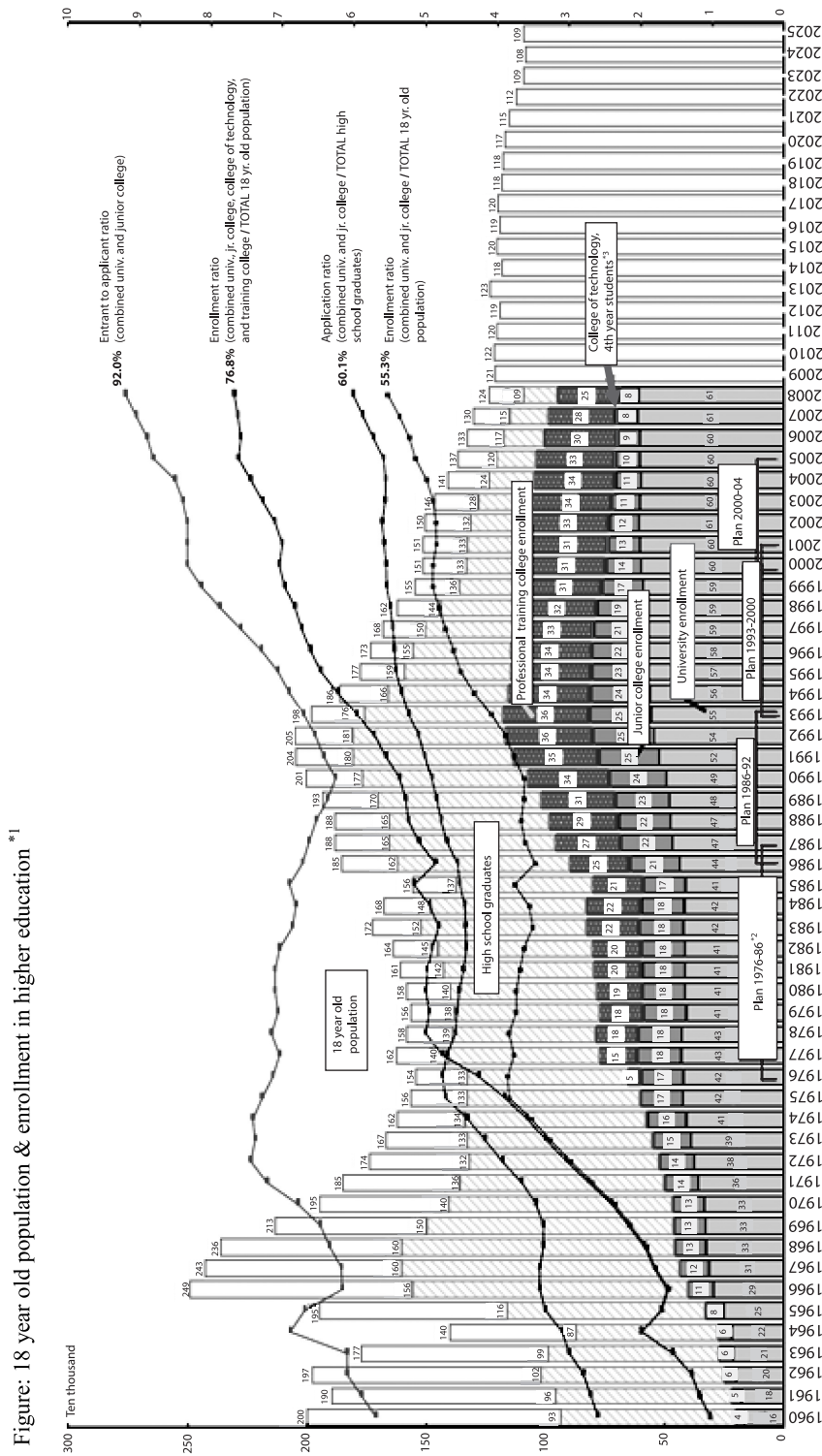
11) MEXT (2008).

12) JAPUC is comprised of 121 private universities in 2015.

13) APUJ is comprised of 401 private universities in 2015.

14) The National Association of Upper Secondary School Principals is comprised of national and public principals. There are 5,418 high schools in Japan. Of these, 15 are national high schools, 4,082 are public high schools (established by local public entities), and 1,321 are private high schools in 2015.

15) MEXT (2010).



*1 Source: CCE (2008)

*2 Based on fiscal year April - March

*3 College of technology students are 18 years old during their fourth year having entered directly after lower secondary school.

education based on item response theory (IRT).¹⁶⁾

Unfortunately, although the committee's proposal was accepted, it did not become concrete policy despite a consensus among representatives of all major associations concerning the articulation system in the final report due to major obstacles in the Japanese political scene; political instability in the Democratic Party of Japan (DPJ) at that time was unable to establish a positive articulation policy, and then at the end of 2012, the Liberal Democratic Party of Japan (LDP) returned to power. As a result, MEXT could not change major policies and systems such as the Japanese articulation system. There was also a cleavage in MEXT between the Elementary and Secondary Education Bureau that controls high school education, and the Higher Education Bureau that is responsible for universities. Lack of strong political leadership to build consensus between bureaus exacerbated the situation and stymied proponents of the new articulation policy were unable to move forward.

However, despite these setbacks, the final report has been influential in the discussion about reforming the Japanese articulation system. For example, the Japan Business Federation (*Keidanren*) insisted on the need to introduce the common test that was proposed by the consultation and study committee in 2010 in their proposal called, *Fostering People Who Can Excel in Global Arena : A Follow-up Proposal for the Development of Global Talents*, on June 13, 2013.¹⁷⁾

In 2013, after Shinzo Abe became prime minister, the Council for the Implementation of Education Rebuilding (CIER) was launched on January 15, and it proposed reforming both the systems of university entrance examination and high school-university articulation in the *Fourth Proposal of CIER* at the end of October, 2013.¹⁸⁾ This brought a breakthrough in the stagnated situation concerning articulation policy. The CCE, after deliberation corresponding to the proposal of CIER, released a report called, *On Integrated Reforms in High School and University Entrance Examination Aimed at Realizing a High School and University Articulation System Appropriate for New Era* on December 22, 2014¹⁹⁾, and then in February, MEXT officially established and then launched, the Council on Reform of the High School and University Articulation System to concretize the CCE's report. At this writing,

16) The final report specifically used the term 'standardized test' in place of 'IRT', but the meaning is a standardized test based on IRT.

17) Keidanren (2013).

18) CIER released some proposals in 2013 (CEIR 2013). The first proposal deals with (1) radical improvement to moral education and examined ways to designate moral education as a school subject within a new framework, (2) legislation to confront bullying, and (3) consistent prohibition of corporal punishment. The second proposal concerns the reform of the Board of Education System. The third proposal is titled 'University Education and Global Human Resource Development for the Future.' See MEXT (2012).

19) CCE (2014a, 2014b).

deliberation in the Council still continues, albeit, slowly.

This précis is given to provide basic information to assist in understanding the current situation concerning reform of the articulation system in Japan. The topic itself is specialized even within Japan and only a handful of people are fully knowledgeable about it. Although there is some information in Japanese—I have written various articles as well as a book titled, *The End of University Entrance Examinations: Reconstruction Based on the Test for the Articulation Between High School and University* (Sasaki 2012)—many scholars abroad have few sources to go by and are unable to understand the present situation and problems in Japan; therefore, I wanted to provide information in English from my standpoint as an expert on the JANU committee working on admissions from 2003 to 2011—when I chaired the committee for consultation and study that looked for a device that objectively grasps and utilizes academic achievement of high school education. Accordingly I will show the fundamental features of the Japanese articulation system and its history, and finish with an analysis and proposal of the system in this article.

2. The fundamental structure of the Japanese articulation system after the end of World War II

The articulation between high school and university consists of two factors: the educational continuity between academic achievement in high school education and university education, and applicant selection process carried out by universities. High school students must finish a set general education curriculum that is a continuation of compulsory education in order to apply to university. Universities base both liberal arts and professional education on what is achieved during upper secondary school (see Table 3). The articulation system must include measures and an institutional framework that assures achievement in high school education as required by university education.

Many industrialized countries set a national curriculum (Europe and Japan) or standardize a curriculum among regions (the United States, Canada, and Australia), with the range and contents differing among countries. In Japan, MEXT set the national curriculum of high school education in 1956 and changes it about every decade (1960, 1970, 1978, 1989, 1999, and 2009).

In conjunction with setting the national or public curriculum, many countries also assess academic achievement of high school education required by university education. The General Certificate of Education (GCE) Advanced Level (A-Level) in the United Kingdom, Abitur in Germany, baccalauréat in France etc. are qualifications that certify completion of high school education and also may act as a requirement for admission to university. In the United States there is no public common test/examination corresponding to this, but there are common

Table 3 General Outline of the Japanese Educational System[†]

Years required for completion/graduation	Educational Establishments ^{††}	
4-6 years ^{†††}	University: undergraduate course	
3 years	Upper Secondary School; also known as high school (gives advanced general education and specialized education) ^{††††}	[Types of High Schools] • General Upper Secondary School • Specialized Upper Secondary School^{†††††} • Comprehensive Upper Secondary School^{†††††}
3 years	Lower Secondary School (gives middle general education)	Compulsory education
6 years (beginning from 6-7 years old)	Elementary School (gives primary general education)	

† Basic system prescribed by the School Education Act. In addition to this, special support schools (6-7 to 18 years old), community colleges (2-3 years), colleges of technology (5 years after completion of compulsory education), and vocational schools (2-4 years) are established. National academies (National Defense Academy, National Defense Medical College, Aeronautical Safety College, Meteorological College, Japan Coast Guard Academy, etc.) that are established by government ministries and agencies other than MEXT are not covered by the School Education Act.

†† Excluding graduate school.

††† 6 years are required to graduate in the medicine, veterinary, dentistry and pharmacy faculties/colleges.

†††† Upper secondary school was provided as an establishment giving *higher* general education and specialized education in the School Education Act of 1947. The present Act (amended in 2007) prescribes that upper secondary school give *advanced* general education and specialized education. This revision is related to ‘the Third Reformation of Education’ as later mentioned in this article.

††††† In contrast to General Upper Secondary School which gives advanced general education, this school gives specialized (vocational) education in agriculture, commerce, engineering, fishery, etc.

†††††† In this school, students can choose to learn courses form both advanced general education and specialized education.

standardized tests such as the SAT and ACT that are conducted by specialized organizations. In Japan, high school principals have the authority to qualify completion of high school education. There is no common test/examination upon completing high school education, and the task of assessing academic achievement is the placed on the university entrance examination.

This leads to the second factor, selection of applicants by universities. Every country that has common tests/examinations for assessing academic achievement of high school education has a selection system that is attuned to that country’s needs. Generally in Europe and the United States, evaluation of students is conducted by assessing in various combinations, scores from common tests/examinations, high school records, essays, and interviews by each department/faculty/university. In some rare cases, a selection method is to further pare down the applicant pool by administrating that university’s unique entrance examination, as it

corresponds to a quota.²⁰⁾ In France, though, all applicants passing the common examination to complete high school qualify to enter university. In Japan, even now, more than half of the quota of Japanese universities is selected through a pre-World War II system, where each department/faculty/university conducts its own entrance examination,²¹⁾ and the selection of students to fulfill an enrollment quota is mainly based on the score of the entrance examination. National universities introduced a common test named the Joint First-Stage Achievement Test in 1979. It was succeeded by the National Center Test for University Entrance Examinations carried out by the NCUEE in 1990.^{22),23)} This common test partly has the function of assessing basic academic achievement of high school education, but it differs from the common tests/examinations of Europe and the United States, because each department/faculty/university conducts its own second-stage entrance examination, and selects students through synthesized scores from the first-stage test (the National Center Test) and the second-stage examination in different ways.²⁴⁾

It is noteworthy that entrance examinations do not assess academic achievement of high schools; this is clarified when we consider that entrance examinations are not designed specifically to assess academic achievement in high school—first and foremost, the fundamental purpose of the entrance examination is to fill applicants over the quota. It does not aim to grant admission to applicants based on the appropriate knowledge and skills required for university education. Second, university entrance examinations including the National Center Test are norm-referenced tests, in which score distribution relatively discriminates applicants. They are not criterion-referenced tests/examinations that assess the absolute degree of academic achievement. Third, each department's/faculties'/universities' entrance examination does not assess academic achievement of general education, but assesses particular knowledge and skills according to its academic character in education. The conceptual diagram of the selection system is shown in the Chart. National universities acting under JANU guidelines, hold examinations in seven subjects from five to six subject areas²⁵⁾

20) For example, universities in Finland conduct their own entrance examinations.

21) Each examination is held only once between February to March for each enrollment quota.

22) See NCUEE (2013).

23) Per the pre-1990s selection system, national universities treat the National Center Test as the first stage test, and conduct their entrance examination as a second stage examination.

24) Sasaki (2012), pp. 18-24. Some national universities select students based on only scores of the National Center Test, but their enrollment quotas are very small. The number of private universities using the National Center Test is limited. Only 5,312 students entered private universities through synthesized scores on the National Center Test and a university-unique examination in 2009. There are private universities that select students based only on scores from the National Center Test, but their share of the total quota of the university bound population is very small; only 41,844 students from approximately 470,000 entering private university in 2009.

25) The six subject areas are Japanese Language, Geography & History, Civics, Mathematics, Science

Table 4 Subject Areas and Subjects in the National Curriculum in 2009[‡]

Subject Areas ^{‡‡}	Subjects ^{‡‡‡}
Japanese Language	
Geography and History	World History Japanese History Geography
Civics	Contemporary Society Ethics Politics and Economy
Mathematics	
Science	Physics Chemistry Biology Earth Science
Foreign Languages	English
Health and Physical Education	Physical Education Health
Art	Music Art and Design Crafts Production Calligraphy

[‡] Source: MEXT (2010). The original table includes 'Home Economics' and another 2 subjects. According to this curriculum, mathematics and science were enforced in 2012, and other subject areas were enforced in 2013.

^{‡‡} The term 'subject area' is officially used by MEXT and the NCUEE. It means discipline.

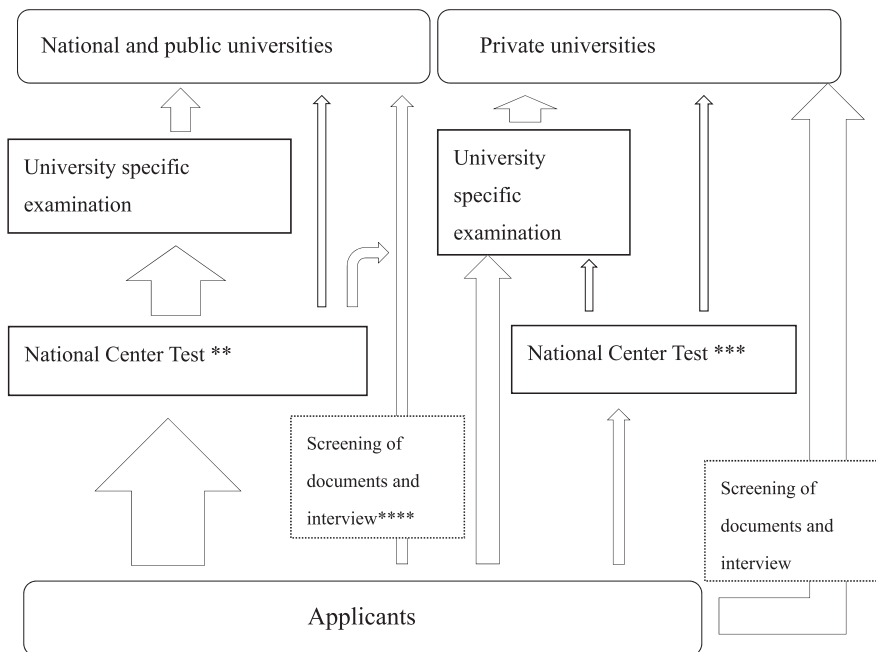
^{‡‡‡} Subjects listed, here are, simplified. For example, 'World History' is actually comprised of 'World History A' (2 credits) and 'World History B' (4 credits); and 'Mathematics' is comprised of 'Mathematics I' (3 credits), 'Mathematics II' (4 credits), 'Mathematics III' (5 credits), 'Mathematics A' (2 credits), 'Mathematics B' (2 credits) and 'Application of 'Mathematics' (2 credits). The subject areas named 'Home Economics', 'Information', and 'Special Activities' are omitted..

in the first-stage of examinations of the National Center Test and two to three subjects for the second-stage examinations that relate to the specific curriculum of a university's department/faculty. In private universities, examinations are conducted in three subjects from three subject areas for about half of the quota taking the ordinary academic examination²⁶⁾, while fewer subjects are imposed on the rest.

and Foreign Language (see Table 4). In the case that requires five subject areas, universities consider Geography & History and Civics as one subject area.

- 26) Sasaki (2012), p. 7. In private universities in 2008, about 49 % of students entered university via academic examination, about 40% were based on recommendation from their high school principal, and about 8% were admitted by a selection committee without any scores from a common test assessing academic achievement in high school—which is very different from the system in the United States. In the same year, about 85% of admissions to national universities was based on academic examination, and about 12.3% through recommendation.

Chart: A Conceptual Diagram of the Current Japanese Selection System*



* Diagram based on Sasaki (2012).

** More than 80% of applicants for the enrollment quota to national universities must take tests of 7 subjects of 5-6 subject areas at the National Center Test for University Entrance Examinations (a.k.a. the National Center Test) conducted by NCUEE.

*** About 90 % of applicants for the enrollment quota of private universities are allowed to take tests of 3 subjects at the National Center Test.

**** Selections based both on recommendation both by high school principals and on self-recommendation of applicants (the latter is called 'selections through the admission offices' in Japan, but this is different from the selection process of admission offices in the United States). In both types of selection applicants to some national universities are required to take the National Center Test.

In the Japanese articulation system, university entrance examination as a substitute for an assessment of high school academic achievement worked until the early 1990s. The first reason why such substitution was possible is because from the end of World War II to 1970s, MEXT pursued a policy with a goal for students to complete their higher general education in high schools and enacted a national curriculum for high schools to correspond to this goal.²⁷⁾ Universities were notified to adjust their entrance examinations to cover all of the major subjects in the high school curriculum. The second reason was excessive competition among applicants to enter university. From the late 1970s, MEXT constrained the increase of the total enrollment quota of universities, and as previously mentioned—the percentage of student enrolling universities stayed under 30% until 1995. Such chronic shortage of the university

27) MEXT (1958), pp. 22-23.

quota resulted in excessive competition for university entrance. Prospective applicants were forced to study hard in high school which in turn assured universities of applicants with a high degree of academic achievement in high school as well as the license to impose inclusion of the major disciplines in the entrance examination.

3. Dysfunction of the Japanese articulation system

Although the Japanese articulation system was stable after the 1970s, social changes in the prior decade forced MEXT, political and economic leaders, and people involved in education to reform the system.

The pressure to change the system first came from the increase of the percentage of students who went on to high school. It increased from about 30% in 1948 to over 50% in the late 1950s, with high schools being rapidly built in the late 1960s in correspondence to the need of the post-war baby boomer generations. The increased capacity of high school quotas and the decrease of students according to decline of the birth rate brought about the era of universal admission to high school. The percentage of students who went to high school in the same generation exceeded 90% in 1975 as Table 1 shows.

Universalization meant that quality of education came to vary widely among high schools, and that the goal of high school education—‘completion of general education’ and execution of higher general education—could no longer be pursued. MEXT, in the end, gave up the idea of ‘completion of general education’, and introduced ‘elasticizing’ the national curriculum. From 1982, the minimum number of credits for completing high school decreased from over eighty-five during 1956-1981 to eighty in 1989 and to seventy-four in 2003; moreover, the range of subject choices broadened from 1994 as shown in Table 5. These changes accompanied large cuts from the curriculums off primary schools all the way to high school education.

With legislation, the School Education Act endowed students completing high school with a formal qualification for admission to university. These changes in high school education inevitably conflicted with requirements in academic achievement for university education. Private universities that imposed fewer subjects in their entrance examinations compared to national universities faced difficulties in how to articulate high school education with their curriculum, as prospective students did not always have the basic knowledge to go into a certain field; for example, students in technology or engineering departments not learning physics in high school. National universities more or less faced the same difficulties due to the changes in high school curriculum. These knowledge gaps forced universities to offer remedial education for freshmen in the late 1990s. At the same time, JANU, which left judgement of what subjects of the first-stage test should be imposed to the discretion of individual

Table 5 National Curriculum in General Upper Secondary School 1956 – 2003[#]

Year enacted	Credits required for completion (Requirements in general upper secondary school)
1956	85 credits or more (10-12 subjects, 45-61 credits)
1963	85credits or more (men: 17subjects, 68-74 credits, women: 18 subjects, 70-76 credits ^{##})
1973	85credits units or more (men: 11-12subjects, 47credits, women: 12-13 subjects, 47 credits)
1982	80 credits or more (men: 7 subjects, 32 credits, women: 8 subjects, 32 credits)
1994	80 credits or more (11-12 subjects, 38 credits)
2003	74credits or more (13-14 subjects, 31 credits)

Source: Sasaki (2012), pp. 30-31.

Differences of credits required for completion between men and women in 1963-1982 are caused by differences in compulsory subjects between men and women. For example, physical education was a compulsory subject for men, while for women home economics was a compulsory subject.

universities in 1990, decided that national universities in principle should impose seven subjects of five or six subject areas in the National Center Test,²⁸⁾ because elasticizing the national curriculum meant more than ever, the university entrance examination played the role of assessing academic achievement and maintaining a degree of achievement.

Criticism to the Japanese entrance examination system itself was another source of pressure to change the system. This criticism was based on a perception that education in Japan was too rigid and uniform, and inhibited the progress of distinctive and creative students. This perception was also bound to a view that excessive competition in the 1980s engendered rote learning; due to both severe entrance competition to university and because high school textbooks covered too many topics. It is said that teachers were not able to finish all the units in the textbook within the school year even in excellent high schools! Universities also tended to raise the difficulty level by including questions requiring rote learning in their entrance examinations. Prime Minister Yasuhiro Nakasone acknowledged this criticism, and established the Provisional Council on Education (PCE) in 1984 to reform the Japanese articulation system. The PCE released *The First Report of the Provisional Council of Education* in 1985, and MEXT embodied it in the late 1980s to the early 1990s. This was called ‘the Third Reformation of Education’²⁹⁾.

28) JANU (2000), and Sasaki (2012), pp. 20-22, 34-35.

29) The first reformation was the introduction of modern educational system in 1872, and the second reformation came with the drastic change of education conducted by the Occupation Authorities after the end of World War II.

The CCE Report (CCE 1991) which followed *The First Report* of the PCE called for reforms in three areas: increased elasticity of the national curriculum (as shown in Table 5)³⁰⁾, and diversification of high school types such as credit-system high schools and comprehensive high schools that included various courses that were previously unknown to the traditional academic school pattern, and also specialized course schools in commerce, agriculture, engineering, etc., and introduction of a new type of selection for university admission—diversification of the rating scale in academic achievement examinations, which parted from the existing selection system which was based only on examination. After this report, the CCE reports of 1997 and 1999 proposed introducing a new selection system to rectify the distortion in the high school curriculum that did not include academic achievement examination scores or examinations consisting of only one or two subjects as had been previously denied by MEXT before *The First Report* of the PCE.³¹⁾

Reduction, simplification, and easing in both the national curriculum and university entrance examination beginning with *The First Report* of the PCE carried with it the potential danger that it would undermine articulation between high school and university. The degree of difficulty in entrance examinations did not change, and it impacted the degree of academic achievement in high school as far as competition between applicants remained severe.

In this past decade, the 18 year old population has continuously decreased from 1992, and the ratio of applicants who completed high school to enrollment quota has drastically declined. Conversely, the percentage of students of the same generation that enrolled in universities increased from 26.4% in 1992, as shown Table 1, to more than 49% in 2008, at that time enrollees were about 610,000 of 1.24 million of the 18 year old population.³²⁾ While competition between applicants has eased, competition among universities to meet their quotas has intensified. The latter brought a Gresham's law factor—'bad money drives out good'—to the entrance examination situation; i.e., two cohorts of students with different abilities both trying for admittance to universities. The strategy of private universities was to ease their admission standards. In contrast, national universities still kept JANU's guidelines. In 2009, admission through an academic achievement examination of total enrollees at private universities was only 48.6%,³³⁾ and examinations covering over three subjects from three subject areas were under 50% compared with over 95% in 1956.³⁴⁾ Discrepancies in the

30) The revised national curriculum in 1994 is characterized by cutting contents of learning and introducing fewer credits subjects than before.

31) MEXT (1958), pp. 22-23.

32) Sasaki (2012), Chart 3 on p. 11.

33) Sasaki (2012), p. 7.

34) Sasaki(2012), pp.13-17. In 1956, private universities imposed over three subject areas examinations to 57,000 enrollment quota, while the enrollment quota of private universities was 59,458.

Japanese selection system between the private and national universities which placed assessment of high school academic achievement in with the university entrance examination created a dysfunction not only in the overall educational system, but in the larger social system, and the call to reform and articulate this area in education policy reverberated in policy circles.

4. The CCE Report of 2014 and Progress in 2015

In the face of this educational dysfunction, what should be done is very clear. First, the national curriculum appropriating articulation from high school education to university education should be reconstructed. In other words, general education for high school students who want to enter universities must be reconstructed. Second, the existing entrance examination system needs to be replaced with a criterion-referenced test that assesses the absolute level of academic achievement during high school. It should also be administered several times a year instead of the current one-shot-only-system to lighten pressure and allow students multiple chances to achieve their educational goals. Third, the university level admission system must be changed to a system that is based on a common test assessing academic achievement of the high school curriculum instead of depending upon a university's entrance examination including the National Center Test; albeit, some competitive universities require their own entrance examinations as well as some competitive universities such as Oxford and Cambridge. Finally, these three points must correlate with each other so they form a cohesive, integrated system.

Can MEXT reform the Japanese articulation system and realize relevant policy and institutional design? The outlook is grim. The CCE report outlined three factors of academic achievement—basic knowledge and skills, the ability to think, judge and express oneself, and an independent approach to learning,³⁵⁾ and took initiative suggesting “a complete overhaul of government course/curriculum guidelines,” “the rapid and full implementation of proactive and cooperative learning and teaching methods,” and “the introduction of the ‘Fundamental High School Scholastic Abilities Test’.” At the university level, it requested reform and change in university education, and it also called for “the establishment of individualized screening based on the admission policy,” “the introduction of the Prospective University Entrance Scholastic Abilities Evaluation Test, which puts weight on intellect, decision making, and expression,” and “promoting implementation in individual universities.”³⁶⁾

For five months after it was formed, the Council on Reform of the High School and University Articulation System deliberated on how to concretize the two tests according to the

35) Three factors of academic achievement were introduced when the School Education Act was revised in 2007.

36) CCE (2014a, 2014b).

CCE report, and released *The Interim Report* on September 15³⁷⁾. *The Interim Report* bifurcates from prior reform deliberations by introducing active learning, measures to improve of teaching skills, and promotion of a multifaceted approach to evaluation and assessment rather than stressing achievement of book knowledge.

The council decided that the Fundamental High School Scholastic Abilities Test should include the following: a clear aim in order to grasp degrees of academic achievement in basic learning of high school, limited test range in Japanese, Mathematics and English (to be extended to other major subject areas after implementation of the new national curriculum), a pre-determined test difficulty level (set to the mean-and-under average stratum), test design based on item response theory (IRT), increased test-taking opportunities (hold the test at high schools twice a year), and archiving test scores from the third year of high school (to create an academic portfolio to use in the admission selection process).

The Interim Report brought together sweeping reforms that not only acknowledged holes in the educational landscape, but proposed concrete actions to reform pressing topics in university education: integration of admissions, curriculum and diploma policies, and to change the accreditation evaluation to evaluating integration of three policies. In other words, the report asked that each university establish their own educational ideals, aims, and actual function—their *raison d'être*—through a set of three policies; however, the integration of these three policies cannot be realized without making clear what selection system universities should take. Each university must admit students that are appropriate to its curriculum and diploma policy.

The Interim Report gives a vision of the Prospective University Entrance Scholastic Abilities Evaluation Test to reform admission selection. This test includes following features: by insisting on the establishment of a university admission policy that requires students to possess knowledge in three areas of academic achievement, and includes the following features: (1) the test should assess thinking, judgement, and expression as required by various subjects, (2) be comprised of not only multiple-choice questions, but also requires written answers, (3) be computer based (CBT) from 2024, (4) covers a wide range of academic achievement, (5) be score by standardization or equalization and be expressed either as a percentage or multi-grade rather than a raw score that is predominant, and (6) be held twice or more a year.

These sweeping reforms look good on paper, but does *The Interim Report* actually show suitable, feasible, and acceptable direction for the reform of the articulation system? On close inspection, an overhaul of the national high school curriculum does not illuminate what high school students should learn, nor does it clarify what level they should attain to enter university. Without making these points clear, improvement in pedagogy and evaluation does

37) MEXT (2015).

not hold any meaning in the articulation system, as giving up the concepts of ‘completion of general education’ was the root causes for dysfunction. Moreover, these proposed reforms are the brainchild of a branch of the CCE which is under the management of the Elementary and Secondary Education Bureau in MEXT which has repeatedly shown that their strengths lie in revising the national curriculum without keeping into account articulation from high school education to university education.

Second, the Fundamental High School Scholastic Abilities Test cannot contribute to reforming the articulation system, because the difficulty level has no relevance in assessing the academic achievement of students entering university. Tests assessing academic achievement to articulate high school and university such as the European certifying examination, SAT, and ACT do not limit the difficulty level in order to assess mean-and under average achievement. They are designed to assess the academic ability to enter university, and to evaluate a wide-ranging level of difficulty. The Fundamental High School Scholastic Abilities Test is not supposed the academic achievement needed for the articulation between high school and university. It also veers away from the national common criterion-referenced test as proposed by the committee for consultation and study led by Hokkaido University in 2010. *The Interim Report* assumes that the scores are not used in the admission selection process of universities. Ironically, it stops short of realizing its potential, and places high school education in a vacuum.

Third, unlike the Fundamental High School Scholastic Abilities Test which is a criterion-referenced test, the Prospective University Entrance Scholastic Abilities Evaluation Test has problems with logistics. If it proposes to assess thinking, judgement, and expression by requiring a written answer, it must be a norm-referenced test imposing ranking among applicants, which asks the same questions to all applicants in order to be fair. It should be conducted simultaneously throughout Japan as the National Center Test is conducted. However, costs for preparation, enforcement, and evaluation alone would far exceed the costs of the existing National Center Test, and this would make it impossible to hold more than once a year.

Most important however, *The Interim Report* does not embody an integrated reform of the Japanese articulation system. It only gives inappropriate reforms that do not correlate with each other. Reforming the educational system in Japan is vital for Japan to keep apace of the country’s and world’s evolving situation, but the direction indicated by MEXT falls short of encompassing the reforms required or insuring the most direct path toward bringing Japanese education into the twenty-first century.

5. Concluding Remarks

Reform of the Japanese articulation system now faces a very difficult phase. If MEXT does not reexamine the direction their reforms are taking, the reform itself fails or produces a lot of

pressure and waste in the articulation system.

How did things get this way? This situation can be best summed up by saying that many members of CIER, the CCE, the Council on Reform of the High School and University Articulation System, and politicians think that reforming university entrance examinations is the most important issue, and do not realize that this is only a stop-gap measure. They overlook the need for restructuring the Japanese articulation system, and thus fall short of what is required. Factions within MEXT also cause cleavage between the Primary and Secondary Education Bureau and the Higher Education Bureau and add to the difficulty to make reforms to the system.

At the root of the problem is a fundamental misconception of what knowledge is and how our relationship to knowledge has evolved. Knowledge in its basic form is knowing facts and figures—things can be memorized—but it is also having the skills of critical thinking, complex reasoning, and expression. With the advent of Internet, information is readily available, but the skills to use it must be honed so that we can be discriminating users of this wealth of information. The CCE and the Council chaired by Yuichiro Anzai, the president of the CCE, are critical of the existing method of teaching knowledge and skills in general education—and yes, problems do exist, but they have yet to realize that students cannot practice critical thinking, complex reasoning, and good writing with a sufficient foundation of knowledge and skills. We avoid the errors of *The First Report* of the PCE and not dismiss the importance of general education.

The idea or expectation that changing the entrance examinations from the existing knowledge-based test to a test that assesses thinking, judgement, and expression will bring about changes in high school education is nothing but an illusion. What is needed is to rebuild general education to articulate and create methods and environments integrating these academic abilities—knowledge and skills, thinking, judgement and expression, and independent learning. Entrance examinations to competitive universities are inclined to require answers based on thinking, judgement, and expression compared with non-competitive universities, and yet universities—especially non-competitive universities’ entrance examinations—administer norm-referenced tests that use multiple-choice and fill-in-blank questions, because they are efficient in assessing volume of knowledge. High school students acquire bulk knowledge as provided by the existing national curriculum and even this is too much. In the existing post-elasticized national curriculum, teachers still cannot teach all of the contents of the textbook within a year in many subjects.

The way forward is not hopeless. MEXT, the CCE, and the Council on Reform of the High School and University Articulation System can begin by defining and then clarifying the contents and levels of learning that are required of high school students to enter university.

They can then redesign the Fundamental High School Scholastic Abilities Test to use in university selection. These are the bridgeheads to reform the articulation system. If these are made, the way to change the university entrance examination will be open; and then reforming the contents of the national curriculum to change teaching methods, reduce class size and allocate teachers can be pursued.

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Reform in Articulation between High School and University as an Urgent Task of Japanese Public Policy

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Abstract

The articulation system between high school and university consists of two factors; one is educational articulation that is assured both by continuity in the curriculum between high school and university and by academic achievement in high school. The other is selection for admission. In Japan, reforms in both education and selection of the 1990s undermined this system, and caused dysfunction of the Japanese articulation system; there is no common test/examination that assesses academic achievement in high school, and so entrance examinations of individual departments/faculties/universities are left with the task of assessing academic achievement. If Japan is to become a truly knowledge-based society, Japanese public policy must solve this dysfunction. This article gives the historical background and an analysis of the Japanese system, and comments upon the current reform policy.

Keywords

educational articulation, university entrance examination, dysfunction of the articulation system, educational reform, knowledge-based society