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Outcomes-Based Approach in Japanese Higher
Education: Emerging Concerns and Challenges ^(*)^(**)

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The words “assessment” and “outcomes” are now a kind of “fad” all over the world. Japan is not an exception, although if the meanings and importance of them for higher education are fully understood, they are uncertain.

Today I will talk first a little bit about my institution, Kobe University and then give you the general picture of Japanese higher education. After that I will tell you the direction toward which higher education in Japan is now moving, that is, outcome-based approach for quality assurance. In order for you to understand this direction, some information of environmental changes should be mentioned nationally as well as internationally, since higher education cannot be an ivory tower anymore. We must adapt to ever-changing environments to survive. Finally I will state some challenges we are now facing to transform Japanese higher education into outcome-based approach, which may be shared with you while introducing several good practices of pioneering institutions.

Introduction of Kobe University

My institution, Kobe University was founded in 1902 as the second Higher Commercial School in Japan by the national government. In 1929 it was given the power to award academic degrees, thus upgraded to the University, Kobe University of Commerce. Having merged with many HEIs in the region after World War II, now it is one of the biggest and best universities in Japan. We have 13 Faculties, from humanities, to social sciences, to natural sciences, to life sciences including medicine and nursing. We offer bachelor, master, doctoral and professional programs. The number of students is 16,000 in total. Among them, the number of undergraduate students is 11,000 and that of postgraduate students is 5,000 including 1,000 international students from 70 countries and regions all over the world. Regarding staff, we have 1,400 academic staff along with 1,600 non-academic staff. We are making an effort to be one of world-class universities by 2015.

Higher Education in Japan

Higher education in Japan started some hundred fifty years ago, thus rather young system compared to European and even American counterparts. But now it is one of the largest systems in the world. We enroll 2.85 million students; among them undergraduate programs enroll most, 2.5 million students. The total number of institutions is 1,182 with 765 for 4-year institutions and 417 for 2-year institutions. 4-year institutions are more popular among applicants so that many 2-year institutions tend to upgrade to 4-year institutions.

In addition to size, “diversity” characterizes higher education in Japan. In terms of types of control, we have national, local and private universities. The biggest sector is private one, which enrolls three quarters of all students.

What is the Outcomes-Based Approach?

I think many of you are already familiar with outcomes-based approach (OBA) to teaching and learning. So I just briefly mention it now. OBA is the way to improve the quality of learning and teaching by prioritizing what the students actually learn and master rather than what professors teach and the content covered.”

OBA has three components;⁽¹⁾

1. The statement of *intended/expected learning outcomes*.
2. The design of *teaching and learning activities* to increase the likelihood of the most students achieving the outcomes.
3. The *assessment* to check if each student actually achieve or not.

As I will tell you later, many systems in the world are now moving toward OBA to some extent.

Background of Outcomes-Based Approach in Japan

Why Japanese higher education is moving toward OBA? There are many changes in the national context as well as international one, which necessitate this move. First I will mention five national factors followed by four international factors among them.

1. Changes in the National Context

(1) The Coming of Knowledge Society

Since the last quarter of 20th century, the coming new millennium would be and

should be a knowledge society, in which it is more critical both for nations and individuals to create new knowledge than to produce goods. Because people is the creator of new knowledge, even the artificial intelligent system has advanced enormously, many advanced countries as well as less-developed countries have invested in higher education as the main strategic target of the human capital development.

The Knowledge society;

- Requires people to learn for life, thus to learn how to learn.
- Means the ability/competence to utilize, apply and create knowledge is more important than the possession of knowledge as such.
- Requires the change of the way of instruction from delivering of knowledge like lecture to active learning like project/problem-based learning.

In a word, in the knowledge society it is more important for students what they can do with what they know than what they know.

(2) Universal Participation in Higher Education

Like other developed countries, Japanese higher education has grown gradually, but steadily since WW II and now more than half of 18-year youth enroll in higher education and reached at the "Universal Stage" called by Dr Martin Trow. This universalization of higher education means that the holders of Bachelor degree will be the core workforce of Japan soon, thus all universities have the responsibility to develop full potential of students. At the same time, however, the universalization of higher education also has brought the more diverse student body in terms of academic ability, motivation and interests, so that we have to individualize instruction and to be more student-centered in order for all graduates to be competent workers.

(3) The Decrease of Young Population and the Consequent Relaxation of the Entrance Examination

The universalization and diversification of higher education led to the serious concern about the quality of higher education. In addition the decrease of young population combined with the increase of new universities resulted in the relaxation of entrance examination. Japan has been once notorious for her harshness of the entrance examination. It is true for some elite institutions like Tokyo University and Keio University, but in theory more than 90 percent of applicants can get

admission from some universities. Many universities, especially new ones, admit applicants without any examination just to fill their student places. Once the entrance examination in Japan functioned as the quality control mechanism, but now its function has weakened except for some elite institutions. This also turns our attention from the entry to the exit, the quality of the graduates.

(4) The Demand from the Industry

Japanese companies used not to be interested in what graduates had actually learnt at the universities. Rather they have selected and recruited graduates according to which university they graduated from, since the highly competitive entrance examinations at the age of 18 could function to screen out the brightest and others. In addition the companies preferred and could afford to give training and education to new employees by themselves because of the life-time employment system.

However, since Japanese economy has stagnated in the last two decades, they could not afford to give their own training anymore. Instead they complained that the graduates are not well-prepared to work and not equipped with generic skills such as team-working, communication skill, problem solving, analytical reasoning and time management.

Speaking for the industry, the Ministry of Economy, Trade and Industry (METI) proposed “Shakaijin Kisoryoku (Social Foundational Capabilities) necessary for a functional member of society.

- 1) Ability to act: ability to act independently, to involve others, and to practice.
- 2) Ability to think: ability to identify the problem, to think systematically, and to create something new.
- 3) Ability to work with others: ability to voice, to listen, to adapt, to grasp the situation, to control oneself and to manage stress.

Having recognized the complain from the industry, the higher education sector has to be concerned with the employment and employability of graduates.

2. Changes in International Context

Since higher education is literally “universal” in nature, we cannot help but being concerned with what is happening in the other countries. In this sense, the most critical players are Europe and US.

(1) “ Bologna Process ” in Europe

Since I think many of you here have already had more information about “ Bologna Process than I, I will touch upon briefly now.

“ Bologna Process ” is now ongoing to construct European Higher Education Area (3-2-3 cycle) by 2010 to enhance mobility of students, to be comparable and compatible, to be competitive and attractive and to assure and improve the quality of higher education in 46 countries.

The main tools for “ Bologna Process ” such as a Qualification Framework for European Higher Education Area, National Qualification Frameworks, Tuning Project and Quality Assurance System are constructed on using aggressively “ learning outcomes ”. United Kingdom, one of participating countries, is also heavily using “ learning outcomes ” for quality assurance system such as the Framework for Higher Education Qualifications and Subject Benchmark Statement.

(2) Accountability and Assessment Movement in USA

I am sure that USA is more familiar with you than I am, thus again I just mention here summative information on what is happening up there.

Skyrocketing tuition and fees for higher education moved US Department of Education to set up the National Commission on the Future of Higher Education in 2005 and published a report, “ A Test of Leadership: A Charting the Future of U. S. Higher Education (Spellings Report) ” in 2006. In this process, US Secretary of Education, Ms Spellings and her colleagues of the committee strongly insisted each university and college has to show the evidence of value-added to be accountable. To do so, they proposed possible use of the standardized test to measure the students learning outcomes.

Having responded to Spellings Report, associations of public universities have made “ A Voluntary System of Accountability ” in which each university collects and publishes information about characteristics of entering students, experiences students can engage and learning outcomes measured by standardized tools such as National Survey of Student Engagement (NSSE), and Collegiate Learning Assessment (CLA).

(3) Globalization of Higher Education in Japan

Japan is now enjoying 7th place to attract international students and about 120,000 international students are studying in Japan. The government recently set

the target to increase international students up to 300,000 by the year of 2030 partly because they bring the diversity, hence improve the vitality of Japanese HEIs as well as society at large, and partly because they will make up for the decreasing number of Japanese youngster.

In order to attract more international students to Japan, Japanese higher education has to assure and improve the quality education and to be transparent about what they can get from Japanese universities.

(4) Assessment of Higher Education Learning Outcomes (AHELO) by OECD

Recognition of the critical role of higher education in the knowledge society and globalization of higher education, it is natural for many are interested in to measure and compare the outcomes of higher education. OECD is one of the leading groups based on their successful experience of PISA for the secondary education.

OECD will conduct a feasibility study to measure the learning outcomes of higher education across countries, that is, a kind of “PISA for Higher Education”, and Japan decided to participate in the feasibility study. The feasibility study will develop

- 1) the assessment methods of generic outcomes using CLA.
- 2) the assessment methods of subject outcomes in Economic and Engineering.
- 3) the methods to measure the value-added.
- 4) the instruments to capture the contextual measures and the indirect proxies of learning outcomes.

Although it is not and should not be the prime objective of AHEL to rank the countries based on the results, we cannot help but be concerned with the performance of our students even in the feasibility study.

Implication for Japanese Higher Education (JHE)

Then what do all national and international changes imply for Japanese higher education?

National factors necessitate;

1. JHE to establish the clear and transparent standards to award academic degrees both at national and institutional levels in order to maintain the trust from the society at large as well as from the students.
2. JHE to shift from the quality control of the input, that is, the academic quality

of the applicants, to the quality assurance of the graduates.

3. JHE to change the goal of higher education from the delivery of knowledge to the development of the ability to use of knowledge they learn.

4. JHE to reconsider and reconstruct its quality assurance system.

International factors necessitate;

1. JHE to be compatible and comparable with European and American higher education.

2. JHE to be transparent in terms of what students can learn from JHE in order to attract more international students.

Both national and international factors strongly suggest JHE has to transform itself to be “student-centered” and “learning-centered”, that is, “outcomes-based” approach to learning and teaching.

Then what policy options do we have to take?

Policy Agenda

Having recognized the national and international environmental changes of JHE, the University Sub-Committee of the National Council for Education issued the policy paper, “The Future Image of Higher Education in Japan” in 2005, in which requires each HEI to establish three policies, “Diploma Policy”, “Curriculum Policy” and “Admission Policy” to assure the quality of higher education.

1. Diploma Policy is a statement of learning outcomes that all students are expected to master to be awarded degrees.

2. Curriculum Policy is a statement of learning and teaching strategy to enable all students to master learning outcomes.

3. Admission Policy is a statement of requirements of learning outcomes at high school for applicants necessary for experiencing CP, and resultant mastery of DP.

To promote and implement the policy toward “outcomes-based” approach, the University Sub-Committee of the National Council for Education is now almost finalizing another policy paper specially for the undergraduate education, “Toward the Construction of Undergraduate Program”, in which proposes a list of learning outcomes called “Gakushiryoku” or “Graduate Capabilities”, as a guideline for HEIs, that all graduates have to master regardless of their major.

Proposed “Gakushiryoku” or “Graduate Capabilities” as a Guideline

Knowledge and understanding:

1. Other cultures and multiculturalism.
2. Human culture, society and the nature.

Generic Skills:

1. Communication skills
2. Quantitative reasoning
3. Information literacy
4. Logical thinking
5. Problem solving

Attitudes and orientation:

1. Self-management
2. Teamwork and leadership
3. Ethical reasoning and action
4. Civic responsibility
5. Learn how to learn

Integrative Learning and Creativity:

Although in Japan “outcomes-based” approach has just commenced, some institutions head-started. Among them, those are;

-Kanazawa Institute of Technology (www.kanazawa-it.ac.jp)

-Hiroshima University (www.hiroshima-u.ac.jp)

-Yamaguchi University (www.yamaguchi-u.ac.jp)

-Kansai University of International Studies (www.kuins.ac.jp)

But I am afraid that all information is provided in Japanese only.

Some Challenges for US

In order to fully implement “outcomes-based” approach, we are facing some challenges.

1. Each institution has to produce the statement about the ideal graduate, and then turn it into clear statement of learning outcomes she/he is expected to achieve.

(Diploma Policy)

2. Each institution has to assure that all students have the opportunity to develop all learning outcomes by spreading and embedding into curriculum. (Curriculum Map)
3. Each institution needs to change teaching methods or pedagogy from teacher-centered lecture to learner-centered active learning. (Pedagogy Reform)
4. Each institution should develop the way to collect information on students learning. (Assessment)

First challenge for us is to produce university-wide “Ideal Graduate” or “Graduate Attributes”. It is rather difficult for academics to reach the consensus on what kinds of person we would like our students to be when they graduate, especially at large institutions. From this April the Ministry of Education requires all HEIs to produce the statement on the Ideal Graduate and to materialize it into clear learning outcomes that all students are expected to achieve. However, only few institutions have done so far.

After producing the university-wide “Ideal Graduate”, we need to materialize it into a set of learning outcomes. “Learning outcomes are statements that specify what learners will know or be able to do as a result of a learning activity. Outcomes are usually expressed as knowledge, skills or attitudes.” (American Association of Law Libraries) Expected/Intended learning outcomes should be 1) specific, 2) measurable, 3) achievable, 4) relevant, and 5) time scaled. When you are producing learning outcomes, it may helpful to refer to well-established Bloom’s Taxonomy, in which specify three domains of learning outcomes, such as cognitive, affective and psychomotor.⁽²⁾

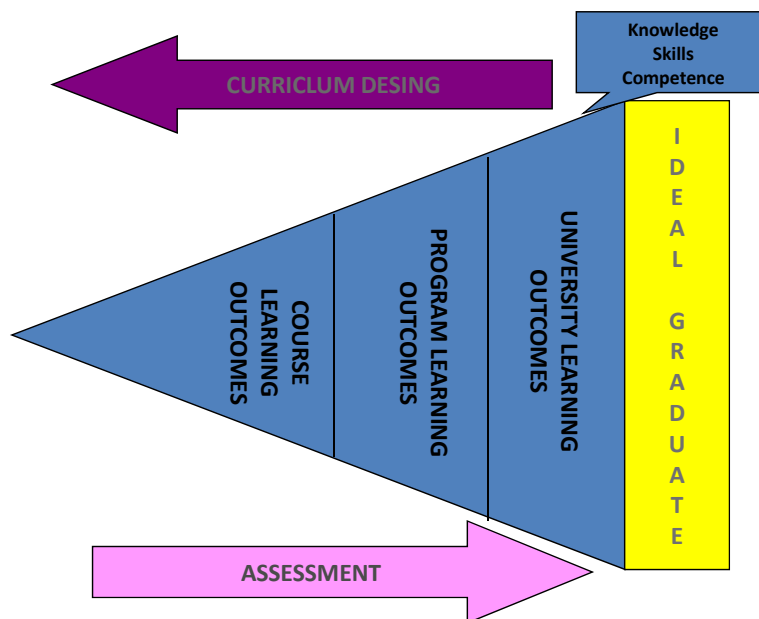
The second challenge for us is to assure all students have the opportunities to develop learning outcomes through the curriculum. It is very important to embed the opportunities into curriculum. How do we this? To make a curriculum map is very useful, but in reality it is hard, since most academics are used to make a teaching plan by themselves alone so far. It is impossible to make a curriculum map without cooperation among academics.

The third challenge for us is the transformation of instruction or pedagogy. Since the knowledge society requires not only knowledge itself but competence like the ability to do something with what they know, students cannot develop such competence by just listening what the professor is speaking in the classroom. They

have to experience by themselves. We, academics, have to change the method of instruction from lecturing to active learning by students themselves to engage them with learning. However, it is difficult for us, since it means we have to change our behaviors in the classroom. Many past studies on learning found active learning one of the most effective ways for mastering and understanding.

The last, but not the least challenge for us is how we know that students achieve the learning outcomes. We have to collect information on students learning in a systematic way and assess as objective as possible. In order to assure the validity and reliability of assessment of learning, it is better to have as many opportunities as possible to assess students learning and to produce the criterion (rubric) against which students performance are judged prior to assessment. Since we are used to assess students performance only by the essay or the written examination at the mid-term or/and the end of the semester, it is hard task for us to diversify assessment tasks and make criterion explicit rubric.⁽³⁾

Summary of Outcome-Based Approach



Japanese higher education has just started to transform itself toward outcomes-based approach to learning and teaching to assure the quality of degree we award to the graduates. As I talked, there are many challenges we are facing ahead. I believe, however, many academics are now start to understand the meaning and the significance of OBA, since it is academics themselves those who mostly care about students learning. I am not sure, however, my presentation today here may give you some learning for all of you. But I am sure that I have learnt a lot from you and it was worth to travel almost half around the globe from Japan to Bogota, Colombia. I am very grateful to Columbia Ministry of Education, and especially Dr Torres, for providing the opportunity with me to present my lecture.

Thank you very much for your attention and kindness.

NOTE

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Outcomes-Based Approach in Japanese Higher Education: Emerging Concerns and Challenges

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This paper examines the emerging concerns with outcomes-based approach in Japanese higher education. First, what is outcomes-based approach(OBA) is explained. OBA has three components;

1. The statement of *intended/expected learning outcomes*.
2. The design of *teaching and learning activities* to increase the likelihood of the most students achieving the outcomes.
3. The *assessment* to check if each student actually achieve or not.

Then the changes in international as well as domestic environment such as globalization, universalization of participation, and the coming of knowledge society are mentioned.

In this context the National Council for Education published the policy paper, *Toward the Constructing Undergraduate Education* in 2008, which proposed “Gakushiryoku (Graduate Capabilities)” as the common set of learning outcomes for undergraduate program in order to assure the quality of it.

Finally, some challenges have to be mentioned to implement OBA fully in Japan. These are;

1. Each institution has to produce the statement about the ideal graduate, and then turn it into clear statement of learning outcomes she/he is expected to achieve. (Diploma Policy)
2. Each institution has to assure that all students have the opportunity to develop all learning outcomes by spreading and embedding into curriculum. (Curriculum Map)
3. Each institution needs to change teaching methods or pedagogy from teacher-centered lecture to learner-centered active learning. (Pedagogy Reform)
4. Each institution should develop the way to collect information on students learning. (Assessment)