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# HIGHER EDUCATION RESEARCH in JAPAN

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Research Institute for Higher Education  
Hiroshima University

# Higher Education Research in Japan

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## Contents

- A Perspective and a Retrospective Review of  
Graduate Education Research over Thirty Years *Akira Arimoto* ······ 1
- A Review of and Prospects for  
Research on the Academic Profession *Atsunori Yamanoi* ······ 27
- Development of the Study on the Transition  
between High Schools and Universities *Tsukasa Daizen* ······ 45
- Developing Professional Staff in Universities  
under Quality Assurance Systems *Jun Oba* ······ 71
- A Review of Studies on Higher Education and  
the Labour Market in Japan *Naoyuki Ogata* ······ 89



# Higher Education Research in Japan

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# A Perspective and a Retrospective Review of Graduate Education Research over Thirty Years

Akira Arimoto\*

## Introduction

There is no “research on graduate school education” in the papers related to the “Special Issue for the 20th Anniversary of the Foundation: Review and Prospects of Research on Higher Education” edited in 1992, when the Research Institute celebrated its 20th anniversary. Although it focuses mainly on research on the graduate school rather than that on graduate school education, the paper “Review and Prospects in Research on Research” (Arimoto, 1993) seems to include most parts of the field. Accordingly, this paper mainly reviews research on graduate school education for the last decade and evaluates its prospects, taking into consideration that a further ten years had passed as of 2002, when the Research Institute celebrated its 30th anniversary.

When this research is reviewed, books compiled by editors (including the papers appearing in them) and in translation (including the material appearing in them) as well as journals and reports are mainly used as sources. The main sources of reference are the volumes edited by Ichikawa and Kitamura (1995) and Ehara and Makoshi (2004) and in translation by Clark (1999; 2000), which were published at this time. In addition, what will be discussed in this review are the actual conditions of the development of Japanese graduate schools that have been studied over the last decade, and the characteristic differences between the graduate schools in Japan and those in foreign countries (especially the U.S.A., as the world’s center of learning at present) — their merits and demerits, from a point of view that focuses on the question of what are the characteristics of Japanese graduate schools.

## 1. Development and characteristics of graduate schools in Japan

### *(1) Trends in the development of the graduate schools*

1) Current trend and characteristics First of all, what is the current trend of development of the graduate schools? When we refer to the statistics in order to grasp this matter quantitatively it is immediately evident that the graduate schools have greatly developed over about thirty years, from the 1970s to the present. In 2002, among the 669 universities, 494 universities had a graduate school, that is 74 percent of the total. Among the 224,000 graduate school students, there are 155,000 students in master’s courses, 68,000 in doctor’s courses. Women constitute 27 percent of the students in both master’s and doctor’s courses; and there are 39,000 part-time, adult students, some 15 percent of all

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graduate students. In total there are 2,786,000 university students: graduate students account for 8 percent of them.

When we examine the distribution of students enrolled in master's courses according to academic disciplines, in 2003, 40 percent of them are in engineering, 14 percent in social science, and 9 percent in science. The proportions of those registered in humanities, science, engineering, and agriculture have fallen for the last five years. Similarly, when we look at doctoral courses, 28 percent are enrolled in medical science or dentistry, 19 percent in engineering, and 10 percent in humanities. The proportion of those registered in social science has risen to 10 percent, but in science, engineering, agriculture, and medical science and dentistry the proportions have fallen for the last five years.

What do such quantitative trends tell us of the current characteristics? First, from the time series, it is clear that the graduate school and its education have dramatically developed during the prewar and postwar eras and especially in the last decade. The reason lies in the various flexible policies toward establishment of graduate schools. Second, it is pointed out that the ratio of graduate to undergraduate students has greatly expanded, and it is remarkable how the number of graduate schools and the students, academic staff, and non-academic staff in them have greatly increased. Third, we cannot ignore the fact that by the emphasis now placed on graduate schools, the university has changed its structure from an undergraduate-oriented structure to a graduate school-oriented one. As the national universities moved actively to an 'emphasis on the graduate school' or its complement 'divisionalization of the graduate school', academic staff became categorized as members of graduate school courses, such as the education graduate school course, the literature graduate school course, or the science graduate school course, who also teach undergraduate courses. This obviously carries an implication that they have reversed the structural status where academic staff belonged to undergraduate Faculties and provided teaching in graduate courses. Fourth, by considering these trends, it becomes evident that graduate schools have progressed beyond the elite stage to become massified, and that actually a new situation exists.

2) Change in policy It is obvious that policy for the graduate school is closely connected with the importance attached by universities to graduate schools. Kobayashi points out that the diversion of academic policy at this time derived from the Basic Law of Science and Technology (in 1995) and the Basic Plan of Science and Technology (in 1996). Both of these indicated the expectation that science and technology would contribute not just to the promotion of basic research but also to economic development (Kobayashi, 1998, p.222). Since 1995, when the paradigm change in national policy toward the graduate schools occurred, a lot of new policies have developed and contributed to this major change.

As the Central Educational Council now points out, the current policy change for graduate schools is reflected in the reform of the system and the organization. The main changes are: (1) an increase in new types of graduate school, such as graduate universities (12 universities as of 2004),



correspondence graduate schools (17 schools, 23 graduate courses), evening graduate schools (22 schools, 28 graduate courses); (2) flexibility in admission requirements and the required period of study for graduation; (3) reinforcement of the teaching and research functions; (4) establishment of a system of professional graduate schools (93 schools, 122 graduate courses as of 2005); (5) cooperation between graduate schools and the industrial world (105 schools, 206 graduate courses as of 2004); and (6) an increase in graduate student numbers (from 87,476 in 1988 to 244,024 in 2004) (Central Council for Education, 2005, pp.4-5).

(2) *Institutionalization of graduate school* In identifying such current movement, we recognize that the graduate schools have changed greatly in comparison with the undeveloped schools before the war. Both in scale and character, the development constitutes an epoch-making event in the history of the universities in Japan. Before the war the universities actually had a single-tier system providing only an undergraduate course. Although the graduate school system was established nominally, it did not function properly. Graduate education and training in Japan mainly followed the German single-tier system; in particular, it did not adopt the U.S.A. system, which had developed the graduate school from its first establishment in 1876 and had adopted a two-tier system. One inevitable consequence was a delay in provision of graduate courses in Japan. With hindsight it can be seen that there are still untoward after-effects in the Japanese graduate school system. An emphasis on the undergraduate course under the single-tier system retarded development of graduate school-level study and academic work generally with an unavoidable result of stagnant academic productivity. Only after reform of the university system and in the policy for graduate schools after the war, based on an American model, was progress effected. Progress towards achieving the original purposes of reform was slow: only recently have they begun to be achieved.

In considering the development, we should recognize that in order to achieve the original idea and purposes we needed a culture, climate, base, and atmosphere that actually have the capacity to accept them. The reason why implementation of the German model did not succeed in Japan more than a century ago - when the graduate school system was being established in the U.S.A. - was the difference in culture and climate. Only recently has a review of the culture and climate been accepted as urgent and institutionalization of the graduate school tackled in earnest. It is instructive to consider why these changes were not carried out in the past and why they are urgent now. Currently, graduate school reform globally is being driven by both academic expectation and social expectation. The former includes (1) specialization of knowledge, (2) institutionalization of research, and (3) reinforcement of the scientific ethos and the research university. Social expectation includes (1) expectations for a society having a center of knowledge and a center of learning, (2) influence of higher education policy, (3) the influence of market forces, (4) massification of higher education, and (5) a requirement for the academic profession and its autonomy (Arimoto, 2004, pp.6-18).

### *(3) Comparison with foreign countries*

1) International comparison As graduate schools all over the world now face social restructuring in response to developments such as knowledge-based society, globalization, and marketization, they seem to share many common issues. It becomes useful to know their merits and demerits by comparing developments in graduate schools in other countries. Research on the present condition of overseas graduate schools provides much literature on the U.S.A., England, Germany, South Korea, and China (see individual articles in Ichikawa & Kitamura, 1995; and in Ehara & Umakoshi, 2004). Various characteristics are revealed in these papers. In England in the 1990s, graduate school reform was concerned with financial matters and they were encouraged to use the words 'selection' and 'concentration' as their motto (Yasuhara, 1995, p.157), while currently graduate school reform is focused on (1) solid education, (2) reform of the degree system, and (3) allocation of funds (Oki, 2004, pp.201-222). In France in the 1990s, it was pointed out that (1) it was getting difficult to give guidance to students due to the increase in their numbers, (2) assistance in attendance in graduate school, by means such as scholarships, was undeveloped, and (3) it was difficult for those who had doctorates to get a job (Natsume, 1995, pp.159-171). In Germany in the 1990s, after they examined many reform plans they suggested that university education should be divided into undergraduate and graduate school stages (Nagashima, 1995, pp.179-181), in line with such modern characteristics as (1) a tendency to form American-style graduate schools, (2) objectification of how to acquire the degrees of Master and Doctor, (3) globalization of the graduate school, and (4) presentation of occupational qualifications and degrees (Beppu, 2004, pp.223-241).

In South Korea, the current issues concerning graduate school reform are (1) graduate school education classified by type, (2) differentiation between professional and specialized graduate schools, (3) administrative relaxation of the fixed number of entrants to graduate school, and (4) securing excellence by relaxing and evaluating administration of educational affairs (Umakoshi, 2004, pp.243-260). In China, the present reform trends are (1) diversification of trained talent, (2) improvement of graduate school education, and (3) maintenance of centers of education and research (Nanbu, 2004, pp.261-278).

In Japan in the 1990s, while initially it had been regarded as dangerous to emulate the American-style graduate school, it was eventually suggested that there should be: (1) changes to practical educational institutions, (2) expansion of training courses for professionals and (3) changing the undergraduate stage of university education into undergraduate colleges. Such changes implied acceptance of an American style and structure (Ichikawa, 1995a; 1995b). Some suggested that the issue of graduate schools becoming independent schools should in the long run be the most important (Sato, 1995). In the 2000s, the trends have become (1) greater flexibility in the graduate school system, (2) research and development of cutting-edge technology and human resources development, and (3) reform of graduate school education. Specific issues are (1) building a grand design for graduate schools, (2) systematizing the structure of graduate school programs, and (3) maintaining the

basic infrastructure for education and research (Ehara, 2004, pp.279-291).

From research on foreign countries and the international comparisons, it seems that the issues generally are how graduate schools are to maintain their facilities with limited funds in order to raise research productivity, and how they are to achieve an assurance of high-quality education. In such a global situation, we should compare graduate school education in Japan not with provision in foreign countries in general, but with provision in those countries that constitute the benchmarks of the 'center of learning.' The models provided by the advanced nations, France, England, Germany, and the U.S.A., have influenced Japan since the prewar period and continue to do so. In order to become located at the 'center of learning' for the undergraduate stage, Japan regarded catching up with the German model, as an essential step. However, the single tier German system, where research and education coexisted at the undergraduate stage proved unable to support research and graduate teaching sufficiently: it was necessary to overcome its limitations by establishing the graduate school.

2) Research on the center of learning Research on scientific and academic productivity by focusing on indicators provided by the sociology of science, such as Nobel and other international prizes, eponymy and scale, publications and patents, indicates that the center of learning moves (Merton, 1973; Shinbori, 1985; Arimoto, 1996). The center had been located in Europe, successively in France, England, and Germany until the end of the 19<sup>th</sup> century when the U.S.A. achieved and retained dominance through the 20<sup>th</sup> century. Based on the graduate schools of the research universities, research into the role of the academic staff indicates the characteristics of the center of learning (Arimoto & Ehara, 1996; Daizen, 2004, pp.123-135). Japan used to be regarded as situated only on the periphery, but now is incorporated within the center. By 1988 Japan was publishing more papers than Germany and was ranked third in the world; by 1989 Japan had risen to second, followed by England. Although more and more papers from Japan are quoted, as yet there are not enough to exceed those of the U.S.A. (Science and Technology Department, 2000, pp.182-189).

Identification of the graduate school in the U.S.A. as the basis of its status as the center of learning in the world encourages examination of the factors that contribute to this. An analysis by Rosenberg indicates the importance of combining graduate school reform with economic development across OECD member countries (Rosenberg, 2001, pp.135-160). This enables us to understand how they have prepared a marketable commodity that is sensitive to the economic system, and especially to market forces. Okugawa points out that the characteristics of graduate schools in the U.S.A. are: (1) early establishment of the graduate school, (2) a variety of large scale graduate school education programs, (3) an external evaluation system for both education and research, (4) a sufficiency of institutional resources for education and study, and (5) availability of external finance and interchange of personnel (Okugawa, 2004, pp.183-200). Okugawa identifies the important general conditions as: (1) a social system (a political and economic system, a scientific policy, culture and climate that support science *etc.*), (2) a higher education system, (3) the structure and function of the academic

community, (4) the departmental organization and climate, and (5) graduate school education (Arimoto, 1996, pp.213-242).

Of these general conditions, (4) is directly relevant to the reform of academic staff organization recently introduced in Japan. The reform by the Central Council for Education included provision for new categories such as “*Junkyoju*: associate professor” and “*Jokyo*: assistant professor”, and a review of the traditional chair system (Central Council for Education, 2004). In the U.S.A., in addition to the fact that they adopt a departmental system, not the chair system, they also have policies that restrict ‘inbreeding.’ In the research universities, no more than one-third of the whole academic staff should be graduates of the university; the majority will have graduated from other universities, and half of the appointments are available to those from overseas. This measure supports a climate, culture, and awareness of departmental organization that seeks to attain international competitive strength. When we take into consideration that this policy has been carried out since the 19<sup>th</sup> century, we can say that the organizational reform of graduate schools in Japan has to develop further if it is to get rid of its autism (Yamanoi, 1990; 2004; Arimoto, 2005).

3) Introduction of American model From such studies, the essential issue for graduate schools in Japan is a decision on the necessity to adopt a changed graduate school structure that corresponds to the shift of the center from Germany to the U.S.A. In this respect, the U.S.A., after having quickly developed a two-tier university structure, succeeded in establishing a base for research and professional education in the graduate school and then developing there the base for academic productivity. The strengths of this American model had been steadily developed without being well recognized, so that when it was introduced to Japan after the war, there was a failure to introduce, translate, or comprehend it adequately. Although previously some, who fully appreciated the essence of the German model, had schemed to reform the universities in Japan, they failed (Ushioji, 1984). It was not until recently, when the differences between Japan and America had become evident, that a full-dress institutionalization of the Japanese graduate school began. We can recognize that this approach to establishment of the graduate school and its education as a system has suffered a delay equivalent to a century.

## **2. Graduate school research model — Clark’s research**

It was the U.S.A. that succeeded in establishing a model for the graduate school that enabled its spread from Germany, where the concept had originated, to other developed countries. Two great achievements in establishing the history of this development are the international comparison through cooperative research conducted mainly by Burton Clark, and the independent research conducted by him on the basis of the former study (Clark, 1999; Clark, 2002).

*(1) Research on the origin of graduate school and its spread* The concept of the graduate

school has its origin in Germany at the start of the 19<sup>th</sup> century. Subsequently it was adopted, restructured and established in the USA in a form that has developed into the modern graduate school. Today this model has been imported into Germany and all other developed countries. Researchers from a wide range of countries contributed to cooperative analysis of the developments conducted mainly by Clark. The German origin lies in the formation and implementation of Humboldt's philosophy (Jullet, 1999a; 1999b). The origin in Germany directly influenced England and France. In England, recent analysis identified the special importance that is attached to the government's *dirigisme* (Henkel & Kogan, 1999; Becher, 1999). As France was a country that was little influenced by Germany and its system of higher education differs markedly, we might suppose that graduate studies in France showed little direct influence. In fact, the CNRS greatly supports them (Neave, 1999; Neave & Edelstein, 1999). In the U.S.A., it is considered that a strongly decentralized and highly competitive system has enabled graduate school education to develop incomparably and reveal significant differences among different types of universities (Gumport, 1999a; 1999b). In Japan, though the background and the present condition can be classified across the fields of specialization, the development was mainly concentrated on engineering (Ushioji, 1999; Kawashima & Maruyama, 1999).

On the basis of these researches, Clark identified characteristics unique to each system and labeled them accordingly: Germany, an 'institute type'; France, an 'academy type'; England, a 'collegiate type'; Japan, an 'engineering application type'; and the U.S.A., a 'graduate school department type' (Clark, 2002). The German model is of particular interest as it provided the basis on which other countries established their own systems. It played an especially important role in influencing Japan. However, in Japan, where the 'institute research' orientation was infiltrated secretly into the undergraduate tier, its development was markedly differently from that in the U.S.A.

(2) *Research on Clark's model* Clark's international comparisons have greatly influenced current research on graduate schools in Japan. First, his research is important in that it was the first international comparative study of graduate schools in major countries based on the history of their development. Second, the research allowed people to recognize that the German model originated in a unification of research, teaching, and study, which has worked so successfully in the U.S.A. This carries the implication that every university system in the 21<sup>st</sup> century should conform to this model. Third, it clearly indicates how the U.S.A. succeeded in institutionalizing graduate schools while other countries, including Germany, failed. Fourth, the characteristics of graduate schools in the U.S.A. can be summarized under six headings (Clark, 1999, pp.492-493): (1) the scale of graduate school education; (2) the graduate school as an independent organization; (3) the superiority of departmental organization; (4) aggressive promotion of research; (5) intense competition, mainly in research achievement, among the universities; and (6) realization of Humboldt's philosophy of integration of research, education, and study. It is pointed out that the success in achieving integration of research,

education and study was due to a voluntary acceptance by the universities, which constitutes an important factor (Clark, 1999, p.11). A fifth aspect of the importance of Clark's study is that, from a comparative viewpoint, the graduate schools in Japan have more issues to address than those in the U.S.A. in addition to their independent development. In Japan, establishment of a Faculty in the engineering-centered system provided a convenient short cut to create graduate schools rapidly. But due to delay in establishing Faculties of humanities and social sciences, its extension has been retarded. In particular, graduate schools in Japan lack the key American characteristics (1) to (6) identified above.

### 3. Research on graduate schools in Japan

Nakayama points out that graduate schools in Japan lack universalism and internationality compared with those in the U.S.A., where people attach high value to graduate schools. He compares eight aspects of graduate schools in the U.S.A. and Japan: (1) entrance, (2) closing period, (3) course work, (4) criticism from the viewpoint of academic freedom, (5) library, (6) language and qualifying examination for the doctoral degree, (7) selection system and (8) dissertation (Nakayama, 1995, pp.102-111). Yamamoto examines the characteristics of three general areas of graduate schools in the U.S.A.: (1) systematic education and research training; (2) economic support of students; (3) the connection between research expenses and research (Yamamoto, 1995, pp.127-133). Arimoto points to the limitations of research universities in Japan where: (1) public financial support is less than in Europe or the U.S.A.; (2) the graduate schools are small; and (3) the training provision for researchers on doctoral courses is inadequate (Arimoto, 1995, pp.191-193). Arai points out that professional education in graduate schools in Japan does not meet the needs of companies (Arai, 1995, pp.220-222); but Tsukahara points out that while the doctoral course meets the expectations of the industrial world, adequate training for academic research supervision is needed (Tsukahara, 1995, pp.234-235).

Such comments indicate clearly the inadequacies of graduate schools in Japan. However in the 130-year history after the birth of the modern university, the graduate school in Japan has shown incomparable development over the last decade. The system that had fallen far behind the U.S.A. has recently developed, made exciting progress, and begun to seek a way to switch from the German model that is focused on a single tier undergraduate format to an American model that focuses on the graduate school. Meanwhile, as special importance has been attached to quantitative development, the increased popularity of the graduate schools has revealed qualitative problems with their research, teaching, and service functions that are now serious issues.

#### *(1) Present condition of the graduate schools in Japan — policy and reform*

1) Academic development and increases in graduate schools Whenever research develops and new specializations emerge, new chairs and expanded departments are located in the graduate school. Japan is no exception. The number of graduate schools themselves has greatly increased.

According to Yamasaki's research, the number of graduate courses was 186 in 1942; this increased to 1,503 in 1995, and it continues to grow. This can be attributed to: (1) freedom of learning and association; (2) the increase in research universities; (3) occurrence of social problems, and (4) national policy (Yamasaki, 2004, pp.137-158). An increased number of research universities implies an increase of graduate schools in response to the extension and specialization of academic disciplines. There is consequently a need to restructure and reorganize the corresponding academic framework in the graduate school to reflect the necessary scrapping and reconstruction of disciplines. The increase in graduate schools shows that more and more of them are being energetically scrapped and rebuilt with little publicity. That is to say, the competition for priority in present-day academic productivity is intensifying, which increases the pathology with regard to scientific ethics and pseudoscience.

2) Plans for doubling the number of graduate students It is obvious that the national policy is directly responsible for the increase of graduate schools. The University Council report "Quantitative maintenance of graduate schools" (in 1991) identifies an objective of doubling the number of graduate students from 100,000 to 200,000 over the decade 1991 to 2000. This target was realized. The consequent popularity of graduate school was accompanied with an apprehension that its quality and quantity might be developing unevenly. Urata examined the factors that influence the proportion of students advancing to and through higher education on the basis of income level, educational price, supply, and unemployment rate, pointing out issues such as the progressive increases in the numbers of students, the deterioration of educational resources, and changes in student's life (Urata, 2004, pp.31-48).

3) Policy for prioritizing graduate school The policy for shifting the emphasis in higher education to graduate schools was initiated after the University Council's report "Extended maintenance of graduate schools" was published in 1991. Asonuma points out a new movement where a policy for placing a new priority on the graduate school (emphasizing graduate school education against undergraduate education, separating the provision for specialist areas of the graduate course in graduate school, and maintaining the graduate schools of specified universities) has increased their budget since the 1990s (Asonuma, 2004, pp.79-101). As a result of an analysis of the extended support for the graduate school system, and notably the full research function — particularity of the University of Tokyo — and the changes to the humanities and social sciences, Kobayashi poses a question about the fact that "many universities consider not only emphasizing the graduate school but also making the professors belong to a research organization" (Kobayashi, 2004, pp.51-78).

Reinforcement of the research function of graduate schools is essential at a time when worldwide competition in productivity is intensifying and graduate schools become its focus. Fujimura analyzes the use of resource allocations based on the accuracy of the predicted value of research performed in

‘research universities.’ Establishing an evaluation system entails substantial costs in evaluating colleagues and major difficulties in evaluating research qualitatively, especially in the humanities and social sciences (Fujimura, 2004, pp.103-122).

Osaki states that “it is difficult to determine whether emphasizing the graduate school causes the formation of a kind of graduate school university or a transitional form for further developments” (Osaki, 1999, pp.319).

4) Mass production of doctors with diploma from course completion In graduate schools of science and engineering, large numbers of students graduated merely with a diploma obtained by completing the course requirements for course credits. And in the graduate schools of humanities and social sciences, withdrawal of students on completion of the acquisition of course credits, namely ABD (All But Dissertation) type graduation, is dominant. Concerning the doctoral degree, these graduate schools have maintained categories of both “doctorates with diplomas for completing the course” and “doctorates following presentation of a dissertation.” The numbers of doctorates with course diplomas have grown at a very rapid rate over the last decade as graduate schools have accepted the adequacy of a fixed number of doctoral course credits, have planned programs for training doctoral students to complete the course requirements for the diploma, and have allowed the number of doctoral students who complete the course requirements for the diploma before graduation to increase. This inflation of graduate school output, slipshod overproduction of doctoral degrees and qualitative decline of the graduate school has begun to be discussed (Ichikawa, 2001).

5) Doubling numbers of international students and an increase of numbers of part-time graduate students Similarly, there was a plan to double the number of international students to 100,000, a target that was achieved in 2003. The expansion included undergraduate students as well as graduate students and clearly the standards for acceptance of international students should be reexamined.

Equally, the importance of access to graduate schools by part-time students has increased. Makino analyzes how graduate schools are meeting the recurrent needs, and gives examples such as special selection procedure for adults, evening graduate school courses, day and night opening graduate schools, and a system for students taking business school courses (Makino, 1995). Shinbori systematically researches the evening graduate school that is a new addition to and a minority in the graduate schools (Shinbori, 2004, pp.139-180). As a result of the increase in the number of such part-time students due to the policy of encouraging their entry to graduate school, they are promoting lifelong learning and realizing a route to universal access. On the other hand, issues of balancing equality and ability have arisen, concerning widening educational opportunity yet maintaining the qualitative standards. In addition, the University Council proposed graduate schools should train



advanced professionals and this is now implemented in the law schools. However, although they seek a balance between quantitative expansion and qualitative standards, the number of candidates for entry to and graduation from the law schools is less than the quotas, creating a serious problem for the profession.

6) Educational pathology and loss of the value of undergraduate education One university response to the reduction of undergraduate enrollment due to the decrease in size of the 18-year old cohort is to recruit graduate students and expand the graduate school. Due to the consequent open door of the graduate school, the issue of a fall in the scholastic ability of both international and domestic graduate students has been discussed (Arimoto & Ehara, 1996; Amano, 2004). The discussion has recently extended in Japan to the matter of graduate students' academic motivation, learning ability, and achievement.

In accord with the national policy of attaching special importance to graduate school, the national universities have focused on a program of divisionalization of their graduate schools. As it is expected that graduate schools should focus on research and professional education, university professors need to be able to demonstrate more enthusiasm about their areas of expertise and research and be more responsible for their academic commitment, attitude, and behavior than before. This may cause teaching at undergraduate level to be disregarded. As Abe expresses it, it is remarkable that the graduate school, professional school, and liberal arts college work together at the "research universities" of Harvard, Stanford, and the University of California, with each of them performing a leading function (Abe, 1995, pp.244-245). As universities in Japan have changed from a simple-structure to a multi-structure, they will be asked to develop their systems, behaviors, and responsibilities in order to elevate the standards of undergraduate and graduate schools simultaneously.

Division and segmentation has occurred largely as a consequence of separating the graduate and undergraduate schools. This development did not arise only in Japan and it shows the gap between the philosophy and the reality of modern universities. Its premise is massification of the higher education system as is shown by analysis by Ichikawa *et al.* (1995). There is a close relation between massification and segmentation of the undergraduate and graduate schools. The division and the fragmentation of the knowledge function are caused not only by popularization but also by segmentation within the system. Clark regards the pressure of fragmentation, which is a global communality, as due to: (1) a shift to mass-higher education; (2) increasing demands that the market needs more experts; (3) expansion of the gap between advanced knowledge and the digested knowledge used to facilitate teaching; and (4) greater support and supervision by governments (Clark, 1999). He aggregates the combined effects in two factors: (1) a research drift, and (2) an education drift (Clark, 2002); it is necessary to overcome and integrate these two factors.

7) Quality assurance of graduate school education — the importance of academic evaluation While some measure of quality assurance has been achieved, it is obvious that the question of how quality assurance is going to be achieved widely has to be answered, especially as institutionalization of the graduate school has already begun. The means to do so have yet to be identified. The open door policy toward graduate schools adopted by the Council for Establishing Graduate School following deregulation implies that regulation of quality assurance has been devolved to the market. Whether this approach can lead to a qualitative guarantee of standards in graduate schools depends on the efficiency of self-check, self-evaluation, mutual evaluation processes, and third party evaluation. Especially, the accreditation evaluation of university institutions by the recently introduced third party agency will play an important role in this exercise.

*(2) Lack of research on graduate school education* The current situation shows that the graduate schools have many problems. Both their present condition and their future development turn on the success of a sequence of “Plan-Do-Check-See-Plan”, that is to say, follows a scheme of: policy, plan, administration, practice, evaluation (self-check, self-evaluation, mutual evaluation, and third party evaluation), diagnosis (discovery of problems and issues), prescription, and feedback. In particular it will be essential to focus on the contents of graduate school education and aspects of educational reform. Nevertheless, in seeking to take the results of research into consideration, it is evident that much of the necessary research is not available (Yamasaki, 1995; Yamasaki, 2004).

Globally there are shared tensions with research on the graduate school. As Clark has shown, common problems in all systems include: (1) the balance of undergraduate and graduate commitment; (2) concentration versus diffusion of advanced education; (3) research in and research out; and (4) central steering versus autonomous competition (Clark, 1999, pp.484-490). Within a given system, the focus on education of the first two areas, (1) and (2), is significant. In Japan, they can be correlated with graduate school education in terms of access, throughput, and output.

Logically, first there is the matter of access. The connection between the role of the undergraduate course and that of the graduate school course is linked to the two aspects of separation and integration. With massification of the graduate school, the open-door policy made the connection between them loose. The flexibility of graduate school and deregulation institutionalized structural changes: evening graduate schools, day and night opening graduate schools, and correspondence graduate schools. The system reforms for part-time students include special selection procedures, new procedures for the study of various subjects, professional graduate schools, and master’s courses. These reforms are essential for realizing lifelong learning and expanding educational opportunity though two groups compete in their attitudes to the level of access to graduate school. One is a group that accepts a policy of progressive relaxation in enrollment standards; the other is a group that seeks to retain rather than relax the requirements. This issue is linked with the undergraduate stage, where there is a shortage of candidates; the graduate schools may have similar concerns in the future. Clark’s fourth

point (above), indicates that a choice will be required between accepting conditions determined by the nation, those provided by market principles, or some middle course between the two. As has already been discussed, the evaluation system will play an important part in the outcome. It seems likely that control of quality will be determined by a mechanism based on demand and supply in accord with market principles due to relaxation of the standards for establishing universities.

Second is the matter of throughput. The course system that is characteristic of the graduate schools in the U.S.A. is taking root, and mass production of doctorates based on course diplomas has already begun. Discussions have taken place about abolition of the requirements of a dissertation for a doctorate (Central Council for Education, 2005). We can note that this is a movement to remove the differences of doctoral degree production that exists among universities and disciplines and that it echoes divisionalization of graduate schools that is similar to what in part has already occurred in the U.S.A. The professional graduate schools were established to provide education and training at master's level in the business schools and the law schools; other professional degrees, such as the doctorate in Art have been introduced. A systematic review is now in progress. This review proceeds, even though research on the contents of degrees and education is not always available or being developed. Amano points out "the confusing degree system", and that "it is necessary to resolve the confusion rapidly" (Amano, 2004, pp.133).

The third problem is connected with the same issue. Although the Japan University Accreditation Association has carried out some research, there is inadequate evidence of the factors of courses curriculum, students, academic staff, educational courses, and educational environment that lie at the core of the throughput of the graduate school (Iwayama & Shimura, 1999). For instance, we seldom find research on curriculum theory, which indicates that a lack of expertise on curriculum theory and curriculum development theory delays development of systematic research (Arimoto, 2003). It is essential to have curriculum theory for undergraduate courses as well as for graduate courses if they are to achieve a global standard for teaching principles, contents, formation, and methods based on the curriculum of the graduate school. In Japan its systematic maintenance is still under development in the graduate schools.

Again, there are few studies of the students. We recognize that students' academic motivation, learning ability, and achievement have declined all over the world: the situation in Japan is no different (Arimoto & Ehara, 1996). Yet theory related to graduate student achievement has developed little. Systemic action, such as an increase in quotas for graduate school and imposition of budgetary penalties in cases of failure, might lead to encouragement of large numbers of students with poor academic ability to go to graduate schools. In addition, the numbers of part-time workers and those who have chosen to be neither in employment, education nor training are increasing for social reasons (Kosugi, 2005). If students who have merely completed first degree courses at universities as well as those who do not seek or have failed to find employment tend to register in graduate school as an interim activity, many graduate school students will lack any clear vision of a future as a researcher or

an expert and it will be difficult to encourage them to study. Empirical study on such matters is essential.

At the same time, in a higher education system that has reached the stage of universal access and in an age committed to lifelong learning, it must be noted that the matter of graduate school education is a component of university education just as the matter of university education is a component of high school education and its precursors. In other words, it is a matter of the continuity between undergraduate and graduate school and between high school and university. Therefore, research on the connection between high school and university from the viewpoint of “Connection from selection at the entrance examination to education” carried out by Arai *et al*, is absolutely relevant to graduate schools (Arai & Hashimoto, 2005).

Concerning academic staff, research on FD focused on undergraduate programs has been carried out, but related work concerning the graduate schools has yet to be developed. Although some studies have been carried out centering on the research university, the COE program, research productivity, and research costs, research on the basis of the relativity of research, teaching, and study that Clark pointed to has yet to be developed (Clark, 2004; Arimoto, 2004).

A fourth and related problem lies in the merits and demerits of focusing on graduate school in the intensive national policy for research. By focusing on the graduate school the policy has reinforced the research-oriented tendency of graduate schools. Academic staff in Japan are already among the most research-oriented in the world on evidence that emerged from study of the universities as single tier undergraduate institutions, where special importance should have been attached to teaching (Arimoto & Ehara, 1996). The academic staff of graduate schools are more research-oriented than those of undergraduate schools. They tend to expand the knowledge acquired in advanced research, and induce in students the urge to discover something in their specialty. In accordance with enforcement of a researcher’s awareness by emphasizing graduate school, the gap between the awareness of academic staff and that of increasing numbers of students is getting wider and wider. Setting aside students in the master’s course, those in the doctoral course are expected to fulfill the requirements for a doctor’s degree within three years: failure to do so implies the academic staff’s instruction was not fruitful. As students’ achievement and awareness become diversified, academic staff face problems and this is a circumstance where FD in a narrow sense is getting more important, centered not only on the undergraduate stage but on teaching at all levels (Arimoto, 2005). As Ernest Boyer insists, the establishment of a view of scholarship, not emphasizing research but integrating scholarship with teaching as a supereminent concept, is an important matter (Boyer, 1996).

The academic staff of graduate schools teach classes both at graduate school and undergraduate levels. As some of them also hold liberal arts classes, they may spend more time teaching students rather than researching. In a research university, there is a case to exempt professors from teaching to enhance academic productivity. This process divides professors into education professors and research professors. The latter are professors who are to concentrate on research in order to make discoveries

at a worldwide level. The competition between this divisionalization and the integration of research, teaching, and learning is becoming a heated issue

A further output aspect relates to the productivity of academic work, teaching, research, and service, in the graduate school. A now accepted indicator of teaching productivity is seen to be the employability of graduate students. The main connection between graduate school and society is through employment. Traditionally, graduate students became researchers in universities, government offices, research institutes, and firms. But as careers for advanced professionals have widened, graduate students now have more employment opportunities. Currently, it appears that employment as researchers has reached a ceiling or is even decreasing due to a decline in the number of junior positions. A large number of people apply for appointments as junior researchers through the Japan Society of Science Promotion, which results in keen competition. Yet even those who are successful and obtain an award for two or three years will have few chances for further academic employment. To relieve this problem, there is a need to increase the total number of junior research appointments and encourage exchanges between research and other appointments so as to benefit from interchange of ideas. The training of researchers also needs to incorporate the changes identified in the systematic researches that were carried out following Tsukahara and Kobayashi's study (1996).

While the output that centers on students' employment is an aspect of the productivity of graduate school education and indicates the teaching productivity of academic staff, a complementary aspect is the research productivity of the academic staff. When graduate schools achieved accentuation and divisionalization, they also assumed responsibility for the research productivity of the university. In this regard, the graduate school in Japan finally caught up with American institutionalization from the viewpoint of pursuit of the world's center of learning. To this end, over the past decade the basic plan for science and technology has developed: the resources have been devoted for five years in the first phase (from 1996 to 2000), and a further five years for the second phase (from 2001 to 2005). Selectivity in provision of research funding has concentrated support on the designated research universities. Moreover, the same pattern of selectivity for designated universities was shown in the 21<sup>st</sup> century COE program. This policy has established a base of research universities and graduate school academic staff. Implementation of this economic development policy, as is argued by Kobayashi (1998), would be expected to result in many bases that attain the status of world-class centers of learning. In fact the situation has changed little; while the results are not easily perceived it is hoped they may become clearer in the future. In the meanwhile it is necessary to examine the situation by carrying out research.

Finally, following the pattern in the U.S.A., the educational-industrial complex has begun to develop. In order to analyze the consequences, research focusing on it is essential.

*(3) Problems and perspective of the results of the research* In surveying research on graduate school education, we can recognize the shortage of research on aspects concerning

educational reform. On the whole, there are many problems that we must not overlook. I have identified for particular discussion three aspects: exploitation of new territory, development of theory model, and unification of basic science and policy science.

1) Development of new territory — reconstruction of knowledge The increase in number of academic associations and graduate schools due to specialization of learning means inevitably that problems of paradigm conversion and reconstruction of knowledge become evident. At a time when knowledge-based society is emerging and the transition of knowledge from mode 1 to mode 2 becomes apparent, we should pay attention to the changes in content, characteristics, and the role in society and university of knowledge itself. The research of Gibbons *et al.* (1994) was translated (Kobayashi, 1997) and a few papers have been published. However, research in this area should merit research from disciplines such as science and technology theory and the sociology of science. When we survey the literature covered in this review, the researchers of higher education have shown no systematic evidence of such research, though it may be expected to develop from now on (Kurosaki, 1997).

2) Development of a theoretical model —beyond the Trow model and the knowledge model In research on higher education, which includes both research and teaching, it is essential to build an effective theoretical model. Therefore, we can recognize that the knowledge model and the Trow model offer theories effective in accommodating the current situation. The Trow model, which was dominant in traditional research, is effective in that it developed a macroscopic theory of the developmental stages of higher education; it has been especially effective as a macroscopic model that accommodated the growth of undergraduate education. However, consideration of the fact that systems at different stages of development compete in research for cutting-edge discoveries, the Trow model is not always effective. A global and simultaneous development of research functions and research productivity is far better accommodated by a digital theoretical model than an analogue model. As Kitamura (1998, pp.160-164) points out, every country is seeking solutions for deregulation, responsibility for social explanation, educational resource theory, and internationalization. Moreover, the knowledge model, developed on digital theory, deals effectively with a condition where society, based on knowledge, causes centers of learning in the world to compete in research productivity and where centers and peripheral areas are joined in simultaneous and multiple discovery (Arimoto, 2003).

As Ehara (2004, p.282) points out, it is obvious that “the reform of the graduate school is being carried out not only in developed countries such as Japan, the U.S.A., England, and Germany but also in developing countries such as South Korea and China.” Similar phenomena can be observed mainly among developing countries in Asia (see Altbach & Umakoshi, 2004). International comparative research based on Clark’s knowledge model, for instance, illustrates the necessity of finding such a

viewpoint for global commonality, or for searching for the characteristics of uniqueness and leadership in Japanese graduate school education. The development of research models corresponding to the new age will acquire more importance.

3) Unification of basic science and policy science In higher education, it is desirable that basic research is improved to meet the heightened expectations of political science. Political science-oriented research does not always discover satisfying aspects of policy, but when considering earlier research, various problems and concerns can be identified and particularly studies of planning and policy need to be improved. The Central Council for Education suggests the need for a study of the “Platform for promoting graduate school education” (a tentative name) for “graduate school education in a new age — for building globally attractive graduate school education” (Central Council for Education, 2005, p.57). They regard the following elements as constituting a specific policy for the direction of reform: (1) realization of education (a complete attainment of the educational function, economic support to students, and improvement of the educational research environment for junior academic staff, *i.e.* researchers); (2) improvement of the international currency and creditability (promotion of active graduate school evaluation, and activation of international contributions and interchange); (3) reinforcement of the training function for human resources in cooperation with the industrial world (enabling graduate school to meet the demands of industry and commerce, and mobilization of human resources in industry and university); and (4) formation of a base of excellence for teaching and research with international competitiveness. It seems that planning and policy proceed faster than research.

## Conclusion

Collating the evidence from the limited amount of literature discussed above, we arrive at six conclusions.

First, although the need for graduate schools in Japan and the education they provide has long been pointed out, they have struggled but failed for a long time to achieve institutionalization in a relatively stable position. Comparing graduate schools in the U.S.A. with those in Japan, we realize that the former sought from the outset to establish their position at the center of learning and succeeded by institutionalizing the graduate school. In Japan, graduate schools fell well behind those in the U.S.A. and were unable to match its system, organization, climate, and behavior in forming centers of learning. However, tracing the decade-long research on graduate schools in Japan, we may consider that they have achieved epoch-making development in their policy, administration, and practice and finally reached a stage to begin institutionalization in earnest.

Second, the rapid arrival at the stage of massification of the graduate school in Japan exposed a problem of unbalanced development between quantity and quality in graduate schools as well as at the undergraduate stage. The reform of graduate school education is essential in order to rectify it. In a

globalized and knowledge-based society, when we compare the systems in Japan with those in foreign countries, we recognize that its size is still small, which should sustain rather than reduce the perception of attaining international quality standards. It is an essential issue to achieve quality assurance by maintaining evaluation and accountability of individual universities. At the same time, systematic research on quality assurance is needed.

Third, from Burton Clark's research, international comparison shows how the model of the graduate school that originated in German universities spread to France, England, the U.S.A., and Japan. As a result, graduate schools in Japan have developed similarly to those in Germany, France, and England; but compared with those in the U.S.A., which invented the graduate school system and succeeded in its institutionalization, they have fallen significantly behind. That applies to the whole system, though the attainments of individual disciplines differ. As a whole, the integration of research, teaching, and learning that originated in Germany is still the main issue for each system at present.

Fourth, in research on graduate school education, development of academic productivity is recognized as important in regard to research, teaching, and service, with each of these aspects attracting much interest. The interest at this time attached to teaching productivity in massified graduate schools, requires assurance that education in graduate school receives similar commitment as that at undergraduate level or whether it remains to be discussed further in the development of institutionalization from that of a simple-structure to a multi-structure. The awareness of the research-oriented academic staff of Japanese universities has been much reinforced due to the emphasis on divisionalization of graduate schools over the past decade, while the possibility that undergraduate education has little relevance has arisen. The age of university-industry cooperation has replaced the age of university-anti-industry exclusion, with the graduate schools centered on research universities assuming more the characteristics of external financed, industry-university cooperative, research centers. The fact remains that more research, both on differentiation between undergraduate and graduate schools and on their integration, is needed, as well as on the property and continuity between undergraduate and graduate schools.

Fifth, by observing current movements, such as massification of higher education, teaching reform, and supportive teaching and learning, it appears that graduate school education is progressing well. Yet problems, such as shortages of candidates to fill enrollment quotas, indicate long term problems. Uncertainties, such as the employment trends of graduates, students that are part-time workers or under moratorium or are NEETs (not in employment, education or training), and the trend of graduate schools to spend much more of the budget and funding than the undergraduate school, predict a gloomy future. Even so, there must be the possibility that now that graduate school education has begun to develop it will attain greater importance, there seems to be more originality in the research field.

Sixth, over thirty years, and especially over the last decade, graduate school reform has advanced rapidly. Various problems and issues at the research level have been clarified. It is true that some



digital-type changes, insoluble through the out-dated analogue approach occur. The reasons for this lie in the areas concerning graduate school where changes occur globally, such as the teaching function, its international currency, industry-university cooperation, the worldwide teaching and research base, and where reform is unavoidable. Naturally, it is essential that the changes in Japan are compared with those in foreign countries. Though the present situation is well observed, plans and policies are developed faster than research can identify the required direction. In a sense, an unstable and unhappy relation exists between research and policy, and therefore we expect that the activation of graduate school education must include development of a research model based on new targets and with integration of basic science and political science.

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# A Review of and Prospects for Research on the Academic Profession

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## Introduction

This article seeks to review research on the academic profession over the period of structural reform that has now lasted for more than a decade. Its focus is on higher education research in Japan on the academic profession. In order to develop study in this academic field, it is essential for researchers to review the research on higher education so that it can be determined how studies have developed and where improvements should be sought. To do this it needs to be reviewed on a regular basis. In fact, this field has been reviewed much more than fields such as pedagogy and sociology of education, which must reflect the high academic productivity of this field (Amano & Arai, 1971; Shimbori, 1981; Arimoto, Kaneko, & Ito, 1989; IDE, 1989; Yamanoi, 1990). However, as it is getting difficult to cover all of the field, the reviewers have tended to concentrate on the areas with which they are familiar. After 1990, research on higher education was reviewed in *Daigaku Ronshu [Research in Higher Education]* by Yamanoi (1993), and Arimoto (1998), and recently the Higher Education Institute, *IDE KENKYUUSHO* released “Prospects and issues in higher education” (*Higher Education Research Journal*, 19, 2004): in the latter, rather than a review of research, the focus is on present issues and prospects in the period of university reform.

Although “20 years of Higher Education Research since 1972”, was reviewed by the Research Institute for Higher Education (RIHE), Hiroshima University, in commemorating the foundation of the RIHE (*Daigaku Ronshu [Research in Higher Education]*, 1993), this review did not refer to the trends of research on the academic profession. At that time, I reviewed research on the academic profession in Japan before the 1990s from an international point of view and the paper included a review of the research paradigm as well as research themes from a researcher’s viewpoint. Arimoto’s review (1998) is concerned mainly with the publication of major books based on the professor’s academic work from an international point of view. In this context, in commenting on research on the academic profession that is focused on the period after the 1990s, two aspects are of special significance. First, it is very important to emphasize the social change that influences higher education and the international point of view. Second, it is important to consider the several fields that relate to the academic profession. This paper consists of the following three parts: 1. Structural reform and research on the academic profession; 2. Some of the fields of research of the academic profession; 3. Issues and prospects.

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## 1. Structural Reform and Research on the Academic Profession

*(1) Transition from an Industrial Society to a Knowledge-based Society: a Quiet Social Structure Reform* It can now be seen that the social structure reforms of the 1990s also marked the transition from an industrial to a knowledge-based society. During this period, the characteristic economic nationalism of higher education in Japan identified by A. H. Halsey unraveled. The revolution in politics, economy, and society and the rapid advance of globalization and internationalization provided the root causes of the developments in structural reform of the university. Structural reform of the university extended to research as well and included research into the academic profession.

The first indicators of the basic reform in social mode might be found in a quiet paradigm shift from the pattern for a highly industrialized society to that of a knowledge-based society. The focus shifted to research on productivity in respect of the leading technology and its evaluation and away from research on the condition of the basic academic productivity (edited by Arimoto in 1994a, and by Arimoto in 1994b). In developed countries, economic globalization expanded and economic competition intensified. The basic ethos in industrial society had been based on a kind of economic nationalism that centers on social expectations and powerful government with an economic base of mass production and mass consumption.

Meanwhile, there is a premise that knowledge-based society is an innovative society where knowledge of high technology empowers. It is not the community that leads a knowledge-based society, nor is it the level of average ability. It has a logic that says few can achieve a breakthrough, innovate, or make discoveries in production, the economy, and research. It is only possible for a few people and companies to succeed in achieving distinctive contributions, and for few universities and researchers to accomplish advanced research. Knowledge-based society is, in other words, an advanced society. Therefore, we reach a conclusion that, in order to form a stable society and world, it is necessary for us to use all aspects of advanced strategies to support the whole of society even at the extreme limits of the social scales. Each country has begun to reconstruct its universities in accord with the new economic nationalism of competitive societies; if the readjustment fails to encompass the rich and the poor, its inadequacies will be seen to be serious. However, the image of the universities has actually been created in a competitive context. Therefore, the government, universities, companies, and industrial societies that have enabled the majority of conventional contemporary societies to grow steadily will be greatly changed.

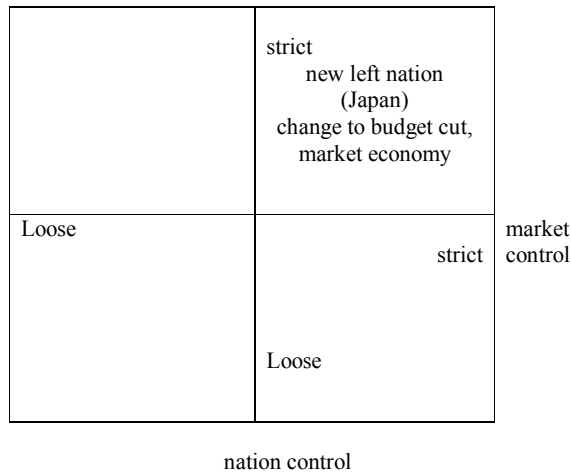
*(2) Government (nation) and Marketization: Drastic Economic Structural Reform* There has been a great paradigm shift in the relations at the Glonacal (coined by combining the words global, national, and local) level such as those between university and government, between university and company or market, and between university and society, community, or citizen. In regard to the

university, discussion of its budget, management, or type of establishment, its position in society has changed from that of a closed, self-governing organization to that of an institution that combines a balance between autonomy and accountability. For a university it becomes important how we regard the connection between internal and external perspectives in implementing lasting reforms that conform to the requirements of accountability. Academic promotion provides a typical example: change of expectations among the government, companies, and society that cause changes to role perceptions as well as to role performance will become relevant.

In a period of structural reform, for instance, the relation between the government and the market should be expected to provide a focus. Although there are three university sectors, all Japanese universities, national, public, and private, have been strongly controlled by the central government. Competition is limited by the quite strict control of the government (the nation) even though they now exist in a market economy. Strict national control and a free market coexist here. It is essentially different from the free market with loose regulatory control of the U.S.A.

Therefore, when we study the academic profession, structural reform of research is required in order to examine its access, viewpoints, and framework of analysis. In research on the university in the 1990s, we are supposed to review higher education itself as well as studying the professors from a new point of view. With this background, in an era of structural reform of the university, research has a tendency to respond to the influences indicated diagrammatically in Figure 1.

**Figure 1. Relation between Nation andMarket**



Therefore, from a political viewpoint research in accord with a corporate management strategy became popular because it focused on the direction of university reform. Then, the political perspective extended to an international comparison, especially with universities in developed countries, and encouraged comparative studies of Japanese and other higher education systems – to which the great influence of globalization has now been added. Finally, research on basic structures and their reconsideration as part of university structural reform is required. This research has to focus

on a new pattern of personnel management due to the change in the types of established universities, and preferably will implement provision for faculty development (FD) to address improvements in the university, conditions for educational research, research organization, productivity, budget allotment, and such political themes as evaluation of professors as objects of research. The research environment, particularly in regard to external finance, competitive funding, and provision for advanced research, has greatly changed in comparison with that before the 1990s. It is according to such a hypothetical framework that the review is undertaken.

(3) *Globalization and Glonacalization* From an international and professional point of view, formal research into the academic profession can be dated from the 1990s. It was at this time that E. Boyer, Director, Carnegie Foundation for the Advancement of Teaching, established an international study of the academic profession in fourteen countries. This was the first time such research had been carried out on a global scale: hitherto domestic surveys of their academic professions that focused on the developed countries had been carried out in a number of developed countries - the U.S.A., Japan, and other Western countries. In order to undertake the study in Japan a group, consisting of Arimoto, Ehara, Yamanoi, Fujimura, and Daizen, was formed. The official report was edited by P. G. Altbach, and published in English. Subsequently many national reports have been extracted, published and discussed. For Japan a number of Japanese discussions have been presented (*e.g.*, Arimoto & Ehara, 1996; other related researches were provided by Arimoto, 1995abc; 1997; 2001). These researches contributed greatly in that they identified the characteristic of educational awareness of professors in Japan from an international point of view, although the differences of university organization and systems and the range of deviations of the subjects of survey make international comparisons difficult. Yamanoi, who was a member of the original Japanese team, did a subsequent analysis of the data with reference to the mobility of university professors in Japan (Yamanoi, 2001ab). Fujimura performed a detailed analysis on time use and on the economic treatment of professors in Japan (Fujimura, 1996; 2002).

However, it is difficult to say now that these series of researches fully show the actual conditions after the university structural reforms that have developed on a Glonacal scale. Before university structural reform, the academic profession had attained a professional status in accord with the Humboldt spirit of academic freedom. But due to international economic pressure, the professoriate has begun to 'Latin-Americanize.' Altbach and Enders demonstrated its international trends. Tenure in developed countries, such as England, and the national civil servant system, in Netherlands and Japan, were abolished. There has been a consequent increase in part-time teachers and non-tenured posts. Moreover, university reform has changed not only the working style of professors but also the differentiations in their status. Tenure *versus* non-tenure or differentiation of posts within ranks of full professors provide typical examples. In Asia, and notably in China, research on training for professors and career development is now established (Nanbu, 1999; 2001).

The increasing focus on internationalization is directly reflected in the frequency with which international conferences on higher education have been held since the 1990s. Indeed, across the whole area of education, higher education must be one of the fields in which most international conferences are held. One reason for this may be because, in reform of the educational system, it is higher education that appears to influence national economic competitiveness the most. While organizations such as OECD, UNESCO, the Pacific Rim Conference, and the Six-Nation Education Research Project arrange frequent international meetings, this also applies to institutions such as research institutes for higher education, and universities. The Japanese Science Academy has held international council meetings since 1991; the Japanese Association of Higher Education Research is going to hold a Japan-China Forum every other year. Information exchange at international conferences has necessitated discussion of university matters in a Glonacal frame. Adoption of an international context for these discussions provides one of the biggest changes for matters that in the past in Japan were dealt with only at a national level. What was adopted as Ministry of Education, Culture, Sports, Science and Technology's (MEXT) "COE Program for the 21<sup>st</sup> Century" in the field of higher education should be interpreted in this context.

*(4) Diversification of the Research on the Academic Profession* Research on the academic profession before the 1990s was based on the framework established before structural reform. This implies a system in which the position, the status, and the role of the academic profession were determined by national control. When, under the reform policy, control was rapidly relaxed, reconstruction of the position of the academic profession was required. As the relaxation transferred autonomy to the university and control to the management, the focus was placed on redefining and diversifying the role of the academic profession (Yamanoi, 2005). Accordingly, a change from the quiet, internal knowledge-based society has led to research on structural changes in a knowledge-based society and the diversity of professors (Kobayashi, 2004): new aspects include research on deterioration of the allocation of time by professors accompanying university structural reform, and the changes that have developed in a knowledge-based society. The more individualization of the university as an institution has developed, the more problems of diversification and differentiation in the role of the academic profession have been revealed. Specification of the teaching, research and management of professors are indicators of this.

## **2. The Academic Fields of Research on the Academic Profession**

*(1) Historical Research of the Academic Profession* Historical and chronological researches, even though there are only few, have been developed while the process of internationalizing research on university professors develops. Takeuchi fully describes the human relations and the power struggles within universities under the title "*Illness of the University — Trouble for Tokyo University*

*and the Professors*” (2001). It is only after an historic era has ended that the confused human relations within the universities can be described. The university subcommittee of the Central Council for Education (2005) has recently discussed the grade of research associates in order to review educational research and the position; while Iwata (1994, 1996), and Ito, Iwata, and Nakano (1990) discuss the birth process of their research associates grade in Japan in the modern age, which gives us much information. Beppu (1998) provided a taste of the historical evolution of university professors in Germany.

*(2) Research on the Market, Personnel Affairs, and the Mobility of University Teachers*

Since the 1990s, with globalization of university reform, the structure of the academic profession in each country has been rebuilt. From an international point of view, the system of tenure for professors has begun to break down. In the U.S.A. various research projects on the academic professions have been announced at Harvard University and Boston College. Chait carried out research on professors' employment at Harvard University. Finkelstein identifies a differentiation in professorial employment and its two-layer structure. In Japan, experts who focus on comparative education, educational sociology, and educational administration have described the actual circumstances in a number of countries (Ehara, 1994; Muramatsu, 1995; Takagi, 1996; Yamazaki, 1998; Hashimoto, 2001ab; Aihara, 2003; Kazawa, 2005).

Although professors in Japan have enjoyed a tenure system over a lengthy period, its personnel system has developed differently from those in foreign countries where, accompanying structural reform it has been recommended that granting tenure can provide an inducement policy to improvement of academic productivity. In 1996, before proposals for a non-tenure system were formalized and specific rules were established, the Institute for Democratic Education published a special edition on the “Non-Tenure System for University Professors” in order to discuss the basic idea and its merits and demerits (IDE, 1996). Later, Yamanoi, Murasawa and Kuzuki showed how the non-tenure system had been adopted for the first time (2004, 2005). Other researchers have been interested in the tenure system, as a counterpart of the non-tenure system. Takagi has noted the guarantee of status and especially the system of tenure based on professorial autonomy by comparing the university models in Japan, in Germany and in the U.S.A. (Takagi, 1996; 1998). The situation of part-time employees, caused by an overflow of human resources and the tight market, is regarded as a social issue (Part-Time Teachers Association of the Universities in the Tokyo Metropolitan District, 1997).

Meanwhile, many people have provided suggestions and criticisms on the modernization of human resources (Kawanari, 1995). The public response to research that was undertaken as a part of the process of modernizing human resources showed a taste of it (Yamanoi, 2000a). It showed that recruitment of university teachers by an open search system had much to do with university reform in respect to establishment of graduate schools or review of university teachers carried out by the Council of University Accreditation.

Recently the report of the Central Council for Education has identified structural reform in teaching and research appointments within the universities. A new grade of associate professor, which takes the place of the assistant professor, and distinguishing research associates (*Jokyou*) from research assistants (*Joshu*) by virtue of their differing duties, are now established changes. The fact that they have replaced the former assistant professor with the new associate professor indicates that they reviewed the teaching organization of the chair system at the same time as they implemented structural reforms including abolition of general education, introduction of a 4-year teaching system for the undergraduate course, a review of the degree structure, the shift to graduate schools, introduction of market economics, corporatization of the national universities, introduction of professional graduate schools, and an organization to evaluate university performance. Yamanoi, Fujimura, and Urata (2005), IDE (2005), and Shinken Ad. Co. (2005) discuss these matters in detail. Study of human affairs issues and the academic marketplace, and a series of researches on other issues developed significantly at this time (Yamanoi, 1997, 1999, 2000abc, & 2001ab; Yamanoi, Fujimura & Urata, 2005). A few studies on mobility among departments accompanying the restructuring of Faculties of liberal arts and science at this time have been published (Yoshida, 2002; Yamanoi, 2003).

(3) *Research on Career Formation and the Training of Faculty Members* Development of advanced human resources has become an important academic policy in Japan as a consequence of the changes occurring from information technology and the transition to a knowledge-based society. The unpopularity of science and technology among junior and senior high school students in the 1990s forced people to recognize a crisis in the training of researchers and the need to take remedial action. Studies showed how a comprehensive approach should include the training of researchers and university teachers (Tsukahara & Kobayashi, 1996; Kobayashi, 1995; 1999). Plans to improve human resources in the future, and particularly for researchers, have been implemented (Ushioji, 1995); notable are a series of researches that focus on research associates and young researchers (Kato, 1996ab; 1997ab; 1998). However, the numbers of studies on the sociology of science indicate that research on scientific socialization is declining (Daizen, 1994).

In the 1990s, a growing awareness of the need for accountability of universities focused international interest on teaching. In Japan, this took the form of emphasis on evaluation of teaching and faculty development. Though there is a traditional insistence that FD should reflect the whole role of the professor, including the academic profession, research, teaching, social service, and management, it gradually became focused on the development of teaching ability. The institutes that emphasized teaching, for instance the Liberal Arts and General Education Society of Japan, whose membership is largely university teachers with an interest in the liberal arts and sciences, began to focus on FD research. As accountability may be regarded as a responsibility to explain detailed provisions to stakeholders, they made a point of constantly requesting quality assurance of teaching by

third-party university evaluation, as well as insisting that quality assurance of teaching should be open to students and their parents.

*(4) Gender and Minorities* Issues on both gender and minorities are present in the universities. In the U.S.A., where human rights and racial equality are sensitive political issues, research into these problems and policies, such as affirmative action aiming to solve them, are well established. There, since the 1970s, both issues been regarded as inseparable.

It would be exceptional for this attitude to be found in Japan though awareness of the gender issue is widespread. The data of the national universities show that the number of Japanese female professors is quite small and the ratio of female to male professors is low, compared with that in the U.S.A. Clearly in the promotion of gender equality, the universities in Japan fall behind those in the U.S.A. and other countries. The data from cross-national research shows that the proportion of female researchers is 11.6%, which is low and criticism from all over the world is growing. The liaison conference of the Gender Equality Association, which consists of 41 national associations of science and engineering, carries out research on the actual conditions of employment; it advises the Cabinet Office. It is perceived to be an urgent requirement for the universities to increase the numbers of female professors. The Japan Association of National Universities formed a select committee to identify a plan of action to raise the ratio of female professors to 20% by 2010, a policy supported by the Japan Science Cooperative Foundation.

Sakamoto (1999; 2002ab), and Horn Kawashima (2004), are enthusiastically pursuing research on American history and the present situation of gender studies at the Gender Research Center of Ochanomizu (women's) University. Their work focuses on the relations between gender and natural science and on the gender imbalance in higher education management.

*(5) Research on Faculty Development* As demands for institutional accountability increased, pressures developed to extend the scope of evaluation beyond self-evaluation of the university to include external evaluation and individual internal evaluation. The overall frame of university autonomy is located within the spiral sequence of university reform, market evaluation, and competitive environment that surrounds the universities. The universities in the 21<sup>st</sup> century are fully aware of this image. It is in this environment that evaluation of a professor's teaching is seen. Although many studies of university evaluation have been published since the 1990s, few of them are centered on the professor or the academic profession.

It is said that currently university structural reform emphasizes reform of university teaching, and that FD theory, broadly based on teaching, research, management, and the social service provided by the academic profession, is in effect reduced to an emphasis on professors' ability in development of university teaching. Members of the General Education Institute, such as Hara (1990; 1995; 1998; 1999), Kinukawa, and Seki, pointed out the FD problem earlier, but as active symposiums on FD took



place (for instance, the subject research meeting in 1994, the meeting in 1995, the meeting in 1997, the meeting in 1999, and the subject research meeting in 1999), Kinukawa arranged the progress of these FD discussions (Kinukawa, 2004). Then, Seki (1990) and Arimoto (1991) took up the subject at IDE or the Research Institute for Higher Education at Hiroshima University: the results are found in the source book (Arimoto, 2005). Comparison of the two approaches reveals differences: the former focuses on development of a professor's ability by means of practice and case studies of teaching centering on liberal arts education; the latter develops a theory of academic FD based on the academic profession and the theory of scholarship. Ito (1990) edited the bibliography and main literature introduction of the Research Institute for Higher Education at Hiroshima University before the 1990s, which identifies earlier results of research on FD and will become the standard reference for research in the future.

Although research on higher education, such as academic background and academic 'cliques' was focused on research on the sociology of education, no papers on FD appeared in the *Journal of Educational Sociology* after 1990. Similarly, after 1997, when the Japanese Association for Higher Education Research was established, no paper on FD appeared in its journal, *Research on Higher Education*. Support for provision of FD in the 1990s as a practical policy by the institutes that emphasized its practical workability, such as the Liberal and General Education Society of Japan, were where this theme appeared. Publications dealing with FD theory regularly appear in *Research on Present Higher Education* edited by IDE. Initially, themes such as "academician" or "training for a professor" were focused on, but IDE (in 1999) adopted FD theory as an individual term, and more recently IDE turned to more practical developments, such as "Hints for FD." By 2001, IDE had broadened its scope to include a wide range of contemporary interests: young people, women, career paths, and mobility (IDE, 2001). Topics, such as "Issues and prospects of FD" or "Hint for FD" are given brief mention together with reports on the internal and external relations of individual universities, liberal arts education, the efforts and practices of the various university groups, the Japan private university federation, and university seminar houses.

(6) *Research on Evaluation of University Teachers* Before structural reform, university evaluation was based on academic productivity. It operated in the sociological context of institutions, departments and courses or chairs, not of individual professors. Following the greater flexibility of university establishment standards introduced in 1991, it became necessary to guarantee its quality and self-check and self-evaluation procedures were introduced. These are now to develop into accountability, evaluation of the institution to guarantee the quality of its teaching, degrees and a system for evaluating structural reform. In practice, it is the professors who actually guarantee educational quality, and inevitably this implies establishment of a system for individual evaluation of professors. However, so far there are few papers on individual evaluation of professors because of the current emphasis on institutional evaluation. As is generally accepted, the roles of professors vary and

change gradually over time. Moreover, any adequate evaluation of a professor needs to be ramified over duties covering teaching, research, social services and management. Before structural reform the evaluation of professors' academic productivities was according to the type of university; following reform the scope of evaluation has extended to university rank, individual institutions, and departments.

It is the professors that perform the academic activities and functions of institutions, departments and courses. Institutional budgets are distributed according to evaluation of teaching and of research. The amount of external finance depends on the academic achievement of each professor. In Japan, models for structural reforms and university evaluation are looked for in England, Australia, and the U.S.A. The nationally oriented university policy in England was preferred and has been adopted as a framework for the future in Japan, with evaluation of each professor developed bibliometrically based on citation analysis accompanying institutional evaluation. Research carried out by Negishi and Yamazaki (2001) reports the results. The number of international studies on professor's evaluation from the international point of view also increased (Tsunogae, 1995; Nishine, 1994). The tendency to link educational evaluation and budget allotment together, increases the likelihood that marketization of the university will also increasingly develop more at the level of professor.

However, each institution is already collecting information for research on professors according to the expectation of provision of social service and cooperation between industry and academia as components of the change to market principles. This information is seen to be relevant as a measure for public relations, personnel performance evaluation, and the allocation of research budgets, but as yet academic research on professorial evaluation remains to be done.

### **3. Issues and Prospects**

For sixty years after the World War II, higher education in Japan has experienced four discrete periods: that of the introduction of the new system (1945-1960), of high growth (1960-1975), of regression (1975-1990), and of structural reform (1991-2005). The trends of research on this field have reflected the situation in each period. Most of the researches on the academic profession in the structural reform period have basically been characterized by the fact that university reform followed a line of corporate management and marketization. That is to say, it shifted from academic assignment to study of university policy and higher education. This is reflected in research themes such as market expansion and intensification of competition, efficiency in the role and function of professors, change of careers and conditions of employment, accountability, self-evaluation and certificated evaluation, and activation of research on teaching and qualitative assessment of teaching. Much the same things can be said in other fields of research on higher education. Especially, after the national universities changed to a corporate system, personnel management ceased to be regulated for national government employees, but structural reform in this new framework for personnel management has developed less than was expected by 2005. As it is inevitable for the universities to reduce running costs by not less

than 1% annually, structural reform of personnel management cannot be avoided. Therefore there is need to activate personnel management and to improve arrangements for employment as much as is possible.

When we imagine how the years after 2005 will be, our imagination is less constrained. It is predicted that a decrease in population will cause a reconstruction of the university. Therefore, a fifth period (2005-2020), which follows the four periods mentioned above, might be called a period of university reduction. Further as globalization develops, a quite tough second structural reform will come, based on the infrastructure of a knowledge-based society and emphasizing a “scrap and build” policy that domestically will implement a “States” system (*Dou-Shu* system). Then economic globalization and the creation of world blocks will enable Asia to have a higher education area able to compete with that in the EU in the following generation (2020-2035). It is quite difficult to predict the distant future, but it is also interesting when we imagine how reviews of research will evolve for such generations.

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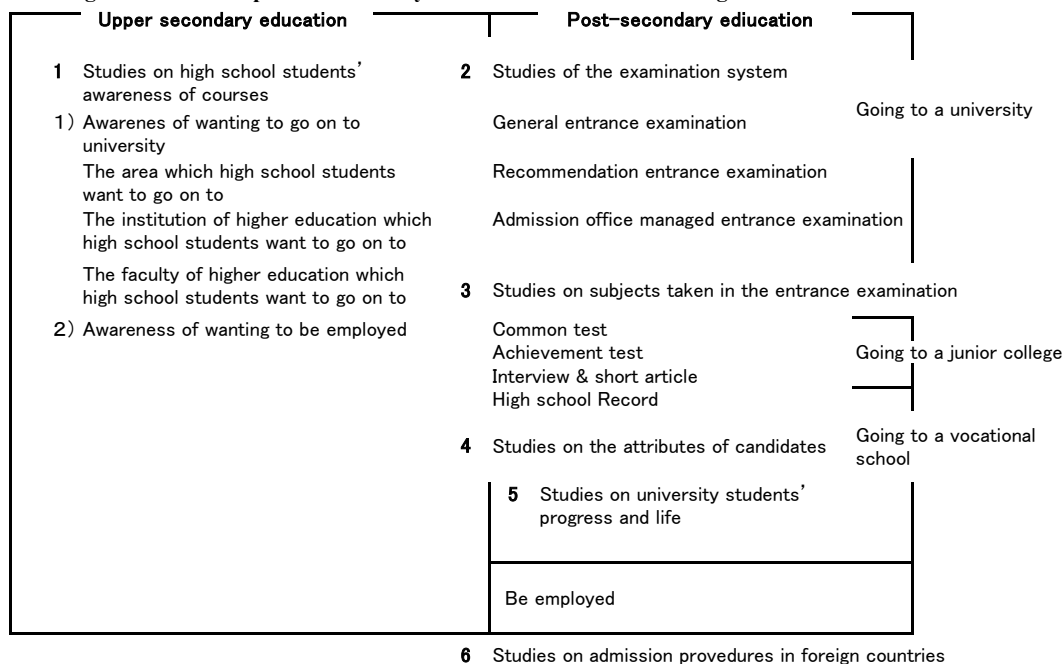
## Development of the Study on the Transition between High Schools and Universities

Tsukasa Daizen \*

The purpose of this paper is to review the studies that have focused on the transition between high schools and higher education institutions, and particularly universities, in the period after 1993. An earlier review paper by Arai (1993) dealt with the same area of study up to 1992, while this paper focuses mainly on studies since then.

The overall structure of the review is shown in Fig.1. The discussion covers broadly six fields: (1) studies of high school students' awareness of courses, (2) study of the screening and selection system, (3) studies on the choice of subjects for the entrance examinations, (4) studies of candidates' and successful examinees' attributes, (5) studies of the influence of university students' learning and life-styles, and (6) studies of entrance examination systems in foreign countries. Typical result of the studies in each field are presented so that in each field development from previous work can indicate a direction for future study..

**Figure 1. The viewpoint of the study on the connection between high schools and universities**



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## 1. Studies on high school students' awareness of courses

The studies made by Yonekawa (1995) and by Iijima (2000) show the characteristics of high school students' awareness of proceeding to university, while those of Daizen (1997) and of Suzuki *et al.* (1997) discuss the determinants affecting enrollment.

(1) *Characteristics of high school students' awareness of going on to university* Yonekawa (1995) identified three issues based on the results of research in 1994 targeted on third-year students at high schools in the metropolitan area and their parents. First, both the high school students, most of whom are studying in the full-time general course, and their parents take it for granted that high school students will go on to university, which, as R.K. Merton says, is regarded as a cultural goal.<sup>1</sup> There is an especial tendency to think so among the boys. Second, high school students recognize that the expectations of their parents expose them to much more pressure to go on to university. The data show that the higher the academic background of a mother, the greater her desire for her child – and especially a daughter – to enter a university. For mothers who are not satisfied with their own academic achievements, the data show they also have high expectations, but especially for their sons. Third, in a situation where it is taken for granted that everyone will go on to university and high school students are aware of the pressure, high school students are eager to go to a better university rather than to go to any university. While school students who get poor marks at school or know that it will be difficult for them to enter university prefer to move directly to university rather than to engage in additional pre-entry study.

Iijima (2000) analyzes the characteristics of the specialized training college students' awareness of choosing further study or employment in comparison with the attitude of university students.<sup>2</sup> In his analysis, the universities are divided into two groups; in group A are those requiring a high score in the entrance examination (deviation value > 56), and in group B a lower score (deviation value < 50). The following three points emerge. First, when we consider the entrance examination for the specialized training colleges with respect to the rankings of a student's high school, those enrolled in the specialized training colleges belong to lower ranked high schools than the students enrolling in group B universities, which implies that those who fail to pass the examination for universities enter the specialized training colleges. Second, although the specialized training college male students at the beginning of their high school days were just as eager to go on to university as students enrolled in groups A and B universities, most of them have lost their enthusiasm for university by November in the third senior high school year: being unwilling to join the examination ordeal, few of them go to cram schools during their high school days. By this time, the results of practice examinations enable

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<sup>1</sup> See Merton, R. K. (1968). *Social Theory and Social Structure*, Free Press, 186-193 for the concept of Merton's cultural object.

<sup>2</sup> Specialized Training Colleges are post-secondary vocational colleges. They were established in 1976 in order to raise the capabilities required for an occupation, practical life, and improve students general education and knowledge. Each course provided in a College provides systematic instruction for at least 40 students in programs lasting not less than one year for 800 class hours or more.

them to realize that there are few chances for them to pass the university entrance examination. Third, when they explain their reasons or motives for going to a the specialized training college, many students say that they decided to study there because it gave them more chances to get a job than university students. That is to say, the specialized training college students' values are diverted from "competition to obtain a high academic background" to achieving "success in employment" and they are going to take advantage of their qualifications as a means of obtaining employment.

(2) *Determinants of high school students' awareness of going on to university* The papers written by Daizen (1997) and by Suzuki *et al.* (1997) deal with the determinants of high school students' awareness of enrollment in university.

By using five-year data concerning third-year students of junior high schools in Okinawa, Daizen(1997) shows that high school students make their own choice of careers not because they are aware of the expectations their parents or society have assigned to them or the kind of courses in high schools they select, but rather by the scores they achieve in high school.

Furthermore, from research concerning 14,318 high school students all over Japan, Suzuki *et al.* (1997) were able to explore the relations between the various factors that determine students' awareness of courses. It is shown that high school students' decisions on whether to go on to university or to get a job after graduating from high school are based on personal factors such as their scores or parents' expectations and on systematic factors such as the progression rate from their high school to university or the subjects they have studied at high school. It also appears that personal factors greatly affect aspiration for higher education, motivation for learning, and the prospects of their course of study in forming awareness of courses, while systematic factors play a minor role.

From a factor analysis of motives for going to university two factors emerge: a study-oriented motive and the motive for deferment of employment. Examination of the relation between these two factors and the awareness of course selection reveals a deep-rooted positive interrelation between a study-oriented motive and the three kinds of course awareness mentioned above. From the analysis, it is found that female students have a more definitely study-oriented motive than male students. Meanwhile, there is a negative interrelation between the motive for deferment of employment and motivation for learning or career prospects; but there is a positive interrelation between the motive for deferment of employment and a study-oriented motive. It is pointed out that this implies that students who have a clear study-oriented motive tend to enjoy their lives after entering university.

## **2. Studies of the examination system**

The studies made by Nakamura (1997) and Daizen *et al.* (2004) analyze the university entrance examination system in the era of massified higher education. Nakamura (1997) covers a wide range of the aspects affecting university entrance, including the various routes available, the factors influencing the choice of route, and the pressures placed on students.

He first considers how the various admission procedures that provide alternatives to the general examination system are adopted by the national, prefectural, and private universities, and the effects of variations in the entry requirements of the universities. Admissions based on recommendations, usually from schools, are more commonly found in the private universities than in the national or prefectural universities; and the lower the academic requirements for admission, the more opportunities there are for admission by recommendation. Those universities that have high entry requirements seldom provide special entry for students with sports skills, or for adult candidates. Nakamura (1996) views these various systems as characteristic of provisions for entry to mass higher education in that they are adopted especially by the private universities and those with lower academic standing. However, admission on recommendation for specified high school students is adopted mainly by private universities that are difficult to enter and does not always appear as a consequence of massification. Further, special entry provisions for Japanese students returning from overseas have been adopted: these provisions have little connection with massification and are used by many of the national and prefectural universities that are the most difficult to enter rather than the private universities.

The choice of alternative routes to university entry appears to be primarily a function of status and gender. High schools less successful in preparing students for university admission, and students in vocational training courses rather than the general course, show a tendency to seek the alternative routes. Furthermore, analyses that control for the difficulty of admission by the normal examination show that female students choose to take advantage of the alternative routes. The data classified by social hierarchy show students whose families are affluent and who have parents with high academic background tend to take advantage of recommendation from high schools attached to private universities and use the special procedures for students returning from high school education overseas. Students, who are female, who are graduating from high schools with low progression rates to universities or from vocational training courses, and who expect to have problems in entering elite universities tend to use the route of self-recommendation, that is, by writing directly to a university and seeking an interview well before the date of the general entrance examination. While this procedure can be related to the impact of massification, admission on recommendation from attached high schools and the special examination for returnee students are exclusive to affluent families and indicate some of the social and educational problems existing in the university admission process.

Finally, Nakamura discusses the pressures on students of the "examination ordeal." As well as the stress of the examination, these arise from various factors: awareness of admission by alternative routes such as recommendation or of taking advantage of attached high school's recommendation, the actual time devoted to study, and the number of days committed to cram school each week, which will vary depending on the chosen system. It is found that it is the high school students who take the general examination who feel the pressure; those who take advantage of the alternative routes are largely free of the pressure. Indeed, many people think that it is easier to enter university by taking

advantage of admission by recommendation than by taking the general examination, and that the students who graduate from attached high school have no troubles. Students who take the general examination for admission to universities with comparatively low academic entrance requirements are those who feel the pressure most, which perhaps indicates why it is these universities that have adopted the alternative routes. Those students who do take advantage of the alternative routes spend less time on study either by themselves or at cram school than those who take the general examination. Therefore, we can confirm that the alternative routes do show characteristics of a system that derives from the massification of higher education.

Daizen *et al.* (2004) report on the process of university admission through the “Admission Office” (AO) system<sup>1</sup> that has been adopted by many universities, not least in response to increased competition and falling numbers of candidates for university entry. Daizen *et al.* (2004) analyze the awareness of what the high school teachers who are in charge of career guidance and the chairpersons of university entrance examination committees (described as university professors below) think of the AO system. The analysis identifies three points.

First, approval of the AO system by university professors, who regard it as appropriate, is greater than that of high school teachers, who see a need to reform the AO process. Second, those high school teachers who are content with the present form of the AO procedure are satisfied also with the process of admission by recommendation. There is a high rate of acceptance of the AO system among teachers in vocational high schools, high schools with a comprehensive course, and high schools with low rates of admission to university. Third, the university professors who regard the AO process as appropriate tend to belong to departments that have already adopted the AO system, admission on recommendation from the designated high schools, and special quotas for admission on recommendation by attached high schools as well as those who belong to universities that accept admission by recommendation. Moreover, there is a higher rate of acceptance of the AO system by private universities than national and prefectural universities.

Then, what causes such differences in acceptance of the AO system? Three points concerning the high school teachers emerge. One derives from the difference in the way career guidance is given and a school’s attitude to it. Those high schools with a high proportion of students enrolling in universities tend to give ‘general’ or ‘standardized’ career guidance; high schools in which students are able to take many kinds of courses give ‘individual’ advice. A second reason is a difference in their view of the feedback that is provided by the selection process. Some high schools prefer the quantitative assessment that is given by a number, such as an examination score; others seek a qualitative evaluation, such as an estimate of individual capability or commitment. The third aspect is related to a difference in the viewpoint about university, the prospects for university entry, and an awareness of the

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<sup>1</sup> The AO (Admission Office) system is one of the detailed selection methods devised by individual Universities and Faculties. It aims to comprehensively judge an applicant’s ability and aptitude, motivation for learning and sense of purpose. It may well include examinations, interviews, and a variety of other assessment tests and procedures.

now expanding linkages between high schools and universities affect the recognition of AO system.

University professors, especially those in national and prefectural universities, have little experience of evaluating applicants' personalities other than by their achievements in examinations. At universities which have adopted the AO procedure, professors are accepting the AO procedure.

### 3. Studies on subjects taken in the entrance examination

Iwata (1995, 2005) has examined the changes in the numbers of subjects taken in the entrance examination and Iwata *et al.* (2002) and Hirano *et al.* (2000) have studied the connection between the choices of entrance examination subjects and the achievements of candidates after they entered university.

*(1) Change of the number of entrance examination subjects* Iwata (2005) describes the ways in which the entrance examination developed in the period after the war. Initially, when the new universities were set up, from 1949 to 1950, the entrance examination subjects of most national and prefectural universities were Japanese, mathematics, a foreign language, science, and social studies. At that time, most private universities examined applicants in only three or four subjects, and in some private universities only in two subjects. From 1951, the universities were allowed to adopt a system which permitted candidates to choose two specialized areas (*e.g.* chemistry and physics) in one subject area (science). This was adopted by most national and prefectural universities in 1952. At the same time, a number of national and prefectural universities required candidates for their Faculties of Engineering to take the examination in physics and chemistry. By 1966, when all high school students were following a course of study revised in 1960, a set subject system for the entrance examination, as specified by each university, was authorized by the Ministry of Education.

By 1993 more than half of the private universities had adopted an examination system of three subjects, and after 1977 a system with less than two subjects began gradually to be adopted, with the number of such universities increasing greatly from 1990 to 1993. This tendency to reduce the number of entrance examination subjects was remarkable.

Just before the Joint Achievement Test started, national and prefectural universities offered two or more opportunities to take the entrance examination, and most Faculties required five subjects to be taken in the entrance examination. Over the period 1979-86 the entrance examination in five subjects was retained by using the Joint Achievement Test. However, after 1987, national and prefectural universities were allowed to adopt an *a la carte* system under which the Joint Achievement Test could be taken in selected subjects chosen from among the five. When in 1990, the Joint Achievement Test was transformed into the National Center for University Entrance Examination (NCUEE) examinations and which became available for use by private universities, many more national and prefectural universities began to adopt an *a la carte* system. The arrangement in which the national and prefectural universities all adopted an examination in five subjects has now begun to disappear,



but most candidates for the national and prefectural universities still took the examination in five subjects: in 1993: among 329,114 candidates for the national and prefectural universities, 276,738 (84.1%) still took the examination in five subjects.

(2) *Connection between the subjects chosen in the entrance examination and students scores after entrance* Iwata *et al.* (2002) examined the connection between the subjects chosen in the areas of science in the NCUEE examinations and the scores in science after entrance to university. By targeting 190 students who entered the Faculty of Medicine of Ehime University in 1997 and 1998 they were able to study whether taking the course in biology affected subsequent scores in their specialized subjects. As a result, they find that students who studied biology at high school obtained better scores in some of the specialized subjects of the Faculty of Medicine than those who had studied physics. However, they also find that if those who had studied physics take a biology course soon after entrance, they are able to get scores as good as those who had studied biology at high school.

In addition, Hirano *et al.* (2000) looked at those students who had entered university from 1990 to 1999 and who had changed from the area of their specialized science curriculum status at their high schools. They compared the performance of students who had taken the entrance examination in physics and chemistry with those who took chemistry and biology in terms of the scores they achieved after their entrance in the context of the possibility that all three science subjects ought to be compulsory. The results indicate that the critical factor is “how interested in medical science and biology they are” rather than “whether they studied biology at high school”. In other words, the scores depend on “their eagerness for study.” Accordingly, the authors suggest that three compulsory subjects in science are indeed essential in order to recruit enthusiastic students.

These two results make it clear that students who take the entrance examination in subjects that match the characteristics of the Faculty obtain good scores subsequently; and students who take the opportunities to study them at university can obtain good scores even if they do not take them in the entrance examination.

However, the results of other studies differ. Yamamoto (2004) suggests guidelines for enthusiasm for study as an indicator of a student’s formative evaluation and discusses the necessity for the scholastic tests devised by each university. He divided students into two groups: those who had a fair possibility of success on the basis of the results of the NCUEE examinations, and those who entered university after taking also an additional scholastic test devised by each university. By analyzing the data for the first semester, he found there is no significant difference in indicator value for enthusiasm for study between the two groups. Yamamoto (2003) concludes that “the additional scholastic test has no practical influence” in the Faculty of Medicine in which many students with high scores in the NCUEE examinations are registered at present.

#### 4. Studies on the attributes of candidates

Studies on the attributes of candidates have mainly addressed concerns in relation to equality of opportunity of going on to university. Studies on the differences in opportunity of going on to university have been carried out from three viewpoints: social classification of individuals, regional characteristics, and gender.

*(1) Social classification of individuals* The modern school system aims to provide objective and fair selection mainly through scholastic examinations. While generally it is believed that everyone has equal opportunity of going on to university, the present situation of educational achievement is actually dependent on social classification.

Awareness of this problem of differences in educational opportunity arises because it has been revealed in the Social Stratification and Social Mobility (SSM) research carried out extensively, mainly by researchers belonging to the Japan Sociological Society, over the last several decades.

When we compare the differences in each social classification's<sup>1</sup> rate of participation in higher education as classified by cohorts according to the SSM research data for 1995, we find that the trends are quite different for male and female students (Aramaki, 2000). The data for male students show an overall slowly widening difference between social classifications which then narrows after the 1960s cohorts. For female students, the differences consistently widen. It appears that for female students social class continues to determine investment in education (Kondo, 1999). Analysis in terms of a linear-log model confirms the relative tendency of a hypothesis that "There is no change over time in the connection between social classification and opportunity for going on to university."

Nakanishi (2000) focuses on high school ranking and university ranking in order to explore the social implications. She identifies two points. First, it seems that the high school or university ranking affects students' careers more than we expect, and that the university entrance examination exercises the greatest function of selection in Japanese society, especially because university ranking affects students' careers. Second, which high school or university students enroll in greatly depends on their family background. That is to say, whether it is high school or university, the more difficult it is to enter the school, the higher is the occupational status of its students' fathers, and the more extended is the period of education of the students.

*(2) Regional characteristics* Some of the early studies dealing regional differences analyze the effects on young men's differences in school careers by using factors such as the regional characteristics of the social economy and high school educational systems (Tomoda, 1970; Amano *et al.*, 1983; Maita, 2003).

Maita (2003) used multiple regression analysis to look for factors that affect the regional

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<sup>1</sup> Father's occupation is used for social classification. There are four categories as follows; "expert and managerial posts class", "clerk and salesperson class", "the skilled and laborer class", and "farm hand class."

difference of admission rates in urban areas in which high schools are close to students' homes. He shows that the high school system in each school district, as indicated by the number of public general high schools *per* school district, as well as the regional difference in socioeconomic characteristics, such as income level and industrial structure, are highly significant. In addition, the smaller are the variations in the success rates for admission to university among a region's high schools, the higher are the overall rates of admission; while the bigger are these regional variations, the higher is the rate of passing the entrance examination for the major universities such as a former Imperial University.

Hayashi (1997) analyzes the regional status of the differences in the educational opportunities by using SSM data from all over Japan. He finds that the regional differences can be seen more clearly in the results for students seeking to enroll in a local university, rather than those who plan to attend a distant university, and for students in the big cities where they enjoy a good academic environment. Further, an analysis over time shows that regional differences in rates of enrolment that were narrow have subsequently become wider.

Another group of studies shows regional differences in admission rates to university resulting from the policy of university localization that constrained development of universities in the Tokyo metropolitan area from the middle of the 1970s (Ushioji, 1984; Shima, 1996; Mabuchi, 1997; Shinohara, 2000). Shinohara (2000) examines whether the policy affected regional differences between 1978 and 1998 and whether the effects can be seen quantitatively in admission rates, in the proportions who achieve enrolment or who fail to do so, and in the proportions that do not move to those who do move to another prefecture. The results provide little evidence of narrowing regional differences. The localization policy was advocated at the Higher Education Conference (1976), the University Chartering Councils (1974; 1984), and by the University Council. The number of regional universities increased, and the effect was to raise the whole level of participation. Even though students living away from the metropolitan area got more opportunities, the opportunities for students living in Tokyo increased even more. Further, although the rates of enrolment at regional universities rose, there is no change in the proportion of those who failed to enrol. While the proportion of those moving to universities in other prefectures fell, the absolute numbers continued to rise, increasing the concentration of students in Tokyo: the rate of increase of students moving into the Tokyo area showed little diminution.

(3) *Gender differences* Studies made by Nakanishi (1993; 1997), Yoshihara (1997; 1998), and Murayama (1999) deal with "gender and opportunity of going on to university" in Japan.

Nakanishi (1993, 1997) demonstrates that the view of an internalized gender role is linked to the pattern of non-meritocratic career differentiation. Furthermore, Yoshihara (1997) identifies a gender difference in the routes followed for admission to university.

In the context of studies on the established process of a bias for female students towards humanities and the social sciences identified by Amano (1986) and Nakanishi (1998), it would be

natural to expect that gender is an important concern in relation to the study on educational achievement. However, an implicit assumption that apparent bias is gender-related is criticized as generating a situation “where they compile the data to conclude that many studies on gender are the social harvest, classify it into two groups, generalize them, name one femininity and the other masculinity, and trust that the biological female and male directly deal with femininity and masculinity respectively” (Nishitai, 1998).

On this basis, Murayama (1999) critically reexamines the “priority entrance system to affiliated university or college” examined by Yoshihara (1998). Murayama concludes that although the “priority entrance system to affiliated university or college” from “attached schools” seems to be a “track for females only”, it is just an institutional matter. The “attached school” for females is often used as a “meritocratic track” rather than a “track for females only.” Female students of the “attached schools” may regard the “priority entrance system to an affiliated university or college” merely as a choice to enroll in the university. In other words, female students are more successful examination candidates than male students and that explanations of differentiation in the “attached schools” for females only on the basis of “women’s privilege” or the concept of “positive discrimination” (Kanda *et al.* 1990) is inadequate.

## 5. Studies on university students’ progress and life

Follow-up studies provide data on the connection between high schools and universities and university students’ progression and life. In particular, these studies aim to show how successful the universities and Faculties were in their object of selecting the students who deserve professional education. The results provide basic data for improvement of the entrance examination.

Specifically, follow-up studies mainly examine and consider students’ adaptation to the situation they face after entry to university. Most follow-up studies in the past assessed students’ adaptation from the point of view of academic achievement. These so-called correlation studies examined statistically whether the following three parts are well linked: 1. the entrance examination score (*i.e.* the score in the Joint Achievement Test or its successor the University Entrance Center Examination); 2. the high school evaluation report and the scores obtained after entrance to university (*i.e.* scores in general education and in subject-specialist courses); and 3. a student’s career situation after graduation (*e.g.* success in national examinations, employment).

In the following paragraphs the main results of follow-up studies are described with respect to comparison of various ways of university entrance and the academic record of students who passed the AO procedure.

(1) *Diversification of the entrance procedure and the subsequent academic record* With individual and varied ideas, each university has diversified its entrance procedures. As a result, two different concerns have arisen: how students who enrolled improve after entrance; and what kinds of

differences arise in their academic record because of the different routes they followed to enrolment.

Nojiri *et al.* (2003) show that students who passed the entrance examination of their university show excellent ability in and attitude to taking the prescribed university courses. In this they are better than those who passed some other examinations. They also performed better than students who were admitted on the basis of only an interview, who tend to fall behind in their first year at university, and of students who were admitted on the basis of only a short essay, who are seldom ranked in the top group in academic record and who show similar tendencies to those whose admission was based only on an interview. The study shows that there might be some connection between the reason why a student chose a particular admission procedure and their academic record. Conversely, Endo (2002) shows that according to a follow-up study for the years 1992 to 1994, students who were admitted on recommendation got better academic records after entrance than those who passed the general entrance examination.

However, Seo *et al.* (2002) compared the performance of students who obtained admission in 1999 by recommendation with those who passed the entrance examination, in regard to their scores at entrance and during the course. The results show that students who obtained admission by recommendation got rough scores lower by about 40 points than those who passed the University Entrance Center Examination or other examinations, but there is no definite difference in the scores obtained for general academic subjects either separately for each subject or in total. Three reasons for this are discussed. 1. If the examinees can correctly answer from 70% to 80% of the questions of the University Entrance Center Examination, there should be no difference in academic records among them (Ogata, 1990; Kobashi *et al.*, 1999). 2. Candidates who obtained admission by recommendation show better awareness and enthusiasm than those who passed the entrance examination, which compensates them for any difference in basic academic ability (Hirano *et al.*, 1999). 3. Because all of the candidates who obtained admission by recommendation were those who had just graduated from high school, their academic records after entrance were good (Hirano, 1996; 1999).

In seeking to identify the best way of selecting students, Okuda (1994) examined alternatives to the entrance examination for the Faculty of Medicine in his university. He considered three possibilities: 1. following one year in a university by retaking the entrance examination; 2. comparing the results of the university's graduation examination and entrance examination; 3. comparing the results of post-graduation clinical training evaluation and the entrance examination. His results showed there is no significant difference in the chosen university, University Entrance Center Examination, individual examination, short essay, and interview between the repeaters and non-repeaters who change over after taking the foundation course to the specialized medical course. In addition, there are many more students who graduated from private high schools in the specialized course who are repeaters than non-repeaters. The interview evaluation of the repeaters is much poorer than that of the non-repeaters though there is no significant difference in the performance in the University Entrance Center Examination, individual examination, or short essays between the

repeaters and the non-repeaters.

The 58 trainee doctors who graduated from the university several years ago (considering only those in the clinical medicine class) were evaluated by their professors in order to compare their achievement with their scores at the time of entrance into university: they were classified as 'advanced' (defined as a doctor who has a possibility to be a leader in the future), 'intermediate' (defined as a doctor of average ability), and 'elementary' (defined as a doctor who possibly will cause some problems). The results show no correlation between the class evaluation and the scores of the University Entrance Center Examination or of scholastic tests. While there is a significant difference in the evaluation of the interview between the advanced and intermediate classification there is no correlation between the high schools (public or private) students had attended and the classification.

Performance in the academic graduation examination in the Faculty and the interview does show a significant correlation. This appears to confirm that the value of an interview in selecting candidates for admission is appropriate not only for those repeating a year and in the class evaluation after graduation but also in their scores in the graduation examination. In addition, Shinomori *et al.* (2004) contradict the idea of making a point of interview examination.

Shinomori *et al.* (2004) examined the connection between the admission procedure, the results of Faculty examinations and the attainment in the practice interview for employment undertaken in the sophomore year at university. Three conclusions were reached. 1. The students who enter university by means of an oral examination are not necessarily strong in the practice interview for employment. 2. Students who enter the university by the interview route obtain similar academic records to those who take a written examination. 3. Students who are admitted by recommendation of a high school and an interview achieve better grades in the special subjects and the practice interview for employment than those who enter only by writing a short essay and an interview. That is to say, it is unnecessary to attempt to identify 'employability' of students in interviews of candidates for admission. It follows that if candidates are screened at just one interview in the limited time available, it is important to refer to the high school principal's recommendation or its contents in making a judgment.

(2) *Academic records of students who are admitted by the AO process* Shirakawa *et al.* (2004) and Watanabe (2003) attempt to establish whether students selected by an AO procedure achieve distinctive results after entrance compared with those selected by other procedures. Shirakawa *et al.* (2004) looked at students majoring in engineering. He finds that as freshmen, students who entered by examination scored well in subjects in which there were written tests, but those who entered by the AO procedure scored well in tasks such as report writing and Website creation. By monitoring the progress of students admitted by the AO scheme in 2000 through to the end of their third year, it is shown that, after surviving less good scores in their freshman year in compulsory subjects, they do well across the whole course. It is noted that rather than taking standard

electives, they prefer electives related to their own interests in learning.

Watanabe (2003) compares academic records (mainly in liberal arts and basic science) of students eighteen months after their entrance to university in 2000. The scores of students who entered by the AO procedure are, on the whole, better than those who took the general entrance examination, and it is confirmed that it is not necessary to worry about their academic ability. Some researches carried out in the past have indicated positive information about the characteristics of the AO group, but no negative information. From the above, it seems that the AO method adopted by universities is an excellent way of screening candidates.

## 6. Studies on admission procedures in foreign countries

In order to understand the characteristics of the Japanese system, it is useful to be informed of those used in foreign countries and to note the differences and the similarities. Results from such studies have been accumulating rapidly.

(1) *Entrance examination systems of the universities in the West* The entrance examination system in foreign countries most often reported to Japan is that in the U.S.A (Fujii, 2005; Ikeda, 2005; Youkoshi, 2005; Hashimoto, 2005; Kouno, 2005; Tanaka, 2005; Onaka, 2005a; Ishioka *et al.*, 2003; Lemann, 2001; Gotou, 2000; Ishioka *et al.*, 2000; Hosokawa *et al.*, 1999; Maxey, 1999; Kishimoto, 1997; Sakamoto, 1996; Ikeda, 1996; Nakayama, 1994; Hanesaka, 1992; Yanai *et al.*, 1991). The report on the distinctive connection between high schools and universities in each state, which Arai *et al.* (2005) provide, is especially useful in discussion of what admission processes might become in the future.

The systems which connect the high schools to the universities in Europe have also been extensively studied. Reports are provided for those in Germany (Kido, 2005; Tanno, 1997), in France (Fujii, 2005; Miyase, 2001; Sakai, 1997; Takahashi, 1994) and in England (Yamamura, 2005; Hita, 2003; Kuroiwa, 2000; Sasahara, 1997; Yonekawa, 1997; Matsudaira, 1994; Takeuchi, 1992).

(2) *Entrance examination systems of universities in Asia* Similarly, studies on entrance examinations of universities in Asia have also recently been accumulated rapidly.

Onaka (2005b), Nakamura *et al.* (2002), Umakoshi (2002), Kin (2001), Arakawa *et al.* (1999) and Matsuo (1997) have all studied the entrance examination system in Korea, which has the highest admission rate to university in the world. Nakamura *et al.* (2002) compare the school careers of high school students in Japan and Korea to show the importance attached to institutional prestige in Japan, a comparison that is to be extended in the future to study the connections between high schools and universities.

Mizoguchi (2003), Oh (2002), Ryu *et al.* (2001), Nakajima (2000), Ri (2001), Kawaijyuku (1997), Ogawa (1997) and Ishii (1997) have studied arrangements for university entrance in China, where the

admission rate has recently been increasing rapidly. Nakajima (2000) compiled a report from an international conference where Japanese and Chinese experts on entrance examinations discussed university entrance examinations for the 21st century.

(3) *Entrance examination systems in other countries* Elsewhere studies on university entrance examinations have included Singapore (Otsuka, 1996), Thailand (Onaka, 2005c), Russia (Takase, 2001; 1997), and Australia (Yamamura, 1996).

Most of the results of these studies do not necessarily compare with the situation of the connection between high schools and universities in Japan. Now, globalization of society and the economy is advancing and a guarantee of the quality of university education is beginning to be required. From now on, international comparative research of educational systems, including the entrance examination system, will become even more important. It will also become important to extend detailed system comparisons to include direct comparison with the educational system of Japan to a far greater extent than has been done previously in studies that have been limited to review of only one overseas system.

Now, in a situation where about 80% of high school graduates progress to a higher school and where a knowledge-based society is developing, the provision of education after entering the academies and the results of learning need to provide a focus. In such a situation, the academies are seeking ways to improve their educational results such as by reviewing educational purpose, educational goals, and educational contents, developing the abilities of teachers, and introducing self- and external-evaluation. However, it is more difficult to say that they are actively engaged in study of the qualities requisite for a student, which is an important factor in regulating the educational results of universities. It will clearly be more important to accumulate results on studies of students' learning experience, their awareness of learning, their success after entrance and their educational results, and the best ways to screen candidates.

This review deals with only part of the results of studies on the connection between high schools and universities which accumulated rapidly in the 1990s. Constraints on space precluded much detailed and technical information that is now available in material published and edited by the Center for University Entrance Examinations.

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## Developing Professional Staff in Universities under Quality Assurance Systems

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Human resource capacity has become a critical issue for contemporary universities in enabling them to deliver multiple agendas in complex environments (Gordon & Whitchurch, 2007). In recent years, many governments have proceeded with deregulation and developed schemes to assure the quality of higher education. Today, universities have a greater autonomy under the new quality assurance systems but are, at the same time, required to be more accountable *vis-à-vis* their fund providers and other stakeholders, particularly the governments and other public or semi-public funding organisations. Furthermore, universities compete more and more globally with each other and with other knowledge providers. Not only academic staff but also administrators and other administrative and academic support staff members need to be more responsive to social demands and some of them are required to be professionalised<sup>1</sup> in certain functional areas, sometimes involving a blurring of the traditional boundaries of staff – academic and non-academic – in order to ensure the efficiency and optimise universities' outcomes.

This article considers issues and challenges in human resources, particularly in professionalisation of non-academic staff under new quality assurance systems.

### 1. Development of quality assurance systems and human resource issues

*Development of quality assurance systems* Since the early 1990s, quality assurance schemes have been developing in national higher education systems. A complex of societal factors, such as concerns for a potential decline of standards in the context of massification, diminishing confidence of stakeholders in traditional informal academic quality control mechanisms, increasing public and political demand for more accountability, pressures to increase performance and cost-effectiveness, and the gradual development of a more competitive higher education market, have caused this important development (Damme, 2002). Concurrently, reforms inspired by new public management have emerged, and new governance models have appeared in universities as a result of a changing relationship between the higher education sector in general and the state (Boer & Stensaker, 2007). These changes can be termed the 'marketisation' of higher education<sup>2</sup>, which has developed

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<sup>1</sup> It is beyond the scope of this article to explain in detail professionalisation and professional staff, but the term 'professional' relates to a job that needs special education and training.

<sup>2</sup> Efforts to seek, through more targeted regulation or through systematic deregulation, or to harness the market as a means of higher education reform are termed 'marketisation' of higher education (Dill, 1997a). According to Teixeira, Jongbloed, Dill, and Amaral (2004), autonomy, open markets and well-informed decentralised decision making are the key elements in marketisation policies. These elements should also be key elements for quality assurance systems.

synchronously with quality assurance systems.

This kind of shift is not confined to higher education, but has been occurring in many public services (Williams, 1995). In the 1980s, the Thatcher Government in the UK made extensive use of market mechanisms as a tool for promoting competition between public services with a view to increasing their efficiency and maximising the provision of social benefits (Amaral, 2007). In the European Union, by virtue of the concept developed by the Green Paper on Services of General Interest (Commission of the European Community, 2003), the market is expected to play an important role in the economy and for production of collective interest; public authorities have only to look after its smooth functioning and to safeguard the general interest, in particular the satisfaction of citizens' essential needs and the preservation of public goods where the market fails (Garcia, 2006). The European Commission has promoted marketisation especially in such areas as transportation and communication, and encouraged the member countries to conform to certain principles to assure the quality of services, including the establishment of regulatory bodies, representation and active participation of consumers and users in the definition and evaluation of services, and the choice of forms of payment. The Commission (2003) stresses: "This development should not mean that public authorities renounce their responsibility to ensure that objectives of general interest are implemented. By means of appropriate regulatory instruments public authorities should have the capability to shape national, regional or local policies in the area of services of general interest and to ensure their implementation."<sup>1</sup>

The development of quality assurance systems of higher education is in line with these moves towards marketisation. The European Bologna Process, of which the chief pillars are the harmonisation of degree structures and quality assurance (Musselin, Froment, & Ottenwaelter, 2007), is considered to transform what were once state monopolies of academic degrees into competitive international markets by the adoption of a common degree framework (Teixeira, Jongbloed, Dill, & Amaral, 2004). In other words, the development of quality assurance systems, particularly in Europe, is a governance reform of the higher education system, in which the role of the state is redefined.

*Quality assurance and human resource issues* In new higher education governance systems, driven by a market mechanism as well as regulated by quality assurance schemes in which the state power is confined to ensuring their good functioning and to safeguard the general interest, higher education institutions (HEIs) tend to have an increased autonomy and a greater responsibility. They are expected to perform efficiently on their own initiatives to assure their assigned missions, although

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<sup>1</sup> In this sense, the process termed 'marketisation' is far from a shift towards a perfectly free competitive market. As Teixeira, Jongbloed, Dill and Amaral (ed.) (2004) suggest, the supposed social benefits of markets cannot be realised without the basic institutional framework of laws, and the critical issue for higher education therefore is how to configure government regulations so that they may maximise the social benefits of higher education systems. Similarly, Dill (1997) recognises that public policies are essential frameworks for the basic conditions of competitive markets. Trow (1996) sees the UK universities as operating, not in a market, but in something more like a command economy, although the rhetoric of the market is employed in connection with higher education.

state regulations are not renounced and place more emphasis on transparency of the activities, participation of users, and evaluation *a posteriori*. State control remains and often is not weakened, but appears in a more indirect manner (Mok, 2007).

This change, exemplified by rhetorics such as marketisation, deregulation, liberalisation, accountability and increased autonomy – all of them interwoven with new quality assurance systems – does not remain without consequences on the internal governance of HEIs. Two main effects of the recent changes in internal governance are an increase in participation on governing or supervisory bodies by representatives and individuals from outside the university and a strengthening of the power of executive authorities within the university (OECD, 2003). HEIs are now at the centre of a number of government policies and demands on universities have increased to the extent that they outrun their capacity to respond (Clark, 1998; OECD, 2004). As pressure mounts to make institutions more accountable, to develop better linkages with wider society and to raise external funds, their leaders need to be more than outstanding academics. Senior managers are selected for their leadership skills as well as for their academic prowess, with a loss of authority and decision-making power on the part of traditional participatory and collegial bodies (OECD, 2003).

At the same time, demand for administrative services and support continues to develop in both diversity and specialisation. Management of universities now requires of their administrative staff a professional commitment, the exercise of sophisticated skills and the shouldering of responsibilities at levels scarcely imagined by their predecessors of a few decades ago (Dobson & Conway, 2003). In addition, indirect policy tools adopted under the framework of quality assurance systems require HEIs to make many decisions on their own but sufficiently informed of government policies and a variety of other requirements. To respond to such needs, central administrative staff have been built up in response to problems of growth, equity, accountability, and duplication by enacting laws that require larger central offices to disburse funds, set uniform requirements, check compliance, and otherwise implement public policy (Clark, 1983).

Today, HEIs need professional managers in key non-academic functions and specialist administrative staff (OECD, 2004; McInnis, 1998). Gordon and Whitchurch (2007) argue that, because contemporary institutions are obliged to operate simultaneously in both global and local settings, they have become complex organisations, and that they increasingly require people who are able to contextualise academic activity against fluctuations in the external environment, be it in relation to, for instance, schools outreach, regional business development or overseas campuses. Revision of the role of the non-academic staff – those in administrative and academic support functions except for academic administrators – has been reiterated and numerous suggestions can be found in diverse policy papers and other literature.

1. In the UK, the Dearing Report (National Committee of Inquiry into Higher Education, 1997) recognised that administrative and support staff played an increasingly central role in higher education, as a result of the growth of information technology, changes in the delivery of

higher education, and the development of an ‘enterprise culture’ within higher education. It recommended reviewing staff development policies to address their changing roles. Shattock (2003) draws attention to the quality of the appointments in the category of academic-related staff<sup>1</sup>, arguing that these appointees may provide the key elements in translating good academic performance and effective exploitation of local assets into institutional success.

2. In France, a governmental evaluation report on contractual policy (*politique de contractualisation*) – a policy that has significantly increased the autonomy of French universities (Musselin, 2001) – recommended an enhanced professionalisation of staff in order to manage their strategic projects (Frémont *et al.*, 2004). More recently, with reference to a new law for university autonomy (*Loi relative aux libertés et responsabilités des universités*), the minister in charge of higher education pointed to the need for new specialised managerial skills (Pécresse & Chupin, 2007).
3. In Norway, professionalisation of administrative staff developed in the 1980s and 1990s. Gornitzka and Larsen (2004) documented a restructuring of a university administrative work force showing many signs of development towards a professionalised university administration.
4. An Australian national survey showed that professional administrators were reshaping academic work by virtue of their increasingly pivotal roles in such areas as course management and delivery. As universities are increasingly held accountable by external agencies, the extent to which administrative staff support core values is crucial to the preservation of university autonomy, and the control of administrators working alongside academics increasingly impacts on such matters as curriculum selection and delivery, and on research agendas (McInnis, 1998).

*Collaboration and blurring boundaries between academic and non-academic staff* In parallel with the development of professionalisation of non-academic functions, not only the role of academic staff is becoming more complex (Eckel, 2006) but also their authority has declined (McInnis, 2006). Askling (2001) recognises that a sharp growth in student numbers, renewal of programme and course structures, curriculum development, devolution of authority from the state to the institutions, combined with greater dependency on external funding has brought about a complexity of functions and activities for all categories of academic staff. Similarly, the OECD (2004) reports expanding roles for academics: many academics are now expected to engage in commercial activity, consultancy, advisory work and other forms of interaction with society. On the other hand, McInnis (2006) points to the dramatic increase in the dependence of academic staff on the specialist skills of professional and

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<sup>1</sup> In the British system, these are administrative or professional staff appointed on salaries comparable to academic salaries (Shattock, 2003).



technical staff and the reduction of their influence in decision-making.

Given such complexity of the tasks of academic and non-academic staff and the changing power balance between them, a need for collaboration between both groups has been reiterated (Conway, 1998; Dobson & Conway, 2003; Gordon & Whitchurch, 2007; McInnis, 1998; Whitchurch, 2004). Duke (2003) indicates, for example, that enhancing collaborative teamwork between classes of workers (administrative, professional, academic, technical) is one aspect of new management, and is required by and grows with the external networking on which universities depend in order to play a useful and sustainable part in networked knowledge societies, and without which responsiveness and innovation will be stunted

Another consequence of these changes is, as Henkel (2000), McInnis (1998) and other authors suggest, a blurring of the boundaries between academic and non-academic staff. Pointing to the emergence of contributory functions required to contextualise work in global and mass higher education systems, Gordon and Whitchurch (2007) suggest that professional staff capable of this contextualisation undertake interpretive roles at the boundaries between academic work, internal constituencies and external partners. In doing so they undertake what might be described as *quasi-academic* work. This has led not only to greater diversity within the workforce but also to a blurring of the traditional divisions between academic and professional staff. Similarly, in his discussion of academic capitalism, Rhoades (2005) points to the rise of non-faculty professionals – he calls them “managerial professionals” – who conduct some academic work and affect such work.

In Japan, blurring of the boundaries can be observed particularly in those national universities that have developed diverse academic support centres and other specialised services in academic-related and research support areas, such as counselling, placement, career development, international students, and university-industry co-operation. In these centres and specialised services (“academic support centres”), professional staff are being employed mostly as academic staff, with the title of professor, associate-professor or lecturer, even though generally they do not or are not expected to perform traditional academic duties – teaching and research. However, in some universities, particularly private universities, this professionalisation can also be observed among non-academic staff, where boundaries between academic and non-academic staff are relatively maintained.

It should be noted, though, that blurring of the boundaries is not supported by all studies. Conway (1998), for example, criticises suggestions of boundary blurring as ignoring the very different natures of work undertaken by the two groups and the different skills and knowledge required for each. She suggests that those boundaries were never clear and that it is the values of both groups that are converging rather than their work. As reported by Gornitzka and Larsen (2004), Norwegian administrative staff point to rather clear boundaries between their role and the role of the academic leaders. However, while these arguments focus on university management, blurring has been observed most often on borders between academic and administrative tasks as shown in the case of Japanese universities. Dobson and Conway (2003) argue that, recognising the appropriateness of the blurring

argument for the “new professionals”, it is debatable that this argument can or should be applied universally across all administrative work.

The next section, after a brief presentation of relevant government policies, discusses academic support functions in Japanese universities, with an emphasis on professional staff in academic support centres.

## **2. Professionalisation of academic support functions in Japanese universities**

*Policy recommendations for promoting professionalisation* One of the earliest proposals in the post-war period with respect to professionalisation of functional areas in universities was one made by an expert group of American student services practitioners, commissioned by the US-Japan bilateral agreement. In 1952, the group, headed by Wesley P. Lloyd, recommended to the Japanese government a wide range of measures to promote student services. The recommended measures included provision of professionally trained staff in student services, with status and salary in keeping with their significant responsibilities, which should be classified as educational rather than as clerical in nature. Furthermore, the group recognised that it was appropriate for staff members in the student services offices to carry teaching responsibilities, though those involved in major student services should devote only a minor amount of time to regular teaching assignments (Lloyd, 1953).

The recommendations were subsequently studied by the Student Welfare Council (*Gakutokoseishingikai*) of the Ministry of Education (*Monbusho*). In 1958, the Council presented to the Minister a report “Organisation of Student Services in Universities and Improvement of their Administration” for developing student services in Japanese universities, which included establishment of a personnel system that would allow universities to recruit and reward the professional staff. The report defined a personnel system for professional staff including the required competencies, selection and promotion criteria, and reward systems; it suggested creating a new education professional status in addition to that of teaching staff. However, the Council recognised both the incompatibility of a US-like professional personnel system with the Japanese traditional personnel system and the underprofessionalisation of student services in Japan. Accordingly, the Council proposed providing professional staff in student services with an academic rank (professor, associate professor, *etc.*), and the idea of a non-academic professional staff was not adopted. Following the disruptions caused by student organisations around 1970, student services were considerably re-oriented in the direction of controlling student activities rather than helping them, and their professionalisation was no longer on the agenda.

In the 1980s, in the face of the massification of higher education and other socio-economic challenges, the National Council on Educational Reform (*Rinjikyokushingikai*), an advisory body to the Prime Minister, stressed the need for professionalising managerial functions of universities in its series of recommendations for reforming the entire higher education system. The Ministry of Education, in consultation with the University Council (*Daigakushingikai*), established in 1987 on the

recommendation of the National Council, proceeded with diverse reforms in the 1990s, and notably in 1991 with deregulatory measures such as the simplification of the Standards for the Establishment of Universities<sup>1</sup>. As a result, university autonomy was significantly enhanced: with each institution required to make decisions based on its own judgement, this demanded development of its managerial capability. The 1995 report of the University Council “Facilitation of University Management” called for revision and improvement of administrative organisations and enhancement of the partnership between academic and non-academic staff in addition to greater leadership by university presidents. Furthermore, the Council called for development of support functions and encouraged professionalisation of certain areas, including international affairs and admissions, in its 1998 report “A Vision of Universities in the 21<sup>st</sup> Century and Reform Measures: To Be Distinctive Universities in a Competitive Environment.”

Moreover, a number of other recommendations were made on issues relevant to professionalisation of universities’ non-academic functions. The 1999 report of the Central Council for Education (*Chuokyoikushingikai*)<sup>2</sup> “Improving Articulation between Primary-Secondary Education and Higher Education” called for development of admissions offices staffed by professional admissions officers. The 2000 report of a ministerial panel of experts “Enrichment of Student Life in Universities – Development of Universities in Support of Students” (Hironaka Report) exhorted university administrators to switch their emphasis from a “teacher-centred university” to a “student-centred university”, and recommended a number of measures including collaboration between academic and non-academic staff, professionalisation of non-academic staff in student services, and recruitment of specialists (counsellors, career advisors, *etc.*) from outside the university. Other recommendations for professionalisation could be found in areas such as university-industry co-operation, information technology, and financial management.

As shown above, a significant number of proposals have been made with respect to professionalisation of non-academic functions. However, most of the proposals were not implemented, largely due to the structure of the personnel system and the traditional university culture. While recognising the need for non-academic staff with expertise in admissions, the second of these issues led the University Council’s report in 2000, “Improvement of University Admissions” to propose as interim measures, the development of an organisational structure in which academic and non-academic staff would co-operate, so as to minimise the resistance from teachers as well as acknowledgement of the time required to develop professional staff. On the other hand, the personnel system issue was particularly important in the national universities, where a civil servant regime applied.

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<sup>1</sup> Before this reform, course subjects taught at undergraduate level were classified into four categories: liberal arts (including humanities, social sciences and natural sciences), special subject education, foreign languages (not less than two languages) and physical education and health: all universities were required to organise their programmes to accord with this schedule. After the deregulation, the only requirement of the standards is that of acquisition of a minimum total number of credits (124).

<sup>2</sup> An advisory board to the Minister of Education on overall educational policy. In 2001, in the process of the governmental reform, it integrated several specialised advisory bodies including the University Council.

One of the objectives of incorporation of the national universities carried out in 2004 was to introduce flexibility into the governance of universities, including human resources issues (Oba, 2005). The ministerial report on incorporation of the national universities (Study Team concerning the Transformation of National Universities into Independent Administrative Corporations, 2002) urged that the duties of clerical staff, beyond their administrative work, should not be limited to the support of education and research activities by academic staff. Rather they should actively participate in university management in collaboration with academic staff. Furthermore, by taking into account the expansion of job areas requiring a high degree of specialisation, it called for the creation of personnel systems to accord with this need for specialisation and for a review of recruitment and development of non-academic staff. After incorporation, neither academic nor non-academic staff have civil servant status, and the national universities are able to recruit non-academic staff without having to hold a national civil service examination. Some universities have recruited specialists for managerial posts requiring specialised knowledge and skills from outside the universities, but the number of advertised non-academic positions remains limited. It should be noted though that, particularly in the larger national universities, numerous specialists have been recruited as academic staff and often placed in diverse academic support centres. This issue is discussed in the next section.

#### *Academic support centres and their staff*

Development of academic support centres Institutional efforts typically observed for quality assurance systems for improving student learning include such activities as programme reforms (vocationalisation, career education, *etc.*), academic staff development, teaching evaluation and development of learning support systems. Some Japanese universities, especially the larger national universities, have developed academic support centres, such as those for career education, international students and education research. These developments are in accord with the repeated recommendations of policy papers discussed above.

According to a survey conducted in 2006 (RIHE, 2007)<sup>1</sup>, academic support centres have been or are being established in nearly two-thirds of universities. The centres are more frequently developed in national universities than in local public and private universities, and are particularly well developed in large comprehensive and multidisciplinary universities (category C1, C2 and M1). Professionalisation of academic support functions is being developed principally in the larger universities that are more likely to have additional resources at their disposal.

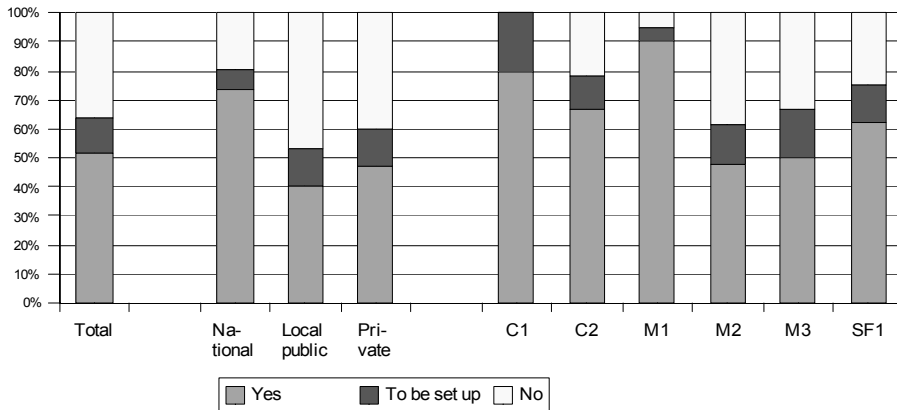
These centres have different missions, ranging from academic staff development to general education.<sup>2</sup> Some are large multifunctional centres, and others are small and mono-functional. In

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<sup>1</sup> A questionnaire was sent to all universities at three levels of academic administrators (presidents, faculty deans and department heads). Their responses were classified by type of control (national, local public and private) as well as by category (see Annex).

<sup>2</sup> General education is not necessarily a function of academic support centres in the strict sense of the word. But centres in charge of general education are most often responsible for campus-wide academic support activities. In this article, the function of general education is not addressed apart from the survey results.

**Figure 1. Establishment of academic support centres by type of control and by category**

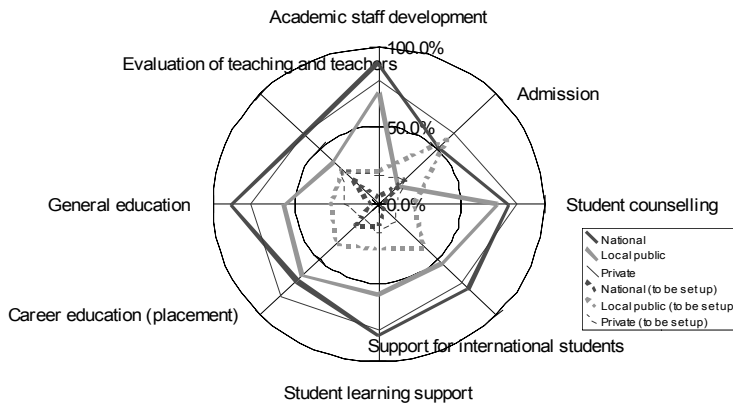


Note:

Note: N=270  
Source: RIHE (2007)

local public universities, centres have fewer functions than those of national and private universities.<sup>1</sup> Staff development and general education functions are most developed in the national universities, and the career education (placement) function in private universities, which have been more attentive to the employment of their graduates than the national and local public universities. However, many local public universities plan to develop centres, and to a lesser extent so do the national and private universities particularly in regard to the currently less developed functions. As a whole, centres at all three types of universities will progress in order to fulfil all the functions addressed in the survey.

**Figure 2. Functions assigned to academic support centres**



Note: N=261  
Source: RIHE (2007)

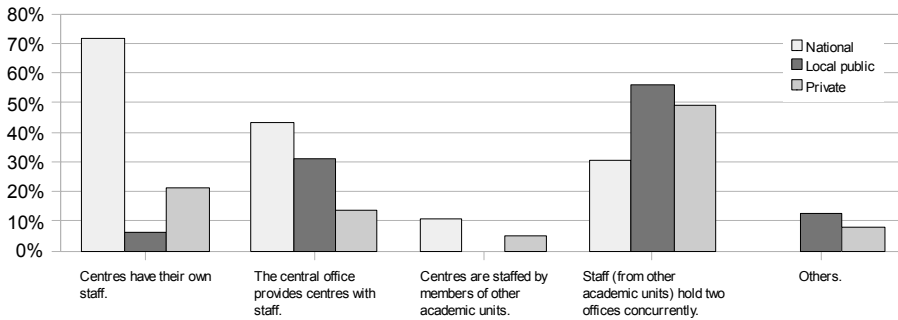
**Staff in centres**

*Staff allocation* Of the centres identified in the survey, most of those in the national universities have their own professional staff; in the local public and private institutions they tend to rely heavily

<sup>1</sup> Centres in a university are addressed as a whole in this article. The functions referred to here are those performed by all relevant centres in a university.

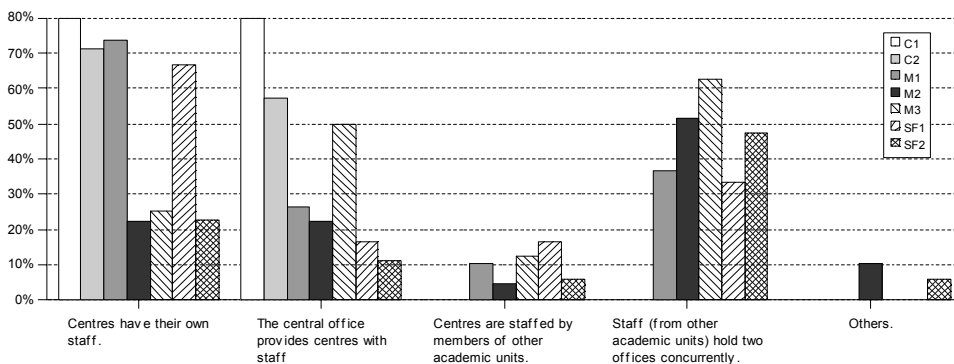
on other academic units for staff to keep them running (Figure 3). When analysing the staffing by category (Figure 4), centres in the larger comprehensive/multidisciplinary universities are seen to have their own staff or those allocated by the central office. Many other universities seem to have much difficulty in staffing their centres.

**Figure 3. Staffing (professional) of academic support centres by type of control**



Note: N=270 (multiple answers allowed)  
Source : RIHE (2007)

**Figure 4. Staffing (professional) of academic support centres by category**



Note: N=270 (multiple answers allowed)  
Source : RIHE (2007)

*Professional staff* Table 1 shows the situation in regard to professional staff (specialists) in student services. Apart from counselling and career support, over half of the universities have no professional staff, and recruitment from outside – either as academic staff or as non-academic staff – is not common. Specialists coming from outside the universities are most often found in counselling, and this is the only functional area in the survey in which professional staff from outside outnumber those developed inside. The proportion of specialist professional staff employed as academics is much higher in the national universities than in local public and private universities.

In the future directions (Table 3), very few universities intend to reduce recruitment of specialists from outside, but well over half the universities (58-80%) have no intention of changing their current

practice. With a limited number of universities intending to develop specialists internally, it seems that professionalisation will grow only gradually.

**Table 1. Professional staff in student services (current state)**

|  | Instructional support | Learning support | Student life support | Counselling | Career support |
|--|-----------------------|------------------|----------------------|-------------|----------------|
| Employ specialists from outside as non-academics | 9                     | 6                | 10                   | 128         | 60             |
| Employ specialists from outside as academics     | 7                     | 10               | 1                    | 43          | 17             |
| Develop specialists inside the university        | 87                    | 86               | 102                  | 76          | 93             |
| No specialists in the university                 | 140                   | 142              | 128                  | 36          | 93             |
| Total  | 243                   | 244              | 241                  | 283         | 263            |

Note: N=243 (multiple answers allowed)  
Source: Onuki (2007)

**Table 2. Professional staff in student services by type of universities (current state)**

|  | National universities | Local public universities | Private universities |
|--|-----------------------|---------------------------|----------------------|
| Employ specialists from outside as non-academics | 27                    | 34                        | 152                  |
| Employ specialists from outside as academics     | 31                    | 4                         | 43                   |
| Develop specialists inside the university        | 37                    | 33                        | 374                  |
| No specialists in the university                 | 111                   | 101                       | 327                  |
| % of academics among professional staff          | 33%                   | 6%                        | 8%                   |

Note: N=243 (multiple answers allowed)  
Source: Onuki (2007).

**Table 3 Professional staff in student services (future directions)**

|  | Instructional support | Learning support | Student life support | Counselling | Career support |
|--|-----------------------|------------------|----------------------|-------------|----------------|
| Employment from outside will increase.     | 8                     | 12               | 2                    | 56          | 51             |
| Employment from outside will decrease.     | 0                     | 1                | 1                    | 2           | 3              |
| Develop specialists inside the university. | 50                    | 43               | 40                   | 27          | 44             |
| No change is expected.                     | 155                   | 160              | 168                  | 143         | 134            |
| Total                                      | 213                   | 216              | 211                  | 228         | 232            |

Note: N=243 (multiple answers allowed)  
Source: Onuki (2007).

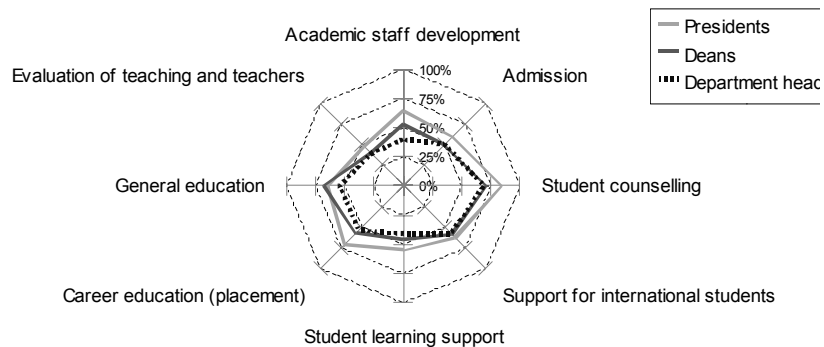
In the national universities as a whole, many of the professional staff recruited externally and located in the centres studied in the survey have academic rank. This is partially (but importantly) due to the fact that, before incorporation, the national universities could only employ non-academic staff – professional or not – who were qualified in the national public service examination. In addition, for

certain kinds of works, academic rank was regarded as necessary for working with other academic staff, and as providing a preferable condition for recruitment of specialists externally.

*Issues and challenges* Centres discussed in the previous sections are not always highly regarded in the universities and indeed are often looked upon with scepticism. As is clear, many of the centres are faced with staffing problems. Centres and the traditional academic units compete for ever decreasing resources, and the criteria appropriate to the centres differ to a considerable degree from those of the academic units, which often cause tensions inside the universities.

Attitudes to the centres are quite divergent among the different groups of decision-makers. Figure 5 shows the responses to the survey expressed by the three levels of academic administrators. The satisfaction shown by presidents is always superior to that of department heads, with that of deans being situated generally in the middle. The gap between the presidents and the department heads is the largest concerning academic staff development (65% against 40%). From these responses, there seems to be little consensus on the effectiveness (and probably the *raison d'être* itself) of centres on each campus. Centres – often set up on the initiative of the presidents – compete with traditional academic units in universities and are supported only by the central authorities; if the president changes, centres are likely to lose support for their existence.

**Figure 5. Effectiveness of the centres, as evaluated by three levels of academic administrators**



Notes: N=141-152 (Presidents)/378-402 (Deans)/1332-1363 (Department heads)

Underevaluation of centres by basic academic units may derive from the perceived administrative nature of their activities, many of which are characterised by normative approaches. It seems that, although their professional staff may be classified as academics, the mode of their activities generally differs from that of the traditional academic units. This illustrates the way that the traditional division between academics and non-academics and between academic tasks and administrative tasks has now become an oversimplification, as Askling (2001) reports in her study of special support units in Swedish universities, which are often staffed with highly specialised academics. The underevaluation can also be interpreted as arising from tensions between centres and academic units caused by



competition for resources. As well as the administrative nature of the centres' activities, Askling identifies tensions between special support units and other academic units in her study cited above.

Moreover, the values developed by the centres do not seem to converge with those of the academic units. Conversely, academics in the centres seem to develop their own set of values, as Becher and Kogan (1992) argue in terms of non-academic administrators. Values shared by the centres seem much closer to those of the central authorities and administrative staff – identification with the institution, responsiveness to needs of society, *etc.* – than those shared by the traditional academic units. Under the new quality assurance systems, institutions have largely been released from state regulations, but the academic staff are more exposed to various pressures as part of institutional management and governance. In this context centres are often looked upon as management advocates, or at least as channels through which these pressures are exerted.

Furthermore, centres compete not only with traditional academic units but also with administrative units for resources. The personnel division manager in a national university expressed a concern that the university could not fill the positions of retiring non-academic staff, after distributing the entire centrally administrated staff quota to its centres.<sup>1</sup> In the future, competition is likely to be harsher in an environment where enrolments of 18-year olds and block grant allocations by government – predominantly used for the salary – are declining. The situation of centres, being neither academic nor administrative by nature, remains very unstable in an environment of blurring academic and non-academic staff and their activities.

### 3. Conclusion

Regardless of the differences that exist among national systems, HEIs are facing similar challenges, such as massification, globalisation and marketisation, which have prompted the development of quality assurance systems, changing the role of the state and enhancing the autonomy and responsibility of HEIs. To meet with these challenges, HEIs have diversified their workforce, by professionalising managerial and academic support functions in order to enhance their managerial capability and through activities in support of academics and students, entailing a blurring of boundaries between academic and non-academic staff.

In Japanese universities, extended discussion of professionalisation of non-academic functions has resulted in numerous recommendations to the government. Nevertheless, most of the recommendations have not been implemented, principally due to the persistence of a binary division of staff – academic and non-academic – supported by the traditional university culture and a rigid personnel system, particularly in the national universities.

However, since the 1990s, in the face of the massification and other increasingly complex socio-economic challenges, the Japanese government has proceeded with deregulation and developed a quality assurance system, though the start of the latter lagged far behind the former. These changes

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<sup>1</sup> According to an interview in August 2007.

have enhanced the autonomy and responsibility of HEIs and significantly modified their management mode. The new responsibilities of HEIs involve a complexity of tasks as well as calling for diverse expertise in management and academic support activities, which has brought about the development of multiple centres and other services staffed by specialists, particularly in national universities.

These changes have blurred the traditional binary division of tasks and staff – academic and non-academic. Many of the professional staff positions in academic support areas are filled with people holding academic rank, particularly in the national universities. Possession of an academic rank may be helpful when they work with other academic staff, although their values differ; but in an environment of declining government resources and a scarcity of new positions, tensions arise over differences of values and resource allocation not only with traditional academic units but also with the secretariat.

Finally, in Japanese universities, development of professionalisation of non-academic staff has been largely neglected, although many recommendations and policy papers have endorsed it. In view of the professionalisation of tasks by staffing specialists holding academic rank in some academic support centres, it would seem that professionalisation of non-academic functions might have been – in a sense irregularly – proceeding particularly in national universities where diverse centres have been developed. As suggested by numerous policy papers, it is indispensable that Japanese universities develop professional staff – such as “administrative managers”<sup>1</sup> (Whitchurch, 2004) and “managerial professionals” (Rhoades, 2005) – backed by specialised knowledge and skills as well as experience. Professionalisation of non-academic staff is all the more necessary given that administrative restructuring is part of a much larger societal change – development of quality assurance is a derivative of it – that has to do with the professionalisation of the work force in general (Gornitzka & Larsen, 2004). Yet such change will create tensions, the resolution of which will affect the success of an HEI. Although these new professional staff’s manifest function remains that of support or advice, as shown by Henkel (2002), they are also regarded as change agents in what had been accepted as uncontested academic territory. Therefore, what is needed now is to recognise the complementarity of both cultures, academic and administrative regardless of the possibility of their convergence, and by creating shared commitments, assure collaboration between staff, irrespective of the titles they hold.

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<sup>1</sup> Staff who do not hold academic posts, but who have responsibility for functions such as student services, finance, human resources, estates, enterprise and external relations.

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## Annex

## University Categorisation used in the RIHE survey (RIHE, 2007)

| Category                            | Description  | Number |
|-------------------------------------|--|--------|
| Comprehensive university 1 (C1)     | Former imperial university   | 7      |
| Comprehensive university 2 (C2)     | Comprehensive university, founded on the core of a university under the old system   | 14     |
| Multidisciplinary university 1 (M1) | Multidisciplinary university with a faculty of medicine, not having its origin in a university under the old system            | 34     |
| Multidisciplinary university 2 (M2) | University with at least two faculties without faculty of medicine, not having its origin in a university under the old system | 309    |
| Multidisciplinary university 3 (M3) | Multidisciplinary university founded on the core of a university under the old system, without faculty of medicine             | 22     |
| Single-faculty institution 1 (SF1)  | Single-faculty institution (medicine)  | 25     |
| Single-faculty institution 2 (SF2)  | Single-faculty institution (apart from medicine)   | 289    |



# A Review of Studies on Higher Education and the Labour Market in Japan

Naoyuki Ogata\*

## Introduction

A research paper with a similar title was written 10 years ago (Ogata, 1997). On the same theme, three good reviews were published in the 1990s by Yano (1993), Yoshimoto (1997), and the Japan Institute of Labour (1998a). It is evident that the research area around higher education and the labour market has gradually obtained wide acceptance (or rather that the issues on this theme have become more critical as a social problem than previously). While the research paper I wrote 10 years ago was far from well constructed, it is useful to adopt the same viewpoint with the aim of providing continuity and by comparison, indicating the direction in which the studies in this area have progressed since then.

This paper seeks to overview retrospectively studies on higher education and the labour market since the 1990s in the following sequence: macro trends in higher education and the labour market (Section 1); overview of progress in economic analysis of education (Section 2); and then a review of major studies in the fields of: transition from higher education to work (Section 3), initial careers (Section 4), and the relevance of higher education to work (Section 5).

## 1. Higher education and the labor market since the 1990s

Before starting to review the studies, it is useful to present an overview of the macro trend in higher education since the 1990s<sup>1</sup>, because, in reality, many of the studies in this area resonate with this trend.

The period witnessed a sharp decline in the 18-year-old population. In 1990 the 18-year-old population was 2.01 million, but by 2004 it had dropped to 1.41 million. Nevertheless, in the same period, the number of students who went into higher education<sup>2</sup> changed only very little: from 1.08 million to 1.05 million, with the participation rate in higher education having increased from 54% to 75%.

During this period, the pattern of admissions to higher education also changed largely. The number of those entering university stagnated from the mid-1970s to the mid-1980s, but then started increasing consistently. The numbers were 492,000 in 1990 rising to 598,000 in 2004, with the participation rate also increasing from 25% to 42% during the same period. The numbers of students

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<sup>1</sup> The data source is *The Statistics of Japanese Higher Education*, RIHE, Hiroshima University.

<sup>2</sup> Students who go to university, junior college, college of technology, and specialized training college (specialized courses) are included.

who went to junior colleges also increased from the mid-1980s, but dropped sharply after passing the peak of 254,000 in 1993. They then fell to 106,000 in 2004, with the participation rate also declining from 14% in 1994 to 8% in 2004. On the other hand, the numbers of students who entered specialized training colleges (specialized courses) remained steady during the same period. The number who enrolled, 339,000 in 1990, remained at 335,000 in 2004, though the participation rate had increased from 17% to 24% reflecting the decrease in the 18-year-old population.

The rapid increase in the number of those who entered higher education and changes in the structure of higher education participation coincided with an economic downswing caused by the collapse of the bubble economy. During this period, employment prospects for higher education graduates deteriorated rapidly. The employment rate of new university graduates reached 81% in 1990, but then dropped to 56% by 2004. That of junior college graduates also fell from 87% in 1990 to 62% in 2004<sup>1</sup>. Until the late 1990s, this kind of deterioration in employment prospects was accompanied by a reduction in the advantage of higher education graduates in the labour market, but their advantage improved after the late 1990s.

For example, comparison of the pay of higher education graduates at age 20-24 with that of high school graduates of the same age (high school graduates pay = 100) shows, the relative pay of male university graduates declined from 99 in 1990 to 96 in 1997, and then rose to 103 in 2003. This is the highest level since the mid-1960s. The pay of female graduates from higher education relative to that of high school graduates has been always strong. The relative pay of female university graduates declined to 107 in 1997 from 115 in 1990, but then reached 117 in 2003, the highest ever since the survey was started in 1973. Relative pay of female graduates from junior colleges and colleges of technology advanced to 113 in 2004, compared with 103 in 1990.

The fifteen years since 1990 that this paper is reviewing was the period in which an increase in the rate of participation in higher education, especially in the university, coincided with stagnation of the economy. This appeared straightforwardly as a deterioration in the employment rate. However, the advantage of higher education graduates in the labour market has increased more than ever since 2000. This implies that relatively the employment prospects for high school graduates have declined even more seriously yet, at the same time, that completion of higher education is not a necessary and sufficient condition for securing a favorable employment condition. In other words, differentiation and disparity in job seeking or job status have been steadily widening among higher education graduates.

## **2. Enrollment behavior and the rate of return --- Economic analysis of the effects of education**

Data on the economic analysis of education have not accumulated sufficiently in Japan, but

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<sup>1</sup> No data on employment status after graduation for students of specialized training colleges (specialized courses), have been made public.



interests in the economic aspects of education have been inherited seamlessly. The interests are reflected not only in translated works, such as studies by Schultz (translated by Shimizu 1964) and Becker (translated by Sano 1976), but also in publications with titles related to the economics of education, including those of Sumiya (1970), Watanabe (1982), Ichikawa, Kikuchi, and Yano (1982), and Shirai (1991). Subsequently, Arai (1995; 2002), Kaneko and Kobayashi (1996), and Oshio (2002, 2003) examined an economic approach to education, not only by reviewing theories, but also by conducting specific empirical analyses. As Oshio and Senoo (2003) have conducted reviews on empirical analyses of the economics of education in Japan, this aspect will not be pursued further in this article. In this paper, I will mainly consider the trends in studies on enrollment behavior and the rate of return, which is the theme directly related to the relevance between enrollment and employment prospects as indicated in Section 1.

First, among studies on rates of return for each university and field of study, Arai (1995) calculated the rates of return for medical and dental education, and separately for national and private universities. He concluded that these subjects provide advantageous investment because of their high rates of return. Yashiro and Ito (2003) also showed that the rate of return for the medical field was higher than for other fields in 1990 and 2000. They also suggested that in the case of law schools (professional graduate schools) the government should not introduce similar regulations to limit enrolment as in medical schools. An alternative approach was used by Iwamura (1996) in calculating rates of return for each university and field of study, based on the data for 1992; she showed that the rate of return for prestigious universities was higher than for other universities and that the rate of return from social sciences was higher than that from science and technology. Yano and Shima (2000) calculated rates of return for each profession. They showed that across the levels of educational attainment, three general categories of occupation could be identified: managerial, sales, and a large group of vocational specialists; formation of human capital differs in each of these categories.

As to the relevance between enrollment behavior and the rate of return, Arai (1995) showed from data up to the mid-1980s that the enrollment rates of male students can be better explained by household income and education fees for higher education institutions, which are related to fundraising possibilities, rather than by the rate of return. Based on data from 1958 to 1980, Yano (1996) explained that the rates of application to universities and junior colleges are influenced by such variables as household income, tuition fees, examination pass rates, and the oil price shock: confirmation of this can be found even in data from as late as 1995. Shima (1999) reviewed the relevance between enrollment behavior and the rate of return, based on data from 1973 to 1996, and pointed out that the rate of application to universities was being influenced by the economic effects of receiving higher education even after the 1980s. Shima also studied aspects of the incentive to enroll in higher education from the rates of return by size of firm and industry and concluded that the incentive to enroll in the more prestigious universities was getting stronger. Arai (2002) studied data from the early 1990s and pointed out that the rate of return from higher education for female students

was higher than that for male students though the rate of return from junior colleges for female students had been decreasing recently, which was in line with the observation that the role of junior colleges in providing higher education for female students could be ending.

The above studies show that the demand for university graduates continued to be firm even after the rate of university enrolment had increased, although there are disparities in formation of human capital among different universities, different fields of studies, and different jobs. The studies showed an understanding that was shared with the translation of a macro trend in the labour market for university graduates since the 1990s as discussed previously. Nevertheless, for confirmation of this, analyses of data continuing after 2000 have yet to be published. When considering investment effects, and the recent evaluation of universities, study themes should cover, not only the economic effects after graduation, but also formation of human capital during university education (*i.e.* the effects of education) and analyze their factors. As Oshio and Senoo (2003) pointed out, the study of how the quality of education influences the effects of education has yet to be started.

### **3. Studies on the transition from higher education to work**

In Japan, studies on transition from higher education to work have focused on the transition to initial jobs because of the employment practice of employing simultaneously the groups of new graduates. The specific object of study is the relationship among the three parties: suppliers (universities), employers (companies, the market), and students. Until the 1980s, analyses focused on the relevance of the hierarchy of companies and of universities, but new research areas have been developed more recently.

For example, the Japan Institute of Labour (1992, 1994) examined the process of career choice and the reality of career guidance to explore disparities in employment opportunities and turnover behavior among different universities, different fields of studies, and between men and women. It also revealed differences in career guidance systems between the different educational sectors and concluded that it was more satisfactory in private universities. In the background of aggravated job prospects, employment support at each university was attracting attention. Specific data on job seeking and recruiting activities were needed to discuss this issue.

During times of change, we tend to focus attention on the obvious changes. But mechanisms connecting universities and companies cannot be all changed. Studies by Kariya (1995), and by Iwauchi, Kariya, and Hirasawa (1998), on the changes to the 'overt system' of the so-called recruitment agreement, focused on the 'covert system' such as the human network and the possibility of access to information. They reviewed the process of transition to work pointing out the disparity in educational backgrounds - that is to say the university that they graduated from- was being preserved despite deregulation in the job market.

During the period when these studies were conducted, job prospects for higher education graduates deteriorated. Though as the situation was not yet serious, studies focused on analysis of the

mechanism of employment, while taking employment at the time of graduation for granted. However, by the late 1990s job prospects for the young generation had worsened. Then, the issue of unemployment among young people came under closer attention.

Genda (2001), based on detailed empirical analysis, studied the background to the difficulty for young people of finding jobs, and concluded that loss of opportunity for young people to find job was due to middle-aged and older people retaining their jobs, rather than a decreased motivation for finding jobs by young people themselves. Genda and Maganuma (2004) cited factors of the “labour market”, “education”, and “family environment” as reasons for the increase of NEETs and advocated that measures to solve this problem need to start as early as in the teenages. Ohta (2003) reviewed recent studies, examining whether the problem is caused by the demand side or the supply side. He looked into the issue of decrease in job finding opportunities for young people, while also taking into consideration the problem of decline in academic ability. Kosugi compiled a study (2002) directly addressing the issue of *freeters* (part-time jobbers), which examined the disadvantage in not being accepted in the system of employing new graduates in a group and analyzed the influences of social stratification as a determinative factor. Kosugi (2005) also studied the actual situation of young people who were having difficulties in transiting to a career and their background by the interview method. Honda (2005) pointed out that the system for finding jobs *via* educational institutions had already collapsed and advocated the necessity to recover a relevance of education to work by educational reform.

Analyses of NEETs and *freeters* are, as far as studying the situation of such young people themselves, usually centered on case studies using interviews, because it is difficult to conduct large-scale surveys using questionnaires. Therefore, most of the studies analyze the situation of high school graduates, because they are relatively more likely to become NEETs or *freeters*, or to discuss young people in general terms. Okubo (2002) has published a study on jobless university graduates, but studies of this aspect of higher education have yet to be conducted: analyses of the composition of jobless people according to educational background is expected to be developed in the near future.

Both in the case of early turnover of employment and for *freeters* and NEETs, the important point is whether the transformation currently taking place in the patterns of transition from education to work is temporary or structural. If it is structural, it might indicate changes in the viewpoint of society on the style of work. Nakamura (2000) examined changes between the generations in perception of academic records. We should not forget that job selection is not only based on economic rationality but that the way of working can also be influenced by the public eye. Analysis that interconnects changes in job consciousness between generations and consciousness of academic records, for example, can be an important theme to study.

As has been indicated, this study area covers the relationship among universities, companies, and students. But recent studies have tended to focus mainly on students. Reviews on universities' career support, or changes in the content of education are limited to presentation of examples in magazines.

The theme of companies' principles in recruitment and training are only examined partly in the studies written and compiled by Nagano (2004) and the Japan Institute for Labour Policy and Training (2005). We often hear about the impressions that the relation among the three parties has changed, but is this really the case? Empirical analysis has yet to be conducted. In such analyses, it would be important to have a viewpoint that includes all of the three factors. In this respect, the approach used by Nakamura (1993) to examine employment agreements as an intermediary system and by Agata (2000) in examining the substitutability of academic records by qualifications, can serve as a useful markers.

#### **4. Studies on initial careers**

It was Yano (1993) who pointed out that there are quite a lot of university graduates who changed jobs while still in their 20s. However, under the system of employing graduates as a group, where the relation between the firm's size and school history was evident, analyses were mostly conducted on large-scale companies in which few workers changed jobs at an early stage of their careers. Society and researchers were only interested in the transition from education to graduates' first jobs. Despite the implication of human capital theory, researchers tended to ignore the role of university education in career formation at the early stage. It was only after the smooth transition to first jobs collapsed, that their point of view has started to shift to formation of initial careers.

Two types of analyses of careers of university graduates are adopted. First, is "analysis of careers of university graduates" with an emphasis on "career analysis", developed in the field of labour economics. Imada and Hirata (1995) showed by case analysis that, at the early stage of careers, personnel matters in companies are mostly based on the seniority system, only later does competition in the speed of promotion become evident. Studies by Koike (compiled in 1991), Koike (1993) and Koike and Inoki (compiled and written in 2002) analyzed the career structures of white-collar university graduates in Japan and made international comparisons. They focused their attention on both the horizontal aspects of careers (width of jobs experience) and the vertical aspect of career (mechanism of promotion). They concluded that wide-ranged expertise is expected internationally and that the common belief, that Japanese companies employ generalists and European and U.S. companies, specialists, was not really the case; and that promotion was fast in Europe and the U.S, but slow in Japan.

These studies were analyses of large-scale companies. They are not based on the viewpoint of relevance between university education and careers. Nevertheless, they offered valuable information for clarifying the relation between universities and companies. For example, they cited the skills to cope with uncertainty as an important ability required in workplaces. If this ability, which is usually expected in the context of wide-ranged expertise, is a core skill in workplaces, it would be worth considering it in the context of training in university education. They also posed questions on the wide-spread theory of career structures, implying that relevance between higher education and a career is weak, because Japanese companies employ generalists, and showed that there was much room to

discuss the role of higher education.

The other approach is to analyze “careers of university graduates”, with an emphasis on “university graduates.” A study conducted by Tachibanaki (1995) focused on promotion within companies and pointed out that graduates from prestigious universities had an advantage in promotion and that graduates from humanities or social science courses and those from science courses have different orientations towards promotion. Kariya and Hamanaka (2000) explained that the first job position would have an important role in the process of subsequent promotion and that school history had a significant influence on career changes after the first job. A study by Nishimura, Hirata, Yagi and Urasaka (2003), targeting graduates from universities' social science courses, analyzed the influence of academic achievement in subjects at high schools on income. They showed that good academic achievement in English and mathematics had positive effects on income. Matsushige (2004) examined the effects of academic achievement: English language ability, and extracurricular activity during study time on income and job grades. The results indicated that good academic achievement had a positive effect in job finding and it also had positive effects on starting salary during the time of decrease in labour demand. It also showed that extracurricular sports activities do not have any influence on job finding, income or promotion, but that English language ability had advantageous effects on income and promotion.

This kind of approach, different from “analysis of careers of university graduates” with its emphasis on “career analysis”, places the emphasis on universities or university education, by examining study experience and the effects of school history on careers. However, this approach is mainly based on economic analysis. Its scope of study on the effects of higher education is limited to the field of income and promotion, because its subject of analysis is limited in social achievement. Sociological and economic collaboration is evident in their affinity in the framework of relevance between academic record, or school record, and economic status. However, it seems that, collaborative study on higher education and economics with a viewpoint of examining careers as a “connection in competence formation through higher education and training within companies” has yet to be developed. This kind of collaboration would need a wide perspective to analyze higher education and intra-corporate training totally.

## **5. Relevance of higher education to work**

Career analyses of university graduates based on income and promotion were often criticized for ignoring the issue of relevance between abilities acquired during study time and the abilities used at work places. This kind of relevance failed to attract attention from society when both universities and economy were deemed to function well. But these days it is no longer acceptable to say “university education is useless”, as public concern for added value in university education has heightened, probably because companies can afford only limited training for new recruits, and because measuring learning outcomes and accountability has come to be a significant issue in the context of university

evaluation. Against this background, there are moves to clarify what is learned in universities and how this is linked to work.

The Japan Institute of Labour (1995) analyzed in what manner university education contributed to formation of professional ability. They classified university education into categories of formal education and informal education and pointed out that the importance lay in highly versatile intellectual training acquired through the process of learning the theoretical framework in each discipline rather than the theoretical framework itself, while acknowledging that there is “professional expertise” and “expansive intelligence” in the knowledge structure at work places. Kobayashi (2001) touched upon the subject of cultivation of human resources in the fields of science and technology, and pointed out that fundamental knowledge and skills are important in university education because following uncertain dimensions, such as changing industries or continuing segmented fields of specialization, would rather aggravate the mismatch. At the same time, Kobayashi noted that it was necessary to consider fostering ability to combine fundamental knowledge and skills and ability to work in cooperation with inhomogeneous groups of people. The Japan Institute of Labour (2003) conducted an international comparison between Japan and the Netherlands, focusing on how ability can be accumulated in the process from graduation to initial career, and showed that each nation has its own way of developing the relevance of higher education to work. Yano (2005), based on a survey of graduates in engineering, showed that educational and learning experience during study time was influencing occupational evaluation of university education through the route of “learning history”, which was, in other words, the process of acquiring academic knowledge. The Japan Institute for Labour Policy and Training (2005), after having examined employment and career formation at early stages, based on interviewing companies in Japan and the UK, advocated the necessity of seeking the relevance of higher education to work in Japanese style, which is different from that of continental Europe, where they aim to train professionals at the undergraduate stage of education.

Many of the above studies pointed out the importance of portable abilities that are common in academic training, rather than the professional knowledge and skills directly related to work. Focusing on such an educational function in universities should be a reasonable result considering that the connection between fields of studies and occupations is loose and that most university graduates are in their early 20s when they start working at the entry level and need on-the-job training in Japan. The next issue is to what extent Japanese universities are able to foster this kind of ability. One method to examine this theme should be by means of international comparison surveys. For example, the Japan Institute of Labour (2001) concluded that, not only the academic record of university graduation, but also the availability of the knowledge and skills acquired during study time in the workplace were frequently lower in Japan than in European countries. It emphasized the necessity of removing structural mismatching and recovering occupational relevance in the content of university education. However, an impression that Japanese university education is inappropriate might be too one-sided. Yoshimoto (2001) noted that the gap in evaluation of university education between Japan

and Europe could narrow when factors such as age are considered and emphasized the importance of examining a system in which higher education and in-company training are combined to yield a fully-fledged member of society.

These studies were focused on university graduates. Other studies covered graduate school education and short-cycle higher education. The Japan Institute of Labour (1997) examined the issue of continuing education at graduate schools, using three surveys on institutions, students entering from workplaces, and other regular students. Studies performed by Honda (2003a, 2003b), by analyzing education of part-time adult students in social science graduate schools, concluded that graduate school education would not easily result in application at workplaces, but confirmed that knowledge and skills required at workplaces are acquired during study time. For junior colleges, a study by Kaneko (1992) reviewed evaluation and future prospects of junior college education according to routes combining fields of studies and job types; while the Japan Association for College Accreditation (2005) examined the issue of long-term career prospects as well as “academic advancement relevance” in terms of transfers to universities., The Japan Institute of Labour (1998b) surveyed graduates of colleges of technology and comprehensively analyzed the process of enrollment, study experience at colleges, and the careers of students after graduation; Shintani, Inomata, and Katase (1999) revealed patterns in graduates' employment and their attitudes towards job finding by conducting case studies. For specialized training colleges, there is a study by Kan (1996) on the system and its curriculum characteristics, but study on graduates has yet to be conducted.

The number of reviews on extracurricular activities has decreased during the period of this review except for that on career support such as internships, probably because interests have shifted in the heightening occupational relevance of the regular curriculum. But, when considering the fact that a large proportion of graduates are youngsters in Japan, educational functions including extracurricular activities are also an important function of higher education. In addition, characteristics of personality and attitude, both of which are largely influenced by extracurricular activities, are considered to be a very important element in work performance. These kinds of soft skills, related to personality and other factors, are usually considered as controlling variables influencing educational outcomes. But it could be important to consider the changes in soft skills during study time as important outcomes of university education.

## **6. Issues and perspective**

It was Yano (1993) who said, “It is too early to make an exact assessment of studies on the education and employment system, because this study area is not yet sufficiently developed.” More than ten years have passed since then. Have studies on higher education and the labour market been deepened or progressed? I have already made comments on each study area in the preceding sections. Now, I would like to review research issues from a different point of view.

From analysis of the macro statistics of the state of employment, the rate of return still remains an

important common tool for recognizing long term changes. In studies of transition from higher education to work, understanding of micro processes, including problems in transition, has progressed, while studies on career support or career education have also started. As for initial career formation, verification has progressed of the “Japan is a special case” theory on transfer within companies, while studies have been conducted on the impact of higher education on career formation, although with limited indicators. In studies on occupational relevance, examination has started on the “Japan is a special case” theory claiming that university education (or what is learnt during study time) is useless, and some studies have moved to start analyzing the process of competence formation in universities. In all these aspects, it can be said that studies in this area have been progressing steadily from ten years ago.

Many of these studies have been conducted necessarily amid the significantly changing employment environment for graduates from higher education during this period. When the subject of research is changing largely, the primarily important role for researchers should be observing precisely and verifying what is happening. However, during the time of changes, one tends to be dazzled by new moves and fail to grasp the essence. For example, during this period, the number of young people out of employment has increased, while new ways of working, different from regular employment, have emerged. At universities, there is a move to emphasize acquisition of various qualifications. However, it does not appear that the fundamental structure of the collective and uniform employment system has collapsed. Japanese society has not really started relying on (professional) credentials either. Lifelong learning has started, but only at some graduate schools. Has the fundamental and essential structure connecting the higher education system and the employment system really been changed or has it been preserved? It is necessary to have an insight that is not influenced easily by the ongoing phenomena just in front of us.

On the other hand, we have already taken steps into the areas beyond outlining and verifying reality, consciously or unconsciously. It is a question of how to translate the verified results with some kind of concept of values. On this issue, I think we are often influenced by movements in reality. For example, these days, some say that it is not necessary to find job immediately after graduating from university and that it is quite satisfactory to aim to become an adult after the age of thirty. This way of thinking did not exist previously. Such a new concept is probably attributable to aggravated employment prospects, increase in people leaving or switching jobs in their 20s, and criticism of higher education. This is not the place to discuss the rights and wrongs of such concepts, but it is important to be aware that changes in reality can influence researchers' sense of values, because their view of young people can bring changes not only in research subjects and method of approach, but also in defining policies and ultimately people's behaviors.

In Section 4, it was noted that collaboration between research on higher education and economics should be viewed as a “linkage of competence formation through higher education and in-company training.” As seen in Section 5, the key word for understanding higher education and the labour



market should be “knowledge.” However, “knowledge” is not traded directly between suppliers and users. It is mediated through some system. The relationship between “knowledge” and “system” is subtle. For example, a credential-oriented society does not trade “knowledge” itself, but it rather has the function of disguising the occupational relevance of actual “knowledge” acquired in universities. But if this works as a lubricant to connect higher education and the labor market smoothly, it is functioning effectively as a system. If this is the case, the designation of “university education is useless” might also have been serving as a lubricant to connect higher education and the labour market in Japan smoothly. But now, Pandora’s Box has been opened. If I have an opportunity to review studies in these areas ten years later, I would like to start from the viewpoint of examining whether “knowledge” and “system” have come to terms successfully.

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# Higher Education Research in Japan

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### Contents

- A Perspective and a Retrospective Review of  
Graduate Education Research over Thirty Years *Akira Arimoto* ..... 1
- A Review of and Prospects for  
Research on the Academic Profession *Atsunori Yamanoi* ..... 27
- Development of the Study on the Transition  
between High Schools and Universities *Tsukasa Daizen* ..... 45
- Developing Professional Staff in Universities  
under Quality Assurance Systems *Jun Oba* ..... 71
- A Review of Studies on Higher Education and  
the Labour Market in Japan *Naoyuki Ogata* ..... 89