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# Higher Education and Work in Japan: Characteristics and Challenges

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The relationship between higher education and work has always been problematic all over the world and throughout history. What constitutes the relationship? What are the issues? This paper tries to shed some light on this issue in Japan, based on a large scale survey on college graduates and other related data. As the basis of discussion, I will lay out a simple framework of analysis (Section I), then discuss the unique characteristics of the Japanese case (Section II), and examine the challenges that Japan faces and examine some analytical questions (Section III).

## I. Higher Education and Work: A Conceptual Framework

At the outset of the analysis, it will be helpful to set up a simple conceptual framework relating higher education and work, with ability as an intervening factor.

### 1. Higher Education, Ability and Work

In this framework, the questions about the relation between college education and work are analyzed as a tripartite relation among three spheres, i.e., college education (E), which renders a set of ability, knowledge, and skill (A), which in turn will be used in work (W). In the following discussion I will denote this relation as the “E-A-W link.”

The nature of the link can be best illustrated by reflecting on the long history of higher education.

The original universities in medieval Europe were organized to prepare youths for three major fields of high professions: law for lawyers and government administrators; medicine for medical doctors; and theology for the clergy (Rashdall 1936). In this sense, the proto-university was built upon a limited number of linear E-A-W links.

New patterns of these links emerged in the 19th century. With the advent of the sciences, the new idea of university developed. The Humboldtian idea of the university became influential. In the United States, state universities and colleges created a new model of higher education institutions serving the needs of society. The emerging nation state, and subsequently modern industry, brought about the demand for workers with specialized knowledge in various fields. The state, observing the rising social needs, started establishing and subsidizing higher education institutions. The general population increasingly became interested in sending their children to higher education institutions as a means to enter the new middle class.

These factors collaborated to create a new generation of E-A-W links. The scope of the professions, and the corresponding knowledge to be taught at universities, became much

broader than the three classical high professions. While some of the links between college education and work were distinctly defined and protected by government regulations and licensure, many others were less articulate.

This trend evolved further in the 20th century, especially after World War II, creating the third generation of E-A-W links. This change was salient in the United States, where rapid economic growth took place from the latter half of the 1950s. This was the period of the “massification” of higher education (Trow 2010). Participation in higher education started to rise in the late 1950s and the trend continued until the 1970s. This was partly due to government policies to expand the opportunities of higher education for promoting social equality and economic growth. At the same time, increases in income levels helped to augment the popular demands for higher education.

Meanwhile, the rapid economic growth accompanied the advent of large-scale corporations (Galbraith 1971). This brought in the expansion of bureaucratic control of the organization, which required large numbers of administrative workers. Such “white collar” jobs normally required college degrees. At the same time, the advent of the welfare state policies augmented demand for workers in the public services, which also tended to require college degrees.

To this extent, it may appear as if the expansion of higher education and economic growth is closely related. One may recall the idea of “manpower planning” which became influential in the 1960s, meant to predict the workforces required by economic growth by extrapolating the relations among economic growth, industrial structure, jobs and necessary education. In other words, it assumed a linear relation among the three spheres.

The actual development in the 1960s turned out to be more complex and contradictory (Teichler 1988). It was because changes in each of the three spheres were driven by their own driving forces. Over this period, universities went through a period of “academic revolution.” (Jencks and Riesman 1968). There was an increasing pressure in the higher education institutions to put greater emphasis on the academic achievement of the teaching staff. It was not due to the growing need of specialized knowledge for training workers, but because of the internal logic of academia. It is indicative that Drucker (1992) pointed out that the increase of college graduates in businesses was not necessarily due to the knowledge acquired in college, but simply because younger generations had college educations.

It implies that the relations among the three spheres have become substantially diffused. In other words, the expansion of higher education took place by adding the E-A-W links that were less articulate.

Similar changes could be observed in other countries, even though the exact period and the magnitude of the changes varied by country. In European countries the changes took place more slowly, and the massification of higher education did not develop until the 1970s. In contrast, Japan followed the United States closely in timing and with a comparable magnitude.

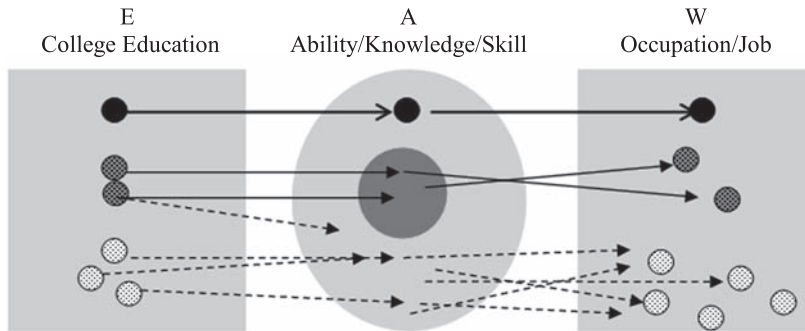


Figure 1

## 2. Patterns of Linkage

The historical reflection above suggests that there are three major patterns of the E-A-W links; i.e., linear, bounded, and unbounded. The concept is illustrated in Figure 1.

### i. Linear Links

The first pattern refers to cases where academic preparation, acquired knowledge/skills, and professions are all well-defined, and relate to each other strongly. One may recall the cases of the education of medical doctors or lawyers. Usually the links of this type are regulated and protected by state professional licensures.

### ii. Bounded Links

The second pattern refers to cases where the acquired knowledge/skills are less clearly defined, but a certain set of knowledge and skill are required. In other words, the links constitute a certain degree of randomness within a boundary. A typical example is education in engineering and the careers of their graduates. The graduates are not strictly destined to particular professions, but they are supposed to have a particular set of basic knowledge and skills in hard sciences. Employers would employ them on the basis of that basic knowledge.

### iii. Unbounded Links

This refers to cases where specific knowledge or skills are not required at the point of recruitment. The graduates are expected to have basic competency to learn knowledge and skills specific to the particular job that they are assigned in the organization. Most of the numerous administrative jobs fall in this category.

## 3. Underlying Structure of the Links

Another implication derived from historical reflection is that the relations among the three spheres have become much more complex and difficult to discern. This raises three sets of analytical questions.

The first is concerned with the relation between higher education and ability. What abilities and knowledge are formed through higher education? Insofar as the role of higher education provides a particular set of abilities and knowledge to be used in a particular profession, this does not raise major issues. Undergraduate education is designed to form specific abilities and knowledge. But in most other academic fields, the contents of the curriculum are formed based on the logic of academic fields, which are usually not purported to create specific applications at work. The recent development of the outcomes of higher education has increasingly put emphasis on generic skills or competencies as the focal point connecting higher education and work (Rychen and Salganik 2001).

The second issue is how knowledge, ability, and skills are utilized at work. In the case of independent professions, this may not raise many questions. But, most of the jobs that college graduates are engaged in are arranged under some form of *organization*. The organization distributes jobs to workers. The workers both share and create the particular knowledge and skills necessary for undertaking the job. The organizational arrangement is the key to understanding the relation between education and work in the age of industry.

The third issue is the feedback mechanisms relating work to higher education. Employment of the graduates, and the subsequent career and rewards at work render information to various institutions. Universities may use it to reevaluate their curriculum. High school graduates choose to attend college partly responding to the information. Also, the rewards should be affecting the motivation of students towards learning while they are in college.

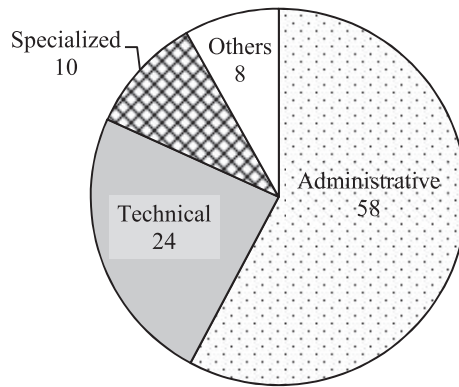
There have been various attempts to investigate each of these questions. It is important, however, to note that these questions should be set in the context of the entire picture of all of the three spheres. It is also important to note that, probably, the underlying structure of the relations varies significantly by country. In fact, the international survey lead by Teichler (2007) on eleven European countries and Japan demonstrated substantial differences in the early career of young college graduates.

## **II. The Japanese Mode**

From the perspectives set above, I will describe some of the salient characteristics of the Japanese case.

### **1. Patterns of the Link**

The starting point of the analyses is how different patterns of the E-A-W links are distributed among college graduates. Japanese employers recruit college graduates in three tracks: Administrative, Technical, and Specialized. The three types of E-A-W links discussed above are conceptual ones, but they roughly correspond to these categories; i.e., the professional link corresponds to the specialized track, the bounded link to the technical track, and the unbound link to the administrative track.



Source: *College Graduates Survey*. (N=24,505)

Figure 2. Distribution of College Graduates over Career Track (%)

Our College Graduates Survey asked working college graduates which departments they graduated from and what were the categories in which they were employed.<sup>1</sup> Figures 2 and 3 present the results.

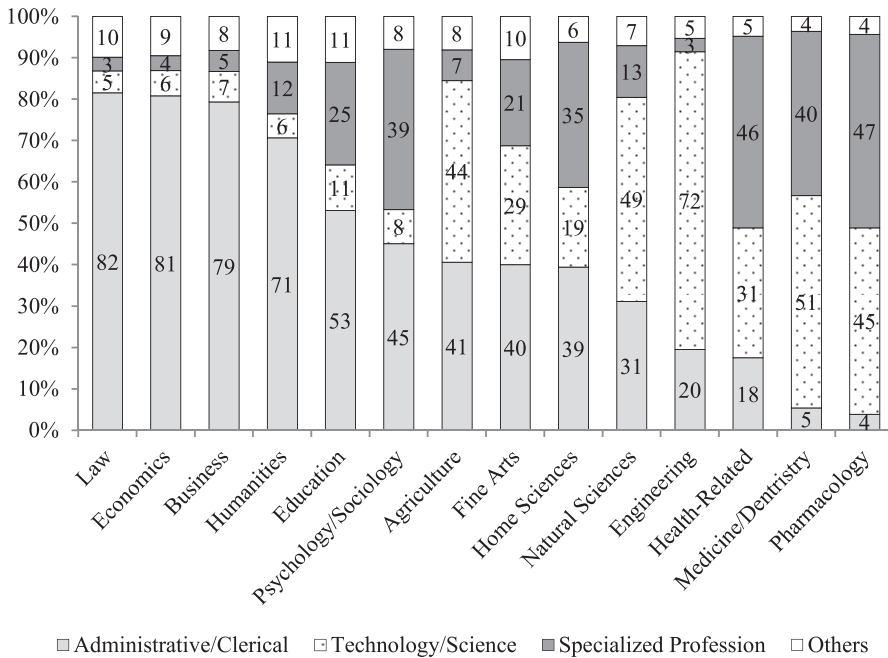
The figures demonstrate that the specialized job track comprises only a small proportion in the graduate labor market. The proportion of college graduates that answered that they were employed on the basis of special knowledge accounted for 10 percent. They are mostly graduates from health-related fields, education, and arts. It should be noted that teachers employed in regular schools, who are not included in this sample, accounts for about 5 percent of college graduates in 2013.<sup>2</sup> Even including teachers, the proportion would be about 15 percent.

Graduates employed in the technical track, who are mostly graduates from the schools of natural sciences, engineering, or agriculture, accounted for about one-third of college graduates. The third category, administrative, which roughly corresponds to unbounded links, constituted by far the majority of the college graduates. It represents about 60 percent of the transition from college education to work. They are mainly graduates from humanities and social sciences.

It should be also noted that, even though specialties in college roughly correspond to career track, the relations are not close. A substantial proportion of the graduates from education, psychology, or fine arts are employed in the administrative track. Moreover, 31 percent of graduates from natural sciences, and 20 percent from engineering, are employed in

<sup>1</sup> The College Graduate Survey was conducted by a group of researchers lead by the author in 2009. The questionnaire was sent to college graduates in fifty thousand business firms (including branch offices) with returns from 25,277 respondents in 3,371 firms including branch offices. The details of the survey are listed in the website of the Center for Research in University Management, The University of Tokyo (<http://ump.p.u-tokyo.ac.jp/crump/>).

<sup>2</sup> Report of Basic School Survey, 2013.



Source: College Graduates Survey. (N=24,505)

Figure 3. Distribution of Working College Graduates by Career Track and by Field of Specialization at College

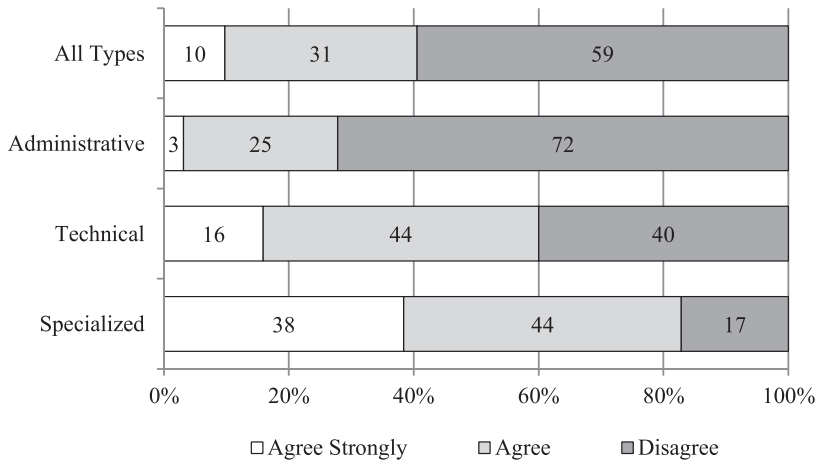
the administrative track. These observations show that the links between undergraduate education and work in Japan are by no means well-defined, except for a small proportion of college graduates.

While loosening the link between field of study and work can be considered to be a historic trend, the tendency is particularly pronounced in Japan. The international survey quoted above shows that Japan is unique in this respect. In an multiple-response question of “how would you define the relationship between your field of study and your area of work,” as much as 28 percent of Japanese graduates picked up the statement “the field of study does not matter very much” as compared to 9 percent averaged for eleven European countries (Techler 2007, 146, table 2).<sup>3</sup>

## 2. Ability and Work

Then, to what extent is the knowledge acquired at college used at work? Our College Graduates Survey asked if they agree to the statement “I have used the knowledge that I learnt in college.” The results (Figure 4) show that less than half of the graduates responded

<sup>3</sup> Multiple choice of six statements. The total of choice was 100 percent for Japan, and 105 percent for other 11 European countries.



Source: *College Graduates Survey*. (N= 23,862)

Figure 4. Distribution of Responses to “I Have Used the Knowledge That I Learnt in College”

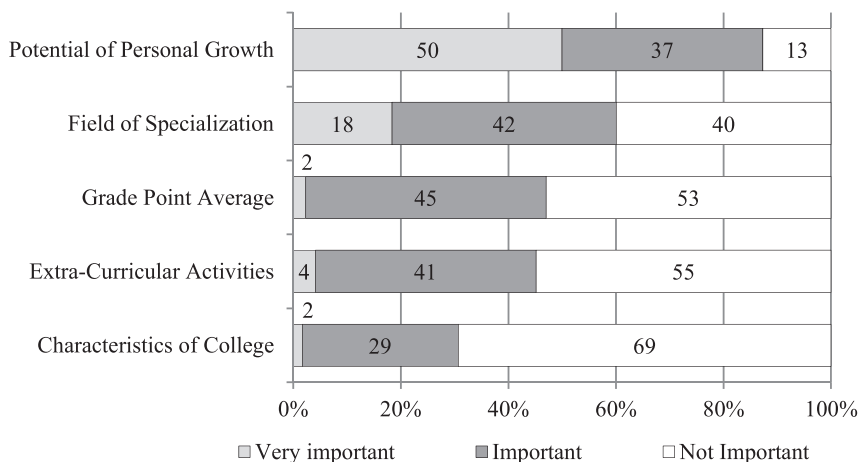
positively to that statement. Those whose work heavily involved specialized knowledge constitute a mere 10 percent of all graduates.

Naturally, the response varies substantially by career track. Among the specialized track, the graduates are dependent on the knowledge from college education. More than 80 percent either agreed strongly or agreed to the statement. Workers in the administrative track do not use much specialized knowledge at work. Those in the technical track tend to use specialized knowledge, but to a much lesser extent. It also deserves attention that as much as 40 percent of the workers in this category did not think that they are using specialized knowledge. In contrast, as much as 72 percent of those workers in the administrative track did not think that they are using the knowledge that they learned in college. These results show that, except for the minority of those in the specialized track, the knowledge acquired at college is remote from their actual work.

While the low level of perceived use of knowledge at work may be found in any country with massified higher education, Japan is again salient in international comparisons. The international survey quoted above shows that, in response to the statement “if you take into consideration your current work tasks: to what extent do you use the knowledge and skills acquired in the course of study,” as much as 47 percent of respondents answered negatively in Japan, as compared to an average of 19 percent in the other eleven European nations (Teichler 2007, 146, table 1).<sup>4</sup>

It, however, would not necessarily imply that college education has not produced any consequences to the graduates in Japan. Rather, the ability and knowledge fostered through

<sup>4</sup> The share of those choosing 4 or 5 in the scale of 1 (“To a very high extent”) to 5 (“Not at all”).



Source: Business Firm Survey. (N=8,156)

Figure 5. Weight Attached to Individual Characteristics in the Process of Recruitment of College Graduates

college education contributes to work more indirectly than generally assumed.

### 3. Feedback to Education

Then, what do employers value when recruiting college graduates? Our survey on business firms asked personnel managers the relative weight they attached to personal characteristics in the process of recruitment.<sup>5</sup> The results are summarized in Figure 5.

The results demonstrate that “potential of personal growth” assumes by far the most significance in the criteria that employers use in recruiting fresh college graduates. Almost 90 percent of the personnel managers rate it as either very important or important. It should also deserve attention that grade-point average is not considered important by more than half of the managers.

These observations correspond to the results of the international survey mentioned above, which asked recent college graduates about their conceived relative importance of different recruitment criteria. As to “field of study,” 37 percent of the Japanese respondents answered either important or very important, compared to 72 percent for European countries.

It is interesting that employers appear to attach only a small weight to institutional characteristics. This is contradictory to the results of our graduate survey, which showed that 48 percent of college graduates answered that the institutional characteristics of college was either important or very important. The latter finding corresponds to the aforementioned international survey, which found that as much as 41 percent of Japanese graduates

<sup>5</sup> The survey was conducted as a part of the College Graduates Survey. See note 1.



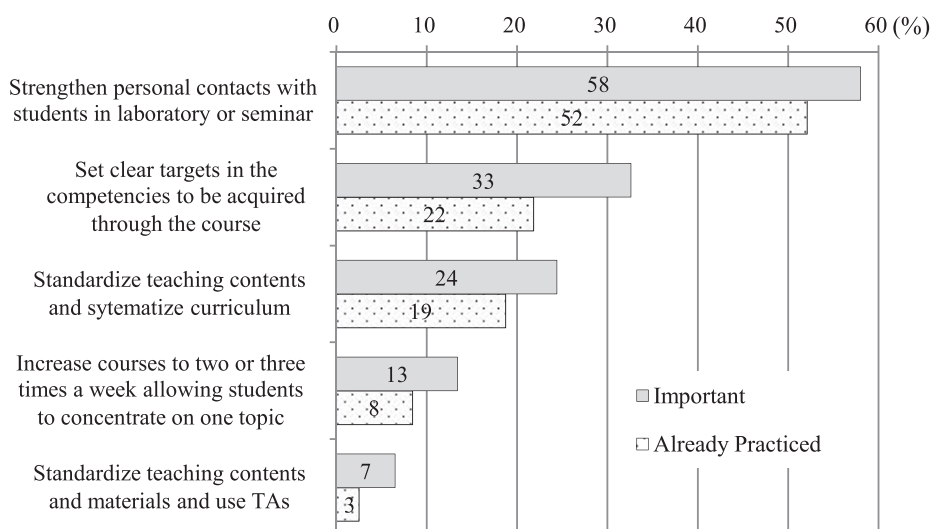


Figure 6. Faculty Members' Concept of Important Teaching Strategies and Actual Practice

answered it is important, as compared to 20 percent in Europe (Teichler 2007, 64, table 20).

This indicates that employers and graduates have different perceptions. Employers tend to emphasize that they are not as concerned with institutional selectivity as has been criticized. It is possible, however, that the employers are implicitly taking institutional selectivity as a proxy for “potential of personal growth.”

The distance between academic knowledge and work implies that academic knowledge itself is not valued when firms recruit fresh college graduates. Rather, they appreciate the ability to learn through work and absorb shared knowledge. This tendency becomes more significant under the commitment of the employers to lifetime employment.

#### 4. Education and Ability

If academic knowledge to be gained in higher education is not directly used at work, and employers do not appreciate academic knowledge, what can college education do?

Our survey on faculty members in Japanese universities (Kaneko 2013, 2014) asked the respondents what they thought as the important means of college education, and if they are practicing it.<sup>6</sup>

The results (Figure 6) indicate that the faculty members value foremost personal contact with students through laboratories and seminars. As much as 58 percent answered it is important, and 52 percent were actually putting it into practice. The strategy to set clear

<sup>6</sup> The faculty survey was undertaken in 2010 on 5,311 faculty members of four-year universities, with the response rate of 31 percent. Details of the survey are shown on the website of the Center for Research in University Management, The University of Tokyo (<http://ump.p.u-tokyo.ac.jp/crump/>).

targets in terms of competence to be acquired through courses was supported by one-third of the respondents, but only one-fourth were putting it into practice. In contrast, the strategies to standardize contents of the courses as a means to intensify the effects of courses received less support, and actually were practiced only by a minority.

The lectures tend to be related to the research topic of the particular teacher in charge. Since the students realize that the knowledge will not be related to their future career significantly, they tend not to spend much time for preparing or extending the contents of the course. Meanwhile, the majority of students are assigned to a particular membership group in the form of seminars or laboratories, especially in the later years of study. Seminars and laboratories function not only as a place to learn particular subject areas, but also as a place of informal learning involving the teacher in charge, the fellow students, and graduate students. In other words, the students are expected to learn through “legitimate peripheral participation.” This provides the basis for a student engaged in a graduate thesis or graduate research, which are required for completion of a degree.

These characteristics reflect historical backgrounds. On one hand, it still remains under the heavy influences of the Humboldtian idea of a university as a place of academic pursuits. Moreover, undergraduate education is compartmentalized into specialized areas of study. On the other hand, undergraduate education is based on the module system, as that in the case of the United States.

What students are actually learning under the teaching strategies is difficult to assess. One indirect proxy of the intensity of students would be the time the students spend on studying. Our survey on 47 thousand college students asked how much time they spend for learning.<sup>7</sup> The results showed even though Japanese students spent a little less than three hours in attending classes, they spent less time on self-directed study either for preparing for lectures or for their graduation thesis. As compared to requirements stipulated in the Japanese Standard for University Education, their time in the classroom roughly satisfies the requirement, while that of self-directed study falls far short of it (Kaneko 2013). Moreover, more than half of the self-directed study comes from the graduation thesis and independent studies which take place in the latter phase of study. Meanwhile, the time spent in preparing for lectures is very limited.

## 5. The Japanese Mode

The various characteristics of E-A-W links in Japan sketched above can be hypothetically interpreted to show a structure through which higher education, ability, and work are aligned. I call it “J-mode,” which can be paraphrased as below:

First, the particular knowledge required for achieving the tasks of a basic unit of the firm, typically called divisions or sections, is shared among the workers in the basic unit.

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<sup>7</sup> The survey was undertaken in 2008 and 2009 and received responses from about 47 thousand students in 117 universities in Japan. (<http://ump.p.u-tokyo.ac.jp/crump/>).

The knowledge is particular to the organization, or the products, or the relation with other sections or other firms. This is how the Japanese firms form what Mincer (1974) called “specific human capital” in his treatise of human capital. The basic unit also develops the shared knowledge through participation of the member over time.

Second, workers are protected for careers stretching from graduation from college to retirement. At the early stages of their career, workers tend to be assigned to relatively primary jobs that do not require much ability, either general or specific. In the mid-career they are assigned to jobs that require more skills and knowledge. Through this period they are selected to advance to the managerial jobs with varying degrees of discretion. Individual workers are rewarded on the basis of age or experience, while specialized knowledge tends not to be awarded directly.

Under these circumstances, business firms lay heavy emphasis on the recruitment of fresh college graduates who have the potential to learn various knowledge at work through collaboration with other jobs in the workplace. Prestige of the university tends to be taken as an indicator for such ability. Teachers, bound by the drive for research on one hand and on the other by the recognition that specialized knowledge would not be appreciated, try to influence the students through personal interaction with students in small groups. One could argue that this latent structure has a degree of affinity to the structure of jobs at work places. In this sense, college education corresponds to the latent requirements at workplaces. In other words, there is a latent link that connects higher education and work, with informal learning in membership group as the intermediary.

Arguably, the J-mode may have been effective in the sense that it brought a type of efficiency and productivity. The competitive edge of Japanese firms has been in their ability to develop local knowledge and share it among workers. However, as the labor market changes and the industrial structure shifts, the advantage in that aspect may be lost.

### **III. Transformation of the Japanese Mode**

The J-mode stated above has always had its limits and contradictions, but now it is faced with serious challenges because the base that supported and legitimized it is being eroded.

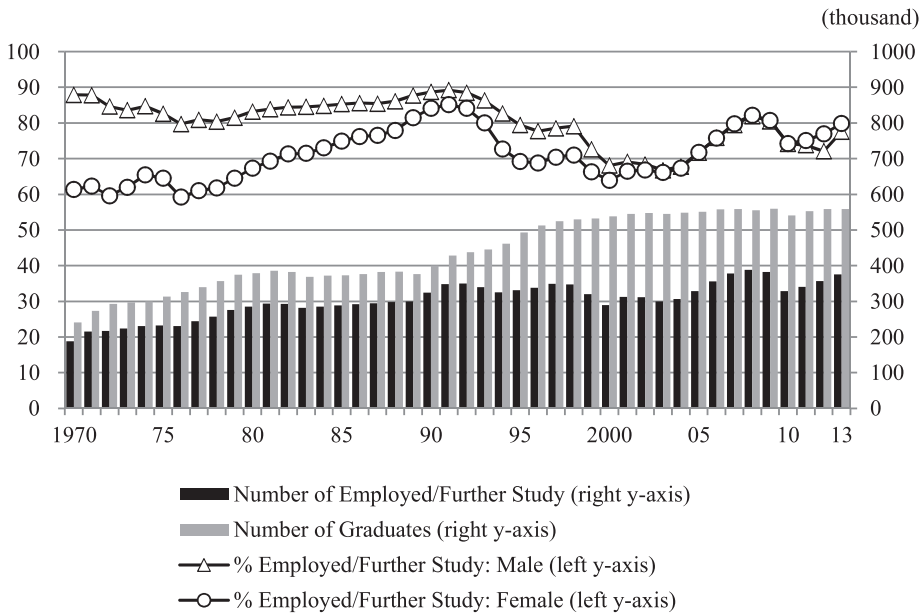
#### **1. Changes in the Environment**

The major reasons of the need for change is the shift in participation rates in higher education on one hand, and the shift of work and organization on the other.

The change in participation rates in four-year institutions of higher education has been dramatic.<sup>8</sup> The first phase of rapid expansion of enrollment that brought the

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<sup>8</sup> Participation rate is defined as the ratio of the number of students entering college to the number of 18 year old in that year.



Source: Calculated from *School Basic Survey*, various years.

Note: Employment rate includes those enrolled in graduate schools directly after graduation.

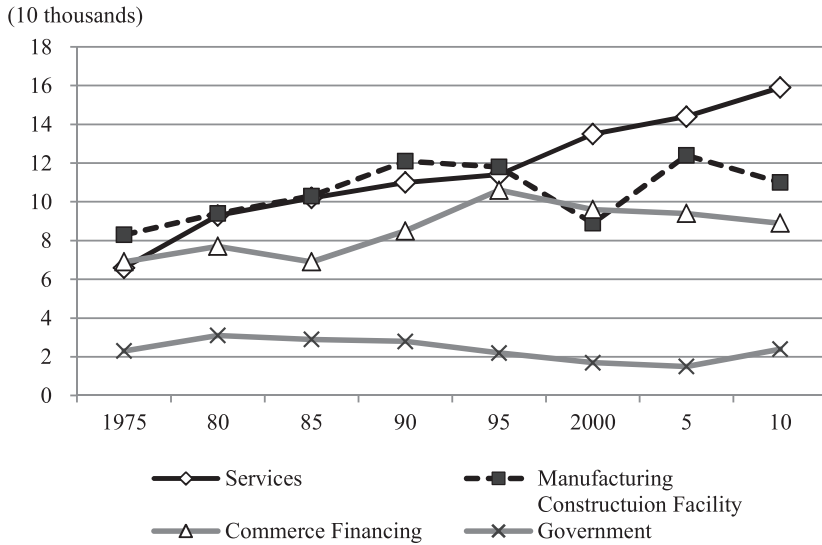
Figure 7. Number of Fresh College Graduates, Employed Fresh Graduates, and Employment Rate of Fresh Graduates

massification of higher education encompassed the 1960s and the first half of the 1970s. After that the participation rates stagnated or even declined slightly. But, since the early 1990s, the rates started expanding again.

This steady increase in participation rates since the 1990s is a product of a few factors. One is the decline in the size of the college-age cohort. Since the seating capacity of higher education institutions kept rising, entrance to four-year institutions has become easier. Another factor is economic. The employment opportunity for high school graduates deteriorated dramatically as a consequence of the flight of the manufacturing process to developing countries including China and India, and also the development of information technology that reduced the demand for simple clerical work. In this sense, high school graduates were forced to advance to higher education institutions, rather than being attracted to higher rewards.

The increases in participation rates naturally increased the size of college graduates from the 1990s and caused a major deterioration of the labor market of fresh college graduates (Figure 7). The proportion of students who got a job or advanced to graduate schools right after graduation declined dramatically in the early 1990s. There has been a recovery since the mid-2000s, but it is still at about 80 percent.

This implies that almost twenty percent of college graduates do not have a definite



Source: *School Basic Survey*, various years.

Note: The figure includes new bachelors and masters' degrees.

Figure 8. Employment of Fresh Graduates by Industry

destination at the time of graduation. This does not necessarily imply that they are unemployed. Since the number of employed graduates is based on the report from the institutions, it does not include graduates employed but not recognized by the institution as such. In fact, other labor force statistics indicate that the explicit unemployment rate among young college graduates is much lower.

Nonetheless, it remains that there have been significant changes in the graduate labor market. First, the proportion of graduates getting jobs outside the traditional pattern of lifetime employment has increased substantially. Also, it is probable that a significant number of college graduates are employed in temporary jobs that do not lead to advancements in their career.

This change is related to shifts in the Japanese industrial structure. The changes in the numbers of fresh college graduates, including graduates from master's courses, in the industrial sector are shown in Figure 8.

The manufacturing sector was the major employer of college graduates until the 1980s. But, the number of employed in the sector has stagnated since the 1990s. Instead, the services sector has been expanding its intake steadily. It should be also noted that the many of the graduates who did not report their destinations are probably employed in the services sector.

The employment in the services sector category in fact includes various activities. It is very likely that their organization has a very different structure from the large scale firms

in the manufacturing or financing sector, even though the change is not fully captured by the existing statistics covering higher education and work. It is probable that the firms in this sector have different forms of organization, and the jobs are more varied and fluid.

At the same time, it has been argued that the Japanese mode of creating efficiency has become increasingly obsolete in the emerging global competition. This raises serious questions about the validity of the J-mode.

## 2. The American Experience and Challenges to Japan

From this perspective, it is interesting to reflect on what happened in the United States, where participation in higher education rose again since the 1990s, entering the stage of “universal” higher education.

As mentioned in Section I, the postwar massification of higher education in the United States was accompanied with the expansion of administrative organization. Lifetime employment of white collar workers was typical. In the 1980s, the manufacturing sector in the United States faced challenges from global competition, prompting layoffs of workers. Many large corporations restructured themselves radically, and many were involved in mergers and takeovers (Reich 1992). Corporations became more attuned to short-term returns, and turned to restructuring the organization and reengineering the manufacturing process.

These changes naturally affected the structure of work and careers for college graduates. In the early 1990s, the first wave of layoffs of white collar workers took place. Firms went to reduce fixed costs, including those needed to retain and develop human resources. The “flattening” of organizations was proposed, and the skills and knowledge of the workers was supposed to be created “just-in-time.” This meant that workers were compensated for their immediate contribution. Acquiring the knowledge to cater to the needed changes was supposed to be taken on by the workers themselves. In other words, the risks of becoming obsolete, or the responsibility of investments of learning, were moved from the firm to workers (Cappelli et al. 1997).

It is difficult to show to what extent this change prevailed among corporations, and it is difficult to quantify. Nonetheless, circumstantial evidence indicates that changes in this direction in fact took place in the United States.

In contrast, Japan has not yet undergone changes anywhere comparable to those in the United States. There are several reasons for this. One of them is the robustness of some of the Japanese manufacturing sectors. It suggests that the productivity supported by the J-mode remains to be effective at least in a part of the economy. Another is the political pressure to sustain the social stability supported by lifetime commitment. Even though there have been increasing use of contingent workers in many sectors of the economy, the core of white collar workers are still protected from the pressure.

Nonetheless, the need to undertake a radical shift in the basic mechanisms of work is felt by many. The economic growth rate has remained at a minimal rate since the 1990s, and

the fiscal deficit has stayed at a high level. Japanese firms have been unsuccessful in developing imaginative or creative products or business models. Most alarming, the un- and underemployment of youths has inching up, while the whole population is aging.

### 3. Prospects

This implies that the E-A-W links should undergo significant changes. It may be an illusion that any change in higher education would create meaningful consequences by itself, but it remains true that higher education should rectify the present problems and be prepared for changes in the future. What should college education do? The current discussions on this issue indicate three directions:

#### Vocational Orientation

The first direction is to enhance the relation between college education and work, by enhancing the direct relationship between the curriculum and future work. By a recent revision, the University Standards stipulate that higher education institutions should set up means for “career education.” This would include career guidance, “introduction to careers” as a course subject in the curriculum, and internships. Increasing numbers of institutions are in fact introducing these measures.

While these measures are aimed at raising awareness about the actual world of work among students, it remains unclear how effective they are in improving the employability of students. Our study showed that participants who participated in internship programs have a slightly higher motivation to study than other students. Introduction to careers as a subject, however, had minimal effects.

Some argue for introducing courses to curriculum that provide specialized knowledge and skills for particular jobs. One may call it the vocationalization of college education. Though it seems like the most direct answer to the issue, it is dubious if it is practical. The specialized track constitutes only one-seventh of the total number of employed college graduates. Skills and knowledge that are required in the new services sector are too varied to introduce to undergraduate curriculums as a formal course subject. Even in the present corporate organization, the specific knowledge and skills acquired in the undergraduate level are far from being appreciated or utilized.

#### Basic Competencies

The second direction is to form basic competencies or generic skills that are actually used in actual jobs. By teaching those competencies, rather than academic knowledge, university education would become useful at work.

The Japanese Ministry of Economy and Trade (2006) set forth a list of such competencies and named them “Basic Skills for Adults.” It went on to survey business firms asking which of the competencies are most important. A webpage was set up to show what each firm needs, which presumably would inform college students what they should acquire

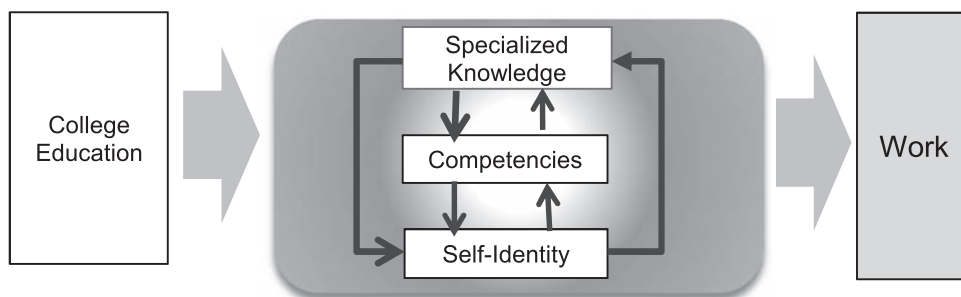


Figure 9. Formation of the Network of Three Layers of Ability

through their college education. Some colleges set lists of competencies that the students should obtain, and some went further to indicate the relation between the course subject and the desired competencies.

However, there seems to be intrinsic difficulty in defining the underlying competencies that are used at work. Competencies are in a way conceptual constructs developed to relate education to work. In reality, they function in particular contexts. For example, many questionnaire surveys rate communication skill as the most important competency, but in reality its function is critically dependent on the concrete context where communication takes place. Introduction of the concept of competencies, or generic skills, to the curriculum and in teaching practices still remains a major challenge.

### Learning and Formation of Self

The third direction of reform is to enhance the process and intensity of learning itself. It emphasizes the importance of the scope and depth of learning experiences in college (Kaneko 2013).

This bears particular significance in the case of Japanese higher education, where learning is assumed to take place in the informal setting of membership groups. Even though it functioned as informal training through “legitimate peripheral participation,” it did not lead students to spend a sufficient amount of self-directed study to understand the basis of subject areas.

Our Student Survey showed that the time spent on self-directed study is critically related on one hand by the students’ motivation, and by the style of teaching on the other. student-centered course design, participatory class, and frequent feedback to students in the form of comments on essays and tests proved to be effective.

Arguably, the experience of deep study would bring about not only specialized knowledge or various competencies, but also the development of self-identity. Moreover, this process would strengthen the circuit of interaction among these factors. It is critically important to build and strengthen this circuit.

This may seem like an odd answer to the problems of the impaired relevance of col-



lege education to work. It sounds like yet another interpretation of the old Humboldtian idea or the orthodox idea of liberal arts education.

Yet, in the period of the changing scope of industry and organization, with opportunities opening up in very different forms than before, one has to have the ability to have a wide scope and sensibility and translate it to one's own creativity. New workers also have to have an established self in order to wield the changes and risks involved in this environment.

The three proposals discussed do not exhaust the current discussions on higher education reforms in Japan. Also, the three proposals are not necessarily incompatible with each other. Nonetheless, it seems probable that future discussion about the relation between higher education and employment will evolve around the three directions.

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