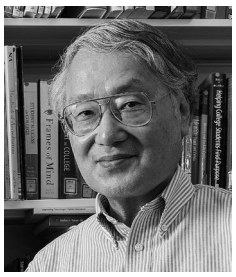
The Formulation of Professional and Vocational Universities: Background and Challenges of a New Institutional Type in Japan



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In 2017, new types of educational institutions known as "professional and vocational universities" and "professional and vocational junior colleges" were formulated in Japan. The relationship between universities and specialized "professional or vocational education" has been a complex one, with universities expected to do more than merely prepare students for professional careers, and with certain social-hierarchical implications. With this reform to the system, *senmon gakko* (specialized institutions of higher education training students in specific vocations, referred to in this article as "professional training colleges"), created as an exceptional measure within the single-track postwar Japanese educational system, can in many ways be said to have mobilized their political clout to gain increased legitimacy and boost their competitiveness with universities. The reform occurred in the context of widespread criticism of the conventional university system within society. At the same time, it has enabled existing universities to add "professional and vocational courses" to their curricula. In 21st-century society, the structure of industry has become more diverse and dynamic, demand for goods, information, and services has expanded, and correspondingly the importance of what one might call "fluid professions" has grown. It is highly significant that these structural changes are being addressed through higher education. In that sense, I believe it is vital that we examine the new possibilities this reform opens up, including the framework of conventional universities.

"Professional and vocational universities" and "professional and vocational junior colleges" constitute a new framework focusing on practical professional education within the university system. What does this framework's establishment mean for higher education in Japan? This article first reviews the status of professional and vocational education within higher education in general, from the standpoint of international comparison (I), then reviews the background and the institutional framework of the "professional and vocational universities" established through the new educational reform (II), and finally discusses contemporary social issues surrounding professional and vocational education at universities (III).

I. Universities and professional and vocational education

First, let us quickly review relationships between universities and professional and vocational education from a broad perspective.

1. Universities and professional and vocational education

Looking at relationships between higher education and occupation historically and internationally, we can roughly divide them into two patterns, the European and the American.

The roots of the university lie in medieval Europe, where universities were established to train students in the three classical specialized professions of theology, medicine, and law. Later, in the 18th century, with the advancement of the natural sciences, the development of knowledge was linked with the growth of various new industries. However, in the early 19th century the Humboldt University of Berlin rejected seemingly utilitarian fields of scholarship outside of classical theology, law and medicine, and created the university model of academic autonomy or learning for its own sake.

This corresponds to the social class structure of Europe. The educational system was divided into a university track, mainly the province of the upper class, and a non-university track, i.e. primary education, for the middle and lower classes. Later, secondary education, in the form of institutions of professional and vocational education, was gradually added to the latter. The resulting overall educational framework remained double-track, with professional and vocational education being the final stage for those not advancing to university, although some universities came to encompass more practical disciplines.

After World War II, however, the importance of scientific and technical human resources was emphasized, and a system of post-secondary education was created to follow the secondary stage of the non-university track. This trend was especially pronounced in the 1960s and 1970s, when British polytechnics, German Fachhochschule (universities of applied sciences), French STS (advanced technical courses) and IUT (university institutes of technology), and other professional and vocational institutions at the higher-education level were created.

In the United States, during the colonial era universities were primarily focused on liberal arts as they related to the training of priests and ministers, but the state university system was established in response to the advent of industrial development in the late 19th century, and was regarded as having a crucial mission to train human resources for industrial development, in fields such as engineering and agriculture. In this sense, the development of modern occupations went hand in hand with that of universities.

After the Second World War, with robust economic growth, demand for personnel in these modern occupations further expanded. The number of two-year community colleges offering professional and vocational education increased, and a system was established for students at these colleges seeking further education to transfer to four-year universities. The difference from Europe is that courses in academic discipline and professional and vocational courses coexisted within the broadly defined university system. Based on the United States' intrinsic philosophy of equal social opportunity, it was important to give students as wide a range of choices as possible.

In the late 1950s and 1960s, the percentage of students advancing to higher education skyrocketed, in a phenomenon described as the "massification" of higher education. There are various ways of thinking about what catalyzed this, but one indisputable point is that the job market for occupations requiring a university degree did not expand rapidly, and the already established correlation between higher education and modern occupations alone cannot explain the surge in enrollment. Regarding this, Galbraith (1971) states that the dramatic expansion of companies' management structures accompanying economic development, with a corresponding growth in the population of white-collar workers in these management positions, merely happened to coincide with a rise in the number of university graduates. In any case, the massification of higher education progressed in tandem with expansion of the industrial structure and of corporate organizations in

particular.

2. Characteristics of Japan's educational system

How does Japan compare to these two overseas models?

From the Meiji Era (1868–1912) until World War II, in Japan's education system a European double-track structure was in place at levels above primary education. On the one hand there was a track leading to junior high school, high school, and university (all of which had their systems changed following the war, and today are referred to as *kyusei* or "under the old system"), and on the other, for those completing mandatory, i.e. primary education and wishing to go on to secondary education, there were vocational schools, normal schools (what we know today as teachers' colleges or teacher-training colleges), and vocational colleges that were virtually on a par with institutions of higher education (Amano 1993).

Here, the difference from Europe is that universities under the old system contained faculties in specialized practical disciplines such as engineering, agriculture, and commerce. In this we can see the influence of both the French Grandes Écoles and the American university system.

After World War II, Japanese education shifted to a single-track system modeled on the United States. As a part of this, a new university system was established, and many of the former vocational schools and colleges became universities under the new system. However, this shift entailed differences from the American system. One is that Japan's (generally two-year) junior colleges, while similar to American community colleges, depend mostly on tuition fees rather than being publicly funded, due to financial constraints, and thus do not serve as preparatory institutions for students seeking to transfer to four-year universities.

Meanwhile, there were strong demands for resurrection of institutions equivalent to the prewar short-term professional higher education institutions, especially from the industrial sector. To meet these demands, "vocational colleges" or "vocational universities" were conceived, but in the end, the system of "colleges of technology" was established in 1961. These were five-year institutions that students could enter following junior high school graduation, offering the equivalent of a three-year high school education and a two-year higher education in one place. Currently, only about 10,000 students enroll in these, less than 1% of the coeval population.

On the other hand, the four-year university enrollment rate surged in the 1960s. During this decade it stood at around 10%, but by the mid-1970s it was well above 30%. This constituted the "massification of higher education" in Japan, and was largely driven by two factors. One was the growth in household incomes accompanying rapid economic development, providing many high school students who would previously have given up on university for financial reasons with the opportunity to enroll. The other was demand for personnel for modern occupations that were expanding along with economic growth, but these occupations alone were insufficient to absorb the growing number of graduates. However, industrial growth resulted in an increase in white-collar workers in corporate management organizations, and these jobs tended to go to university graduates.

At the same time, the percentage of university graduates able to secure employment began falling steeply around the end of the 1960s, and as the number of students skyrocketed, the quality of Japanese university education declined. This led, by the mid-1970s, to a more restrained tone in higher education policy. Specifically, the Factory Location Act restricted new construction of various types of buildings in major urban areas, including universities, while subsidies for private universities' operating expenses were established, enabling recipient institutions to curtail exceeding enrollment to a certain degree. These measures helped to limit the number of four-year university students, while a system of *senshu gakko* ("specialized training colleges") was established to accommodate those seeking higher education but unable to enter four-year universities. In particular, specialized training colleges offering post-secondary courses, i.e. *senmon gakko* or "professional training colleges," became the primary sources of post-secondary professional and vocational education. However, adherence to the principle of a single-track educational system put these institutions in

an ambiguous position, in that *senshu gakko* (specialized training colleges), while termed *gakko* (schools) in Japanese, did not qualify as "Article 1 schools,"[1] i.e. schools prescribed in Article 1 of the School Education Act.

In terms of numbers, the professional training college system showed a considerable expansion, with enrollment growing to nearly 20% of the age-18 population. However, during the same period the number of students aspiring to enter four-year universities continued to accelerate, and entrance examinations became more fiercely competitive. This resulted in a generally recognized paradigm of students choosing professional and vocational education, i.e. enrolling at professional training colleges, because they were unable to enter four-year universities due to academic performance or financial constraints. In this sense, in postwar Japan, professional and vocational education has been strongly stigmatized in terms of social status and academic ability.

It was made clear that professional and vocational education was not simply correlated with supply and demand in industry and the job market, but was also significantly influenced by socioeconomic hierarchies, and by political developments unfolding within the context of these hierarchies.

II. The political context of professional and vocational universities

An effort to redefine professional training colleges as a type of higher education institution emerged in the above-described context.

1. Moves toward creation of "professional and vocational universities"

Efforts to have professional training college designated as so-called "Article 1 schools," and further, to make them into an educational system on a par with four-year universities, were ongoing for many years (Kobayashi 2016). They regained momentum in the late 2000s, and in January 2011 the Central Council for Education issued a statement ("The future of practical professional education within the school system") recommending development of "a new educational framework specifically tailored to vocational and practical education." In response, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in October 2013 launched discussions in "the Expert Panel on Establishment of Higher Educational Institutions Providing Professional and Vocational Education."

Meanwhile, the fifth (July 2014) and sixth (March 2015) set of recommendations from the government's Education Rebuilding Implementation Council also emphasized the importance of practical professional education. Eventually, the Central Council for Education's Special Committee on Inauguration of Higher Educational Institutions Providing Professional and Vocational Education issued a "Progress Report on institutionalization of a new type of higher educational institution for fostering high-quality professionals able to cope with society's demand for human resources arising from social and economic changes" (March 2016). Based on this, the School Education Act was amended in May 2017 and clear provisions were made for the "professional and vocational university" and "professional and vocational junior college" in legislative documents. Universities and colleges fitting the new definitions are scheduled for launch in April 2019.

The objectives of establishment of the professional and vocational university system are outlined in the reports and minutes of the above-mentioned councils. Having participated in some of these discussions myself, I believe that the factors propelling this systemic reform can be roughly divided into three categories.

2. Momentum for change

The first was demand from conventional professional training colleges. As described earlier, a direct cause of the professional training college system's establishment was the necessity of filling the gap between higher education supply and demand resulting from curtailment of four-year university admissions in 1975. At the time this systemic change was strongly criticized as undermining the postwar principle of a single-track

educational system. In actuality these "professional training colleges" were, or emerged from, what had thus far been called "miscellaneous schools," many of which were small-scale and operated by single individuals. For this reason, it was predicted that problems would arise if "professional training colleges" were designated as schools under Article 1 of the School Education Act. Accordingly they were not added to Article 1, and their oversight, including permission to open new institutions, was delegated to prefectural governments. While the framework for professional training colleges was legally recognized, their status was ambiguous in that strictly speaking they were not part of the public education system. This put them at the disadvantage of being ineligible for subsidies like those received by private educational institutions. In this regard, professional training colleges had requested from the start that they be clearly defined part of the public education system.

In fact, since the system was established, enrollment in professional training colleges had dramatically increased. In 1980, the number of students entering professional training colleges was 190,000, but this had risen to 360,000 by the beginning of the 1990s. In 2005, the percentage of the 18-year-old population advancing to professional training colleges (new high school graduates only) reached 17%. However, afterward the number of students admitted gradually declined to about 270,000 in 2017, nearly 30% fewer than at its peak. This reflected not only the shrinking of the age-18 population, but also a progressive gravitation toward four-year universities among the student population who would previously have entered professional training colleges.

Under these circumstances, it is easy to imagine that from the viewpoint of professional training colleges, curtailing this decline in demand was a significant issue. In 2013, a system was established in which professional training colleges meeting certain conditions could be approved by the Minister of Education, Culture, Sports, Science and Technology as offering "professional post-secondary courses." However, there remained the more fundamental task of shedding the colleges' inferior status, compared with four-year universities, as higher education destinations for high school graduates. The challenge was to acquire equivalence with four-year universities in terms of authorization to provide students with academic credentials, specifically bachelor's degrees. In this regard, the question becomes whether to convert professional training colleges to conventional universities, or to create a new type of school. For some professional training colleges, the latter option was preferable, and this motivated them to step up efforts to influence the administration and ruling party.

Secondly, looking at broader social trends, criticism of the conventional universities was also a significant factor. The four-year university enrollment rate in Japan began rising again in the early 1990s, by the 2010s reaching the 50% level; a state one might call "universalization." However, there was widespread criticism that university enrollment ratio of Japan was excessively high. Although politicians made few clear pronouncements because of being criticized themselves for criticizing universities, the widespread sentiment against extremely high university enrollment ratio can be seen in remarks, of which Minister of Education, Culture, Sports, Science and Technology Makiko Tanaka's (2012) is a typical example.

There was also a considerable amount of unspoken criticism and dissatisfactions with conventional universities as socially exclusive and self-righteous. Although this sometimes took the form of general dissatisfaction with university administration and management, there were also particularly strong critiques of educational content as too biased toward academics. Regarding the above-mentioned rise in the university enrollment rate, it was also pointed out that students need more university education that develops skills leading to employment. Also influential was the argument (Toyama 2014) that only a minority of universities need to achieve international academic standards, and the rest should focus on imparting general, practically applicable knowledge.

However, business organizations have not always adopted a clear stance toward these arguments. In general, business leaders appear to support increased practicality in university education, but do not necessarily say that they will hire graduates of new types of institutions other than conventional universities, if such institutions can be formed.

The third factor was a backlash against a prevailing social attitude of contempt toward professional and vocational education. As described earlier, historically speaking, the development of universities has been closely intertwined with scholarly disciplines, while by contrast professional and vocational education has taken the form of secondary education for young people unable to get on the university track. As a result, there has undeniably been a widespread implicit bias in society against professional and vocational education as offering relatively inferior educational opportunities.

Meanwhile, it is no wonder that there were also widespread dissenting opinions that professional and vocational education should be recognized for its unique value within the educational system. These opinions were certainly not uncommon among researchers studying higher education administration or professional and vocational education.

On the other hand, there were certainly those skeptical about creating professional and vocational universities as a new type of institution. The fundamental issue is the maintenance of the single-track model. A wide range of professional and vocational education is already carried out at conventional universities, and professional and vocational education could be greatly advanced through enhancing flexibility to conventional universities' institutional framework. Furthermore, a comparative survey of developed countries (National Institution for Academic Degrees and Quality Enhancement of Higher Education, 2016) showed that while double-tracking at the higher education level took place in Europe in the 1960s and 1970s, the trend has been rather toward incorporation multiple tracks or fields into a single university system since the start of the 21st century.

In this sense, I believe that the Central Council for Education's deciding that a new type (professional and vocational universities) was necessary was not exactly a logical conclusion to its discussions. However, the reform already been proposed in the Education Rebuilding Implementation Council, and at that stage, the establishment of professional and vocational universities would have been politically difficult to reverse.

It is also important to keep in mind that setting up "professional and vocational programs," courses equivalent to professional and vocational university courses, at conventional universities and junior colleges has been approved through the discussion process. This has the potential to catalyze significant changes at existing universities as well.

3. Specific design of the project

How do professional and vocational universities specifically differ from conventional universities? To define them specifically, "standards for establishment of professional and vocational universities" and "standards for establishment of professional and vocational junior colleges" will be enacted, but at the time of this writing, they have not been finalized. Based on the materials provided for public comments, however, their characteristics can be summarized with the following three points.

First, from the standpoint of subjects (courses), requirements for graduation are prescribed in terms of credits (as opposed to time, in the case of professional training colleges), and the 124 credits required is the same number as that of normal universities. However, unlike ordinary universities, students are required to obtain 40 or more credits related to experiments, practical training or practical skills. Regarding subjects, four categories are to be established: (1) basic subjects, (2) specialized professional subjects, (3) advanced subjects, and (4) integrated subjects.

Secondly, regarding educational conditions such as admission capacity, facilities, faculty and so forth, as a general rule they conform to ordinary standards for establishment of universities, such as the number of teachers required for each specialized field. Differences are that in principle class sizes are required to be no larger than 40 people, and that in relevant notifications, methods for "provisional practical exercises" are specified. Rules regarding teachers include that people working in specialized professions outside the university can be admitted as full-time teachers, and that 40% or more of full-time teachers must have five or more years of experience in their fields of specialization, and have high levels of practical proficiency.

The third characteristic concerns governance and mechanisms of quality assurance. Because professional and vocational universities are established within the scope of the School Education Act, unlike professional training colleges, school corporations must be established under the provisions of the Private Schools Act, and they must be operated and managed accordingly. Also a Curricular Liaison Council must be established to maintain partnerships with the industrial and academic communities. Council participants are to include representatives such as university teachers and staff, members of industry associations related to specialized professional fields, local government officials and so on. Quality assurance is a crucial task, and it is likely that the new type of institutions will be subject to evaluation and accreditation procedures as with ordinary universities, but its format has yet to be specified.

III. Issues facing professional and vocational universities and professional and vocational programs

As we have seen, the framework for professional and vocational universities has almost solidified. However, we cannot view this as simply the outcome of political factors. As discussed above, there is also the issue of establishment of professional and vocational courses (programs) at ordinary universities or junior colleges, and a need to consider what significance these reforms have for Japanese higher education, and what sorts of problems may lie on the horizon.

1. Demand

An interesting aspect of discussions on the establishment of professional and vocational universities is that it was never clearly stated what kind of "specialized professions" the system envisions. Indeed, even the final report of the review committee places no clear numerical values on the demand for graduates of these institutions, or the distribution of students' areas of specialization. Several examples of fields were given during the discussions, but their scales were not clarified, nor were the reasons they could not be addressed within the conventional university system. Thus, in the standards for establishment of professional and vocational universities, classifications of special fields are almost the same as those of existing universities.

On the other hand, however, this does not indicate that there are no points to consider with regard to the relationship between conventional university education and specific occupations. As described earlier, universities were originally intended to train students in the classical specialized professions, and since the 19th century preparation for modern occupations has also been an important objective of university education. However, the postwar massification of university education occurred in tandem with expansion of corporate organizations. Knowledge and skills related to duties were incorporated into training within corporate organizations, and direct relationships between university education and career became highly unclear.

The results of a survey on university graduates (Figure 1) show that the majority are hired at enterprises in the categories of "administrative and sales positions," "technical positions," and "specialized professional positions." "Administrative and sales positions" account for about 60%, "technical positions" about 30%, and "specialized professional positions" no more than 10%. In terms of distribution of this last category by university major (Figure 1), the scope of "specialized professions" is limited to health-related, psychological and social, education and the like.

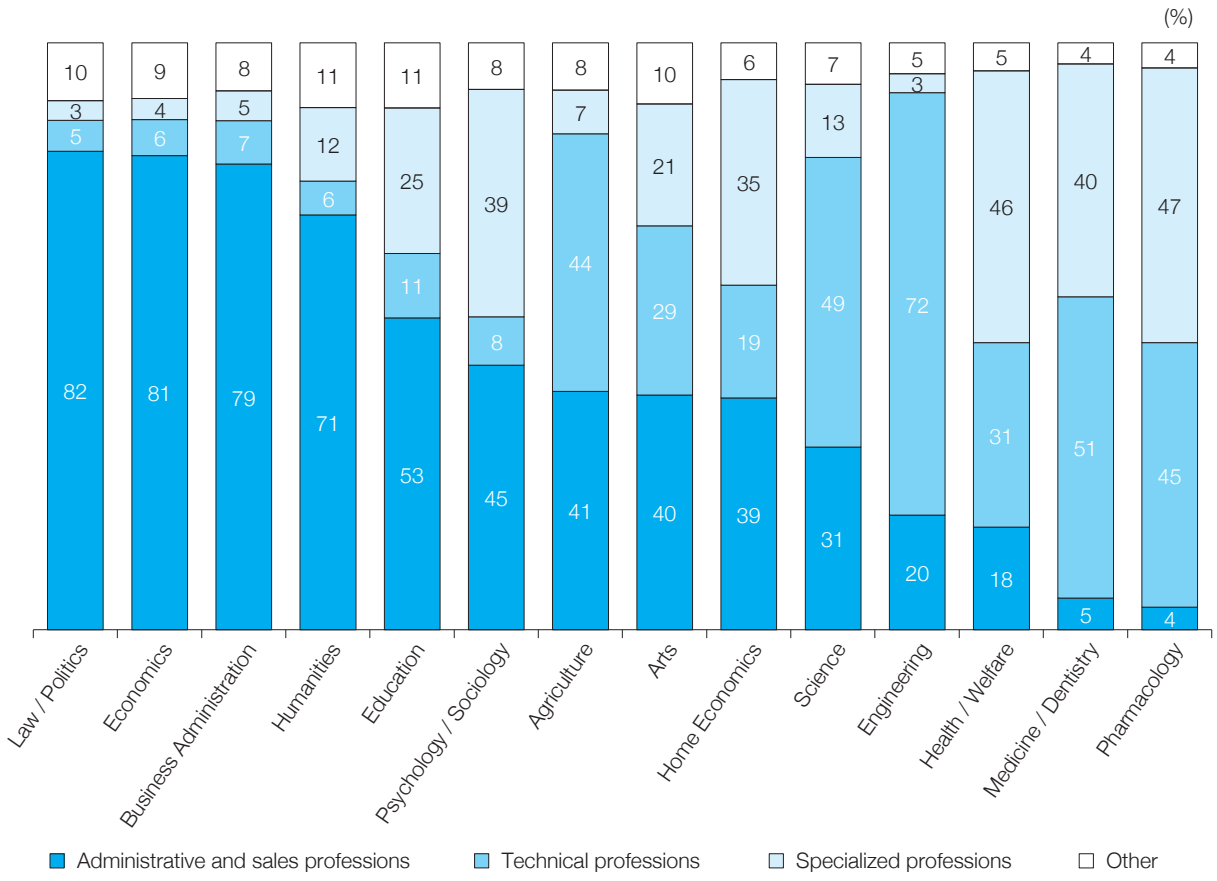
On the other hand, examination of the distribution of graduates of four-year universities by industry reveals that the employment structure of university graduates has changed dramatically since 1990. Until the 1990s, the manufacturing industry led the job market, but commerce and finance have expanded thereafter, and service industries have rapidly increased in the 21st century (Figure 2).

These figures show that almost 40% of graduates are employed in the service sector, and when the approximately 30% in commerce and finance are added, this accounts for 70% of university graduates. In these sectors, specific job contents appear to be growing highly varied.

So, what types of skills are specifically in demand? A graduate of a professional training college usually gains employment through having their knowledge and ability in specific skill areas recognized. From that perspective, I examined the distribution of specializations of students enrolled at professional training colleges (Figure 3). Professional training college graduates account for less than 20% of new graduates employed (i.e. of their peer group), but the survey findings show that half of them are in occupations requiring public licenses such as health care and welfare. This is not particularly different from the circumstances of four-year university or junior college graduates. However, the other half is employed in a diverse range of fields, including industrial and commercial ones.

To investigate this in greater depth, I examined the distribution of professional training college students by more finely subdivided college subjects (Table 1). The results clearly show that these subjects span a very diverse field. In terms of the industry classifications mentioned above, most can be considered to belong to the service industry, but their actual job contents are quite diverse and do not necessarily correspond to conventional industrial or occupational classifications. We should recognize that in a wide variety of fields, employees are being recruited to perform specific duties.

People hired to perform such diverse duties appear to function in organizations different from ordinary university graduates. They also have a high degree of fluidity outside the scope of specific companies. Here, let us call their fields "fluid professions." The professional and vocational universities to be established, as well as professional and vocational programs at conventional universities, are supposed to correspond to these areas.



Source: The author, 2013, 148.

Figure 1. Sectors in which employees are hired, by field of university major

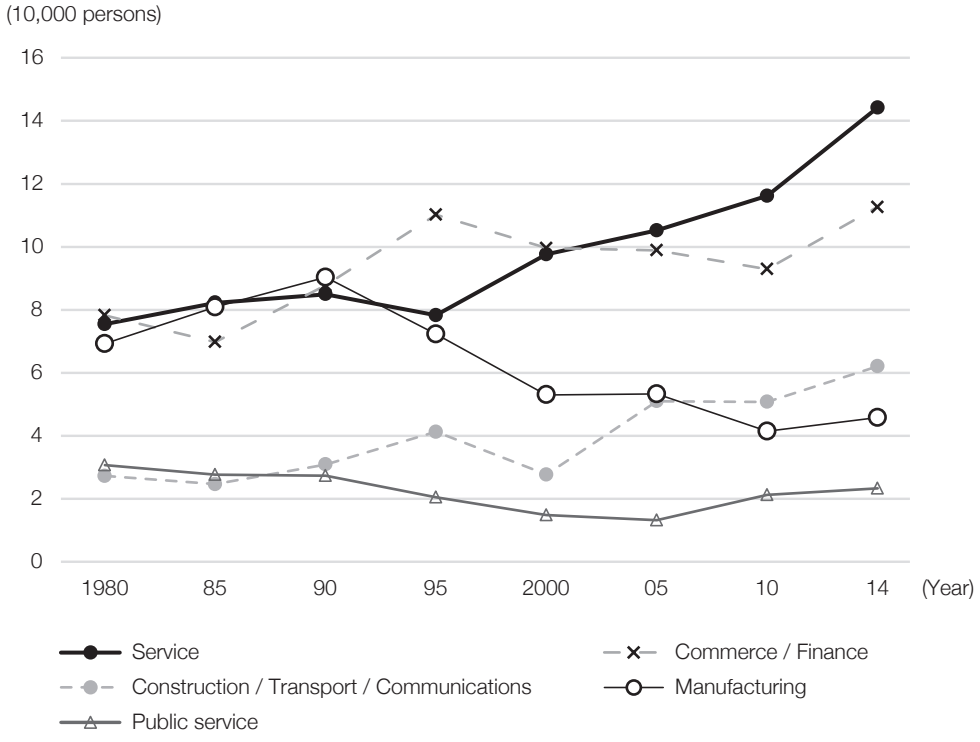
From this perspective, the employment tracks of higher education graduates can be divided into three conventional categories: (1) white-collar administrative and sales positions, for which duties are delegated by enterprises, (2) technical positions for which duties are delegated within the framework of enterprises, (3) specialized professions requiring a university degree, many of which also require licenses and are systematically divided by academic field. To these we can add a fourth, (4) "fluid professions" encompassing a highly diverse range of specific duties.

2. Curricula and methodologies

What do these changes signify in terms of curricula and methodologies? The importance of "practical" education was emphasized in the discussions on establishment of the professional and vocational university system. However, it is not necessarily clear what "practicality" here means specifically.

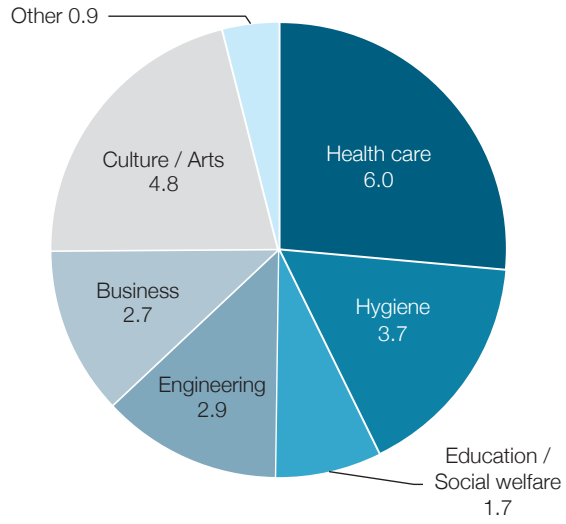
One possible meaning is that its education is practically useful in that graduates can be placed in charge of specific tasks as soon as they are hired, forming an immediately accessible pool of talent. If this is possible, it is certainly a desirable outcome for employers and students themselves. Actually, however, when considered in concrete terms, this is quite difficult to realize. Duties performed in the real workplace are quite varied, and it is extremely difficult to accurately match curricula to them. Also, duties required in the workplace change rapidly.

Considering it, this vision for curricula could be rather regarded as a criticism of the status quo, in which conventional universities deliver specialized academic education, which is almost completely irrelevant to actual duties graduates will perform at companies. In that sense, it is desirable for university education to be more closely related to activities in society. And the new model can be interpreted as not only learning individual pieces of knowledge related to specific job duties, but also absorbing general knowledge and attitudes that will be required in the workplace.



Source: Ministry of Education, Culture, Sports, Science and Technology, "School Basic Survey" for each year.

Figure 2. Distribution of new four-year university graduates by industry



Source: The author, based on Ministry of Education, Culture, Sports, Science and Technology, "School Basic Survey," 2015.

Figure 3. Distribution of new professional training college graduates by field of specialization (broadly categorized) (2014, unit: 10,000 persons)

Table 1. Distribution of professional training college students by subject studied (2015)

	Actual number of students	Percentage (%)			
Total	588,183	100.00	Information	7,693	1.31
Nursing	96,536	16.41	Drama/Film	6,761	1.15
Science/Occupational therapy	37,548	6.38	Nutrition	6,338	1.08
Beauty	33,253	5.65	Other (Hygine)	5,649	0.96
Information processing	24,764	4.21	Commerce	5,060	0.86
Other (Culture Arts)	21,184	3.60	Social welfare	4,498	0.76
Design	19,577	3.33	Clinical examinations	3,961	0.67
Automotive maintenance	19,330	3.29	Interpretation/Tour guidance	3,508	0.60
Dental hygiene	18,657	3.17	Computers	3,263	0.55
Legal administration	15,498	2.63	Fashion business	3,206	0.55
Cooking	15,318	2.60	Agriculture	3,127	0.53
Judo therapy	15,087	2.57	Radiology	3,030	0.52
Business	14,806	2.52	Business administration	2,735	0.46
Other (Engineering)	14,578	2.48	Electric/Electronics	2,643	0.45
Early childhood education	14,252	2.42	Dental technique	2,286	0.39
Other (Medical)	14,172	2.41	Other (Education/Social Welfare)	2,143	0.36
Travel	13,452	2.29	Art	2,023	0.34
Animals	12,939	2.20	Barber	1,381	0.23
Music	12,932	2.20	Other (Agriculture)	985	0.17
Long-term care/Welfare	12,119	2.06	Gardening	879	0.15
Confectionery/Baking	11,457	1.95	Machinery	863	0.15
Civil engineering/Construction	11,107	1.89	Photography	788	0.13
Acupuncture/Moxibustion/Massage	11,089	1.89	Home economics	697	0.12
Dressmaking (Japanese/Western)	9,957	1.69	Secretarial	539	0.09
Sports	9,598	1.63	Radio/Communications	485	0.08
Accounting/Bookkeeping	9,306	1.58	Surveying	449	0.08
Foreign language	8,941	1.52	Cooking	432	0.07
Other (Business)	7,740	1.32	Nursing care	357	0.06
			Knitting/Handicrafts	285	0.05
			Other (Clothing/Housekeeping)	213	0.04

Source: The author, based on Ministry of Education, Culture, Sports, Science and Technology, "School Basic Survey" 2016.
Note: Fields with 100 or fewer students are omitted.

Incidentally, research aimed at empirically validating the relationship between school education and professional capabilities began in the 1980s in the United States and elsewhere (Business-Higher Education Forum 1999). This research showed that specific knowledge learned at schools or universities was not very often used directly in future occupations. Rychen and Salganik (2001) and Nijhof and Streumer (1998) argued that education at schools plays an important role in cultivating generic skills or competencies. With regard to Japanese workplaces, where knowledge formed and accumulated within the organization is particularly important, this becomes an even more convincing argument. It is no wonder that a similar message was conveyed with the "fundamental competencies for working persons" advocated by the Ministry of Economy, Trade and Industry (2006), and a series of related workforce competency campaigns.

If we extend these concepts, it once again becomes evident that the discussion surrounding knowledge, which connects college or university education and work, is a multilayered one (Figure 4). By providing specific expertise and skills, college or university education forms not only these, but also generic abilities such as logical thinking and communication skills, as well as self-awareness and ambition for the future. And this self-recognition and ambition forms a motivation for acquiring generic competencies, knowledge and skills. These dynamics of learning bring about intellectual and personal growth of students.

However, these dynamics are not necessarily at work in actual college and university education. For one thing, that the time Japanese students spend studying is extremely low shows it distinctly, and naturally, efforts and ingenuity on the part of colleges and universities are needed to overcome this. On the other hand, the essence of ordinary university education lies in explaining and fostering understanding of systems of academic knowledge that have already been logically organized.

Meanwhile, encounters with actual society and work, or the search for necessary knowledge and skills through experience, are of great significance to the university education. This is the so-called pragmatism theory of John Dewey, who pointed out its importance in primary education, but it actually has great meaning at the higher education level as well.

In fact, when generic knowledge and self-awareness are assumed as abstract concepts, while their importance is obvious, in reality they consist only of individual and highly specific abilities and qualities. In other words, they are created under certain specific conditions and needs, and put into practical use in relation to them. In this sense, we should think of generic knowledge and self-awareness as developed through actively taking the initiative in the workplace and society, and through the self-reflection that results.

In this point of view, it is a major challenge for colleges or universities to organically incorporate social and work experience into their educational programs. The discussion surrounding professional and vocational education at university has important implications for incorporating this perspective. However, the methods of introducing "on-site education" such as training in actual workplaces, and of combining vocationally

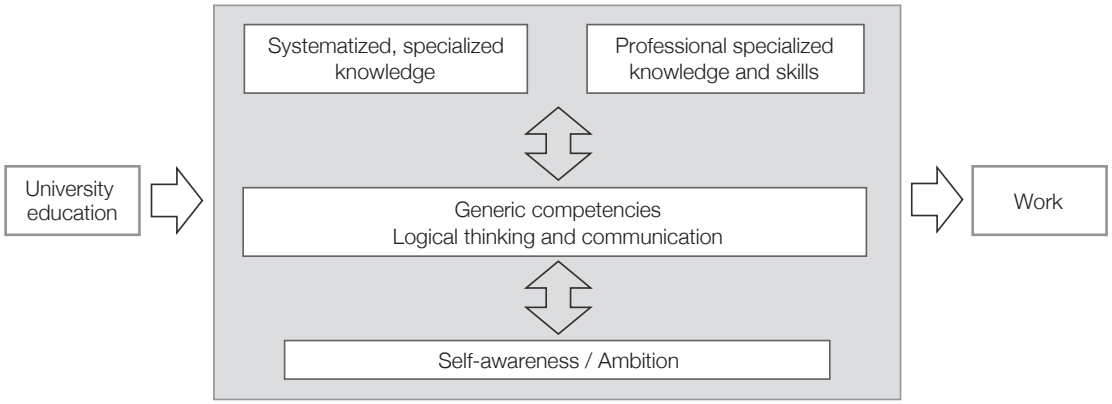


Figure 4. Multi-layered knowledge and skill model

related classes or more specific classes at universities, should be seen as depending on specific occupations.

3. Governance and collaboration with society

Currently, another important challenge is the management and operation of professional and vocational universities and program. As mentioned earlier, if the movement to establish professional and vocational universities was propelled by existing professional training colleges, its main objective might be to confer bachelor degrees on graduates by obtaining the status of universities, rather than necessarily upgrading education. On the other hand, it is necessary to put organizational systems in place to ensure solid high-quality education, and mechanisms for monitoring them, focused on fields of study related to the "fluid professions." This is not always an easy endeavor.

With respect to academic fields, or established professional and vocational fields, there is an academic track record, and since there are similar courses offered at multiple universities, mutual evaluation and monitoring among universities has an effective quality assurance function. However, "fluid professions" are generally not established as knowledge systems themselves, and individual fields of expertise are narrow, so it is difficult for similar universities to assemble and mutually evaluate one another. How to overcome this is an issue.

To that end, organizations that provide a certain amount of advice and monitoring are needed, based on region or specialized profession in question, from representatives of companies related to the field, or of local government. For this purpose, creation of Curricular Liaison Councils is envisioned as part of the standards for establishment that are currently being studied. However, in order for these organizations to have meaning, they should not merely be advisory bodies, but must have concrete authority.

Besides, it is important for students to gain practical training at companies, and for educational institutions not only to employ teachers with practical occupational experience, but also to carry out ongoing human-resource exchange with companies. With regard to the standards for establishment currently under examination as well, due to such considerations, leeway is granted in terms of flexible conditions for hiring teachers, such as broadening the definition of full-time faculty members. However, depending on how it is used, this leeway runs the risk of leading to merely fulfilling the requirements for number of teachers as a formality. Regarding this point as well, it is essential that a system be instituted for substantive evaluation and checks, for example by the above-mentioned councils that liaison with society.

IV. Conclusion

This new inauguration of a "professional and vocational university" system grew out of the past history of Japanese professional and vocational education, and various social and political dynamics. Personally, I believe it was a significant error to create a separate professional and vocational education system and officially distinguish it from ordinary university education. On the other hand, this systemic reform makes it possible to create "professional and vocational programs" even at ordinary universities. It also opens up new possibilities for the relationship between university education and occupations.

Seen from another angle, in the 21st century, the relationship between university and occupation is changing significantly. We could say that new model for this relationship is emerging, in addition to the model of training in modern specialized professions that emerged in the 19th and early 20th centuries, and the model of university graduates as human resources supporting the expansion of corporate organizations in the latter half of the 20th century. This results from a diversifying and fluid industrial structure and increasing demand for goods, information and services, which university graduates are corresponding to. If we refer to the emerging occupations as "fluid professions," it is no wonder that university education will function so as to adapt to them.

The new system does not necessarily take the place of conventional college or university education, and

may not be very large quantitatively speaking, but for universities, it is important that one new function has been added. However, its content and methodologies are extremely varied, and various steps are required from now on to ensure that these institutions and programs have substantive and meaningful curricula. In that sense I believe we must pay attention to these new possibilities, including the framework of conventional universities.

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Note

1. "Article 1 schools" refer to kindergartens, elementary schools, lower secondary schools, upper secondary schools, secondary education schools, schools for special needs education, universities (including junior colleges), and colleges of technology.

References

Amano, Ikuo. 1993. *Kyusei senmon gakko ron* [The prewar vocational school system in Japan]. Tokyo: Tamagawa University Press.

Business-Higher Education Forum. 1999. *Spanning the Chasm: A Blueprint for Action.* Washington: Business-Higher Education Forum.

Galbraith, John K. 1971. *The New Industrial State.* 2nd ed. Boston: Houghton-Mifflin.

Kaneko, Motohisa. 2013. *Daigaku kyoiku no sai kochiku: Gakusei o seicho saseru daigaku e* [Reconstructing college education in Japan: Toward colleges that promote students' growth]. Tokyo: Tamagawa University Press.

———. 2014. "Higher Education and Work in Japan: Characteristics and Challenges." *Japan Labor Review* 11, no. 2: 5–22.

———. 2016. "Koto kyoiku shisutemu to shokugyo kyoiku: 7 kakoku gaikan." [The higher education system and vocational education: A seven-nation overview]. Chap. 1 and "Nihon no koto kyoiku ni okeru shokugyo kyoiku to gakui" [Vocational education and academic degrees in Japanese higher education]. Chap. 8 in *Koto kyoiku ni okeru shokugyo kyoiku to gakui* [Vocational education and academic degrees in higher education]. 1–18, 155–170. Tokyo: National Institution for Academic Degrees and Quality Enhancement of Higher Education (NIAD-QE).

Kobayashi, Shinichi. 2016. "Daigaku kyoiku no kyokai: Atarashii koto shokugyo kyoiku kikan o megutte" [Boundaries of higher education: Dispute over professionally oriented higher education institutions]. *Reference* 785: 23–52.

Ministry of Economy, Trade and Industry (METI). 2006. "Shakaijin kisoryoku ni kansuru kenkyu kai hokoku" [Report of the committee on fundamental competencies for working persons]. METI: Tokyo.

National Institution for Academic Degrees and Quality Enhancement of Higher Education (NIAD-QE). 2016. *Koto kyoiku ni okeru shokugyo kyoiku to gakui* [Vocational education and academic degrees in higher education]. Tokyo: NIAD-QE.

Nijhof, Wim J., and Jan N. Streumer, eds. 1998. *Key Qualifications in Work and Education*. Dordrecht: Kluwer Academic Publishers.

Rychen, Dominique Simone, and Laura Hersh Salganik. 2001. *Defining and Selecting Key Competencies*. Seattle: Hogrefeuber Publishers.

Toyama, Kazuhiko. 2014. "Waga kuni no sangyo kozo to rodo shijo no paradaimu shifuto kara miru koto kyoiku kikan no kongo no hokosei" [Future directions for higher education institutions in light of paradigm shifts in Japan's industrial structure and labor market]. Paper presented at the first meeting of the expert panel on inauguration of new higher education institutions offering practical vocational education as material no. 4, Ministry of Education, Culture, Sports, Science and Technology (MEXT), October 7, 2014. http://www.mext.go.jp/b_menu/shingi/chousa/koutou/061/gijiroku/__icsFiles/afieldfile/2014/10/23/1352719_4.pdf.

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