### Abstracts

# Specialized Professional Colleges : Background and Challenges of a New Institutional Type in Japan

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By the revision of School Education Law in 2017, a new institutional type was created in the higher education of Japan. Roughly translated as a "Specialized Professional College," this type of institutions offers a bachelor degree through curricula emphasizing practical professional training. This article first overviews the historical context and major issues of professional education in universities in Europe, the U.S. and Japan, and articulates the general and peculiar characteristics of the Japanese system (Section 1). It then analyzes the social and political factors that promoted the change (Section 2). Following these examinations, it argues that labor demands have become increasingly diversified; in this context there are new types of labor demands that may be called "fluid professions." The new type of institution, and the degree programs in the existing four year institutions, may have significant prospects to cater to this new need. (Section 3).

## On the Demand for Higher Education

Ryuichi Tanaka (The University of Tokyo)

This paper investigates empirically the determinants of college choice and college major choice by high school graduates. Using nationally representative microdata of high school students, I estimate the probability of the four-year college going rate using Probit models. I find that household income, parental education as well as academic background matter for the college-going probability. On top of them, I find that expected returns from college education and some types of future jobs matter for this probability. I further estimate the probability of choosing science-related (STEM and medical) majors. I find that students who wish to have a job using major-related knowledge and/ or being helpful for others are likely to choose science-related major. Parental income and education matter for this choice of major, but subjective returns from college education have no statistically significant relation with this choice probability. Based on the estimation results, I discuss how the future changes of population and socio-economic conditions affect demand for higher education.

#### Adult Learning in Japan's University Education

Shuichi Tsukahara (Kansai University of International Studies)

Atsushi Hamana (Kansai University of International Studies)

In this paper, the following points on adult learning in Japanese university education are described. (1) There are 110,000 adult learners in higher education institutions in Japan around 2015, of which 50,000 are in colleges and universities. The majority of them are in face-to-face courses of postgraduate and professional schools, and in correspondence courses of undergraduate and graduate schools. The proportion of adult students is fairly low compared to the average of OECD countries. (2) According to the social survey for adult students, enterprises and universities, adult students are expected to acquire specialized knowledge in university education. However, its content, educational method and conditions are diverse. Adult students are requesting companies to appreciate graduation qualifications, but few companies have such a mechanism. (3) In the professional graduate schools, the work experience of adult students improves the learning outcomes, but in recent years students who advanced directly from undergraduate courses are increasing. The Brush up Program for Professionals recognized by MEXT are mainly provided as certificate programs and master's courses, that adult students find easy to attend. In the specialized vocational university set up in 2019, the choice of department at the time of admission will strongly prescribe the occupation after graduation. Career education will be necessary prior to enrollment. In this sense, a stop-out giving temporary work experience before going to university will be effective. Finally, the strategies for expanding adult learning in university are discussed.

## A New Concept in Higher Education: Competency-Based Education

Kumiko Aoki (The Open University of Japan)

The purpose of this article is to introduce the concept of competency-based education (CBE), which requires a paradigm shift from the traditional higher education based on "seat time," to explain how CBE differs from the traditional seat-time based system in terms of its characteristics and historical backdrops, to introduce CBE implementations in the United States, and to provide opportunities to reconsider higher education in response to the current societal needs. The credit system based on so-called "Carnegie Units," which was introduced in American universities in the early 20th Century, was implemented in higher education in Japan after World War II, and has served as the common currency in every aspect of the higher education system in Japan; however, it has caused the hollowing-out of higher education and fundamental reform of higher education systems is becoming pressing. CBE assesses one's learning outcomes as acquired at a pace and method of one's preference, based on the defined competency, i.e., knowledge, skills, and attitudes, and to recognize them instead of the seat-time based grades. To assess one's competency properly and objectively, competencies must be clearly defined and rubrics visualizing the competency definition developed. To this end, several professional organizations and non-profit educational organizations in the United States have defined relevant competencies and developed rubrics to assess those competencies. In addition, the U.S. Department of Education started an experimental program to allow students of selected CBE programs to access federal student aid, and this governmental experiment will give some insights into how we should design the process in Japan.

## The Practicability of "KOSEN"Education: Focusing on Its Relation to Graduates Career Yoshitaka Hamanaka (National Institution for Educational Policy Research)

KOSEN are technical colleges in Japan, appreciated as a school type performing practical engineer education characterized by a program that attaches great importance to laboratory work. However, KOSEN are not so popular with the general public because of their small size on a quantitative scale. Further, there is little evidence to support the usefulness of KOSEN education. This paper describes the present conditions of the social evaluation of KOSEN graduates by analyzing surveys for graduates from 1976 to 2008, and also examines how graduates themselves recognize the practicability of KOSEN education. The findings are as follows. Though an increasing share of the population has higher academic qualifications, the distribution of the academic achievement of entrants has not changed for 40 years. The fact that more than half of new graduates who want to find a job are employed in large companies as engineers has also not changed. In regard to the wage level and possibility of promotion, KOSEN graduates receive equal treatment to bachelor's degree holders. KOSEN graduates evaluate the educational experience of their schooldays higher than university graduates, though it cannot be clarified whether the difference of evaluation depends on the educational practicability. On the other hand, both KOSEN and university graduates consider conventional teaching methods like lectures and laboratory work more useful than subjects that directly intends practicability like internships. Also, the recognition of usefulness of experience in their school days is affected by the current situation of their self-learning. Those results suggest that the practicability of KOSEN education does not depend on distinctive teaching methods but is supported by raising the applicability through graduates' self-learning based on the knowledge and skills that students obtained in daily classes.