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Report on Public Symposium “Active Learning and Teachers’ Capability: Talking on elementary school science”



From left to right, Prof. Hioki, Dr. Shimoikura and Prof. Ishii.

This year’s annual public symposium planned by the Curriculum Center for Teachers was held on November 27, 2016, with the title “Active Learning and Teachers’ Capability: Talking on elementary school science.” Our initial intent at the planning stage was to try to regard active learning as a problem of teachers’ capability, as well as to examine an issue of capability formation in future teacher students. However, it was far too broad to discuss. Therefore, we decided to narrow the subject down to “elementary school” from a perspective of school levels and “science” in terms of subjects. I would like to introduce some points in the lectures given by the following three symposiasts.

Prof. Mitsuhsisa Hioki, a specially appointed professor at The University of Tokyo, made a suggestion under the title of “Active Learning and Elementary School Science.” He pointed out that: (1) The course from the old-days “cramming and dropping out” through “careful selection and pressure-free (yutori)” and a “zest for life” to the ongoing course of study (of the 2008 version) was organized. Particularly “utilization” has been hammered out already as an element connecting the “acquisition” of each subject to “research” in comprehensive learning. A mode of thinking leading to active learning, which is a hot topic today, is included in it. (2) Problem-solving learning in science that has been provided is a cycle that starts from concrete objects (nature) toward abstraction and verbalization, shares them, and looks at nature once more with a new perspective and mode of thinking. This can be

regarded fundamentally as the same as the mode of thinking of active learning.

Dr. Tomomi Shimoikura, a specially appointed lecturer at Tokyo Gakugei University, delivered a specific report entitled “A Teacher Education Curriculum to Foster the Effectiveness of Science Classrooms” based on classroom practice at university and survey data. With regard to university students, she demonstrated the following notions: The “confidence to give guidance” cannot be improved even in the case in which the depth of understanding of selected learning units has been increased by incorporating experiments and observations; students have a desire to learn “a little bit of everything”; according to previous surveys, even if understanding is ensured, it is not directly linked to the “confidence to teach.” Therefore, although teaching methods themselves should be valued, ideally it is necessary to ensure sufficient understanding of learning subjects before moving on to the learning of teaching methods.

Prof. Masayuki Ishii, a professor at Otsuma Women’s University, offered a suggestion with the title “Teachers’ Capability Required for Future Elementary School Science Education.” His lecture included the following points: Objective, goal, content, method, and evaluation are indispensable elements for class making. Teachers must make classes based on them. It is true that universities cannot foster work-ready teachers who have mastered all learning units and teaching methods. Even so, it is desirable for students to cultivate interpretation skills for teaching materials to produce problem-solving style classes that facilitate learning by which children discover, examine, and consider problems, as well as human skills that form the basis of the teacher.

Following the three lectures, discussion and questioning sessions were held, in which some participants joined. The topics discussed there included how “Japanese style science” should be, general ability and the direction of future reorganization of subjects, and facts in the fundamental understanding of subjects. The symposium was an extremely useful opportunity to reconfirm the understanding of active learning and to think about problems and difficulties related to teacher training education. As one of the planners, I would like to thank all the symposiasts and participants. (Kenji Maehara)

Introduction of New Visiting Associate Professor



I am an associate professor in Department of Education at the Chinese Culture University (CCU), Taiwan. I was the Deputy Executive Officer of Xiaofen College at CCU and currently responsible for the Teaching Excellence Program in CCU funded by the Ministry of Education. I'd been an assistant professor and chairperson of Dep. of Early Childhood Education and Care and the director of Center of Teacher Professional Development at Meiho University.

My research interests lie, firstly, in philosophy of education, especially in post-structuralism and the analysis educational issues with Michel Foucault's theory; secondly, in comparative education, particularly focusing on educational policies and educational systems in European Union; thirdly, in sociology of education, emphasizing on social justice and educational equity; and fourthly, in teacher education, such as teacher education and teacher professional development.

There is a wide range of scope and subjects in Foucault's works, and Foucault's theory and methods have been widely applied till now. Recently, Foucault's genealogy has been used to analyze different education issues from the historical development, the subject of modern education, as well as the educational subject constructed from the mainstream discourse in contemporary society. Some of my works are attempts to analyze education topics via genealogy, rather than applying the specific concepts used by Foucault to illustrate the phenomenon of education.

My recent works include: *Social Justice and Capacity for Self-development in Educational Systems in European Union*, in *Education Provision to Every One: Comparing Perspectives from Around the World* (BCES, 2016); *Teacher Professional Development in Taiwan*, in *Teacher Education in Taiwan* (Routledge, 2016); *Teacher Professional Development Framework in European Union and Its Significance to the Teacher Professional Development in Taiwan* in *Teacher Education Law: 20 Years Retrospect and Prospect* (in Chinese) (TEAROC, 2015); *A Study on Teacher Professional Competence Development in European Union in Teacher Professional Standard, Development and Practice* (in Chinese) (TEAROC, 2016); *Foucault on Education* (in Chinese) (Taipei: Wha-Kang, 2013). Together with Tien-Hui Chiang co-edited *Crisis in Education: Modern Trends and Issues* (in Chinese) (Taipei: Edu-book, 2015).

I currently serve as Secretary-General of Taiwan Association for Sociology of Education (TASE), the executive editor of *Journal of Comparative Education*, and the executive editor of *Journal of Taiwan Philosophy of Education*.

As a visiting Professor of Training Curriculum Center for Teachers in Tokyo Gakugei University, I am glad to share studies and information about trends and issues of educational system in Taiwan with anyone who has interests in related issues.

The education system in Taiwan is currently a 6-3-3-4 structure, providing compulsory education as well as teacher training and vocational education. Compulsory education in Taiwan extended to 9 years in 1968, including primary and secondary schools; in 2014 it has extended to 12 years to cover senior high school. Upper secondary education consists of three years of schooling and includes "general senior secondary schools," "skill-based senior secondary schools," "comprehensive senior secondary schools," and "specialized senior secondary schools."

In terms of curriculum, the Nine-Year Curriculum for National Primary and Secondary Schools is a major change in curriculum development since 2000. It emphasizes competency-based, school-based and students' ability acquisition. The Nine-Year Curriculum has been in place since the 2001 academic year and has been in progress since the end of the 2004 academic year. In order to meet the needs of the times, some emerging issues (such as media literacy, marine education, etc.) were added into the learning areas of primary and secondary education. And in line with the establishment of a consistent curriculum system for primary and secondary schools, the teachings in schools will carry out a revision of the competency indicators in various fields and topics, with a focus on the 12-year curriculum convergence and social change in primary and secondary schools.

Teacher education system consists of diversified, training and selection mechanisms. Universities with teacher training institutions and program recruit candidates and offer teacher-training courses. These teacher-training programs recruit qualified undergraduate, masters and doctoral students. Qualified candidates must complete the curriculum, including regular, professional and pedagogy courses, and then they must attend a six-month internship. Candidates will be officially accredited if they pass the teacher certification exam. Only those candidates who have obtained this certification are eligible to participate in the selection held by local governments for teaching positions at primary and secondary schools.

Traditionally, the concept of teacher professional development in Taiwan is mainly based on teacher in-service training and learning. In 1990's, the movements of educational reform in Taiwan led to changes in ideas of teacher education system and teacher professional development. The framework of teacher professional development gradually attempts to build up a teacher career ladder and construct a consortium system of teacher professional development. With the diversity of teacher education system and institutions, Taiwan teacher professional development represents a gradual governance shift from the model of centralized and state regulation to new professionalism and marketization.

From February 2017 to August 2017, I will share my researches with the staff in Tokyo Gakugei University. I am sincerely looking forward for profound academic communication in Japan.

Dr. Bo-Ruey Huang
Chinese Culture University

Compulsory Education System and Teacher Qualification – A premise for comparison of teacher training

Kazuko Takano
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Member of the Advisory Board for the Curriculum Center for Teachers

Some people ask me about characteristics of teacher training in England compared with those in Japan. To answer the question, I would have to explain that paths to obtain a teacher qualification are extremely diverse in England, different from Japan, where the paths are almost strictly limited to those via training courses at university, and that elementary and secondary schools play a major role not only as providers but also as places to give training, which cannot be said of Japan (Looking at the number of new postgraduate entrants in the academic year 2015–2016 [a provisional figure], the higher education institution-led courses already accounted for only 49% (DfE, Initial teacher training census for the academic year 2015–2016, England)). However, a persistent feeling bothers me: “The promise is different from Japan, whose people take it for granted that everybody goes to a similar school and where it will make the news immediately if a teacher teaching at the school is unlicensed…” Nonetheless, I have never mentioned it.

Because it is often introduced into Japan in movements to include free schools in the public education system, the duty of parents in the entire UK, including England, is the duty to secure “education” of children of compulsory age (compulsory education), not the duty to send a child to school (compulsory schooling). Different from Japan, where parents are required to “send” their children to “schools” prescribed in Article 1 of the School Education Act, it is necessary for UK parents to induce their children of compulsory school age to receive efficient full-time education suitable (a) to their age, ability and aptitude, and (b) to any special educational needs they may have, “either by regular attendance at school or otherwise” (Article 7 of the Education Act 1996). As a method of education otherwise, education by parents at home is legally permitted. Information about home education has been provided on the comprehensive information website of the government (<https://www.gov.uk/home-education>). It would not have been possible without a culture and history that tolerate individualism and diversity. It goes without saying that parents need not have a teacher qualification.

From the beginning, teachers of private schools that receive no support from public funds, which are called independent schools, have not been required to have a

qualification. Joining the schools were City Technology Colleges (CTCs), which were schools of a type newly established by the Education Act 1988. There have been schools with no restriction in terms of teacher employment, other than passage of a criminal background check. Furthermore, after schools of new types were established (e.g., Academies in the 2000s and Free schools in the 2010s), such schools have spread rapidly, which has created situations in which persons without a teacher qualification can be employed as teachers in such schools. In the course of the reform of school systems to promote competition among schools and to make use of private sector vitality, which has continued after the Thatcher Government, the types of schools for which the acquisition of qualification is not a condition for teachers working there are increasing. This means that the useful scope of teacher qualification itself is narrowing. Referring to the association with teacher training, the opportunities that various training “reforms” and efforts present as educational improvement at school sites is declining. Although the teaching certificate system was once brought to the public eye in discussions of regulatory reform in Japan as well, the United Kingdom has moved much ahead in this respect.

Japanese pre-service and in-service teacher training related policies which will be put into practice based on the law revision last year seem to follow the British manner, by which teacher training programs and qualities and abilities of teachers are assured through the setting of standards and competencies. However, what we should be conscious of when comparing today's Japan with the United Kingdom is rather a sense of scale and thoroughness of influence that “reform” will spread throughout public education: in elementary and secondary education, teacher training, and higher education in general. The reform will be undertaken to perform quality management over the professional life of teachers and to establish a curriculum that serves as a model. Typical Japanese features such as the ratio of children who go to schools prescribed in Article 1 of the School Education Act, the certificate possession ratio of teachers working there, and the ratio of persons via teacher training courses in qualification acquisition should be considered along with comparisons to the United Kingdom.

Terminology of Teacher Education

Japan Association of Universities of Education

A federation of universities of education in Japan was founded in 1949 under the direction of the Supreme Commander for the Allied Powers (SCAP) in the form of developmentally reorganizing the former Principals' Committee of Normal Schools. In addition to national universities and faculties of education, it organizes their affiliated schools and some general universities as members. Although private universities used to take part, the membership is now restricted to national universities because the rules were changed in 2010. The office has continuously been at Tokyo Gakugei University, which took over the old Tokyo 1st Normal School. The president of the university and the chief of the administration bureau serve successively as the chair of the association and the head of the office, respectively. The Association has exchanged information related to teacher training, has conducted research activities (e.g., holding research meetings and issuing annual research report), and has made policy proposals. It has a strong tinge of being a kind of pressure group of teacher training universities and faculties and their affiliated schools. However, after national universities were reorganized as corporations in 2004, the authority of presidents of universities and that of deans of faculties of education in comprehensive universities have become substantially different, which made it difficult for them to have common interests. As a result, strong policy proposals have been decreasing. (Yasuyuki Iwata)

Sites Where Teachers Are Nurtured

A Cooperation Agreement between Tokyo Gakugei University and Ninohe City Board of Education

Hideaki Matsuoka

Head of Regional Cooperation Section, Public Planning Division,
Tokyo Gakugei University

Ninohe City in Iwate Prefecture is at the northern extremity of the inland area of the prefecture, located on the prefecture's border with Aomori Prefecture. Of the 420-square-kilometer area, 280 square kilometers are occupied by mountains, forests, and wilderness. It is a town with approximately 27,000 inhabitants. Although blessed with an abundance of natural environments, such as Oritsume Basenkyo Prefectural Natural Park and Kintaichi Hot Spring, the city has been addressing problems of how to improve academic achievement among students in school education while simultaneously confronting population decline and aging of the population.

Tokyo Gakugei University was to be involved in Ninohe City's project for academic achievement improvement started in 2010 because the intent of the city to improve academic achievement among students matched the intent of the university to promote cooperation and collaboration with boards of education.

In 2015, a cooperation and collaboration agreement was signed between Tokyo Gakugei University and the Ninohe City Board of Education, which was to strengthen the collaborative relationship between the two parties. "Satellite Study Meeting/ Disaster Prevention Education Program Training" is the project that was launched based on the agreement.

The project was intended for students from Tokyo Gakugei University to give disaster prevention education through the observation of areas affected by the Great East Japan Earthquake, as well as experience educational guidance for elementary and junior high school students in Ninohe City. This year, which marked the second time, it was held as a five-day program from August 1. Eleven students participated; I accompanied with them as a leader.

A satellite study meeting was held during the three days of the first half, in which approximately 60 elementary and junior high school students participated. The person in charge of the board of education asked students who were going to be lecturers to support the improvement of desire to learn, attaching great importance to each child's autonomy. There was also a request to speak actively to children when seeing them in trouble

because children in Ninohe City were shy.

I felt that students watched over children gently as their good big sisters and brothers and gave careful guidance. Responses given to a participant questionnaire included: "It was good to be taught in a gentle manner" and "My learning progressed" (elementary school students); and "I was taught in an easy to understand way" and "They created an atmosphere in which it was easy to speak to them" (junior high school students). Nearly all children responded that they wanted to participate next year as well.

In the disaster prevention education program training, we listened to a lecture given by Ms. Miyuki Muto, Chief Supervisor of the Iwate Prefectural Board of Education. Additionally, we visited Taro Town, Miyako City to observe the seawall, earthquake disaster remains, and the affected Taro First Junior High School, and to hear a talk delivered by the president of a company in Taro Town, who addressed the reconstruction of businesses.

Chief Supervisor Muto, who was working in Otsuchi Town at the time of the earthquake disaster, talked about the experience of bustling about trying to reopen affected schools in an extreme situation in which severe damage had been sustained. We heard the experience of an official of the board of education who strove for the "guarantee of education," firmly maintaining a belief that schools and teachers exist for children. The event seemed to have left a deep impression on students in thinking about themselves, overlapping with images of their future selves, who would be entering educational sites.

Throughout the project period, I met officials of the Ninohe City Board of Education. I felt their passionate desires from end-to-end in their simple way of talking about how they loved their hometown, how they wanted to devote their efforts to human resources development to revitalize the region, and to that end, how they tried to improve educational ability in the region. They also highly appreciated students who participated. Students were deeply touched by the hospitality shown by the people of Ninohe City.

Tokyo Gakugei University and Ninohe City are also actively conducting other cooperative projects, including observational visits to our affiliated schools and participation in study groups by teachers from Ninohe City and mock classes on demand by teachers of our affiliated schools. It is said that since the cooperative projects started, the academic achievement of children in the city is improving steadily. Teachers in Ninohe City also are apparently improving their capabilities as teachers by having opportunities to learn devices for classes and advanced efforts.

Interaction between Tokyo Gakugei University and Ninohe City is certainly producing results in both the growth of students of the university and that of teachers of the city.

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