



Curriculum Center for Teachers
Tokyo Gakugei Univ.

Creative Curricula & Teaching
Newsletter

English Edition
No. 12 February 2015

Public Symposium “The Great East Japan Earthquake and School Education — Educational practice addressing radiation problems”

It has been almost four years since the accident at the Fukushima Daiichi Nuclear Power Plant operated by Tokyo Electric Power Company. Memories of the shock and confusion that the accident gave within and outside Japan are fading with time. However, radiation science and energy policy remain as themes that schools in Japan cannot put outside their scope of responsibility.

On November 30 last year, Curriculum Center for Teachers held a symposium under the theme of educational practice addressing problems of radiation released by the nuclear accident. We invited Mr. Tsugio Shiraki, a teacher at an elementary school in Minamisoma City, Fukushima, Ms. Hideyo Ohya, a lecturer at private junior high and high schools in Tokyo, and Professor Shigeo Kodama at The University of Tokyo as symposium speakers and Professor Hatsuo Mitsuishi of Teikyo University as a commentator to raise questions from both perspectives of practice and theory.

First, Mr. Shiraki gave a talk about the production of a play based on compositions and poems written by pupils after the earthquake disaster. A video of the play performed on stage at a school presentation was shown along with the report. In the play, separation from familiar people that children experienced after the nuclear disaster and problems related to employment and medical systems in Minamisoma City, which faced declining population caused by evacuation were told from the children’s perspective. According to Mr. Shiraki, the effort was intended for children’s families. He introduced that it was a classroom practice with teachers’ wish that parents and children would talk together about their own way of life in the future and find hope even in the harsh reality.

Ms. Ohya reported two practices conducted in home economics classes at private boy’s junior high and high schools in Tokyo. The first case taken up was that of a role playing discussion performed by second-year junior high school students in 2012. It was held on the theme of nuclear disaster and food safety in the form of mock citizens meetings that people in different positions gathered together under one roof. She said that through playing roles of producers in Fukushima, parents of young children, members of the government, and workers of Tokyo Electric Power Company, etc., students came to know each claim, the point at issue, and to understand the nuclear disaster as a problem related to their own life in Tokyo. Similar results were said to be obtained in 2013 from exchange learning in writing



between second-year high school students and students in Fukushima. She pointed out that what brought about a great change in the sense that “the nuclear disaster is somebody else’s problem” that students in Tokyo had were straightforward questions asked by high-school students in Fukushima such as “Can you become friends with or marry a woman from Fukushima?”

Finally, Professor Kodama appealed for the need for students to study at school about issues of problems that even specialists have divided opinions about, including scientifically unresolved issues, such as the influence of low dose exposure on the body. Taking up controversial themes at school is, according to Professor Kodama, extremely important for citizenship education that fosters citizens’ ability to form political judgments and promote social participation. With regard to judgment related to radiation risk, he emphasized that students and residents were required not to depend on specialists, but to do form their opinions themselves through conversations with specialists.

After receiving reports from the three symposiasts, the commentator Professor Mitsuishi pointed out two points as prerequisites for the class in which pupils and students thought about social and scientific problems independently: 1) teachers can appropriately teach basic scientific knowledge, and 2) support systems, such as in-school training, have been established for teachers to work actively on educational issues not written in text books.

Through the symposium, including a question-and-answer session followed by the reporting, we shared our understanding that the problems of nuclear disaster epitomized by radiation risk were educational subjects that today’s schools should address directly. In addition, the consensus was reached that the themes were effective for issues of school education that made pupils and students become able to judge or choose opinions in a rational and autonomous manner. (Yoshimi Uesugi)

A Visiting Professor Arrived from Beijing

Curriculum Center for Teachers welcomed Dr. Pengxiang Xia, Associate Professor at Capital Normal University, in November last year as the International Visiting Professor of 2014-2015. She is planning to undertake research on elementary education and teacher education in Japan until May of this year and is delivering lectures on the themes of elementary teacher education in China and other subjects (For more details, see p.4).

I have a deep relationship with Tokyo Gakugei University. I attended the Master's Course from 1993 to 1995 and stayed on as an International Researcher during 2004-2005. Furthermore, this time, I was invited by the Curriculum Center for Teachers as an International Visiting Professor to work with teachers at the Center for six months. I am delighted to have the opportunity to do my third research project at Tokyo Gakugei University.

I studied Japanese language at university in China and majored in social education in the Master's Course. Under the supervision of Professor Fumito Kobayashi, I conducted research on Kominkan (community learning center) and lifelong learning in Japan, which gave me an extremely fulfilling and happy life abroad.

In 1999, I was sufficiently lucky to gain employment with the College of Elementary Education of Capital Normal University, which had just been established, and came to devote myself to elementary education and elementary teacher education. In China, elementary teacher education had been provided by institutions equivalent to professional training schools. In fact, it was in the very year of 1999 that the education was upgraded to a four-year university level. Looking back now, I feel like having come back home just to do research related to elementary education. After gaining employment, aside from working at the college, I have visited elementary schools in Beijing for observations and served as a lecturer in training for elementary teachers. This year marks my 15th year.

The most impressive things for me, having been engaged in elementary teacher education, are schoolchildren's sweet smiles, their enthusiastic learning, and elementary school teachers' attitudes of hard work. However, in China, the amount to be learned at school is enormous, and elementary schools are no exception. Under the difficult environment generated from a credential society, the academic record comes first, and children have a very difficult time living by that rule. In such a situation, the college is pursuing issues such as how elementary schools should be, how to help children spend an innocent school life, and what elementary school teachers should do for that.

In association with the above, I have been participating in research projects related to teacher education, including "Research Capability of University Graduate Elementary School Teachers" and "Qualities of Elementary School Teachers" for the past few years. A meaningful experience among them was that I was involved in formulating professional standards for elementary school teachers, a project commissioned by the Ministry of Education.

The college accepts students who come to undertake overseas training from the Graduate School of Teacher Education, Soka University every autumn. It conducts class observations and



class-work study in elementary schools in Beijing. Through attempts by Chinese and Japanese teachers respectively to teach the same content, for example, they can compare the two countries' philosophies of education and methods of teaching subjects, which is also useful for my own practice of teacher education. Papers written based on these experiences include "Comparative Study of Moral Education at Elementary School in China and Japan" and "Cultivation of Expression Ability among Elementary School children in Japan."

Another subject of my research is "life education." In recent years, life education has spread to school education in China. It is broadly practiced at elementary and junior high schools in particular. In life education, elementary school teachers themselves are required to appreciate children's "life", to say nothing of teaching children the precious nature of life and consideration for other people. That is to say, teachers should not repress a child's individuality, but respect it and apply the most appropriate teaching method for each child. In that sense, life education is more necessary for elementary school teachers than for elementary school children. Life education is advocated to be conducted not only in moral classes, but also in each subject. It has become a major theme in training for elementary school teachers. In this connection, Center for Children's Life and Moral Education was established in 2011 mainly by staff of the College of Elementary Education and has been developing research to investigate the philosophy and practice of life education. As a member, I am working on spreading the practice of life education at elementary schools.

I am truly grateful to have this opportunity to be a visiting professor of the Center. I would like to continue my study involving a comparison of teacher education in China and Japan and elementary education in Japan for six months to come and find out something helpful for the two countries, particularly concepts that are useful for education in China. I ask all persons concerned for help and support. I look forward to your guidance and encouragement.

XIA Pengxiang
Associate Professor, Capital Normal University

To Verify Some Policies and Trials for Enhancing “Practice” and “High Performance” for Teacher as Issues in Teacher Training/Education

Curriculum Center for Teachers holds a study meeting every month with Professor Hatsuo Mitsuishi, the Internal Visiting Professor of 2014-2015, on the theme of the reformation of professional schools for teacher education. Here we asked Professor Mitsuishi to summarize the latest points for discussion.

It has been a long time since teacher education at the “master’s level” came to be discussed publically. The discussion is apparently converging in “the redefinition of the mission” of national universities two years ago by the review of existing graduate schools and the presentation of policies to transfer to professional graduate schools. At a research conference held by the Japan Association of Professional Schools for Teacher Education in December 2014, it was introduced that two graduate schools would open in 2015 and 18 in 2016, in addition to 19 existing professional schools for teacher education in national universities. Such a movement evokes a major turning point for teacher education and in-service education of postwar Japan.

Universities and faculties for teacher education have discussed some issues such as the following since 2000: (1) The positioning of subjects related to educational practice in the teacher education curriculum; and (2) The curricula and their goals of undergraduate programs, master’s and professional programs. What was being called into question were the goals and models that contemporary teacher education and teacher training should be, and “practice” and “high performance for teacher” have been focused as the concepts which have been called into question in the discussion.

The Japanese Society for the Study of Teacher Education

which is a specialized society for teacher training, devotes attention to the following questions: (1) Why is “high performance for teacher” of teacher training/education required now? and What are the background of the educational policies and the nature of a required high performance. (2) How are we arranging appropriately concepts in teacher training/education, including “teacher professionalism,” “practicality in teacher education,” “expert process for teacher,” “culture and human nature for teacher,” and “collegiality and collaboration?” (3) What kinds of differences are there between educational profession and the others? (4) What is the “high performance of teacher thought from the viewpoint of learners, parents and schools?”

As described above, it appears necessary to verify the current problems in the policies of postwar teacher education and also the efforts of teacher education at higher education institutions. That must be carried out while sharing the recognition of the current circumstances related to authentic “practical leadership in education” between people of higher education institutions and teachers, schools, and boards of education.

Hatsuo Mitsuishi
Professor, Teikyo University

Terminology of Teacher Education

Special Exception under Article 14

Article 14 of the Standards for the Establishment of Graduate Schools in Japan stipulates that “a graduate school might provide education using appropriate methods, such as conducting classes or research guidance in the evening and other specific time or season, when it is deemed to be especially necessary from an educational standpoint.” It is a provision for handling the curriculum while envisioning adult students flexibly.

Most adult students in graduate schools at universities of education are in-service teachers. The Graduate School of Tokyo Gakugei University (TGU) has improved the curriculum since the 1990s, enabling students to earn the most credits required for master’s programs within a year. TGU has begun accepting students dispatched from local boards of education using the “special exception” in 1997. The students are studying in the following style: leaving from their work sites for only a year to take classes at graduate schools, and in the second year, receiving guidance during holidays and evenings to complete their master’s theses while working.

(Yasuyuki Iwata)



Overview of the Ongoing Research Project

For a summary conference of the joint research with Northeast Normal University, which has continued with the plan for three years, I visited China as the year was drawing to a close, from December 28 to December 31. In China, they said that New Year’s Day was indeed a holiday, but “the New Year” was celebrated according to the lunar calendar. Therefore, they continue normal business operations during that period. During the visit, we discussed the compilation of written reports on teacher education curricula, including practice teaching. In addition, the possibility of exchange between university-attached schools came up. On the second day of the conference, partly to sound out their feelings about it, I visited a junior high school and an elementary school attached to Northeast Normal University. Schools in China are, particularly in urban areas, said to be large in scale. The attached schools I visited were indeed large-scale ones: The junior high school had 26 classes in each grade. The elementary school had 7–8 classes in each grade. In the attached elementary school, I was amazed by the open-type classrooms combined with corridors of sufficient width, the arrangement of widely various special classrooms, and by the enrichment of fixtures and equipment. School administrators said that they used to conduct selection of new students, but now it was incorporated into part of the public school system in which pupils and students in a prescribed school district entered school. I was overwhelmed by the quality and quantity of public expenditure which had been invested. Educational policies in Japan that pursue cost-effectiveness of education with “evidence” as the slogan gave rise to feelings of lost opportunities there, contrasted against the unconditional expectations of Chinese education.

(Kenji Maehara)

Sites Where Teachers Are Nurtured

Advanced Support Center for Science Teachers of Tokyo Gakugei University

Fumi Nakanishi
Natural Science Division, Tokyo Gakugei University

Advanced Support Center for Science Teachers (ASCeST) became a permanent center in October 2011 and established the Basic Workshop Division, Advanced Workshop Division, and the Planning and Outreach Division to promote its projects. As in-service teacher training, we conduct basic training aimed at acquiring basic knowledge and skills necessary for the guidance of experiments and observations, as well as specialized training aimed at understanding contemporary subjects, such as advanced science and technology and the natural environment, and cultivate the educational ability to tell pupils and students about them in an easy-to-understand manner. Additionally, we conduct research on science education in Japan and career development of teachers involved in it, hold symposia with the theme of teacher training, and provide guidance for training teams from abroad. The training has been undertaken mainly by full-time ASCeST teachers, part-time teachers of the Natural Science Division of the University, and two specially appointed professors (now former teachers at an affiliated high school have taken over the position). With the start of the next academic year, teachers who have been engaged in science education at elementary schools for many years will join us as lecturers. We are preparing a system to meet on-site needs more broadly. Last year, more than 1400 people from all over Japan participated in our projects. Here are the types of training of which I am in charge: "Pathways of Water Transport in Plants" and "Rearing of Killifish and Its Effective Handling in Class."

"Pathways of Water Transport in Plants" is the content added to the sixth grade curriculum by the Courses of Study for elementary schools announced in 2008. It seems unfamiliar even to teachers with many years of

experience. Therefore, it is difficult to learn from other teachers. Furthermore, the "experiment to dye vessels by taking in color water from roots," which is dealt with in textbooks, contradicts the plant physiological common sense: "Dye molecules used in stains for food red and cut flowers do not permeate cell membranes and are not taken in from undamaged roots." That point causes confusion at elementary schools because "the more carefully children treat the plants, the more they are likely to fail the experiment." In the training, as well as explaining the plant physiological background on the intake of water and transpiration in plants, we introduce a practice at Affiliated Takehaya Elementary School which brought learning one step ahead, "roots serve as filters," by children looking at the phenomena with no preconception. Furthermore, we show how plants take in water on a real-time basis using a simplified potometer with a silicone tube. That is true because we want teachers themselves to feel how plants work and to make use of those actual feelings to teach children.

"Rearing of Killifish and Its Effective Handling in Class" is about "the continuity of life," which is a course unit for fifth grade students in elementary schools. Nonetheless, a questionnaire survey of elementary school teachers in Tokyo revealed that it is the content about which many teachers feel anxiety and difficulty because of a lack of knowledge and skills. The training is structured for learning by experience about killifish rearing basics and observation methods through feeding of killifish fry. In addition, learners gain knowledge about the measurement of free chlorine concentration, nitric acid concentration, and pH in tap water, storing water, and water in rearing containers using Pack Test and test papers. Subsequently, they observe fertilized eggs that were prepared at intervals of a day from the day following spawning until immediately before hatching by stereoscopic microscope. They understand how the body structure is gradually formed in fertilized eggs, how pulsation and blood flow become visible, and how pigments are deposited. This training is also intended to be an opportunity to think about the moral aspects of how teachers and schoolchildren deal with tiny lives in the class and the processes related to its preparation.

Special Lecture by Prof. Pengxiang Xia

"Teaching and learning in elementary schools in China"

- ◆Time: March 11, 2015, 14:30-16:00
- ◆Place: Meeting Room in the Curriculum Center for Teachers
- ◆Language: Japanese

(See p.2 for a profile of the speaker.)

Staff of Curriculum Center for Teachers

Director OTAKE, Midori
(Professor, Home Economics Education)
Center Researchers
[Division of Curriculum Research and Development]
KANEKO, Mariko
(Associate professor, Educational Sociology)
[Division of Teacher Preparation Research and Development]
IWATA, Yasuyuki
(Professor, Historical Studies on Teacher Training)
UESUGI, Yoshimi
(Associate Professor, Media Education)
[Division of Research and Development for In-Service Teachers]
MAEHARA, Kenji
(Professor, Educational Administration)

The CCT is produced by the Curriculum Center for Teachers, Tokyo Gakugei University.
Editor: Yoshimi Uesugi
Designer: Tsukasa Aoyama and Emi Oura
(Aoyama Lab., Calligraphy and Arts, Tokyo Gakugei University)
Curriculum Center for Teachers, Tokyo Gakugei University
4-1-1 Nukui-kitamachi Koganei, Tokyo 184-8501 Japan
Tel: 81-42-329-7776 Fax: 81-42-329-7786
Email: curric@u-gakugei.ac.jp
Website: <http://www.u-gakugei.ac.jp/~curric/english/index.html>