

Issues and Challenges of Teacher Training in Environmental Education in Japan

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ABSTRACT

To clarify the challenges in the training of Japanese environmental educators, I examined the quality of training courses for schoolteachers. In Japan in the 1990s, the teacher training courses held by MEXT (Ministry of Education, Culture, Sports, Science and Technology) and educational boards had the good effect of promoting environmental education and disseminating the Belgrade Charter's idea of environmental education as a universal concept. Moreover, it resulted in the propagation of instruction methods such as hands-on and field activities and workshops. However, there are some challenges for improvement of training courses, such as new ideas for environmental education including ESD, approaches for environmental education instruction, knowledge of environmental processes and systems and the evaluation of environmental education practices. To solve these issues, a link between training courses and school classrooms will be necessary, and the partnership between schools and other institutions, such as environmental sections of local governments, the NGO and universities will be essential.

Key words: teacher training, professional development

The Quality of Training Courses for Environmental Educators in Schools

Courses for Teacher Training in Environmental Education Held by MEXT

As the "Course for Teacher Training in Environmental Education" held by MEXT has had the great effect of shaping the course of teacher training in regions, the examination of programs in this course is very important. MEXT entrusts the plan and management of training courses to other organizations, examines the plan of training programs proposed by organizations and approves plans after examination and correction. Nowadays, because of the participation of 150 teachers and supervisors of educational boards, two branches of the National Children's Center are entrusted with this course. The programs of two courses, in 2000, in two National Children's Centers are examined in this report.

As a result, these training courses have made teachers and supervisors understand the necessity of environmental education. In the 1990s, the supervisors who participated in this training course planned and conducted courses in local areas to disseminate environmental education. The training course served the role of spreading the interdisciplinary and integrated concepts of environmental education as described in the Belgrade Charter.

Next, the quality of the programs offered in this training course is examined. In the training courses, hands on activities and field activities such as nature experiences and environmental surveys were introduced. I speculate that these activities led to the development of educational materials and methods on environmental education in the 1990s. Moreover, the social and cultural approaches of workshops and role-playing in these courses were adopted for recognition of the value differences concerning the environment. Besides, by having workshops, the chance to create educational materials with participants was offered in group work sessions, which would contribute

to the understanding of the developmental methods of educational materials.

But there are several challenges in these courses. One of them is the necessity for the reexamination of concepts on environmental education. Although these courses were planned based on the Guidelines for Environmental Education written by MEXT in 1991, its concept should be reexamined. The 1999 report on environmental education by the Central Council for Environment, organized by the Ministry of Environment, described environmental education as related to a sustainable society. Therefore, the planning officer in a training course should reexamine the concept of environmental education and understand new ideas related to education for sustainable development.

Second is the essential approach to environmental education instruction such as inquiry-learning or problem-based learning. Although examples of such educational methods as hands-on activities, experience learning and workshops were shown in training courses, complete understanding of the instruction methodologies of environmental education will be necessary in the training course.

Third is the teacher's ability and skill to conduct the learning approach of action research or problem based learning. As students inquire into the environment in local areas for a scientific or social survey, during community based action research, the teacher should understand the basic ideas and methods of regional and environmental surveys. Understanding the concept of action research while conducting activities on experiential learning and workshops lets teachers understand the importance of conducting fieldwork and environmental surveys over a long period in schools. It is difficult for participants to understand the whole framework and details of community based action research and inquiry method in short training courses, but they need to know and see its essence. By using the above knowledge, the learning in the Period of Integrated Study at school makes children develop cognition and have an interest in basic subjects. In the case of the community based action research and inquiry-method, long term learning could be necessary in schools, so a lecture on these methods in training courses should offer the process and key points of its long term learning.

Fourth is the infusion of environmental education into the subjects. There is a trend that the infusion of environmental education into subjects wouldn't be stressed in the current training courses in comparison with the courses in the 1990s. Considering that the Period of Integrated Study by new Course of Study in Japan started in primary and secondary schools from April 2002, it is understandable that the training courses have a greater consideration for training activities related to this new period. But, participants should also understand that acquiring basic knowledge in each subject is important for the accurate understanding of environmental problems. We have to understand that the learning in this new period in school is situated on the basic knowledge from each subject as science, social study, mathematic, language, etc. Therefore, I think that learning about the infusion of environment into each subject is also necessary in the training course.

Fifth is environmental literacy, especially knowledge of environmental processes and systems, and environmental issues/problems. Although environmental experts taught about environmental processes and environmental problems in the training course, there could be a limit on the coverage of these issues, because the knowledge of experts could cover one or two academic fields. There should be systematic knowledge on environmental processes and systems, and environmental problems as environmental literacy for teachers who conduct environmental education in school, and experts will have to examine it.

Understanding of evaluation of environmental education practices in the school classroom is very important. However, it is not clear whether lectures on evaluation were conducted in these training or not. At least, evaluation/assessment of environmental education was not conducted in the training in 1990s. However, after inducing the Period of Integrated Study to school education, a method of evaluation/assessment, portfolio method, has been paid attention, so the effect of this method has to be searched.

Teacher training courses held by educational board of governments

The 1997 survey by the National Institute for Educational Research showed that 51 educational boards or education centers of prefectural governments have the experience of carrying out training course prior to or during that year. (There are 58 prefectural governments in Japan.) Therefore, it is speculated that the training course in environmental education has expanded in prefectural governments. These training courses contribute to the dissemination of environmental education in schools. However, it is only 1 or 2 days long. Even though the length of term of the training course is short, adequate quality can be achieved by the careful selection of lectures and practices.

Teacher training courses held by other organization

In Japan, professional development also exists in other organizations. They are: the national and local workshops or conferences held by teachers unions, the national and local workshops by teachers associations of each subject, the workshops for education leaders by NGOs, the workshops by universities the advice by supervisors in school classes, and participation of pilot projects for environmental education. The chance for the professional development of environmental education has expanded, so the dissemination of information about various professional developments is necessary.

Essential Qualities in Training Courses of Environmental Education

Based on the above discussion, the essential qualities in the training course are proposed as follows:

- Objectives and goals of environmental education including a vision of the future as ESD
- Distinctive feature of environmental education as an interdisciplinary and integrated field
- Environmental issues, and environmental processes and systems
- Design and planning of curriculum and practice of environmental education including the relationship between subject and problem based learning
- Approaches of instruction such as hands-on, inquiry, community based action research, etc.
- Evaluation/assessment
- Resource information regarding experts in the field, paper materials and web sites

The proposal on essential qualities in the training course requires a long-term course of learning. However, most Japanese teachers are too busy to have the time to upgrade their skills as educators. If all essential qualities can't be introduced only in the training course, there should be support systems for professional development. For example, the link between a training course and instruction in a school classroom could be very useful for the optimal development of the environmental educator. Therefore, the educational boards need to reexamine quality of training course for environmental educator and support for link between course and school class for professional development.

Moreover, for ability development of environmental educators, I would like to recommend support by other institutions such as universities, the environmental section of local governments and the NGO. They have a lot of information and resources regarding the local environment and community, as well as the international and global environment. Environmental sections of local governments, that are energetic in the sustainable local society, have promoted good policies for public awareness of the environment. For example, a city office, which received ISO14001, has influenced school education as an eco-school project. The partnership between school and other institutions will be essential for professional development.

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