The Effects of an Early Childhood Teacher Education Program Based on a Feminist Science Educational Approach

Hyung Sook Cho  
Chung-Ang University, Korea

Min Jeong Kim  
Changwon University, Korea

Kunhee Lee  
Shingu College, Korea

Abstract

This study intends to verify the effects of application of the feminist science educational approach and to seek new directions of early childhood teacher education. First, the study demonstrated that an early childhood teacher education program based on a feminist science educational approach had an influence on enabling the positive recognition of science, scientists, and early childhood science education. It was also determined that the early childhood teacher education program based on a feminist science educational approach helped teachers develop a scientific attitude and helped science lessons through the aspects of lesson planning, management, and evaluation.

[Key Words] a feminist science educational approach, early childhood teacher education, science education

Correspondence and requests for reprints should be sent to Kunhee Lee, Shingu College, 377 Gwangmyeong-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea  
E-mail: kunhee_lee@hotmail.com
**INTRODUCTION**

In modern society, scientific technology and information are developing more rapidly than in the past and everyday life is also changing quickly. Therefore, the goals of science education are to foster scientifically well-cultivated people who use scientific products, enjoy science, and think scientifically rather than just acquiring knowledge and developing theories (Martin, 2001). A will for this reform of science education is reflected in Project 2061 (Rutherford & Ahlgren, 1990) and the U.S. Science Education Standard (National Science Council, 1996). The U.S. realized the importance of developing mathematical and scientific literacy in the information age in order to be successful in international competition, and passed the “America Competes Act,” investing 31 trillion Korean Won over the next three years to enhance mathematics and science education (Joong Ang Newspaper, 8. 6. 2007). The Act contains a clause on linking math and science scores to a teacher certificate, as well as education enhancement and expansion of research support (Cho, 2007) and it emphasizes the importance of teachers and teacher education.

After setting the year 1993 as “the year of science education” in Korea, early childhood education institutions have been continuously emphasizing the importance of science education for young children in order to develop scientific literacy that the young children need (Moon, Sin, Kim, & Ru, 2002). Actually, children are interested in the world around them, they like to manipulate and experiment with objects, and they ask questions constantly. Most of these processes in which children try to understand the world are known as “sciencing,” and the science activities are natural to them (Kim, 2007). This is why the national curriculum for early childhood education contains the contents of “developing inquiring attitudes” and “developing basic scientific abilities,” and why it presents science education as an important educational content.

Contrary to the fact that children are natural scientists and the importance of doing science with children is emphasized, the reality that a science center in the classroom does not operate actively has been revealed through the results of domestic and international research (Cho, 1998; Cho, 2000; Kellog & Young, 1993; Park, 2003; Weis, Nelson, Boyd & Hudson, 1989). Most kindergarten teachers who are in charge of early childhood science education think science is more difficult than other educational fields and they do not want to teach it (Choi, 2001; Martin, 1997; Min, 2004; Sheila, Molly, & Tara, 2000). It is pointed out as a problem that teachers lead science activities as a structured experiment or pass over content knowledge that has a high level of difficulty for children (Ahn, 2002; Cho, 2005; Lee, 2000; Schiller, 2000).

In order to solve these problems of early childhood science education, most of all,