A Case Study on the Discussion Project in the Kindergarten through Digital Methods

Jee-Hyun Bae and Kyeong-Ouk Jeong

Abstract—The purpose of this case study was to present the process and results of the discussion project for promoting young children's creative problem solving strategy about conserving the natural environment in the kindergarten. The mobile application, SNS and Internet searching methods were provided for both Korean and international kindergartners in the form of intercultural exchange. The findings showed that the discussion project through using digital methods could be helpful for enhancing young children's creative problem solving ability. The present study has educational implications such as providing young children with social awareness and dynamic cultural experiences through various digital methods.

Research Keywords— Discussion Project, Young Children, Creative Problem Solving, Digital Methods

1 INTRODUCTION

Currently, kindergarten curriculum in Korea aims at promoting interaction among human beings through understanding and experiencing the value and beauty of the nature. Korean kindergarten curriculum also aims at promoting interaction between human beings and the nature itself [1]. Interaction based on interdependent relationships with the nature in the early childhood is essential for both cognitive and affective growth during early childhood development [2]. Young children encounter personal experiences with the nature every day in their lives. They learn the value of shared life between the nature and human beings while seeing, feeling and understanding the value and beauty of the nature. In the field of early childhood education, young children should be encouraged to have the more opportunity to experience and appreciate the vitality and beauty of nature through meaningful interaction with nature through the appropriate and carefully designed curriculum.

However, what should children do when they meet problems that are difficult to solve for themselves in their everyday experience with the nature? One of the effective methods for young children to be engaged in problem solving experience is through the discussion project. In the process of performing discussion project with peers, listening to others' stories and cooperating to solve problems, young children can move out of self-centeredness and learn how to cooperate with others and how to control their emotion by increasing their understanding of others [3]. In other words, in the learning process of solving various problems or conflicts, performing discussion project can offer the important opportunities for young children to have emphatic understanding and to be able to embrace diverse ideas and views of others [4].

The purpose of this study is to explore the meaning of understanding the nature through the environment saving project perceived by young children. This study tries to examine the implementation process and educational implication of discussion project and problem solving activities for young children. This study also investigates the role of digital methods for the discussion project and provides basic perspectives on the process and strategies of creative problem solving activities for young children.

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2 RELATED WORK

Discussion projects are considered to be one of the most effective teaching and learning methods. While taking part in the discussion projects, learners can be actively engaged in the creative problem

solving process and cooperative learning activities. Various studies commonly showed that the meaningful discussion project could be successfully implemented even in the early childhood stage [5]. Research revealed that the forest conserving project through the discussion activity could promote the nature-friendly attitudes of young children, the love and concern for plants and the nature, the respect for life, and the preference for conserving natural environment. Research results also suggested that such projects could have the significant effect on enhancing young children's critical thinking ability as well as emphatic understanding of embracing different ideas and opinions of others [4] [6].

Early childhood is a critical period for the young children to develop creativity. Early childhood is also an essential period to lay the foundation for the young children to develop emphatic understanding about the nature and environment [7]. For this period, young children's various problem solving experiences are significantly bound up with developing kindergartener's creativity and cooperative ability [8]. Especially technology-assisted education can be an effective and natural way for young children to experience cooperative learning and creative self-expression activities [9]. Unlike general assumption that young children are not old and smart enough to be engaged in the technology-enhanced learning experiences, even kindergartners can develop digital literacy such as understanding, using and adjusting various digital educational contents [10]. The educators should examine systematically and carefully the intentions and the needs of utilizing various digital media or technology-embedded learning contents. When educators apply them in teaching the young children through the appropriate and systematic instructional methods. Digital media and digital educational contents can be valuable instructional medium and can be served as effective and valuable pedagogical materials [11].

3 METHODOLOGY

The participants of this study for the international exchange discussion project were young children of Korean kindergarten and kindergarteners or elementary school students from two international schools in Africa and the northeast Caribbean Sea. The discussion project was conducted in each class respectively. Teachers from each class communicated to perform the international discussion project though several social networking sites every once a week. There have been consents about sharing the course learning contents, class pictures and class observation videos among the teachers of each institution.

In this study, the basic information was obtained by observing the phenomenon that appeared in each classroom, and they were analyzed and described in detail. The process and method of this case study went through stages of planning, designing, data collecting and analyzing, and result sharing [12]. The stages of this research based on this process are shown in Table 1 below.

Table 1. Research Procedure

Stages	Application
Planning Stage	• Literature review about the topic
Designing Stage	• Selecting research format and participants
Data Collecting Stage	• In-depth interview • Classroom observation • Collecting artifacts and documents
Analyzing and Writing Stage	• In-depth interview • Narrative example research • An analytical example research • Evaluative example research
Sharing Stage	• Exchange research result and feedback

4 PROCEDURES OF DISCUSSION

The young children from each institution were engaged in the discussion project using digital technology, which was arranged by the teachers from each institution. The young children in Korean kindergarten found problems in the garden of their kindergarten playground and sought creative solutions to save the natural environment through discussion project as cultural exchange with international children.

At the end of this discussion project, there was an exhibition of the project that took place during the semester with the young children. In the pictures that described the future kindergarten playgrounds the children dreamed of, they showed

their idea to save the environment and they were able to share the time that connected past, present and future. In addition to the experience of nature-friendly education, the children were able to experience the process of discovering collaborative solutions and accept opinions of others through the discussion project.

Figure 1 shows the artifact from the international discussion project to conserve the natural environment.

Fig. 1. The artifact from the discussion project

5 Conclusions

This study showed that discussion project could be helpful for enhancing young children's creative problem solving ability. This research has educational implications for providing young children with intercultural awareness and cultural experiences via various digital methods. This study revealed that it was possible to implement the discussion project even in the early childhood stage, and children could behave as eligible members to protect and care their community.

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