Investigation of Preschool Teachers' Views on Science Education Processes

Ahmet SİMSAR
Kilis 7 Aralık University, Muallim Rıfat Faculty of Education, Department of Preschool Education
e-mail: ahmetsimsarr@gmail.com

Yakup DOĞAN
Kilis 7 Aralık University, Muallim Rıfat Faculty of Education, Department of Preschool Education
e-mail: yakupdogan06@gmail.com


Extended Summary
Preschool is the period in which knowledge and skills of children are laid as a foundation for life. Observations are made to find answers to questions about beings and events thus, the first concepts of science are formed (Alisinanoğlu, Özbeý & Kahveci, 2015; Güler & Bıkmaz, 2002). Therefore, it is an indisputable fact that systematic science education is an important necessity to start in early childhood education. In order for this educational process to proceed in a healthy way, it is very important that science education is given correctly and in accordance with the development of children. For this reason, the aim of science education in the preschool period is to provide children with basic information about the realization of basic phenomena and events related to nature. In addition, it is to gain affective and psychomotor skills to help them understand themselves and their environment. Therefore, the role of the early childhood teacher is not limited to planning science activities and providing relevant materials. In this study, it is aimed to examine in depth the views of preschool teachers who are active in the field related to preschool science education from a holistic perspective.

Method
This study is a phenomenological study examining preschool teachers' opinions about science education phenomenon. The study group consisted of 70 preschool teachers who worked in kindergarten and nursery classes affiliated with the Ministry of National Education in the city center of Kilis province, Turkey. The data was collected through an interview technique, which is frequently used in qualitative methodology (Johnson & Christensen, 2008). The content analysis method was used for data analysis. The teachers’ answers were transcribed on the computer and the qualitative data set was created. The recorded data were examined one-by-one and coded by researchers to find themes and patterns (Miles, Huberman, & Saldana, 2014). Frequency and percentage distributions of the codes obtained in the definition of preschool teachers' views about science education were calculated and given within tables.

Conclusion and Suggestions
As a result of this research, it was determined through the teachers' opinions, that science education should start in preschool. Science Education courses given in universities were insufficient, resource books related to science education were insufficient and teachers defined themselves as sufficient in planning and implementing science activities. It was determined that the majority of the teachers regularly carried out science activities in the classroom however, the materials in the science centers were insufficient. The teachers could develop the science materials they needed, as well as the methods and techniques such as; experiments questions and answers, group work, drama, trip observations, and projects. It was found that teachers pay more attention to learning and inducing the active participation of the children in the evaluation of science activities. In addition, the interviews revealed that the teachers self-reported mostly using books about science. The materials in the science corners were insufficient and they did not prepare them by themselves. Considering the importance of preschool science education to the positive attitude of children towards science, preschool teachers should acquire the necessary knowledge and skills in order to carry out the most effective science activities in the preschool education program. In order for preschool teachers to acquire these skills, some of the material development courses taught at undergraduate levels should be revised to develop materials that can be used in science activities and to build the skills of prospective teachers.

Moreover, teachers need to try different methods to improve children’s’ interest in science activities. This needs to include the active participation of children in the process of implementation of the activities that will enable them to transfer to different situations that will contribute to the achievement of their objectives. In addition, teachers should be provided with environments that allow children to be encouraged in science, to make discoveries and experiments, and the information should be given correctly and in accordance with their level of development.