EXTENDED SUMMARY

The purpose of this research is to determine methods-techniques preferences of the science teacher candidates' in science unit and investigate the reasons for this choice. In this research, among other qualitative research types, phenomenology research was used to obtain data that is suitable for the purpose of the researcher. In this study, the researchers were concerned about the private experiences of the individuals and taken cognizance of their personal ideas. For this purpose, negotiations were carried on with participants and the opinions of participants concerning the subject were analyzed with great extent of scope. Participants whose inputs were collected are selected by purposeful sampling which enables researcher to pick individuals which will be the answer to the problems of the research study (Cohen, Monion and Morrison, 2007). In this study, researchers select Gazi Faculty of Education as a study zone since it is easily accessible. Besides, “methods-techniques preferences of the science teacher candidates” is chosen as research subject. Study group of research is consists of 183 teacher candidates who were studying Science Education at 2nd grade at Gazi Faculty of Education in 2013-2014 spring semester. As data gathering tool, two semi-structured interview questions are used to determine the teaching methods and techniques preferences of the candidate science teachers. To ensure the validity of the questions were consulted three experts faculty members in the field and according to the feedback from the experts, questions were rearranged. The following questions were administered to the participants during the semi-structured interviews.

- What are your preferred teaching methods and techniques in science unit?
- What are the causes of your preferred teaching methods and techniques?

Data which are related with the aim of this study are gathered through semi-structured interview techniques which provide certain and detailed descriptions related with the situation with teacher candidates. Thus, it is ensured that making precise and detailed definitions of the participants for the interest case (Punch, 2005; Yıldırım ve Şimşek, 2008). An interview form was prepared by the researcher and during the interview the order in this form was followed. The data obtained as a result of the interviews, are recorded with a voice recorder upon the permission of the participants with the aim of converting into a written text in electronic environment. In the findings, candidate teachers are given a code name as the sentences of them will be transferred directly and without being changed.

Content analysis, one of the qualitative data analysis methods, was chosen in order to analyze the data. The steps indicated Yıldırım & Şimşek (2008) were followed in the analysis of the data. First step in qualitative data analysis was turning the data into written documents. In the next step, coding key was created to indicate on which themes the codes would be prepared and given. Then, coded expressions were turned into themes by rearranging them according to their similarities and differences. After the themes were created, tables were created which shows theme, code and utterance frequency of codes by students. The written documents transcribed from the interviews were analyzed with the qualitative analysis program called HyperRESEARCH™ 2.6.1.

The first results obtained from research; candidate teachers are mostly prefer the traditional teaching as lectures and question-answer techniques in physics, chemistry and biology unit. However, all science teacher candidates have preferred computer-assisted teaching methods, project-based teaching methods, drama and experimental teaching methods for each branch. According to another results of the study it was found that methods-techniques preferences of teacher candidates’ are connected to four different factors as causes related to the teachers themselves, causes related to the students, causes related to the characteristics of the subject and causes related to the features of the method.