Turkish Preservice Special Education Teachers' Experiences, Perspectives and Expectations on Use of Technology: Integrating Technology in the College Classroom

Abstract: The use and integration of the new technologies, such as the Internet, World Wide Web, new computer software, etc., in educational milieus have been enormously growing for nearly two decades. Not only do these new technologies make an impact in general education, but also within preservice special education teachers who work with one of the diverse groups in the societies. However, it is observed that there are divergence approaches to use and integrate the new technologies into the Special Education Programs in Turkey. The major concern in this study is to examine and define preservice special education teachers' experiences, perspectives and expectations on the use and integration of the technology. A distance education professor and a professor of Special Education in Turkey have collaborated on the use and integration of technology in the College of Education for studying the dynamics of change in an era of electronic technologies.

Introduction

The use and integration of the new technologies, such as the Internet, World Wide Web, new computer software, etc., in educational milieus have been enormously growing for nearly two decades. Not only do these new technologies make an impact in general education, but also within preservice special education teachers who work with one of the diverse groups in the societies. However, it is observed that there are divergence approaches to use and integrate the new technologies into the Special Education Programs in Turkey. The major concern in this study is to examine and define preservice special education teachers' experiences, perspectives and expectations on the use and integration of the technology

A distance education professor and a professor of Special Education in Turkey have collaborated on the use and integration of technology in the College of Education for studying the dynamics of change in an era of electronic technologies. They will describe the perspectives used to examine the impact of technology on society and thus on the pedagogical tools developed to enhance eventual course delivery.

This is a qualitative ongoing case study. The main purpose of this paper is to describe and analyze the Special Education preservice teachers experiences, perspectives and expectations toward using and integrating the technology in the classrooms. This case is chosen for a couple reasons: First, this study is exploratory in order to allow insights to emerge from a recursive data analysis process. The research variables are highly complex and extensive. Additionally, the research data is very dependent on context and needs to be collected in its natural environment without controls and manipulations. Second, this case will examine the phenomena in depth in its natural context by focusing on a specific case.

Purposeful Sampling and Participants

This study utilizes both qualitative and quantitative data to provide detailed information to the researchers for analysis. The combination of this method helps the researchers to generate new perspectives and stimulate new directions in data analysis. The combination of the methodologies is to strengthen this study design and to provide data triangulation (the use of a variety of data sources), theory triangulation (the use of multiple perspectives to interpret the data collected), and methodological triangulation (the use of multiple methods to study the focus of this research). Therefore, the researchers overcome the intrinsic bias that can come from single methods.

There are several different strategies for purposeful sampling (Miles & Huberman, 1994). As one of them, *mixed purposeful sampling* approach was used in this study due to its flexibility to triangulate the research data and meet multiple interests and needs. Also, the purpose of this strategy was to examine an information-rich case, represented the actual experiences, perspectives and expectations on the use of technology, in depth. *Mixed purposeful sampling* in this study was done in the following manner. At the beginning of the Fall Semester-2002, the professor of the course introduced the researchers to the students. Consequently, at the first meeting with the students, the researchers explained the study and the research process in detail to them. Furthermore, to establish an appropriate relationship between the researchers and students, the researchers let the students know about their roles as researchers in this study.

Through purposive sampling techniques, the 50 voluntary students from senior classes in the Special Education Department at a large Middle Anatolia State University were selected as participants. The 50 students were asked individually to read and sign the informed consents form, which describes the research in detail. The researchers also strongly emphasize that they are interested in studying students' experiences, perspectives and expectations on the use and integration of technology in their classrooms. Only twenty-three students in the course chose not to participate in this study. As a result, they were excluded from the research study with no penalty. Miles and Huberman (1994) pointed out that qualitative researchers work with small samples of people studied in depth and in their context. These small samplings in this research was purposive in order to help the researcher define aspects of the study within time and means limitations, and create a frame to uncover and qualify the basic processes of this case study (Miles & Huberman, 1994). The remaining twenty-three college students in the Special Education Department, fifteen females and sixteen males, were asked individually to read and sign the informed consent form, which described the research in detail.

These twenty-three participants in this study were asked to fill out a pre-survey given at the third of the Fall Semester-2002. The researchers also let these participants know that they will fill out the student questionnaire given the eleventh week of the Fall Semester-2002 and a post-survey given at the fourteenth week of the Fall Semester-2002. From the purposeful sampling, toward the end of the third week of the Fall Semester-2002, twelve students, three female and three male participants, in the senior classes in the College of Education of this University will be chosen for the interviews. These six students will be identified for the interviews according to their pre-survey scores. Two students will obtain very low scores about their experiences, perspectives and expectations on the use and integration of the technology whereas two students will have moderate scores toward using and integrating technology and the last two will have very high pre-survey scores about their experiences, perspectives and expectations on the use and integration of the technology. The main instrument of data collection in this research will be the interview protocols. Two researchers in this study will interview with twelve participants from the senior class in Special Education Department of College of Education at the fourth week of the Fall Semester-2002 and at the tenth week of the Fall Semester-2002. All interviews will be taped-recorded. Also, the researchers will take paper-pencil notes consisting primarily of major points during both focusing group sessions. It is estimated that each focusing group session will last approximately 60 minutes.

To provide the credibility issue in this study, the researchers adopted a stance of neutrality with regard to the phenomenon, preservice teachers' experiences, perspectives and expectations on the use and integration of technology. In other words, they will not try to prove a specific perspective and manipulate the data from the different sources. This study is exploratory in order to allow insights to emerge from a recursive data analysis process. The researchers strongly highlighted that this is an ongoing case study. Therefore, in this paper, they present only the findings and conclusions of the pre-survey data although overall research design is a qualitative research that describes the particular phenomenon of the college students' experiences, perspectives and expectations on the use of technology in Special Education.

Developing Research Instruments and Data Analysis

To investigate preservice special education teachers' experiences, perspectives and expectations on the use of technology, the pre-survey was modified during the pilot studies by the researchers. This survey was a paper-pencil survey. They handed out to the participants in a traditional class session, and the participants were asked to fill out the survey into the class or after the class.

This research has been operated within a qualitative case study approach. The analysis of the students' experiences, perspectives and expectations on use of technology in Special Education has been ongoing process which was started at the Fall Semester-2002 trough written the final report. The data analysis process in this study was analytic and recursive to inform further decisions on data collected. It also was pre-structured, flexible and open to the discussions with the stakeholders and reviews of related literature. The pre-survey scores of the students were analyzed to find out students' experiences, perspectives and expectations on use of technology at the beginning of the course, and then used to identify and select the interview participants. To make precise statements about the data from the pre-survey, frequency distribution was used in this study.

Analysis and Discussion

The present study addressed the following main research question: *What are Turkish preservice special education teachers' experiences, perspectives and expectations on the use of technology in the college classroom?* The results of this study provide in detail descriptive analysis and discussion of students' attitudes towards using technology as a function of their experiences & computing skills.

The researchers decided to look at the students' technology experiences and computing skills (such as anxiety, nervousness and self-efficacy, etc.) that might affect their attitudes. Therefore, it is indispensable to begin with an overview of students' technology experiences and computer skills. The answers to the research question need to be placed in context. Thus, twenty items in the pre-survey provided the data regarding the students' previous technology experiences and computing skills.. The surveys consisted of 20 items for which students were asked to rate technology experiences and computing skills on a six-point likert scale. Values from 1 to 6 were assigned to the six-point likert scale: Strongly Disagree (SD)=1, Disagree (D)=2, Barely Disagree (BD)=3, Barely Agree (BA)=4, Agree (A)=5, and Strongly Agree (SA)=6.

As indicated in Table 1, responses were obtained from twenty-three students in this study. The mean of the pre-survey scores was 87.26 out of 120. The mean and standard deviation (SD) indicated that students overall had positive experiences, perspectives and expectations towards the use of technology at the beginning of the course. The scores also indicated a continuum on experiences, perspectives and expectations on the use of technology, with a low of 44 and a high of 109 (Table 2).

Table 1. The Mean and Standard Deviation of the Students Pre-Survey Scores

TOTAL

N	Valid	23
	Missing	0
Mean		87.26
Std. Deviation		14.09

The six students were selected from this continuum for interviews. These six represented very low, low, moderate and high experiences, perspectives and expectations towards the use of technology in Special Education. The two students with scores of 44 and 70 were chosen to represent very low and low attitudes, two students with a score of 90 were chosen to represent moderate attitudes, and the two students with high scores of 109 were chosen to represent high experiences, perspectives and expectations towards the use of technology in Special Education.

Table 2. The Students' Pre-Survey Scores

Score	Frequency	Valid Percent	Cumulative Percent
44	1	4.3	4.3
70	1	4.3	8.7
76	1	4.3	13.0
77	2	8.7	21.7
78	1	4.3	26.1
80	1	4.3	30.4
81	1	4.3	34.8
83	1	4.3	39.1
84	1	4.3	43.5
90	2	8.7	52.2
91	1	4.3	56.5
92	1	4.3	60.9
93	1	4.3	65.2
94	1	4.3	69.6
95	1	4.3	73.9
96	1	4.3	78.3
98	1	4.3	82.6
99	1	4.3	87.0
101	1	4.3	91.3
109	2	8.7	100.0
Total	23	100.0	

The pre-survey data give some insight into what preservice teachers' experiences, perspectives and expectations towards the use of technology in Special Education, even though the statistics show no overall significant differences in total scores. The volunteer participants stated that they liked to study with technology and with the various applications of technology. They would like to virtually collaborate with their classmates about assigned learning activities, because of the promptness of responses, but these participants prefer to communicate with their instructor in person.

The data obtained from the pre-survey highlighted that there were three major themes, which affected the students' experiences, perspectives and expectations towards the use of technology in Special Education: 1) not only instructor' roles but also students' responsibilities in technology-based class are different from the roles of students and instructors in traditional education environments 2) the learning milieus in technology-based class is new but different from traditional learning settings; and 3) learning and studying with technology in class was a brand new issue for the students. Therefore, they had not enough experiences about technology-based class and its class works.

Conclusions

The use of technology in Special Education is creating an interactive context for educational collaboration. Thus, the roles and responsibilities of students in technology-based class have been changing dramatically. Their needs, concerns and roles are different now. This new paradigm in higher education settings enhances traditional classes. Therefore, important issue is to provide necessary support to preservice teachers in Special Education.

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