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Teacher Candidates and Teachers' Opinions on Personalized Teaching

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Keywords : personalized teaching, motivation, personalization, teacher opinions, teacher candidate opinions.

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Teacher Candidates and Teachers' Opinions on Personalized Teaching

Dr. Özlem Çakır

Abstract - Personalized teaching materials are the materials created by using the names of people, experiences and objects (a friend's name, mother's name, favorite team, and favorite objects' names) in presentations, examples, exercises & practices and exams. There are studies in field literature that present positive and negative findings about the effects of these materials to teaching and learning. In this study, personalization preferences of information technologies teacher candidates who were trained about the preparation and application of personalized teaching materials were examined. In addition to these teacher candidates, 22 teachers' positive and negative opinions on the teaching where personalized materials were used and their suggestions about the improvement of personalized teaching were examined. The data required for the study conducted in 2011-2012 education years was obtained through a semi-structured form, which was applied to teacher and teacher candidates. Obtained data was collected under three main groups. The first group consists of personal student information that teacher candidates choose to use in personalizing the materials they developed. Second group consists of opinions about the advantages and limitations of personalized teaching in terms of instruction, classroom management, student motivation, student recognition and evaluation of student achievement. In the third group, there are suggestions on achieving success in the courses based on personalized teaching. According to the research findings, both teachers and teacher candidates have stated that personalized teaching materials increase student motivation. However, both groups mentioned as a disadvantage that material preparation is time-consuming.

Keywords : personalized teaching, motivation, personalization, teacher opinions, teacher candidate opinions.

I. Introduction

People maintain their lives by making their living environments and objects in that environment unique for themselves. Personalization can be experienced in various ways from our living and working environment to our study and from our computer desktop to our mobile phones (Özarslan, 2010).

"Personalized Teaching" is the teaching system that is achieved through the adaptation of teaching to students' personal characteristics in their daily lives or in their backgrounds as well as their learning characteristics. The approach of personalized teaching argues that learned concepts must be adapted to individual students in order to increase learning efficiency contrary to traditional educational systems where the student tries to adapt to the concept (Karagiannidis, Sampson & Cardinali, 2001). "Personalization" in this context is structuring learning content according to students' backgrounds and fields of interest. The use of variables like students' friends, familiar places, and favorite team is a kind of personalization. Stories about people who are familiar to students and students' experiences can build a bridge between the new information and existed ones (Hart, 1996). The remarks on this aspect suggest that the personalization of verbal math problems can have various positive effects on learning. Besides, studies report various findings supporting this suggestion. For instance, according to Bailey (2002), verbal math problems are extremely appropriate for personalization. For example, students are interested in music, video games, cinema, card games and their friends other than the question of how many apples did Ali give Ayşe? "Personalized Teaching materials" are teaching materials created by the use of the names of people, incidents and objects (friend's name, mother's name, favorite team and names of favorite objects) that exist in each student intimate living space in presentations, examples, exercises & practices and tests.

In the field of literature, there are studies that present findings in which these materials have positive effects and no effects were noticed regarding the impact of these materials on teaching and learning. There are studies whose findings prove they have no effect in achievement (Bates & Wiest, 2004; Ku, Harter, Liu, Cheng and Yang, 2004) and attitude (Ku, Harter, Liu, Thompson and Cheng, 2007; Ku & Sullivan, 2002). Besides, there are studies, whose findings have positive effects in students' math achievements (Ross & Anand, 1987; Chen and Liu, 2007), in their motivation (Bates and Wiest, 2004; Karat and Brodie, 2004; Hart, 1996) and in their attention (Bates and Wiest, 2004; Hart, 1996). In addition, they have positive effects in their attitude towards math (Hart, 1996; Ku & Sullivan, 2000; Chen and Liu, 2007), understanding math problems (Davis-Dorsey, Ross and Morrison, 1991; Ku & Sullivan, 2002) and their performance (Anand and Ross, 1987; Ku and Sullivan, 2002; Davis-Dorsey, Ross & Morrison, 1991; Chen and Liu, 2007; Özarslan, 2010). In addition to these studies, some other studies observe that students get excited when they see their names in these

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materials (Karat, Karat and Brodie, 2004) and this increases the sense of belonging (Karat, Karat and Brodie, 2004).

It is seen that personalization is classified in the field of literature according to who (group personalization, individual personalization) the personalization is provided for and in what kind of environments (paper-based personalization and computerbased personalizeation) personalized teaching is performed. In this study, because it is hard to provide a computer for each student group that teachers and teacher candidates work on, personalized teaching was carried out with paper-based materials. Since there were not any detailed studies about teachers and teacher candidates' opinions on personalized teaching in the field of literature, we wanted to examine experts' opinions about personalized teaching. The purpose of this study is to prepare personalized teaching materials. Preferences of teacher candidates who applied personalized teaching and in addition to candidate teachers, teachers' positive and negative opinions about the teaching where personalized materials were used and their suggestions to improve personalized teaching process were examined. With this purpose, answers were sought for the following questions

1. What student data that teacher candidates preferred while carrying out the personalization process?
2. According to teachers and teacher candidates;
   a) What are the positive aspects of personalized teaching?
   b) What are the negative aspects of personalized teaching?
3. What are teachers and teacher candidates' opinions about personalized teaching development process?

II. Method

In this study, qualitative research method was used to describe 22-information technologies teacher candidates' personalization preferences regarding the preparation and application of personalized materials in the class and in addition to these teacher candidates, this method was also used to describe 22 teachers' positive and negative opinions' about the teaching in which personalized materials were used. Qualitative research method was also used to describe teachers' opinions about process development of personalized teaching. Qualitative research is a preferred technique in performing a systematic examination of the significances arisen from the experiences of people who are studied or considered to be studied (Ekiz, 2003).

a) Study Group

The study group is formed with 22 information technologies teacher candidates who were trained about personalized teaching and 22 teachers who have been working in the schools in Ankara where these candidates had their practice teaching. When the gender range of the group was examined, it can be seen that there are 17 (38.64 %) females and 27 (61.36 %) males in the group. In terms of age range, while ages of teacher candidates vary between 19 and 21 (average= 20), ages of teachers vary between23 and 50 (average=29.81).

b) Data Collection

In the study, which was conducted in a qualitative pattern, data was collected by semi-structured interview technique. Interview questions were created through the focus group interviews with participants as well as literature screenings. Semi-structured interview technique facilitates participants within the frame of general questions about the subject to broaden their views in accordance with their personal experiences. With this aspect, it is neither as rigid as a structured interview nor as flexible as non-structured interviews (Karasar, 1995).

Before the interviews, teacher candidates and teachers were trained about how personalized teaching must be carried out. Teacher candidates prepared personalized teaching materials and they were given the opportunity to apply these materials in certain classes by using paper-based personalization. During this application period, personalization process was performed with the aid of computer by teacher candidates. Because a class environment where each student has a computer could not be arranged, personalized materials were given to students in a paper-based environment. These materials were used to carry out the lesson in the class. These are the questions asked to teacher candidates: 1. What student data did you use to personalize? 2. What are the positive aspects of personalized teaching? Discuss/ Argue this question a) in terms of teaching dimension, b) classroom management, c) student motivation, d) student recognition, e) student evaluation and f) other aspects. 2. What are the negative aspects of personalized teaching? Discuss this question a) in terms of teaching dimension, b) classroom management, c) student motivation, d) student recognition, e) student evaluation and f) other aspects. 3. How can you improve the process of teaching a lesson using personalized materials? Discuss this question a) in terms of preparation period and b) in terms of application process of prepared materials in the class or in the laboratory.

These are the questions asked to the teachers in the study. 1. What do you think are the positive aspects of personalized teaching? Discuss the question a) in terms of teaching dimension, b) classroom management, c) student motivation, d) student recognition, e) student evaluation and f) other aspects. 2. What do you think are the negative sides of personalized teaching?

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c) Data Analysis

Content analysis method was used to analyze the data. Content analysis requires analyzing the obtained data profoundly and enables vague/unclear themes and dimensions to emerge (Yıldırım and Şimşek, 2005) the main purpose in content analysis is to reach to the concepts and correlations that can explain obtained data. Summarized and interpreted data in descriptive analysis is processed more profoundly in content analysis and the concepts and themes that are not noticed by a descriptive approach can be discovered by this analysis (Yıldırım and Şimşek, 2005). Therefore, first, the themes were discovered by examining the participants' statements and then statements were grouped under relevant themes. Sentences were chosen as the unit of analysis. Data analysis was conducted over 238 participant statements.

III. Findings

a) Student Characteristics used in Personalizing

Table 1 : Student characeristics used in personalizing

Personal Information	Favorite Food	Family Information
• Name • Surname • Hair color • Eye color • Height • Weight • Age • Whether wearing glasses or not • Supported team • Favorite toy • Favorite sports • Favorite subject • Favorite days • Favorite objects • Favorite cartoons • Favorite numbers	• Favorite beverages • Favorite dishes • Favorite chocolate • Favorite dessert • Favorite fruit • Favorite ice cream • Favorite cake • Favorite juice • Favorite nut • Name of favorite teacher • Favorite cities • Hometown • Favorite spot/place • Vacation city • The best loved city	• Number of people in the family • Mother name • Mother age • Mother height • Father name • Father age • Father height • Aunt name • Uncle name • Sister/brother name • Number of brothers & sisters • Friends • Number of trousers • Number of jackets • Favorite color • Brand of mobile phone • Exam grade • Monthly allowance • The number of pages of the book last read • The number of the days he/she read

The answers of teachers and teacher candidates to the question of "What student data did you use to personalize?" were given in Table 1.

b) Opinions about Personalized Teaching

In the study, opinions about personalized teaching were asked to the participants. With these questions, we tried to describe participants' opinions about the advantages and limitations of personalized teaching in terms of teaching, classroom management, student motivation and recognition and student achievement evaluation when they teach using personalized materials. Within this framework, collected data was analyzed as positive and negative aspects of personalized teaching.

c) Positive aspects of personalized teaching

When participants' statements are examined, it can be seen that personalized teaching has some positive aspects such as developing a sense of community, increasing motivation, increasing teacher efficiency, increasing effective evaluation and pave the way for more effective classroom management. The distribution of these opinions according to the participants is shown in Table 2.

When the number of participants who give their opinions is examined, a similar case can be noticed. According to this, 36 participants (18 teachers, 18 teacher candidates) stated that personalized teaching increased motivation, 24 participants (13 teachers, 11 teacher candidates) said that it increased "student achievement" and 21 participants (21 teacher candidates) claimed that " they have known their students better".

After the interviews done with teachers and teacher candidates, both teacher candidates and teachers mentioned that when personalization was used for teaching purpose, students' motivation, attention, willingness, performance, concentration, achievement and comprehension increased. Furthermore, they say that students get excited when they see their personal information and their participation increases when the lesson is personalized. They state that they recognize the students better and they can make fairer evaluations. Generally, both teachers and teacher candidates say that personalized teaching have positive effects in terms of teaching.

Table 2 : Positive aspects of personalized teaching

Positive Aspects	Teachers		Teacher Candidates	
	f	*%*	*f*	*%*
Sense of belonging(Develops a sense of community)	24	25.26	34	21.12
Increases motivation	32	33.68	39	24.22
Increases learning efficiency	29	30.53	57	35.40
Increases effective evaluation	4	4.21	18	11.18
More effective classroom management	6	6.32	13	8.07
TOTAL	95	100,00	161	100,00

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d) Negative aspects of personalized teaching

When the opinions about the negative aspects of personalized teaching were examined, it is seen that technical issues, being time-consuming, a decrease in motivation and the quality of the instructor were emphasized. These opinions and their frequency and rates in the number of total statements are presented in Table 3.

After the interviews done with teachers and teacher candidates, both teachers and teacher candidates stated that manual preparation of personalized materials takes up too much time and applying paper-based personalization in crowded classes can be time-consuming. Both groups warn that information must be well described.

Table 3 : Negative aspects of personalized teaching

Negative Aspects	Teacher		Teacher Candidates	
	f	%	f	%
Motivation	1	2,33	8	8,33
Quality of Instructor	1	2,33	0	0
Technical Issues	37	86,05	74	77,08
Time-consuming	4	9,30	14	14,58
TOTAL	43	100	96	100

e) Opinions about Development Process of Personalized Teaching

When teachers and teacher candidates' opinions were asked about the development process of personalized teaching, they usually stated that the students' personal information must be updated because the information taken at the beginning of education period can change. Since the students are very young, their best-loved friends can be the least loved during this period because of a problem or because of losing someone in the family, some data used for personalizing can cause the student get upset. Therefore, they stated that the data must be updated.

As a conclusion, teachers used 43 negative and 95 positive statements. Teacher candidates, however, used 96 negative and 161 positive statements. Negative statements can be eliminated when a good computer system is established. These statements claim that there can be problems since the personal information used during personalization are not used in the right place and in the right time.

IV. Conclusion and Discussion

Obtained data is collected under three main groups. 1. Students' personal information that teachers prefer to use while personalizing the materials they have developed. 2. Opinions about the advantages and limitations of personalized teaching in terms of teaching, classroom management, student motivation and recognition and evaluation of student achievement. 3. Suggestions to achieve success in the lessons based on personalized teaching. According to research findings, teacher candidates usually used the data such as student's name, parents' names or favorite people's names, supported team, favorite food, favorite cartoon characters, favorite games or computer/arcade games and favorite books while preparing personalized materials. Both teachers and teacher candidates stated that they observed an increase in students' motivation, achievement, performance, attention and concentration, the level of comprehension, participation and student-teacher communication when the lessons were carried out by using personalized materials. This finding is consistent with the previous research (For instance, Hart, 1996; Chen and Liu, 2007). They explained that when the students see their personal information in the worksheets distributed in class, they got excited and felt special and so the lessons became more fun and enjoyable. Hart also discovered similar results in his/her own study (1996). Both groups mentioned that manual preparation of personalized teaching is time-consuming and applying paper-based personalization in crowded classes can take too much time. This statement is one of the main issues of personalized teaching, which has also been described in other studies. Solution is possible with today's technology, for example, this problem can be eliminated by establishing computer-based learning management system. The study group who used paper-based personalized teaching in the class found this time-consuming because they used word processing software and spreadsheet program such as Microsoft Word and Excel. Both groups warn that information must be described carefully. They stated that as the personal information about the students can change through the process, the information must be checked throughout this period. Because this information is a finding that is discovered for the first time in the field of literature, it is very important. In the past studies (Hart, 1996; Ku and Sullivan, 2000; Ku and Sullivan, 2002; Bates and Wiest, 2004; Chen and Liu, 2007), the information was taken in the very beginning but the necessity of making updates was not considered. The effect of personalization on teaching must be controlled by preparing a system that allows student personal information updates for future studies about personalized teaching.

By this study, we tried to fulfill a need in the field of literature in which teacher opinions were observed by other researchers but were not collected in a certain format. It was determined that in today's world, in which many things are offered in a personalized context, the idea of giving education in a personalized method /way were embraced by teachers and teacher candidates.

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