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## The exploration of the attitudes of the science teacher candidates towards teaching profession

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### Abstract

The purpose of this study is to determine prospective science teachers' attitudes towards teaching profession in terms of different variables. This research was designed as a descriptive study. Participants in the study group were selected among the students who were attending the 1st, 2nd, 3rd and 4th grades in the Department of Science Teaching, Faculty of Education, Ahi Evran University during the 2011-2012 academic year. While forming the study group, maximum variation sampling, which is one of the purposive sampling methods, was used. Data of the study were collected using the "Attitude Scale towards Teaching Profession" which was developed by Özgür (1994). In the analysis of the data collected, descriptive and inferential statistics via SPSS 15.0 Package Program were utilized. According to the study results, there was no statistically significant difference between prospective science teachers' points related to their attitudes towards teaching profession and gender, general academic average, family's monthly income and where they lived before university. However, a statistically significant difference was observed between their attitude points and their departments.

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### 1. Introduction

Prospective teachers' perspectives related to their profession have an important role in training qualified teachers. Likewise, teacher training programs have a crucial role in prospective teachers' forming attitudes towards their profession (Hacıömeroğlu & Şahin Taşkın, 2010). Accordingly, in order for teachers to form positive attitudes, education process should definitely be arranged by taking into account the methods, techniques, teaching aids and strategies which are compatible with their learning styles (Ekici, 2008). This is because interest in learning increases when positive attitudes are developed (Hevedanlı & Akbayın, 2006). Hence, if prospective teachers can be trained in a way that they develop positive attitudes, they do their jobs fondly, derive pleasure from it and undertake their missions, responsibilities and roles in a better way (Çeliköz & Metin, 2004). However, a teacher who has developed negative attitudes will reflect this negativity on his/her behaviors and in this case, the education system, especially students, will be negatively affected (Çetinkaya, 2009). Negative attitudes can be described as a lack of motivation in loving the students, improving yourself and being enthusiastic and willing (Semerci & Semerci, 2004). In brief,

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an increasing interest as a result of positive attitudes may enable training more qualified teachers because prospective teachers' chances of receiving a good education depend on the quality of the teacher education programs (Öztürk, Demir & Dökme, 2011). For this reason, in education programs, prospective teachers' attitudes should be determined because attitudes are one of the elements that constitute a teacher's personality (Güleçen, Cüro & Semerci, 2008). This shows that education is an important tool in changing attitudes (Kahyaoğlu & Yangın, 2007; Ekici, 2008).

If we are to answer the question "What is an 'attitude' which is considered an important tool in education, what does it mean and what kind of variable is it?", the answer will be as such: knowing an individual's attitude towards an object or a stimulus will enable us to be able to predict what this individual's behavior will be towards that stimulus (Üstüner, 2006). However, attitudes are not behaviors; they are psychological variables that direct people's behaviors and that are at the background of behaviors (Kahyaoğlu & Yangın, 2007). Attitudes are inclinations that are not themselves observable but that are assumed to lead to some observable behaviors (Yeşil, 2011). In other words, attitude is an important explanatory factor for behavior with its cognitive, affective and behavioral dimensions (Doğan & Çoban, 2009; Karaer, 2007; Kahyaoğlu & Yangın, 2007; Demirtaş, Cömert & Özer, 2011; Anderson, 1988; as cited by Yaşar & Anagün, 2008).

As for the attitude towards teaching profession, it is defined as an individual's opinions about teaching profession, what s/he feels towards it and his/her performance while professing the job (Camadan & Duysak, 2010). Opportunities in education faculties where competencies and attitudes related to teaching profession are gained have quite an important role in prospective teachers' perceiving themselves as professionally competent and possessors of positive attitudes towards teaching profession (Çapri & Çelikkaleli, 2008). This is because prospective teachers' attitudes towards teaching profession can be accepted as an expression or reflection of how they perceive this job which they will be a member of in the future (Şahin, Zade & Direk, 2009). For this reason, it is obligatory that qualified teachers be trained in terms of teacher education and that their attitudes towards teaching profession be determined, and changed in a positive way if they are negative, in order to increase the success of the program (Semerci & Semerci, 2004). A necessity to develop prospective teachers' attitudes towards teaching profession in a positive direction is present and there are some responsibilities that fall to the researchers in this respect. Therefore, in order make success more qualified, determining prospective teachers' attitudes towards teaching profession and eliminating any negative feelings and opinions related to the job may play an important role in motivating the teacher to be more successful at the start of the profession and also contributing to their academic achievements related to their jobs. This is why, in this study, prospective science teachers' attitudes towards teaching profession were aimed to determine in terms of different variables. It is hoped that the study results will greatly contribute to the literature.

## 2. Method

### 2.1. Research Model

This research is a descriptive study and it was carried out through screening model. In such an approach, variables that belong to units or situations such as the case object, individual, group, subject and etc. in question are attempted to describe separately. Descriptive studies aim at explaining the interaction among situations by taking into consideration the relationship of existing events with previous events or conditions. As for the screening models, they are based on presenting the existing situation as it is and through an objective approach (Karasar, 1999). In this study, attitudes of prospective science teachers in science teaching departments towards teaching profession were considered as constructs and, throughout the study, a method of relating these constructs by describing them was utilized.

### 2.2. Study Group

The study group comprised of 178 randomly-selected students receiving education in the Department of Science Teaching, Faculty of Education, Ahi Evran University during the 2011-2012 academic year. Demographic features of these 178 prospective teachers who took part in the study group are given in Table 1 below.

Table 1. Distribution of the Sample Group in terms of Demographic Variables

Faculty type	Department	Gender	f	%
Faculty of Education	Classroom Teaching	Male	16	9
		Female	46	25
	Social Sciences Teaching	Male	18	10
		Female	34	20
	Science Teaching	Male	49	28
		Female	15	8

### 2.3. Data Collection Tools

In order to collect the study data, “Attitude Scale towards Teaching Profession” which was developed by Özgür (1994) was used. The scale consists of 33 items. Cronbach Alpha internal reliability coefficient of the scale was calculated as 0.865. According to Kalaycı (2009), because the calculated Alpha value is in the range of  $0.80 \leq \alpha \leq 1.00$ , the scale is highly reliable.

### 2.4. Analysis of Data

Study data were analyzed by using the SPSS 15.00 Package Program. Frequencies, percentages, arithmetic averages and standard deviations related to the points were calculated, and for dichotomous variables independent groups t-test, for multi variables one way Anova and to determine the source of the statistically significant difference, Scheffe test was used.

## 3. Result and Discussion

Findings obtained through exploring prospective teachers’ attitudes towards teaching profession in terms of different variables are given below.

### 3.1. Findings related to Points of Prospective Teachers’ Attitudes towards Teaching Profession in terms of Gender

Table 2. Independent Groups t-test Results for the Distribution of Points related to Attitudes towards Teaching Profession according to Gender

	Gender	N	$\bar{X}$	S	t	p
Teaching Profession Attitude Points	Male	83	102,024	10,051	1,722	,087
	Female	95	99,084	12,394		

When the total points related to the attitude points for the teaching profession in terms of prospective teachers’ gender are analyzed in Table 2, it is seen that there is no statistically significant difference ( $t=1,722$ ;  $p>.05$ ). In other words, it can be stated that prospective teachers’ attitude points for the teaching profession do not significantly change according to gender.

### 3.2. Findings related to Points of Prospective Teachers’ Attitudes towards Teaching Profession in terms of General Academic Achievement

Table 3. ANOVA Results for the Distribution of Points related to Attitudes towards Teaching Profession according to General Academic Achievement

	General Academic Achievement	$\bar{X}$	S	F	p	Difference
Teaching Profession Attitude Points	1,50-2,00(n=11)(a)	98,181	9,724	,513	,726	-
	2,01-2,50(n=70)(b)	99,514	11,229			
	2,51-3,00(n=22)(c)	102,818	11,236			
	3,01-3,50(n=36)(d)	100,611	10,351			

3,51-4,00(n=39)(e)	101,307	13,365
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According to the analysis results in Table 3, it is observed that there is no statistically significant difference between prospective teachers' attitude points for the teaching profession and their general academic achievement ( $F=.513$ ;  $p>.05$ ).

### 3.3. Findings related to Points of Prospective Teachers' Attitudes towards Teaching Profession in terms of Teaching Departments They are Registered in.

Table 4. ANOVA results for Teaching Profession Attitude Points in terms of Departments

Departments		$\bar{X}$	S	F	p	Difference
Teaching Profession Attitude Points	Classroom Teaching (n=62)(a)	98,903	11,591	8,176	,000*	a-c
	Social Sciences Teaching (n=52)(b)	96,980	11,052			b-c
	Science Teaching (n=64)(c)	104,781	10,319			

\*Correlation is significant at the 0.01 level.

According to the analysis results in Table 3, there is a statistically significant difference between prospective teachers' attitude points for the teaching profession and the departments they are registered in the Faculty of Education ( $F=8.176$ ;  $p<.05$ ). According to the Scheffe test performed, the source of this significant difference is between the students of classroom teaching department ( $\bar{X}=98,903$ ) and the students of science teaching departments ( $\bar{X}=104,781$ ), and it is in favour of students in the science teaching department. In addition, it can be stated that, between the students of social sciences teaching ( $\bar{X}=96,980$ ) and those of science teaching ( $\bar{X}=104,781$ ), the difference is in favour of the students in the science teaching department ( $F=4.001$ ;  $p<.05$ ).

### 3.4. Findings related to Points of Prospective Teachers' Attitudes towards Teaching Profession in terms of their Monthly Family Income

Table 5. ANOVA results for Teaching Profession Attitude Points in terms of Monthly Family Income

Monthly Family Income*		$\bar{X}$	S	F	p	Difference
Teaching Profession Attitude Points	500andbelow (n=18)(a)	99,9444	13,24197	1,753	,141	-
	501-1000(n=48)(b)	99,3750	10,59632			
	1001-1500(n=53)(c)	101,2453	10,37732			
	1501-2000(n=29)(d)	97,0345	11,53715			
	2001andabove(n=30)(e)	104,4000	12,62619			

\*Monthly Family Income was calculated as TL.

According to the analysis results in Table 5, it is observed that there is no statistically significant difference between prospective teachers' attitude points for the teaching profession and the monthly family income ( $F=1,753$ ;  $p>.05$ ).

### 3.5. Findings related to Points of Prospective Teachers' Attitudes towards Teaching Profession in terms of Where they Lived before University

Table 6. ANOVA results for Teaching Profession Attitude Points in terms of Where they Lived before University

Where they lived before university		$\bar{X}$	S	F	p	Difference
Teaching Profession Attitude Points	Village(n=17)(a)	99,2941	12,22582	1,669	,176	-
	County(n=8)(b)	100,2500	7,45941			
	Town(n=57)(c)	97,9825	9,39318			
	Province(n=96)(d)	102,1458	12,45622			

According to the analysis results in Table 6, it can be seen that there is no statistically significant difference between prospective teachers' attitude points for the teaching profession and where they lived before university ( $F=1,669$ ;  $p>.05$ ).

#### 4. Conclusion and Suggestions

In this study, attitude points of prospective teachers attending the departments of *Classroom Teaching*, *Social Sciences Teaching* and *Science Teaching* in the Faculty of Education towards teaching profession were analyzed in terms of different variables. According to the study results, it was observed that attitude points of prospective teachers in the faculty of education towards teaching profession were quite high. The results of the study are in parallel with many other studies carried out in a similar way (Özder et al., 2010; Yeşil, 2011).

No significant difference was observed between the prospective teachers' points related to their attitudes towards teaching profession and gender. According to the results of many other studies performed in a similar way, it was found out that there was not a statistically significant difference between the prospective teachers' points related to their attitudes towards teaching profession and "university" and "gender" variables (Terzi & Terci, 2007; Bulut, 2009; Özder et al., 2010). However, in these studies, it was emphasized that there was a significant difference between the prospective teachers' points related to their attitudes towards teaching profession and gender (Çapri & Çelikkaleli, 2008; Yeşil, 2010) and that difference was considered important.

No statistically significant difference was observed between the prospective teachers' points related to their attitudes towards teaching profession and their general academic average. According to the results of the studies by Özder and the others (2010), no significant relationship was found out between attitude points and academic achievement points.

No statistically significant difference was observed between the prospective teachers' points related to their attitudes towards teaching profession and their monthly family income. According to the research results of a similar study carried out by Yeşil (2011), it was revealed that there was not a significant difference between the attitude points of students in the Turkish Education Department towards teaching profession and their monthly family income.

A statistically significant difference was observed between the prospective teachers' points related to their attitudes towards teaching profession and their departments (Classroom Teaching, Social Sciences Teaching and Science Teaching). When the source of this significant difference was examined, according to the Scheffe test performed, the difference was observed to be between the students of classroom teaching department and the students of science teaching departments and it was in favour of students in the science teaching department. Also, it can be seen that, between the students of social sciences teaching and those of science teaching, the difference was in favour of the students in the science teaching department. According to the results of similar studies, it was determined that the prospective teachers' points related to their attitudes towards teaching profession differed significantly in terms of their department (program, major) (Terzi & Terci, 2007; Bulut 2009; Özder et al., 2010). In contrast, as for the results of the study performed by Çapri & Çelikkaleli (2008), they revealed that program and faculty variables did not have a significant effect on the prospective teachers' points related to their attitudes towards teaching profession. Bearing in mind that the findings obtained within the framework of the study results will shed light on future studies, some suggestions were included. These suggestions are as below:

- A significant difference was observed between the prospective teachers' points related to their attitudes towards teaching profession and the departments they were attending. Future studies may focus their attention on the determining the reasons that constitute this difference.
- In order to eliminate the difference between the prospective teachers' points related to their attitudes towards teaching profession and the departments they are registered in, guidance activities in relation to their departments may be made more effective.
- Vocational activities that prepare the prospective teachers for teaching profession can be made more effective.

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