

Analysis of Changes in the Affective Characteristics and Communicational Skills of Prospective Teachers: Longitudinal Study

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Abstract

The main purpose of this study is to analyze the change in the affective characteristics (attitudes, interests and self-efficacy beliefs) and communication skills of prospective teachers, and to question what these changes are, how they happened and the reason behind them. This study has been designed longitudinally for this purpose. The study group consists of 28 prospective teachers that were educated under 3 different undergraduate programs. 12 of the prospective teachers studied primary mathematics education while 8 of them studied Turkish and 8 of them studied social sciences. The research's study group was determined by the maximum variation sampling method. The placement scores of prospective teachers were taken as a basis in order to enable maximum variation. Data was collected from prospective teachers by means of scales and semi-structured interview forms. According to the research's results, prospective teachers started their teaching education with a high level of affective characteristics and communication skills. It was seen that there was a decrease in the attitude and self-efficacy levels, an increase in the communication skills levels and no change in the interest levels of prospective teacher over time. The results show that there was no significant difference between the first and second measure scores from the participant's measure instruments. However, in the analyses performed individually, it was seen that some prospective teachers had significant changes in their affective characteristics and communicational skills.

Keywords: Affective characteristic, interest, attitude, self-efficacy belief, communicational skills

DOI: 10.29329/ijpe.2018.179.14

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Introduction

Beginning from the Tanzimat (Reform) period, when institutions that educate teachers as systematic and innovation movements started to be established, the search and expectation of qualified teachers who continue to increase their significance in the 21st century continues to be important today. Indeed, the main factor in the emergence of qualified human power is the teachers and qualified teachers training process is needed for qualified teachers. This process can be listed under three elements including input, process and product when addressed with a system approach. The dynamic structure between these elements is important in terms of the quality of teacher training. One of the important factors of the input dimension in teacher training is the prospective teacher and their admission characteristics. In this system, the higher the quality of input is, the stronger the possibility of getting a quality product is. On the contrary, it seems quite difficult to obtain a quality product from a low input. Therefore identification of the admission characteristics of prospective teachers is considered important. Furthermore, the consideration of student characteristics in education programs prepared for any educational institution is one of the main principles. Based on this main principle, identifying/learning the admission characteristics of prospective teachers that are placed in teaching education programs in all aspects is important for the implementation and success of programs (Eret Orhan and Ok, 2014).

Demographic information, socioeconomic states, interests, tendencies and attitudes for profession, beliefs in their ability to perform their jobs, and communicational skills with the social environment are among the admission characteristics of prospective teachers. Within this scope, it is believed that addressing and examining the affective dimension of characteristics is important. Because poet Goethe's emphasis on "among everything, the things we can learn are the ones we love" can be interpreted as individuals who are willing to learn or do things for which they feel emotionally positive and have interest. Besides, it could be said that affective characteristics that guide human behaviors play an important role in the realization of effective learning as Balaban Salı (2006) states that interest and participation of students in the learning process is closely associated with the will and enthusiasm they feel. In Bloom's (1998) theory called mastery learning or school learning, interest, attitude and academic self-concept of students related to any course or unit are expressed as the affective admission characteristics. It is emphasized that positive admission characteristics increase the learning level of students and can also decrease the differences between the success of students by 25% (Senemoğlu, 2012, p.442-443). In research conducted by Abak, Eryılmaz and Fakiyoğlu (2002), it concluded that multiple affective characteristics of university students such as attitude, motivation, anxiety, and self-efficacy have an effect on their success. In other studies (Guy, Cornick and Beckford, 2015; Wiltsher, 2016; Robinson, Ranellucci, Lee, Wormington, Roseth, Linnenbrink-Garcia, 2017; Józsa and Barrett, 2018; Kertechian, 2018; Ray, Onifade and Davis, 2018), it was also concluded that there was a relationship and positive effect between the affective characteristics and academic success.

In this study, the affective characteristics dimension is based on mastery learning model of Bloom (1998). In Bloom's model, factors determining the learning level are stated as student qualities, quality of teaching service and learning product. According to Bloom (1998), when student qualities are brought to the desired level and a qualified learning process service is provided, the learning level of students will rise. Student qualities are addressed in two dimensions including cognitive admission characteristics and affective admission characteristics (Bloom, 1998; quot. Senemoğlu, 2012). Interest, attitude and academic self-concept of students related to any course or unit are expressed as affective admission characteristics. Therefore, the affective admission characteristics are the combination of students' interest, attitude and self-concept related to a course (Bloom, 1998). Thurstone (1928) defined attitude as the total of tendencies, feelings, prejudices, biases, thoughts, fears, threats and beliefs of individuals about any subject (Robinson, 1975). Herr and Cramer (1996) defined interest as the reactions of individuals in which they like, do not like, or, are indifferent to a person, subject or activity (quot. Deniz, 2009). It is suggested that academic self-concept and academic self-efficacy can be substitutes for each other, and both concepts assess the similar structure which is the efficacy perception (Pajares, 1996; Çalışkan 2014). According to Pajares

and Schunk (2001), it is emphasized that both concepts are even used as synonyms by several researchers (quot. Çalışkan, 2014). Therefore, the concept *self-efficacy* is preferred to be used in this study.

According to the literature research about the admission characteristics of prospective teachers and their attitudes towards teaching, studies on admission characteristics (Ok, 1991; Uygun, 2010; Chroinin, Tormey and Sullivan, 2012; Özder, 2012; Eret Orhan and Ok, 2014; Kahramanoğlu, 2014; Kutluca Canbulat, 2014; Yokuş, 2015; Kahramanoğlu and Bay, 2016;) focused on characteristics that must be owned by prospective teachers at the admission to educational programs. It is seen that studies on attitudes (Kyriacou and Kunc, 2007; Lašek and Wiesenbergová, 2007; Başbay, Ünver, Bümen, 2009; Aydın and Sağlam, 2012; Hacıömerlioğlu and Taşkın, 2010; Aydın and Tekneci, 2013; Tunçeli, 2013; Bağçeci, Yıldırım, Kara and Keskinpalta, 2015; Karatekin, Merey and Keçe, 2015; Serin, Güneş and Değirmenci, 2015; Tufan, 2016; Akman, 2017; Blazar and Kraft, 2017; Kahramanoğlu, Yokuş, Cüçük, Vural and Şiraz, 2018) are relatively more in number as compared to the admission characteristics. These researchers mainly focused on identification of the attitude levels of prospective teachers.

There also conducted studies to directly or indirectly determine the interest levels of prospective teachers in the education and teaching profession (Eryaman, 2007; Okçabol et. al., 2003; Ok and Önkol, 2007; Aksu et. al., 2010; Liu, 2010; Low, Lim, Ch'ng and Goh, 2011; Eret Orhan and Ok, 2014; Riedler & Eryaman, 2016). Studies conducted in recent years on the self-efficacy beliefs of prospective teachers (Tarkin and Uzuntiryaki, 2012; Tunca and Alkın Şahin, 2014; Ayra and Kösterelioğlu, 2015; Ekinci, 2015; Şenaol and Ergün, 2015; Akman, 2016; Morgül, Seçken and Yücel, 2016) focused on the review of self-efficacy beliefs of prospective teachers from various branches in terms of teaching profession. Furthermore, studies conducted on the communicational skills of prospective teachers (Bozkurt Bulut, 2004; Pehlivan, 2005; Özerbaş, Bulut and Usta, 2007; Saracaloğlu, Yenice and Karasakaloğlu, 2009; Tümkiye, 2011; Çetinkaya, 2011; Tunçeli, 2013; Çuhadar, Özgür, Akgün and Gündüz, 2014; Ocak and Erşen, 2015) generally focused on identifying the skill levels of prospective teachers.

According to the results of these studies mentioned in the above paragraphs, it is seen that studies are conducted to identify the level of characteristics of prospective teachers such as attitudes, interests, self-efficacy and communication skills. However, no longitudinal study is based on repetitive measures of such characteristics of prospective teachers except for the study of Başbay, Ünver, Bümen (2009) in which they identified the attitudes of secondary education prospective teachers about teaching profession with repetitive measures. Therefore, this study is of importance as a longitudinal study conducted to analyze the change in attitudes of prospective teachers about teaching profession, their self-efficacy beliefs, interests in education, and communicational skills. Within this context, the main purpose of this study is to analyze the change in affective characteristics (attitudes, interests and self-efficacy beliefs) and communication skills of prospective teachers, and to question what these changes are, how they happened and what is the reason behind them. The following questions are asked within the scope of this general purpose.

1. What kind of a change has occurred in the affective characteristics and communication skills of prospective teachers?
2. Is there a significant difference between the repetitive measures of affective characteristics and communication skills of prospective teachers?
3. What kind of a change has occurred in the affective characteristics and communication skills of prospective teachers on an individual basis?
4. What are the opinions of prospective teachers about how much the education they receive in the faculties to meet their expectations of teacher training?

5. What kind of a relationship is there between the placement scores of prospective teachers in the relevant program and change in their affective characteristics and communication skills?

Methodology

Study Design

This study is a longitudinal research conducted to analyze the change in affective characteristics and communication skills of prospective teachers during the teacher training program. Longitudinal studies have many various forms: These are generally based on observation but can also be experimental (Caruana, Roman, Hernández-Sánchez & Solli, 2015). In this study, longitudinal research based on observation has been used since the researcher did not manipulate the variables related to any group and could observe the participants in their natural environment. Longitudinal studies are used to conduct continuous and repetitive measures in order to track certain individuals for a long time. These are generally observational and are used with qualitative and/or quantitative researches within a cause and effect relationship without any external effect (Caruana, Roman, Hernández-Sánchez & Solli, 2015; Lynn, 2009).

Study Group

The study group consists of 28 prospective teachers that were educated under 3 different undergraduate programs. 12 of the prospective teachers studied primary mathematics education while 8 studied Turkish and 8 studied social sciences. 5 of the prospective teachers were men and 23 were women and were all selected on a voluntary basis. The research's study group was determined by the maximum variation sampling method. The placement scores of prospective teachers were taken as a basis in order to enable maximum variation. Five prospective teachers were selected with highest, medium and lowest placement scores each for all programs. Thus, the study started with a total of 45 prospective teachers including 15 from each program. Firstly, data was collected from 45 prospective teachers but as the study was completed with 28 prospective teachers in the following data collection processes since some prospective teachers went to other universities through undergraduate transfer, some did not want to continue with the research and some responded randomly to data collection tools. All 28 prospective teachers participated in the complete data collection process. Distribution of these 28 participants based on their placement scores is given in Table 1.

Table 1. Distribution of prospective teachers that participated in the research based on their placement scores

		Placement Levels		
		High	Medium	Low
Programs	Primary Education Mathematics (PEM)	3	4	5
	Social Sciences (SS)	3	3	2
	Turkish (T)	2	3	3

Three, four and five prospective teachers included in the study were placed in the primary education mathematics undergraduate program with the highest, medium and lowest score, respectively. Three, three and two participants who were placed in social sciences education program with the highest, medium and lowest score, respectively, while two with the highest, three with medium and three with the lowest score in Turkish education program were involved.

Data Collection Tools, Process and Analysis

The study's data collection process took place between October 2016 and October 2017. The first data collection process commenced with the prospective teachers who started first class in the 2016-2017 educational period. Attitude, interest, self-efficacy belief and communicational skill levels

of prospective teachers were assessed twice by using the same measure tools on October 2016 and October 2017. In addition, interviews made with prospective teachers in October 2017 during second class about their opinions on the teacher training that they received for that year. Interviews were conducted one-on-one and were recorded. Various data collection tools were used in this process in order to assess various characteristics of prospective teachers. A semi-structured interview form was used in the interviews made with prospective teachers regarding teacher training. Four different data collection tools were used to assess the attitude, interest, self-efficacy belief and communicational skill levels of prospective teachers.

Semi-structured interview form

A single question interview form was used to determine whether the teacher training taken by prospective teachers for one year met their expectations and revealed their general opinions. The question proposed was: “Can you make a general assessment of the education you have received in the faculty so far? Have your expectations been met?”

Scale of Attitude on Teaching

A scale of attitude consisting of a single dimension and 10 items developed by Eret Orhan and Ok (2014) was used to assess the attitudes of prospective teachers regarding the teaching profession. In the scale development study, Cronbach alpha coefficient of the scale was .90 and in this study for the first measurement was .78 and the second measurement for this study was .82.

Professional Field Interest Scale

The inventory developed by Deniz, Türe, Uysal and Akar (2014) is an measure tool to identify the professional interest levels of individuals in 14 professional fields and is based on the information provided by individual about themselves. The inventory has two versions; the long version with 156 items and a short version with 72 items. Both versions have 14 subscales/dimensions. One of these dimensions is education and includes six items. The short version with 72 items was used in the study. In the validity and reliability studies performed for the short form, 14 factors express 49% of the total variance. Compliance index values of the items in factors vary between .87 and .99. Also, the Cronbach alpha coefficient of 14 factors varies between .59 and .92. In this research, Cronbach alpha coefficient of the factor related to education in the inventory for the first measurement was .72 and the second measurement for this study was .77.

Teacher Self-Efficacy Scale

The teacher self-efficacy scale that is developed by Tschannen-Moran and Woolfolk-Hoy (2001) and adapted to Turkish by Çapa, Çakıroğlu and Sarıkaya (2005) consists of 24 items in 9 point likert format. The scale consists of 8 items for each 3 dimensions; student engagement, teaching strategies and classroom management. In the reliability study of scale, the coefficient for dimensions is .82, .86, .84, respectively, and the coefficient for the whole is .93. Factor load values of items in the scale vary between .49 and .74 in the reliability studies of scale. In this study, Cronbach alpha coefficient of the scale for the first measurement was .88 and the second measurement was .80.

Communicational Skills Scale

The communicational skills scale developed by Korkut Owen and Bugay (2014) consists of four dimensions and 25 items. Dimensions are called communication principles such as, main principles (CPMP), self-expression (SE), effective listening and non-verbal communication (ELNVC) and willingness to communicate (WTC). The factor load values of items in the scale vary between .30 and .70. The scale expressed 45.95% of the total variance. Reliability coefficient of the whole scale

was .88 while coefficients of subscales were .79, .72, .64 and .71, respectively. The Cronbach alpha coefficient of this scale for the first measurement was .76 and the second measurement was .72.

The Content analysis method was used in the analysis of data obtained from the semi-structured interview forms for data collection purposes. Data collected from the prospective teachers were analyzed in three stages: (1) coding of data, (2) identification of themes, (3) arrangement of codes and themes. Firstly, data was reviewed and codes were obtained. These codes were separated into themes so that they constitute meaningful wholes and categories were created. Lastly, codes were arranged according to the relevant themes. Two themes (positive and negative) were obtained as a result of the interview made regarding the teaching training of prospective teachers. In the analysis of data collected by means of scales, arithmetic mean and percentage were obtained for the first and third study questions, and Wilcoxon signed rank test was performed in order to find a significant difference between affective characteristics and communication skills of prospective teachers in the second question. The purpose of this test is the fact that study group consists of 28 prospective teachers. Because it is stated in literature that if the number of samples is few, it would be appropriate to use non-parametric tests (Can, 2014, p.142).

Results

In this study, performed to analyze the change in affective characteristics (attitudes, interests and self-efficacy beliefs) and communication skills of prospective teachers, we have examined what these changes are, how they happened and what is the reason behind them. Descriptive statistics related to items found in the measure tool aimed at attitude, self-efficacy, interest and communication skills of prospective teachers are given in Table 2.

Table 2. Descriptive statistics related to affective characteristics and communication skills

	Measures	N	\bar{X}	Sd	Minimum score	Maximum score
Attitude	First measure	28	39.00	8.86	17.00	50.00
	Second measure	28	38.50	7.15	21.00	50.00
Self-efficacy	First measure	28	179.57	22.07	134.00	213.00
	Second measure	28	174.79	18.82	140.00	212.00
Interest	First measure	28	23.18	3.51	13.00	28.00
	Second measure	28	23.21	4.29	17.00	30.00
Communicational skills	First measure	28	100.61	9.02	82.00	120.00
	Second measure	28	102.14	10.66	82.00	119.00

According to the scores of prospective teachers related to their affective characteristics and communication skills, it is seen that a decrease occurs in the attitude and self-efficacy scores over time ($\bar{X}_{\text{attitude } 1}=39.00$, $\bar{X}_{\text{attitude } 2}=38.50$; $\bar{X}_{\text{self-efficacy } 1}=179.57$, $\bar{X}_{\text{self-efficacy } 2}=174.79$). While no change was observed in the scores that prospective teachers obtained from the interest inventory, the mean value of the scores in communication skills scale increased from 100.61 to 102.14.

Changes that occurred in the affective characteristics of prospective teachers over time are shown in Figure 1. Mean values of affective characteristics are shown individually.

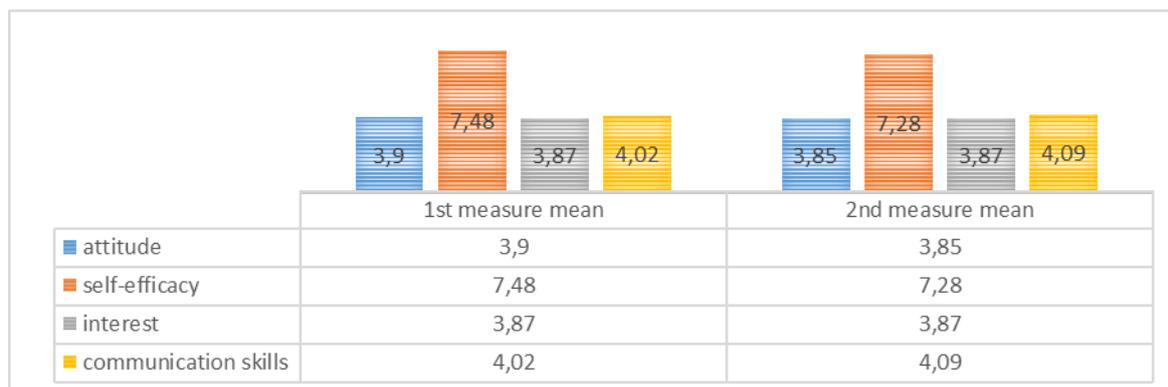


Figure 1. The first and second measure mean values of affective characteristics (attitude, self-efficacy, interest) and communication skills of prospective teachers

As a result of the analysis performed to reveal the change in affective characteristics and communication skills of prospective teachers, it was seen that affective characteristics and communication skills of the prospective teachers were generally high according to the data collected in the first months of their education in the faculty. Accordingly, it might be said that prospective teachers start their teacher training programs with strong affective characteristics and communication skills. While the mean value of prospective teachers in their attitude levels related to the teaching profession was 3.90, this figure was observed as 3.85 in the second measure made one year later. Although small, a decrease is observed in the attitude mean values of prospective teachers. A similar situation is seen in the self-efficacy levels of participants. The self-efficacy level mean value of prospective teachers was 7.48 at the beginning and decreased to 7.28 one year later. Very little decrease was observed in the mean values. No change was seen in the mean values of interest in education ($\bar{X}_{1st\ measure} = \bar{X}_{2nd\ measure} = 3.87$). However, a partial increase was observed in the communication skills of prospective teachers. The mean value of prospective teachers' communication skill levels was 4.02 at the beginning and increased to 4.09 in the measure performed one year later.

From a general perspective, it can be said that stable measures were performed in terms of the assessed characteristics of prospective teachers. Even though changes in characteristics were positive or negative, the amount of change was quite small. Within this context, it might be said that prospective teachers were stable in their opinions.

The results of the Wilcoxon signed rank test that was performed to reveal the statistically significant difference between the mean values of scores that the prospective teachers obtained from the measure tools aimed at the identification of the affective characteristics and communication skills are provided in Table 3.

Table 3. Wilcoxon signed rank test results of first and second measure scores for affective characteristics and communication skills of prospective teachers*

Characteristics	Scores	Ranks	N	Mean value of rank	Total rank	of z	P
Attitude	Second measure score	Negative ranks	14	14.79	207.00	-	.665
		Positive ranks	13	13.15	171.00	0.433	
	First measure score	Equal	1				
		Total	28				
Self-efficacy	Second measure score	Negative ranks	18	13.50	243.00	-	.086
		Positive ranks	8	13.50	108.00	1.715	
	First measure score	Equal	2				
		Total	28				
Interest	Second measure score	Negative ranks	12	14.33	172.00	-	.929
		Positive ranks	14	12.79	179.00	0.089	

	First measure score	Equal	2				
		Total	28				
Communicational skills	Second measure score	Negative ranks	10	12.75	127.50	-	.520
		Positive ranks	14	12.32	172.50	0.644	
	First measure score	Equal	4				
		Total	28				

*Based on negative ranks

According to the test results found in Table 3, there was no significant difference between the first and second measure scores that the participant prospective teachers took from measure tools ($p > .05$). The test results indicate that teacher training programs do not lead to a change in the affective characteristics and communication skills of prospective teachers.

According to the analyses made on total scores, teacher training programs have no effect on the affective characteristics and communication skills of prospective teachers. However, serious changes are observed in the individual evaluation of prospective teachers. In Table 4, 5, 6 and 7, the changes in the individual affective characteristics of prospective teachers are shown. In this regard, an attempt to explain the causality of such changes is reasoned.

Table 4. Results of changes in the first and second measure mean values related to attitudes of prospective teachers

	Attitude 1st Measure mean value	%	Attitude 2nd Measure mean value	%	Change %
ö14	2.3	46	3.6	72	26
ö15	2.5	50	3.8	76	26
ö16	3.2	64	4.3	86	22
ö5	3.7	74	4.6	92	18
ö2	3.5	70	4.2	84	14
ö7	2.6	52	3.3	66	14
ö8	3.3	66	3.8	76	10
ö23	1.7	34	2.2	44	10
ö13	3.7	74	4.1	82	8
ö12	3.7	74	3.9	78	4
ö26	4.8	96	5	100	4
ö18	4.8	96	4.9	98	2
ö21	4.9	98	5	100	2
ö27	4.2	84	4.2	84	0
ö24	4.7	94	4.6	92	-2
ö19	4.4	88	4.1	82	-6
ö1	5	100	4.5	90	-10
ö3	4.5	90	4	80	-10
ö4	4.3	86	3.8	76	-10
ö9	4	80	3.4	68	-12
ö11	3.7	74	3.1	62	-12
ö17	4.4	88	3.8	76	-12
ö6	2.8	56	2.1	42	-14
ö10	4.5	90	3.8	76	-14

ö22	4.1	82	3.2	64	-18
ö25	4.8	96	3.8	76	-20
ö20	4.3	86	3.2	64	-22
ö28	4.8	96	3.5	70	-26

According to the first and second measure scores of prospective teachers' attitudes on teaching profession, a positive change is seen in the scores of 13 prospective teachers. Since the attitude scores of these prospective teachers at the beginning of their studies at faculty changed positively one year later since starting their teaching training, it is observed that their emotional approach to the teaching profession is increased. Change rates in the scores of 13 prospective teachers were between 26% and 2%. Especially obvious was the change rate in the attitudes of prospective teachers with the Ö14, Ö15 and Ö16 codes being above 20%. When the positive change in the attitudes of these three prospective teachers is evaluated within the framework of education they received in the faculty (see Annex 1), they state that the education they received for 1 year in the faculty of education met their expectations, contributed positively in them and they received an education that led them to read, think and question. From this perspective, it could be said that the cause of the positive change in their attitudes is the quality of education they received in the faculty of education. In the review of opinions of other prospective teachers with a positive change in their attitude scores, only two participants (Ö12 and Ö23) have negative thoughts about the quality of education they received in the faculty. Some expressions from the views of prospective teachers are as follows:

Ö14: "... I'm satisfied with the education in faculty, I can say that it met my expectations. Students are valued and the aim is learning. There is an effort towards reading and questioning. The education fits the university phenomenon. The education is not sloppy at all."

Ö15: "... In general, I believe that the education I receive is good and sufficient. However, provision of a very easy and basic education in some courses lowers the level. Yes, the education I received met my expectations. But it could be better. ..."

Ö16: "... Knowledge I have received from some lecturers changed my perspective on life, people and events. I contribute in myself in terms of education however I am a bit behind in social activities. ..."

A negative change is seen in 14 of the prospective teachers that participated in the study. Thus a decrease occurred in the attitudes of 14 prospective teachers on the teaching profession after they started their education. The rate of change in the attitude scores of 14 prospective teachers varies between -26% and -2%. The greatest change occurred with the Ö28, Ö20 and Ö25 coded prospective teachers and the rate was -20% and greater. When the change in these prospective teachers is evaluated within the framework of education they received in the faculty (see Annex 1), it is seen that opinions of these three prospective teachers on the education were negative (see Annex 1). In general, participants stated that their expectations were not met, they experienced no mental or social change and could not find an answer to the question "How should a teacher be raised?" with the education they received (see Annex 1). From this perspective, cause of the decrease in their attitudes on the teaching profession can be explained with the quality of education they receive. The prospective teachers mentioned in the earlier paragraph who had a positive change in their attitudes on teaching profession emphasized that the education they received in the faculty of education met their expectations in general. When two results are evaluated together, it can be said that the positive or negative change that occurred in the attitudes of prospective teachers is related to the education they received. In the review of opinions of other prospective teachers with a negative change in their attitude scores, it is seen that the participants except for Ö24, Ö9 and Ö10 had negative opinions about the quality of education they received in the faculty. Relevant opinions of the prospective teachers are as follows:

Ö28: “... I definitely do not think that the education I received is sufficient. I even ask myself if this is the university education I should be receiving. How is a teacher raised? I couldn't find an answer to this question for two years here. ...”

Ö20: “... There is nothing done as an activity. Some lecturers teach the subjects very superficially, I have studied the same things at high school. So, what distinguishes this place from a high school? ...”

Ö25: “... They are trying to teach some things in general. Is this general information sufficient? It is a matter of debate. When I look back to see what I've got in my hands now... I see that there is not much. I cannot say that I have improved myself sufficiently in this or that course. ...”

Table 5. Results of changes in the first and second measure mean values related to self-efficacy of prospective teachers

	Self-efficacy 1st Measure mean value	%	Self-efficacy 2nd Measure mean value	%	Change %
ö15	5.58	62	6.67	74.11	12.11
ö10	6.33	70.33	7.29	81	10.67
ö13	7.04	78.22	7.96	88.44	10.22
ö8	7.04	78.22	7.67	85.22	7
ö14	5.92	65.78	6.33	70.33	4.56
ö22	7.33	81.44	7.58	84.22	2.78
ö27	8.75	97.22	8.83	98.11	0.89
ö12	7.92	88	7.96	88.44	0.44
ö19	6.42	71.33	6.42	71.33	0
ö20	8.38	93.11	8.38	93.11	0
ö4	8.08	89.78	8	88.89	-0.89
ö9	6.54	72.67	6.33	70.33	-2.33
ö3	6.88	76.44	6.63	73.67	-2.78
ö26	7.79	86.56	7.54	83.78	-2.78
ö7	6.38	70.89	6	66.67	-4.22
ö16	6.25	69.44	5.83	64.78	-4.67
ö21	8.88	98.67	8.42	93.56	-5.11
ö18	8.04	89.33	7.55	83.89	-5.44
ö23	8.17	90.78	7.67	85.22	-5.56
ö5	8.25	91.67	7.71	85.67	-6
ö1	7.75	86.11	7.17	79.67	-6.44
ö2	7.92	88	7.25	80.56	-7.44
ö28	8.42	93.56	7.71	85.67	-7.89
ö24	8.17	90.78	7.33	81.44	-9.33
ö25	8.38	93.11	7.54	83.78	-9.33
ö17	8.33	92.56	7.46	82.89	-9.67
ö6	7.71	85.67	6.83	75.89	-9.78
ö11	6.88	76.44	5.88	65.33	-11.11

According to the first and second measure scores of prospective teachers' self-efficacy beliefs in terms of the teaching profession, it is seen that there was a positive and negative change in 8 and 18 participants, respectively, and no change in the scores of 2 prospective teachers. It is seen that there was a decrease in the self-efficacy beliefs of majority of prospective teachers after they started their teaching education. The rate of change of the prospective teachers with positive change in self-

efficacy beliefs was between 12.11% and 0.44% while such rate was between -11.11% and -0.89% for the participants with a negative change. The largest positive change occurred in the participants with the codes Ö15, Ö10 and Ö13, which was greater than 10%. When the positive change in these prospective teachers is evaluated within the framework of education they received in the faculty for one year (see Annex 1), they stated that the education they received generally met their expectations and provided them with positive knowledge and skills. From this perspective, it might be said that cause of the positive change in their self-efficacy beliefs is related to the quality of education they received in the faculty of education. Because, the higher quality of education they receive, the more participants will believe that they will be able to fulfill the requirements of teaching profession and feel confident. According to the opinions of other prospective teachers with a positive change, participants except for Ö22 and Ö12 had a positive opinion about the quality of education they received in the faculty. Furthermore, the change in the attitude scores of Ö15 and Ö13 were positive and at a rate of 26% and 8%, respectively, whereas a negative change of -14% was seen in Ö10. It was also observed that there was a negative change in the attitude scores of Ö22, no change in Ö27, and a positive change in all other prospective teachers. Relevant opinions of prospective teachers are as follows:

Ö10: "... I think that the education in faculty is well. I believe that both our major course lecturers and other lecturers raise us with all due knowledge and experience. I do not think that I will have any trouble when I start teaching profession in the future. ... However, I would prefer to attend conferences and panels related to our department or personal development. I would actually like to gain knowledge in other subjects too. ..."

Ö13: "... I think that education I receive is quite sufficient. Various information is given in courses and we have the opportunity to discuss. I'm satisfied with that. However, there are few social activities. Unfortunately, there is nothing we can do except for the courses. ..."

Three prospective teachers with the largest negative change in their self-efficacy beliefs were Ö11, Ö6 and Ö17. Rates of change in the self-efficacy beliefs of these prospective teachers varied between -11.11% and -9.67%. When the change in prospective teachers is evaluated within the framework of education they received in the faculty (see Annex 1), it is seen that opinions of these three prospective teachers on the education they received during the last year were negative (see Annex 1). Participants emphasize that the education they receive did not meet their expectations, and was based on knowledge and rote-learning. It could be said that the confidence of prospective teachers in fulfilling the requirements of their profession decreased, and one reason behind that is the education they receive in the faculty. The change in the attitude of these prospective teachers on teaching profession is observed to be negative. Therefore, positive and negative changes in the self-efficacy beliefs of prospective teachers seem to be in parallel with the changes in their attitudes. According to the opinions of prospective teachers with a negative change in their self-efficacy beliefs on the quality of education they receive in the faculty, opinions of 9 participants were positive while 9 had negative thoughts. And considering the change in their attitude scores, an increase was seen in the attitude scores of 8 prospective teachers while the scores of 10 decreased. Relevant opinions of prospective teachers are as follows:

Ö11: "... Unfortunately, university is not the place we have dreamed of. Quality of education must be increased. Rote-learning based system must be ended - there is just knowledge. ..."

Ö6: "... It has contributed very little in affecting my education technically so far. Education here is only knowledge-based and they continue to make the mistakes that have been made in education until today. ..."

Ö17: "... I definitely don't like it. But I've seen that this problem is almost the same in most of the faculties. But still I wish that our lecturers would say "you are responsible for what I've lectured" instead of giving thick books and saying "you are responsible for these".

Table 6. The results of changes in the first and second measure mean values related to the interest of prospective teachers in education

	Interest 1st Measure mean value	%	Interest 2nd Measure mean value	%	Change %
ö8	2.22	44.4	3.38	67.6	23.2
ö12	3.67	73.4	4.67	93.4	20
ö13	4.17	83.4	5	100	16.6
ö16	3.67	73.4	4.33	86.6	13.2
ö21	4.17	83.4	4.83	96.6	13.2
ö22	4.17	83.4	4.83	96.6	13.2
ö5	4.17	83.4	4.67	93.4	10
ö26	4.5	90	5	100	10
ö17	2.83	56.6	3.17	63.4	6.8
ö1	4	80	4.33	86.6	6.6
ö23	3.33	66.6	3.63	72.6	6
ö7	3.33	66.6	3.5	70	3.4
ö15	3.17	63.4	3.33	66.6	3.2
ö27	3.67	73.4	3.83	76.6	3.2
ö14	3.67	73.4	3.67	73.4	0
ö24	4.67	93.4	4.67	93.4	0
ö18	4.67	93.4	4.5	90	-3.4
ö20	4.5	90	4.33	86.6	-3.4
ö2	3.5	70	3.17	63.4	-6.6
ö4	4.17	83.4	3.83	76.6	-6.8
ö6	3.67	73.4	3.33	66.6	-6.8
ö3	4.5	90	4.05	81	-9
ö19	3.5	70	2.83	56.6	-13.4
ö28	4.33	86.6	3.5	70	-16.6
ö11	3.67	73.4	2.83	56.6	-16.8
ö25	3.67	73.4	2.83	56.6	-16.8
ö9	4.17	83.4	3.17	63.4	-20
ö10	4.5	90	3.17	63.4	-26.6

According to the first and second measure scores of prospective teachers' interest levels in education, it is seen that there was a positive and negative change in 14 and 12 participants, respectively, and no change in the scores of 2 prospective teachers. It is seen that a positive increase occurred in the interest levels of half of the prospective teachers after they started their teaching education. The rate of change of the prospective teachers with positive change in interest levels was between 23.2% and 3.2% while such rate was between -26.6% and -03.4% for the participants with a negative change. The largest positive change occurred in the participants with the codes Ö8, Ö12 and Ö13, which was above 16%. When the change in prospective teachers is evaluated within the framework of education they received in the faculty (see Annex 1), Ö8 and Ö13 had positive thoughts about the teaching education received in the faculty while Ö12 had negative opinions. Prospective teachers with positive opinions emphasized the quality of education and lecturers whereas the participant with negative views stated that expectations related to teacher training were not met. Considering the thoughts of other prospective teachers that had a positive change of 10% or above, all except Ö22 had positive opinions about the education they received in the faculty. Therefore it might be said that the increase in the interest levels of prospective teachers results from the belief that the education received in faculty meets the expectations. Considering the change in the attitude and self-

efficacy belief scores of 3 prospective teachers with the largest change in interest levels, a positive change is seen in both of them. Relevant opinions of the prospective teachers are as follows:

Ö8: “... I'm quite satisfied with the education I have received. I understand the quality of education we are receiving since I also know the education they provide in other faculties. ...”

Ö12: “... Activities performed for the individuals to improve themselves are not sufficient and have not really met my expectations. What matters is not the courses only. Social activities are also important for us to improve ourselves. There are no activities at the university such as conferences or theatres. There is also no lab environment. There aren't sufficient materials for the experiments and observations to be performed. ...”

Five prospective teachers with the largest negative change in their interest levels were Ö10, Ö9, Ö25, Ö11 and Ö28. Rates of change in the interest levels of these prospective teachers varied between -26.6% and -16.6%. When the change in prospective teachers is evaluated within the framework of education they received in the faculty (see Annex 1), it is seen that opinions of Ö9 and Ö10 on the education they received were positive while other three participants had negative thoughts (see Annex 1). The opinions of Ö19 who had a negative change of over 10% were also negative. From this perspective, the cause of the decrease in education-related interest levels of prospective teachers might be the negative thoughts about the education received in faculties. Besides, considering the change in the attitude and self-efficacy beliefs of these prospective teachers, a negative change is seen in the attitude scores of above-mentioned 6 participants. In the self-efficacy belief scores, there was a positive change in the scores of Ö10, no change in the scores of Ö19, and a negative change in the scores of 4 other prospective teachers (Ö9, Ö11, Ö25 and Ö28). Relevant opinions of the prospective teacher are as follows:

Ö9: “... I think that education I received at university is sufficient and improves me. I believe that I have sufficient knowledge on how to behave to children in the future. However, social environment of the university doesn't provide me the university life I've desired. It doesn't let me improve myself in various aspects. ...”

Table 7. Results of changes in the first and second measure mean values related to communication skills of prospective teachers

	Communication 1st Measure mean value	%	Communication 2nd Measure mean value	%	Change %
ö27	3.6	72	4.72	94.4	22.4
ö13	3.84	76.8	4.52	90.4	13.6
ö15	3.52	70.4	3.96	79.2	8.8
ö5	3.8	76	4.16	83.2	7.2
ö12	4.2	84	4.56	91.2	7.2
ö10	3.64	72.8	3.96	79.2	6.4
ö16	3.92	78.4	4.2	84	5.6
ö1	4.2	84	4.4	88	4
ö4	4	80	4.16	83.2	3.2
ö26	4.56	91.2	4.72	94.4	3.2
ö7	3.56	71.2	3.68	73.6	2.4
ö21	4.4	88	4.52	90.4	2.4
ö23	4.08	81.6	4.16	83.2	1.6
ö3	4.12	82.4	4.16	83.2	0.8
ö8	3.8	76	3.8	76	0
ö18	4.56	91.2	4.56	91.2	0
ö19	3.28	65.6	3.28	65.6	0
ö20	4.2	84	4.2	84	0
ö24	4.8	96	4.76	95.2	-0.8
ö14	4.24	84.8	4.12	82.4	-2.4

ö9	3.88	77.6	3.72	74.4	-3.2
ö28	4.52	90.4	4.28	85.6	-4.8
ö22	3.64	72.8	3.36	67.2	-5.6
ö25	4.24	84.8	3.96	79.2	-5.6
ö2	4.12	82.4	3.76	75.2	-7.2
ö6	3.92	78.4	3.56	71.2	-7.2
ö17	4.2	84	3.84	76.8	-7.2
ö11	3.84	76.8	3.32	66.4	-10.4

According to the first and second measure scores of prospective teachers' communication skills, it is seen that there was a positive and negative change in 14 and 10 participants, respectively, and no change in the scores of 4 prospective teachers. It is seen that a positive increase occurred in the communication skills of half of the prospective teachers after they started their teaching education. The rate of change of the prospective teachers with positive change in communication skills was between 22.4% and 0.8% while such rate was between -10.4% and -0.8% for the participants with a negative change. The largest positive change occurred in the participants with the codes Ö27 and Ö13, which was above 10%. When the positive change in these prospective teachers is evaluated within the framework of education they received in the faculty for one year (see Annex 1), it is seen that the education they received met their expectations and they have a positive opinion about the matter. Within this context, the cause of this increase in the communication skills might be related to the quality of education they have received. In the review of change in the scores of attitude, self-efficacy beliefs and education-related interest levels of these prospective teachers, an increase that is parallel with the communication skill scores is observed. No change occurred in the attitude score of Ö27 only. Relevant opinions of the prospective teacher are as follows:

Ö27: "... Courses I have taken so far have met my expectations about my department. Besides, these courses provided me with a different perspective and enriched my thoughts. But I believe everything is up to the student. No matter how much qualified the lecturer might be, the student won't receive sufficient knowledge if he/she doesn't show any efforts. ..."

According to the review of four prospective teachers that had a change in communication skills scores above 7%, it is seen that opinions of three participants except Ö2 are negative about their education (see Annex 1). Especially Ö11 and Ö17 underlined that the socially improving environment at the university is not sufficient. From this perspective, a decrease in the communication skills of prospective teachers might have resulted from the insufficiency of extracurricular activities at the university (activities that improved personal, social or occupational skills). Besides, according to the changes in attitude, self-efficacy belief and education-related interest level scores of these prospective teachers, there was a negative change in the attitude scores of other participants except for Ö2, a negative change in the self-efficacy scores of four prospective teachers, and a negative change in the interest scores of other participants except for Ö17.

Table 8. Comparison of the university placement scores, and change in affective characteristics and communication skills of prospective teachers

	Code Name	Department	University Placement Score	Change in Attitude %	Change in Self-Efficacy %	Change in Interest %	Change in Communication %
High	Ö1	PEM	414.58	-10	-6.44	6.6	4
	Ö2	PEM	374.05	14	-7.44	-6.6	-7.2
	Ö3	PEM	366.91	-10	-2.78	-9	0.8
	Ö4	PEM	351.93	-10	-0.89	-6.8	3.2
Medium	Ö5	PEM	351.702	18	-6	10	7.2
	Ö6	PEM	351.304	-14	-9.78	-6.8	-7.2
	Ö7	PEM	351.01	14	-4.22	3.4	2.4
	Ö8	PEM	345.75	10	7	23.2	0
Low	Ö9	PEM	345.508	-12	-2.33	-20	-3.2
	Ö10	PEM	344.92	-14	10.67	-26.6	6.4
	Ö11	PEM	333.103	-12	-11.11	-16.8	-10.4

	Ö12	PEM	329.48	4	0.44	20	7.2
	Ö13	SS	380.32	8	10.22	16.6	13.6
High	Ö14	SS	377.82	26	4.56	0	-2.4
	Ö15	SS	376.75	26	12.11	3.2	8.8
	Ö16	SS	367.58	22	-4.67	13.2	5.6
Medium	Ö17	SS	367.42	-12	-9.67	6.8	-7.2
	Ö18	SS	366.97	2	-5.44	-3.4	0
	Ö19	SS	363.24	-6	0	-13.4	0
Low	Ö20	SS	322.56	-22	0	-3.4	0
	Ö21	T	418.65	2	-5.11	13.2	2.4
High	Ö22	T	412.02	-18	2.78	13.2	-5.6
	Ö23	T	404.77	10	-5.56	6	1.6
	Ö24	T	404.71	-2	-9.33	0	-0.8
Medium	Ö25	T	404.27	-20	-9.33	-16.8	-5.6
	Ö26	T	402.14	4	-2.78	10	3.2
Low	Ö27	T	379.86	0	0.89	3.2	22.4
	Ö28	T	364.96	-26	-7.89	-16.6	-4.8

In the review of university placement scores of the participating prospective teachers and the change in their affective characteristics and communication skill levels, a positive change was observed in the affective characteristics of participants that were placed in the social sciences department with the highest score. The lower the placement scores of prospective teachers got, the more negative changes were observed. A positive change was seen in the interest dimension of affective characteristics of prospective teachers that were placed in Turkish education program with the highest score. No systematic change occurred in the other programs and dimensions.

Discussion, Conclusion and Suggestions

According to the results obtained in this study which was conducted to analyze the change in affective characteristics (attitude, interest and self-efficacy beliefs) and communication skills of prospective teachers, it would be right to say that prospective teachers started their teaching education with high affective characteristics and communication skills. Prospective teachers that start their education with high affective characteristics and communication skills is an expected and desired situation in terms of teaching profession. This is important in terms of enthusiasm, positive approach and self-confidence of prospective teachers towards the teaching profession. Considering the teacher training within system integrity, it might be thought that a strong input dimension can affect the process and output dimensions positively. This study's result on the high attitude levels of prospective teachers was parallel with the results of other studies conducted in the field (Baykara-Pehlivan, 2008; Akkaya, 2009; Doğan and Çoban, 2009; Eret Orhan and Ok, 2014) whereas it contradicted with the results of Dadandı, Kalyoncu and Yazıcı (2016) and Şahin and Şahin (2017). Ekinci (2017) concluded that internal factors of prospective teachers were highly effective in their choice of profession. According to the study, the internal factors are largely their emotional approaches towards the profession, i.e. attitudes. From this perspective, results of Ekinci's (2017) study are parallel with the findings of this study. In addition, Şahin and Şahin (2017) concluded that self-efficacy beliefs of primary school prospective teachers were at a medium level, which did not comply with the results obtained from this study. The result on high communication skill levels of prospective teachers obtained from the study is also similar to the results of other studies conducted in the field (Pehlivan, 2005; Çevik, 2011; Milli and Yağcı, 2017).

Another result of the study showed that there was a decrease in the attitude and self-efficacy levels, an increase in the communication skills levels and no change in the interest levels of prospective teachers over time. Research results showed that the changes occurred within a small amount. The results show that there was no significant difference between the first and second measure scores from the participant's measure instruments. The attitude dimension of this result is parallel with the study of Başbay, Ünver and Bümen (2009). Researchers concluded that attitudes of prospective teachers on teaching profession didn't change significantly during their education programs. Nevertheless, this result contradicted with some studies (Çakır, Kan and Sünbül, 2006;

Peker and Tambağ, 2007) in the field. In the studies of Çakır, Kan and Sünbül (2006) and Peker and Tambağ (2007), they concluded that teacher training programs affected the attitudes of prospective teachers on the profession positively.

There was no significant difference between the first and second measure scores for affective characteristics and communication skills of prospective teachers. This shows that teacher training programs did not contribute positively in the improvement of attitudes, self-efficacy beliefs, education-related interests and communication skills of prospective teachers. However, in the analyses performed individually, it was seen that some prospective teachers had significant changes in their affective characteristics and communicational skills. While there was a positive change in the attitude scores of 8 prospective teachers at a rate of 10% and above, 12 participants had a negative change in their scores at a rate of 10% and greater. Opinions of prospective teachers with a positive change in their attitudes on teaching profession generally had positive thoughts about the teaching education they received in the faculty of education whereas participants with a negative change had negative opinions about teacher training. Therefore, the cause of change in the attitudes of prospective teachers was related to whether their expectations from the teacher training they received were met. Within this context, education programs caused changes in the attitudes of prospective teachers to the extent that their expectations are met. In self-efficacy beliefs, a positive change occurred at a rate above 10% in the scores of three prospective teachers while a negative change occurred at a rate above 10% in the score of only one participant. Opinions of prospective teachers with positive or negative change about the teacher training are generally related to the direction of change. In other words, the opinions of prospective teachers with a positive change in their self-efficacy beliefs are also positive about the teacher training. A cause and effect relationship can be established between the change in scores and thoughts.

While a positive change occurred at a rate above 10% in the education-related interest levels of eight prospective teachers, a decrease above 10% was seen in the interest levels of six participants. In the comparison of change in the scores of prospective teachers with their thoughts about teacher training, opinions of prospective teachers with an increased level of interest are also positive. As such, prospective teachers with a decreased level of interest have negative opinions about teacher training. Accordingly, the cause of the increase or decrease in the level of prospective teachers' interest is related to whether their education meets their expectations. In the communication skills dimension, there are few prospective teachers with a change of 10% or greater. While the opinions of prospective teachers with an increased change of 10% or greater were positive, the only participant with a decreased change greater than 10% had negative views. Besides, in the comparison of placement scores of prospective teachers compared to the relevant programs and the change in their affective characteristics and communication skills, the change in the affective characteristics and communication skills of prospective teachers that were placed in the social sciences education program with high scores was positive. The direction of change differed as the scores of prospective teachers in this program became lower. Prospective teachers that were placed in the Turkish education program with highest scores had positive changes only in their relevant levels. There was no systematic change in other programs and dimensions.

In view of these results, the following suggestions can be made: The negative change in the affective characteristics and communication skills of prospective teachers on an individual basis is mostly in parallel with their thoughts on the education that they receive in their faculties. Therefore, increasing the quality of education received by prospective teachers in their faculties is of great importance. The most common problematic points experienced by prospective teachers about the teaching education are few numbers of lecturers, knowledge-based courses, and the few social, cultural and educational activities provided for their personal and occupational improvement. The few number of lecturers in faculties means that some lecturers give courses that are not in their major fields. This might lead to courses given without quality. Therefore, increasing the number of lecturers is important. Besides, improvement of physical and technical infrastructures of faculties may also lead to more quality courses. Courses given at schools are not necessarily the only way of providing

professional qualities to prospective teachers. Increasing the number and quality of extracurricular activities may also affect the change in affective characteristics positively.

It is also seen in this study that there are positive and negative changes in the affective characteristics and communication skills of prospective teachers. Reasons of the positive and negative changes can be researched prospectively in more detail. Furthermore, repetition of the study with a larger sample seems important in terms of generalization of results.

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Annex 1. Findings related to personal information and measure results of prospective teachers

Name	Department	Gender	ÖSYM	First year				Second year				Opinions
				Attitude	Self-efficacy	Interest	Communication	Attitude	Self-efficacy	Interest	Communication	
Ö1	PEM	Female	414.58	5	7.75	4	4.20	4.50	7.17	4.33	4.4	- Education I received partially met my expectations. - Few number of lecturers. - Same teachers giving different courses. - Inability to take optional courses
Ö2	PEM	Male	374.05	3.50	7.92	3.50	4.12	4.20	7.25	3.17	3.76	- I'm satisfied with the education provided. - I received education based on thinking apart from rote-learning.
Ö3	PEM	Female	366.91	4.50	6.88	4.50	4.12	4.00	6.63	4.05	4.16	- Education is insufficient. - Knowledge-based. - The education that I received didn't contribute much. - It is like high school.
Ö4	PEM	Female	351.93	4.30	8.08	4.17	4	3.80	8	3.83	4.16	- The education that I received didn't contribute much. - Didn't meet my expectations. - We do not enjoy the courses. There is just knowledge...
Ö5	PEM	Male	351.702	3.70	8.25	4.17	3.80	4.6	7.71	4.67	4.16	- Didn't meet my expectations. - It is good that courses are based on producing ideas or solutions.
Ö6	PEM	Male	351.304	2.80	7.71	3.67	3.92	2.1	6.83	3.33	3.56	- The education I've received contributed very little. - A knowledge-based education.
Ö7	PEM	Female	351.01	2.60	6.38	3.33	3.56	3.30	6	3.50	3.68	- My education met my expectations - I believe that I have received a detailed education. - It enabled me to improve in terms of different areas of improvement.
Ö8	PEM	Male	345.75	3.30	7.04	2.22	3.80	3.80	7.67	3.38	3.8	- I am satisfied with the education. - There is quality education, lecturers are very good, etc...
Ö9	PEM	Female	345.508	4	6.54	4.17	3.88	3.4	6.33	3.17	3.72	- I believe that my education is sufficient. - Social activities are insufficient. - Inadequate activities do not let me improve myself.
Ö10	PEM	Female	344.92	4.50	6.33	4.50	3.64	3.8	7.29	3.17	3.96	- Didn't meet my expectations. My education is good - The social environment is weak
Ö11	PEM	Female	333.103	3.70	6.88	3.67	3.84	3.1	5.88	2.83	3.32	- Didn't meet my expectations - Education is based on rote-learning. - The social environment is not good - The library is weak
Ö12	PEM	Female	329.48	3.70	7.92	3.67	4.20	3.9	7.96	4.67	4.56	- Didn't meet my expectations. - Teaching materials are weak. - There are no activities such as conferences or theatres.
Ö13	SS	Female	380.32	3.70	7.04	4.17	3.84	4.1	7.96	5	4.52	- I think that the education I received is quite sufficient. - Socially weak...
Ö14	SS	Female	377.82	2.30	5.92	3.67	4.24	3.60	6.33	3.67	4.12	- I am satisfied with the education. - Students are valued.

												- There is an effort for reading and questioning.
Ö15	SS	Female	376.75	2.50	5.58	3.17	3.52	3.8	6.67	3.33	3.96	- I believe the education is sufficient apart from some courses I take. Lessons are given simply and superficially in those courses.
Ö16	SS	Female	367.58	3.20	6.25	3.67	3.92	4.3	5.83	4.33	4.2	- My expectations are met at a good level - Social environment is weak
Ö17	SS	Female	367.42	4.40	8.33	2.83	4.20	3.8	7.46	3.17	3.84	- Didn't meet my expectations. - Social environment is weak.
Ö18	SS	Female	366.97	4.80	8.04	4.67	4.56	4.9	7.55	4.50	4.56	- Met my expectations - I like the teaching approach of lecturers. There is no knowledge-based approach. They lead us to think more.
Ö19	SS	Female	363.24	4.40	6.42	3.50	3.28	4.10	6.42	2.83	3.28	- Didn't meet my expectations. - It is the same as high school. - Totally rote-learning...
Ö20	SS	Female	322.56	4.30	8.38	4.50	4.20	3.20	8.38	4.33	4.2	- Didn't meet my expectations - Courses are totally based on knowledge - I don't think that it contributes in my mental and social improvement
Ö21	T	Female	418.65	4.90	8.88	4.17	4.40	5	8.42	4.83	4.52	- Met my expectations - I received a good education
Ö22	T	Female	412.02	4.10	7.33	4.17	3.64	3.20	7.58	4.83	3.36	- Didn't meet my expectations. - It seems like the education will not provide anything for me except for the courses
Ö23	T	Female	404.77	1.70	8.17	3.33	4.08	2.20	7.67	3.63	4.16	- Didn't meet my expectations. - And I am pessimistic about whether it will in the future...
Ö24	T	Female	404.71	4.70	8.17	4.67	4.80	4.6	7.33	4.67	4.76	- The education is good and has met my expectations - Contribution to socializing and extra-curricular activities is weak
Ö25	T	Female	404.27	4.80	8.38	3.67	4.24	3.80	7.54	2.83	3.96	- Didn't meet my expectations. - I see that nothing has changed when I look back at last year.
Ö26	T	Female	402.14	4.80	7.79	4.50	4.56	5	7.54	5	4.72	- Didn't meet my expectations. - I think it will contribute more and more day by day
Ö27	T	Male	379.86	4.20	8.75	3.67	3.60	4.2	8.83	3.83	4.72	- Met my expectations - Field-related courses provided me with a different perspective but student's approach is also important. Students must show some effort.
Ö28	T	Female	364.96	4.80	8.42	4.33	4.52	3.50	7.71	3.50	4.28	- Didn't meet my expectations. - I study in the faculty of education but haven't found a response to the question "How should a teacher be raised?".