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## PROFESSIONAL EDUCATION & TRAINING | RESEARCH ARTICLE

### An investigation into the students' choosing mathematics as a teaching profession

Elif Ertem-Akbaş\*, & Murat Cancan

**Abstract:** The profession of mathematics is known to be difficult in society (Çakır & Akkaya, 2017). In this direction, in this study, it is aimed to determine the factors that impact the choices of the students who are preparing for university exams and considering to choose mathematics teaching department. In this study, where the qualitative research method was adopted, the focus group interview was used as the data collection technique. The focus group interviews aim to gain in-depth, detailed and multidimensional qualitative information about the participants' perspectives, experiences, interests, experiences, tendencies, thoughts, perceptions, emotions, attitudes and habits on a given topic (Bowling, 2014; Gibbs, 1997; Stewart & Shamdasani, 1990). The participants were selected by purposeful sampling method among the students preparing for the university exam. In the study, as a data collection tool, firstly, some of the questions included in 'the scale of the reasons for choosing the teaching profession' prepared by Özsoy, Özsoy, Özkara and Memiş (2010) were compiled and interview questions were prepared. Afterward, the semi-structured interview form was used as the data collection tool for the study. the findings show that the reasons for choosing mathematics teaching profession could be examined under seven headings: The impact of family and close environment, the impact of the teacher, the interest of this profession in web-based examinations, the impact of job security, the impact of students' ideals, the impact of whether the profession is suitable for them and the needs of the education system and the desire to meet them. Besides, it was determined that some of the students who prepared for the exam did not have any negative thoughts about mathematics courses even though they interpreted mathematics as a difficult course.

**Keywords:** mathematics as a teaching profession; student opinions; reasons for choosing a profession.

The profession is a systematic, knowledge, and skill-based, suitable for the community's benefit and having profitable characteristics under a certain education (TDK, 2014). The choice of professions in society is mostly made by the preferences of the selectors. The choice of profession in the process of self-development greatly affects the person for the rest of life. It is thought that it is meaningful to measure the factors that individuals are affected when choosing a profession and to evaluate the observations obtained in this direction. Choosing a profession is one of the important choices in human life. The type and capacitive incompatibility existing in our country in terms of workforce and higher education programs make career and career choices difficult for those who are preparing for university (Yazıcı, 2009). The teaching profession and its characteristics in terms of status have been the subject of many studies. The teaching profession, considered sacred in history, has changed in terms of social status. At the beginning of the Republican period, this profession was regarded as a job with higher education and income levels. In the 1980s, the income level of this profession decreased, its prestige has weakened and its status has decreased (Erden, 1998).

Teachers play a significant role in achieving a contemporary level of society (Şişman, 2007). Training qualified teachers

is also of great importance in this context. One of the duties of a teacher in raising an individual is to be effective and competent enough (Kılıç & Saruhan, 2006). The teacher reaches to mind at the mention of education to succeed; qualitative, loving, knowledgeable, well-equipped should come (Kartal, Öztürk, & Ekici, 2012). In addition, according to Aktürk's (2012) study, teachers who choose their teaching profession for internal reasons; they have more understandable and satisfying expectations, and reduced anxiety.

Individuals aspire to be successful in their chosen profession to achieve academic success. When the expectations are too high, uncertainty factors can negatively affect individuals' motivation. Uncertainties should be handled in many ways in the choice of profession, as in every field. When planning for the future, these uncertainties should be paid attention in detail to minimize the contradictory situations. Especially the family is seen as a more dominant factor than other factors at this point. People experience difficulty in making decisions, evaluating these factors, and sometimes they even experience stress-related health problems. The complexity of the career choice process triggers this situation. There are difficulties in the adaptation of an individual to the society in the environments where there are individuals who do not know what the concept of mathematics means in society yet. There are difficulties related to not knowing how to do the calculation, for example, in shopping. This situation is not related to the person's personality or characteristics. It is only an obstacle to the individual's adaptation to society and it leads to the conclusion that he should use mathematics as a tool in order to sustain his life easily. Thanks to mathematics, advancements are achieved in every academic field. The profession of mathematics is a profession known as difficult in society. In addition, the mathematics profession is utilized in every field. The math profession is one of the professions that form the backbone of society. Individuals need a mathematics profession especially in areas such as business investment. In every field of society, the profession of mathematics is at the forefront among the professions chosen from past to present. This profession will be beneficial for future generations with its respectable and wise social benefits.

There is an assumption in society that certain subjects are challenging. Even when the school and course information of the children will be tested, the priority is in the questions regarding the mathematics course. This is because the person preparing the questions actually believes that the mathematics subject is demanding. So, this issue is not unique to students. Given the idea that today's students will form the society of the future, it is in our hands to change this judgment, and the teachers are the ones who are to do it. Ertem-Akbař (2018), in her research for finding out the reasons math fear, the remarkable behavioral characteristics in the classroom environment include lack of internal confidence, anxiety, and inability to distract. Based on the opinions of the classroom teachers, it was seen that the fear of mathematics in the primary school level was not much and increased as the grade level increased. Considering the opinions of mathematics teachers, the lack of basic knowledge of mathematics leads to fear of mathematics, as lessons are mainly based on reading and writing. In order to overcome this fear, school-family cooperation and curriculum arrangement can offer solutions.

The notion is that mathematics is a problematic subject, and therefore this profession is chosen less. Considering this situation, the reasons for the students' desire to prefer mathematics as a teaching profession are considered crucial. Ertem-Akbař (2018) demonstrated in her study that the fear of mathematics, which develops with the negative thoughts of the students against mathematics lesson, is one of the reasons for the failure of this course. This situation affects students' perceptions of mathematics and causes them to have trouble with mathematics. The most important witnesses of these processes in mathematics lessons are teachers. The idea that mathematics is a challenging subject and therefore this profession is chosen less has also affected the researcher and prompted him to do this study and considering this situation, the reasons for students' desire to prefer mathematics teaching have been considered important. This research, unlike previous researches, was conducted with candidates who chose this profession, not with candidates who chose the Mathematics Teaching profession. The study, in which we evaluate the findings regarding the current factors affecting the opinions of the candidates who are still in the decision stage, will be an important source for the students in the preparation process to make clearer decisions.

## 1. Literature Review

When the literature is examined, it is noteworthy that studies are examining the reasons for preference of teacher candidates in different aspects (Boz & Boz, 2008; Bursal & Buldur, 2013; Çakır & Akkaya, 2017; Çermik, Doğan, & Şahin, 2010; Hacıömerođlu & Şahin-Tařkın, 2009; Karadađ, 2012; Kılcan, Keçe, Çepni, & Kılınc, 2014; Övet, 2006; Özbek, 2007; Özsoy, Özsoy, Özkara, & Memiř, 2010; Tatarođlu, Özgen, & Alkan, 2010). It can be said that the studies carried out differ

based on teacher branches. In addition to the studies conducted with only prospective Mathematics teachers, there are also studies in which teacher candidates from different branches are evaluated together. Tataroğlu, Özgen, and Alkan (2010) carried out a study to reveal the reasons and expectations of teaching preference of new candidates for mathematics teaching. The data obtained revealed that interest and love for mathematics, seeing teaching as a suitable profession, and not settling in other choices are among the reasons for preference. Çakır and Akkaya (2017) investigated the reasons and expectations of elementary mathematics teacher candidates' preference for the profession of teaching in their studies, 6 prospective teachers who have recently gained the elementary mathematics education undergraduate program of a state university were asked about the reasons and expectations of choosing this profession. Çermik, Doğan, and Şahin (2010), according to the interests of pre-service teachers, in order to find out whether there is a change in the preference of the profession and the current preferences at the end of the teacher training, pre-service teachers according to their interests, external, internal and altruistic factors, respectively. While determining the profession they prefer, it is observed that internal and altruistic factors are preferred due to external factors during graduation. Karadağ (2012), on the other hand, conducted a study examining the reasons why Turkish teacher candidates prefer their profession. When the data were analyzed, it was revealed that the first-grade teacher candidates participated more in the views such as the desire to love the profession, to educate individuals, and to have a respected place in the society than the fourth grade. The researchers examining the reasons for the preference of the departments of students studying in teacher education programs generally divide these reasons into three groups: (i) altruism (service to society, contributing to the future of children, etc.), (ii) intrinsic motivation (desire to work in the related field, children in the age group to work in love, etc.) and (iii) external factors (job security, working hours and holidays, etc.). Bursal and Buldur (2013) revealed in their study that 379 pre-service science teachers participated in the study, the reasons for choosing the profession consisted of two factors: essential reasons and external reasons. It has been observed that essential causes are more effective than external causes. It is determined that altruism is higher than altruistic and internal reasons which are sub-dimensions of essential causes. When evaluated in general, it was revealed that the factors that affect the profession in preference are listed as altruistic, internal, and external reasons. In other studies examined, the reasons for preferring the profession of teachers in different branches were discussed. Boz and Boz (2008) examined the reasons for pre-service chemistry and mathematics teacher candidates. The opinions of 38 teachers were collected with the help of open-ended questions. It has been revealed that teacher candidates want to become teachers because of internal and external factors. Considering the reasons for preferences, factors such as loving teaching, being positively influenced by teachers during student years, and loving lessons were at the forefront. Özbek (2007) examined the effectiveness of personal, economic, and social factors that were effective in pre-service teachers' choice of the teaching profession. When the data were analyzed, it was seen that the factors related to personal preference in choosing the teaching profession were more effective than economic and social factors. Hacıömeroğlu and Şahin-Taşkın (2009), on the other hand, investigated the reasons for pre-service teachers' preference for the teaching profession in their study with non-thesis graduate students in Secondary Science and Mathematics Education. Opinions of 17 prospective teachers studying in physics teacher, 12 teacher candidates studying biology teaching, and 19 pre-service teachers studying mathematics teaching were taken. The data revealed that pre-service teachers chose the teaching profession for reasons such as loving teaching, job opportunities, and the availability of working hours and conditions. While the pre-service physics teachers stated that they preferred this profession because they liked to teach lessons and children, the pre-service teachers of biology and mathematics also stated that they chose this profession due to job opportunities, working hours and conditions. In addition, it has been observed that studies on the factors affecting the preference of elementary mathematics teacher candidates are the ones conducted with prospective teachers in other branches and focus on the general factors affecting the choice of the teaching profession (Boz & Boz, 2008; Kılcan et al., 2014; Övet, 2006; Özbek, 2007).

## 2. Methodology

In the research, the model was used among quantitative research methods. The model is the research carried out to describe the current situation as it exists within a certain time (Büyüköztürk, Çakmak Kılıç, Akgün, Karadeniz, & Demirel, 2008; Karasar, 2002). Accordingly, in-depth examination of a certain unit (such as individual, school, etc.) in the universe and reaching a judgment about that unit comes to the fore in such researches (Karasar, 2002).

### 2.1. Participants

The participants of the research were composed of students who studied at a private course in the 2018 - 2019 Academic Year. The participants of the study were determined as 20 students, including 10 female and 10 male students, and they are thinking of choosing the mathematics teaching profession.

## 2.2. Data collection tool

In the study conducted by Özsoy et al. (2010), as a data collection tool, a questionnaire was compiled by obtaining some questions in the scale of reasons for choosing the teaching profession and the questions collected from the opinions of 3 experts in the field. There are demographic questions in the first part of the created questionnaire. In the second part, there are questions about the reasons for students' desire to choose mathematics teaching program. The reliability of this questionnaire was determined as 0.86 and it was applied to students preparing for the exam. Questions related to this survey are given in the Appendix-1.

## 2.3. Data analysis

In the analysis of the data obtained, frequency and percentage calculations were obtained by using Excel and presented in tables because some variables that should be categorized by their nature were evaluated (Çepni, 2012).

## 3. Findings

In this part of the research, the necessary information about the participants, and their perspectives on the research subject will be revealed. However, the gender of the participants, the educational background of their parents, and their impact on the choice of mathematics teaching, if any, will be examined, as well. This study also includes information about the number of siblings of the participants and the number of siblings studying at the university. After the implementation of the questionnaire, some of the participants were interviewed and asked: "What are your thoughts on mathematics lessons?" and "What are your expectations from the mathematics teaching profession?" Questions were asked to support the obtained quantitative data. (Female participants are presented with PG and males with PB).

### 3.1. Associating the education level of families with students' preference of mathematics teaching

The education level of the parents of the participants can generally be interpreted as medium level. Considering the education level of the mothers, out of 20.5% of them are university graduates, 15% of them are high school graduates. While 20% of them are secondary school graduates, 40% of them are primary school graduates and finally, %20 of the parents are literate. The level of education of their fathers is as follows: 2% university graduates, 45% high school graduates, 20% secondary school graduates, 20% primary school graduates, and 5% literate (5%). It is seen this table; it will be interpreted jointly with the factors that affect the choice of mathematics teaching and will allow us to understand whether the level of education is effective in the specified factors.

Table 1. Educational background of the participants' parents

Participants	Mother's Education Status	Father's Education Status
PG1	Primary School Graduate	High School Graduate
PG2	Primary School Graduate	Primary School Graduate
PG3	High School Graduate	High School Graduate
PG4	Literate	Secondary School Graduate
PG5	High School Graduate	High School Graduate
PG6	Secondary School Graduate	High School Graduate
PG7	Secondary School Graduate	High School Graduate
PG8	Secondary School Graduate	Secondary School Graduate
PG9	High School Graduate	High School Graduate
PG10	Graduated From a University	Graduated From a University
PB1	Primary School Graduate	Primary School Graduate
PB2	Literate	High School Graduate
PB3	Primary School Graduate	Associate Degree
PB4	Primary School Graduate	Primary School Graduate
PB5	Literate	Primary School Graduate
PB6	Primary School Graduate	Secondary School Graduate
PB7	Primary School Graduate	Secondary School Graduate
PB8	Literate	Literate
PB9	Primary School Graduate	High School Graduate
PB10	Secondary School Graduate	High School Graduate

In line with the data obtained, the findings were analyzed as 7 categories with the help of the created questionnaire.

**3.2. Does the environment or family have an impact on students' selection of mathematics teaching?**

When the table below is examined, it is seen that 30% of female participants and 10% of male participants would like to choose this profession due to their environment/family. Based on all participants, it is seen that 20% of the participants want to choose this profession because they have teachers in their immediate environment or family. Students who have teachers in their families have lower levels of anxiety about the teaching profession than students who do not (Saracaloğlu et al., 2009). Low anxiety levels are a positive factor for students to choose their teaching profession.

Table 2. Distribution of participants who want to choose this profession because of being a teacher in their immediate environment or family

I want to choose it because one of my relatives or family member is a teacher.	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
	PG	PG1, PG2, PG7	3	30%
	PB	PB6	1	10%

**3.3. Does the teacher have an impact on the process of choosing students' mathematics teaching?**

When the table below is analyzed, 20% of female participants and 40% of male participants are affected by their math teachers. Based on all participants, it is seen that 30% of participants want to choose this profession because of their love for their teachers. In this study, it is seen that the rate of exposure is higher in male participants.

Table 3. Distribution of the participants who decided to choose this profession by being affected by the mathematics teacher and by gender

I want to choose it because my math teacher is someone I love.	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
	PG	PG6, PG8	2	20%
	PB	PB2, PB7, PB8, PB10	4	40%

**3.4. Does the internet have an impact on students' selection of mathematics teaching?**

When Table 4 is examined, it is seen that 20% of female participants and 20% of male participants are impacted by the internet. Based on all participants, it is shown that 20% of the participants decided to choose this profession by making web-based reviews. Today, developments in fields such as media and biotechnology have made it inevitable for schools to renew themselves, on the other hand, it has made it compulsory to use information technologies as an effective tool in choosing professions. In the choice of profession, one should prepare educational environments that will help him achieve his goals and prepare the human force required by information technology to live in the best way. It would be the most rational way to use internet technology that enables individuals to choose and apply many professions from where they are located (Deniz, 2001).

Table 4. Distribution of participants who decided to choose this profession by making web-based reviews

I make decisions for choosing teaching mathematics by researching web bases as a student.	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
	PG	PG1, PG9	2	20%
	PB	PB6, PB8	2	20%

**3.5. Does job anxiety affect the students' selection of mathematics teaching?**

As given in Table 5, it is revealed that 50% of female participants and 40% of male participants would like to choose the profession because of job security. Considering all participants, it is seen that 45% of participants want to choose their teaching profession because the job is secure. In a study conducted by Eskicumalı (2002), 37.1% of the participants stated that they chose teaching because of job security. In addition, in the study conducted by 626 prospective teachers in the study named "Reasons of Profession Preference in the Teacher Training Process", it was stated that 65 teacher candidates (10.38%) chose their teaching profession because of a safe job opportunity. The education level of families should also be taken into consideration in this premise. Considering the educational order of the mothers of 9 people who want to choose this profession, we see that job security is important. We can examine from *Table 1* that 3 people are high school graduates (33.3%), 2 people are secondary school graduates (22.2%), 1 person is primary school graduate (11.1%), and 3 people are literate (33.3%). If we examine the level of education of their father from the same table, 1



person is a university graduate (11.1%), 5 people are high school graduates (55.5%), 2 people are secondary school graduates (22.2%) and 1 person is primary school graduate (11.1%).

Table 5. Distribution of participants who think of choosing this profession because of job security

	Code	Participant's Code	Frequency (f)	Participant's Percentage (%)
Taking job security into consideration is the factor of choosing this job.	PG	PG3, PG4, PG5, PG6, PG9	5	50%
	PB	PB2, PB3, PB5, PB6	4	40%

Considering the table below, 60% of female participants and 20% of male participants choose the profession because of social security. Based on all participants, it is seen that 40% of the participants think of choosing the teaching profession because it provides social security.

Table 6. Distribution of participants who think of choosing this profession as it provides social security, by gender

	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
Social environment affects my choice.	PG	PG1, PG2, PG3, PG4, PG6, PG9	6	60%
	PB	PB3, PB6	2	20%

### 3.6. Are their ideals effective in the process of choosing students' mathematics teaching?

When all the participants are taken into consideration, it is seen that 55% of them want to choose the profession because they think this is the ideal job.

Table 7. Who choose the profession because it is based on the gender of the participants ideally distribution

	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
I choose this job because it is my ideal job.	PG	PG3, PG7, PG9, PG10	4	40%
	PB	PB1, PB2, PB4, PB5, PB7, PB8, PB10	7	70%

### 3.7. Is the thought of whether the teaching profession suits them or not in the process of choosing students' mathematics teaching is effective?

When Table 8 is examined, it is presented that 10% of female participants and 40% of male participants think this is the most suitable job they can do. Based on all participants, it is seen that 25% of participants want to choose the mathematics teaching profession because they think it is suitable for themselves. Çermik et al. (2010) in their research, it is seen that the rate of participants who choose the teaching profession is 3.99% since it is a "profession suitable for their personality". (25 people from 626 participants)

Table 8. Distribution of participants who chose this profession, considering that it is the most suitable profession they can do

	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
I choose it because I can focus on this job.	PG	PG3	1	10%
	PB	PB2, PB4 PB6, PB7	4	40%

**3.8. Are the needs of the education system and the thought of meeting them effective in the process of selecting students' mathematics teaching?**

Considering Table 9, it is illustrated that 40% of female participants and 50% of male participants want to choose this profession because of the urgent need of the education system. On the basis of all participants, it is seen that 45% of the participants want to choose this profession because the education system needs the teacher.

Table 9. Distribution of participants who want to choose this profession, considering that the education system needs teachers

	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
I choose because this education system lets me think the way I want.	PG	PG3, PG4, PG5, PG6	4	40%
	PB	PB2, PB3, PB6, PB7, PB10	5	50%

Based on all participants, it is seen that 80% of participants want to choose this profession as it can contribute to education. Apart from the sub-problems mentioned above, some of the participants stated that they wanted to choose because they thought that the teaching profession was a sacred profession.

Table 10. Distribution of participants who want to choose this profession because they think it can contribute to the education

	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
I choose this department because maths provide convenience for my opinions and choices.	PG	PG3, PG4, PG5, PG7, PG8, PG10	6	60%
	PB	PB1, PB2, PB3, PB4, PB5, PB6, PB7, PB8, PB9, PB10	10	100%

When Table 11 is examined, it is seen that 35% of all participants seem to want to choose this profession because they think that the teaching profession is sacred. In response to the question, he observed that the factor of "being a holy profession" ranks third. To support quantitative data after the application of the survey, the participants were asked about their thoughts about mathematics as an open-ended question and the data in table 12 were reached.

Table 11. Distribution of participants who want to choose this profession because they think it can contribute to the education

	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
I prefer this job because it is sacred to me.	PG	PG4, PG6, PG9, PG10	4	40%
	PB	PB4, PB7, PB9	3	30%

When Table 12 is examined, 30% of the female participants and 70% of the male participants think that they are the courses that they love and succeed; 50% of female participants and 10% of male participants think they are enjoyable but difficult; 10% of female participants and 40% of male participants are happy when they can succeed; 20% of female participants and 30% of male participants think they are useful in solving daily life problems; 30% of female participants and 30% of male participants think they are difficult lessons; 40% of female participants stated that they love but fail. When the findings obtained for the problems of the study were examined, the number of siblings and the number of siblings studying at the university attracted the attention of the researcher. It was wondered whether these variables (number of siblings, number of siblings studying at university) affect the desire to prefer the mathematics teaching profession and the findings in table 13 were reached.



Table 12. Participants' thoughts

Thoughts	Code	Participant's Code	Frequency (f)	Participant's Percentage(%)
I find myself successful at math courses.	PG	PG2, PG9, PG10	3	30%
	PB	PB1, PB2, PB3, PB5, PB6, PB7, PB8	7	70%
Maths is difficult and it affects my choice.	PG	PG3, PG4, PG5, PG6, PG8	5	50%
	PB	PB4	1	10%
It is a lesson that I am happy and enjoy doing it.	PG	PG10	1	10%
	PB	PB2, PB3, PB5, PB7	4	40%
This course provides solutions for my daily life problems.	PG	PG7, PG9	2	20%
	PB	PB1, PB8, PB10	3	30%
It is a course whose difficulty can be overcome by studying.	PG	PG2, PG3, PG8	3	30%
	PB	PB4, PB6, PB9	3	30%
My failure despite my love for it affects my choice.	PG	PG1, PG4, PG5, PG6	4	40%
	PB	-	-	-

In order to analyze these findings, the number of siblings was determined as criteria. According to this criterion, it is reported that the number of siblings studying at the university between 1-3 is 4 (33.3%); the number of siblings studying at the university between 4-6 siblings is 11 (22.9%); the number of students who have siblings between 7-9 is 6 (15.4%); and the number of participants who have siblings between 10-12 is 7 (33.3%).

Following the findings, the researcher acknowledged that the percentage of the number of siblings studying at the university was 80% and above had an impact on the desire to choose the math profession. When Table 13 and other tables are analyzed, it is not seen that there is a general connection between the number of siblings or the number of siblings with the choices made by the participants. Because, considering the rates, a rate of 80% and / or above was not encountered. In addition, the number of siblings studying at the university did not have a significant effect on the choices made by the participants.

Finally, the participants were asked "What are your expectations from mathematics teaching?" and the responses were as follows:

PG2: "Providing social security and being more respected in the society."

PG3: "Breaking the prejudices, realizing that it can be a fun and easy lesson as possible, most importantly, breaking the notion that I can't do Mathematics."

PG7: "If I can help people, I want it..."

PG9: "Communicating well and effectively..."

PG10: "I want to be happy and be a useful teacher for my students."

PB4: "To show students that Mathematics is a lesson that can be done when they work and strive"

PB8: "I want to have a share in the future of people. In this life, to see the happiness of the people, especially the students, whom I have raised on my education..." His thoughts in other participants are in line with this.

#### 4. Discussion, Suggestions and Conclusion

In the teacher training process, the factors that affect the professional preference of prospective teachers should be examined in more detail and the possible underlying causes should be investigated. It is crystal clear that it is critical to determine the reasons for choosing the teaching profession and the expectations of the mathematics teacher candidates considering the choice of mathematics teaching. Considering the results of the analysis, Table 2 also reveals that 20% of the participants who want to choose this profession have teachers in their families. This factor results from the low level of anxiety of the teacher towards teachers compared to other participants (Saracalaoğlu et al., 2009). When some studies

with a higher number of participants were examined in these studies, it was observed that the rate was lower in the results. Akbayır (2003) stated in his study that 9.4% of those who had teachers in his family had an effect on the choice of the teaching profession in his family. In their study, Özbek (2007) and Boz and Boz (2008) stated that some factors are more prominent in pre-service teachers' choice of the teaching profession. While Özbek (2007) stated that personal factors are more effective than economic and social factors, Boz and Boz (2008) made this ranking as altruistic, internal, and external reasons. When these findings are evaluated, the general findings below can be concluded. The factors that the participants were affected are listed:

Table 13. The order of the factors

Sequence	Why Effective	Participant's Percentage(%)
1	Thinking that it can contribute to the education	80%
2	Ideal occupation- Job security	55%
3	That the system needs the teachers	45%
4	Providing social security	40%
5	Being a sacred occupation	35%
6	Influence from a mathematics teacher	30%
7	Seeing it as a suitable job	25%
8	Having a teacher in family and its vicinity Web-based reviews	20%

In this table, all factors are examined together and ranked according to the intensity of selection by the participants. The most preferred reason for students is "the idea that they can contribute to education". This indicates that when the participants choose this profession, they aim to work selflessly by adding something from themselves. The reason for being ranked is "Having an ideal profession". This factor suggests that the participants' ideals prevail over other concerns and guide their choices. The factors of "job security" and "thinking that the system needs a teacher" have an equal ratio and ranked 3rd for the participants. The factor of "providing social security" was also shown as the reason for preference by 40% of the participants. Providing job security and social security also played an active role in the career choice process. This shows that participants want to guarantee themselves for future conditions. Nevertheless, the ideal factor has outweighed the participants, putting the assurance factor of the professions they prefer for their ideals into the background. It is a publicly accepted belief that teaching is a sacred profession. This opinion was seen by 35% of the participants as a preference for civilization. Teachers have always been a role model for students. 30% of the participants were also influenced by the mathematics teacher who attended the course and saw this factor as a reason for preference. 25% of participants think that mathematics teaching is a suitable profession. Today, while the internet and social media use is so intense, it is surprising that only 20% of students have an impact on the choice of profession. This shows that the participants in this group concentrate on other factors rather than web-based reviews.

As a result of this research, it was determined that the opinion that the majority of the participants could contribute to education was effective in their choices. However, in their study, Yılmaz and Doğan (2015) stated that the most influential factor in pre-service teachers' selection of mathematics teaching is "being suitable for my personality" and the least effective factor is "the desire to replace traditional teachers". In the current research, it has been determined that the candidates want to choose the factors such as the thought of contributing to the education, the least web-based examinations, and the presence of teachers in the close vicinity. By gathering the answers to the question "What are your thoughts on mathematics lesson?" together, the results in Table 12 were obtained. When this table is analyzed, it is seen that the participants considering choosing this profession generally have a positive attitude towards the mathematics course. Some expressed that they could not succeed at it, but stated that they did not have a negative opinion about the lesson. Most of the participants stated that mathematics course was difficult. In fact, this idea is not unique to the participants participating in this study. As a society, such an attitude towards the lesson prevails, which I think it is due to deficiencies in basic mathematics. Educational institutions should make every effort to change this idea. The results obtained in the studies of Çakır and Akkaya (2017) about the reasons and expectations of elementary mathematics teacher candidates for the teaching profession, it is stated that mathematics is a popular and enjoyable lesson and it is a reason for preference and has an impact on the choice of profession. Also, in this study; the main reasons for choosing the profession of teaching are the direction of someone and / or being influenced by others, job anxiety and working conditions, and interest in mathematics, loving and endearing it, it has been concluded that our study has created an

important resource for us in order to interpret students' thoughts in parallel with this. When the relevant literature is analyzed, the process of choosing Mathematics teaching in most of the studies has not been addressed in this aspect, and generally the selection and placement process. After completion, studies were carried out in this parallel. This study is different from others in this aspect. While a choice has not yet been concluded in this study, a more realistic, timely examination has been made by examining the decisions of the participants and the factors they may be affected.

As a result of the findings obtained from the study, some suggestions have been developed for researchers, educators, and for future researchers. When the literature is analyzed, it is seen that the studies carried out are generally carried out with prospective teachers. Candidates who are in the process of preference may be suggested to take part in such studies. As it is taken into consideration that only 20 students' opinions were taken within the scope of this study, more clear results can be achieved with more participants for the relevant literature.

### Disclosure of Conflict

The author(s) declare that they have no conflicts of interest.

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#### Appendix-1: The questionnaire of students who prepare for the university exam to study mathematics teaching

##### DEMOGRAPHIC QUESTIONS

- GENDER:
- MOTHER EDUCATION LEVEL:
- FATHER EDUCATION LEVEL:
- SISTER NUMBER:
- NUMBER OF SISTERS READING UNIVERSITY:

##### REASONS TO WANT TO CHOOSE MATHEMATICS TEACHING

- What are your thoughts on mathematics lesson?
- Which of the following are the reasons for choosing mathematics teaching?
  1. I think of choosing it because it is the ideal job.
  2. I want to choose because I think it is the most suitable profession I can do
  3. I want to choose it because it is job security.
  4. I want to choose one of my close circle because it is a teacher
  5. I want to choose it because it provides social security.
  6. I want to choose because I think I can contribute to education
  7. I want to choose it because I believe it is a sacred profession.
  8. I want to choose it because of my love for my math teacher.
  9. I want to choose because I think our education system needs teachers.
  10. I examined the situation of those who chose this profession in social media. For this reason, I want to choose.
  11. I decided to choose it by making web-based reviews.
- What are your expectations from mathematics teacher?