



[www.ijres.net](http://www.ijres.net)

## The Mediating Effect of Vocational Self-Efficacy Beliefs in the Relationship between Big Five and Professional Attitude

İsa Yıldırım   
Ataturk University, Turkey

### To cite this article:

Yildirim, I. (2021). The mediating effect of vocational self-efficacy beliefs in the relationship between big five and professional attitude. *International Journal of Research in Education and Science (IJRES)*, 7(3), 885-909. <https://doi.org/10.46328/ijres.1957>

The International Journal of Research in Education and Science (IJRES) is a peer-reviewed scholarly online journal. This article may be used for research, teaching, and private study purposes. Authors alone are responsible for the contents of their articles. The journal owns the copyright of the articles. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of the research material. All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations regarding the submitted work.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.



*International Journal of Research in Education and Science (IJRES)* is affiliated with the **[International Society for Technology, Education, and Science \(ISTES\): www.istes.org](http://www.istes.org)**

## The Mediating Effect of Vocational Self-Efficacy Beliefs in the Relationship between Big Five and Professional Attitude

İsa Yıldırım

---

### Article Info

#### Article History

Received:

30 December 2020

Accepted:

24 June 2021

---

#### Keywords

Personality traits

Professional attitude

Student teachers

Teacher education

---

### Abstract

In this study, the mediator role of self-efficacy in the relationship between personality traits and attitude towards teaching profession was examined for prospective teachers. The sample of the study consisted of 487 3rd and 4th grade students (356 females and 131 male) studying at Atatürk University Kazım Karabekir Education Faculty in the Spring Semester of 2018-2019 Academic Year and these students were determined by simple random cluster sampling method. This study was designed as a relational study and quantitative methods were used. Three different measurement tools were used in order to determine the personality traits, professional attitude, and self-efficacy beliefs of prospective teachers. The data were analyzed with different statistical package programs. As a result of tested SEM models and Bootstrap analyses, it was found that self-efficacy had a partial mediator effect on the relationship between agreeableness and neuroticism and attitudes towards teaching profession, and a full mediator effect on the relationship between conscientiousness, extraversion and openness to experience and attitude towards teaching profession. The results were discussed in the light of related studies and certain conclusions and recommendations were presented.

---

### Introduction

The relationship between teacher candidates' personality traits and professional self-efficacy beliefs and attitudes towards the profession has been the subject of many studies. These studies mostly focused on the relationship between self-efficacy belief and attitude towards profession (Emmers, Baeyens & Petry, 2020; Akgün, 2020; Dolapçı & Kavgaçı, 2020; Akıncı, 2020; Yıldız, Şahin & Çelik, 2020). Studies on the relationship between teacher candidates' personality traits and their attitudes towards the profession and their professional self-efficacy are rare (Bahar & Kağan, 2018; Uslu, 2013; Üstüner, 2017). The body of previous studies is insufficient in terms of revealing the relationships between the stated variable pairs and supporting the findings. On the other hand, there are no studies that examine these three variables together, based on a theoretical basis, according to the perception of teacher candidates studying in teacher training programs. Evidence is needed on how the personality traits of teacher candidates affect their professional attitudes. The aim of the present study was to reveal the mediating effect of professional self-efficacy beliefs on the effect of teacher candidates'

personality traits (agreeableness, conscientiousness, extraversion, openness to experience, and neuroticism) on their attitudes towards profession, and thus partially eliminate the gap in the literature.

Teachers are the most important elements of the education system as the initiator, developer, and practitioner of education. They have a direct and most important impact on the quality of education compared to other factors (MEB, 2017; Çetin, 2006). “The quality of any education system can never exceed the quality of teachers” (TEDMEM, 2014). Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes (OECD, 2009). However, teachers who develop a positive attitude towards their profession may cause a behavioral change in students (Patel, Korde & Patel, 2012). In view of the importance of this, attitudes of teachers and prospective teachers towards the teaching profession have been examined in many countries (Osunde & Izevbigie, 2006; Juliet & Balaji, 2018; Bhargava & Pathy, 2014; Manju, 2016; Bademcioğlu, Karataş & Alcı, 2014; Andronache et al. 2014; Güneyli & Aslan, 2009; Saks, Soosaar & Ilves, 2016). According to Eagly & Chaiken (1993), attitude is “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor”. Attitudes consisting of cognitive, affective, and behavioral elements can be defined as expressions containing positive or negative evaluations about objects, human events, or situations (Robbins & Judge, 2017; Sabuncuoğlu & Tüz, 2016). Teachers' attitude towards the profession can be defined as regular psychological tendencies with cognitive, affective, and behavioral traces that appear as dissatisfaction or satisfaction as a result of evaluating the elements related to the teaching profession.

Studies on teachers and prospective teachers revealed that attitudes towards the profession were associated with several variables including teaching achievement (Sharma, 2013; James, 2018), adaptation to school (Baruah & Gogoi, 2017), teaching behaviors (Hussain et al. 2011), job satisfaction (Dhull & Jain, 2017), occupational anxiety (Doğan & Çoban, 2009; Serin, Güneş & Degirmenci, 2015) and student's interest in learning (Shittu & Oanite, 2015). Some studies have examined the relationships between the attitudes of teachers and prospective teachers towards their profession and their personal traits. Bektaş & Nalçacı (2012) found a significant relationship between prospective teachers' personal values and attitudes towards teaching profession; Bayat (2019) found a significant relationship between job satisfaction and personality traits; and Ceyhan & Çiçek (2020) found a significant relationship between personality traits and teacher burnout. According to Bedel (2008), there is a negative correlation between prospective teachers' external locus of control and their attitudes towards the profession. Aslan & Yalçın (2013) stated that neuroticism, agreeableness and conscientiousness personality dimensions of prospective teachers were significant predictors of attitudes towards teaching profession. Similarly, Uslu (2013) concluded that all personality traits except neuroticism were significant predictors of attitudes towards teaching profession. Üstüner (2017) has found that there is a relationship between all personality traits of formation students and their professional attitudes. When these studies are taken into consideration, it could be noted that the attitudes of prospective teachers towards the profession may be influenced by their personality traits as a more stable structure [ $H_1$  (a, b, c, d, e)].

One of the personal variables that affect prospective teachers' attitudes towards the profession is their self-efficacy beliefs affecting their thinking, feeling, and self-motivating processes (Bandura, 1995). On the other

hand, perceived self-efficacy expresses one's belief in his/her ability to organize and execute action plans necessary to manage possible situations (Bandura, 1995). Individuals with low self-efficacy beliefs avoid difficult tasks that they perceive as a threat to them. Rather than focusing on how they will perform better, they choose to maintain their self-diagnostic. When confronted with difficult tasks, they focus on personal deficiencies, obstacles they will face, and all kinds of negative consequences. When they fail, they are slow to regain their feelings of self-efficacy. Individuals with high self-efficacy beliefs increase their personal success in many ways. They treat difficult tasks as challenges, rather than threats to be avoided. They have set challenging goals for which they remain committed. They maintain their own focus of task diagnostics that guide effective performance (Bandura, 1993).

When taken into consideration in terms of teachers, self-efficacy revealing itself in many areas of human life, including business and private life, expresses teacher's personal belief in the ability to plan teaching and achieve teaching goals (Gavora, 2010). More specifically, it is „the teacher's belief in his/her competence in planning and conducting the set of actions necessary to successfully perform a particular teaching action in a given context“ (Hoy & Miskel, 2012). Researchers interested in humanities acknowledge that people have certain beliefs and judgments about themselves and the functioning of the world as a result of their interaction with the environment. Subconsciously, these beliefs affect all of their behaviors and give direction to their relations with their environment (Şişman, 2014). In this sense, it can be said that prospective teachers' self-efficacy beliefs related to teaching profession may affect their attitudes (H<sub>2</sub>). As a matter of fact, in many studies, self-efficacy and attitude towards the teaching profession were found to have moderate and near-moderate positive correlation (Şahin & Şahin 2017; Üstün,2017; Dadandı, Kalyon & Yazıcı, 2016; Demirtas, Comert & Ozer, 2011). In spite of these findings, in some longitudinal studies, it was concluded that teacher self-efficacy increased significantly from the beginning of teacher education to the first year in profession, but there was no significant difference in attitudes towards the profession and at the end of four years prospective teachers' attitudes towards teaching profession did not change (Tanel & Tanel, 2013; Bümen & Özaydın, 2013). Teachers with high instructional self-efficacy devote more time to academic learning in the classroom, support students who need help to succeed, and have an impact on students' success (Freeman, 2008; Hajovsky et al. 2020; Woolfolk & Hoy, 1990).

On the other hand, teachers' self-efficacy is a variable related to the personality traits. Personality, derived from the Latin word “persona”, which means mask, can be defined as the organization of psycho-physical systems in the individual that provides harmony between the personal differences of the individual and the environment or the set of characteristics underlying a relatively stable behavior model in response to ideas, objects, and people around the individual (Allport, 1937; Hiriyyappa, 2009; Daft, 2000). Personality can be defined as 'all the means an individual uses to react to or interact with other individuals' (Robbins & Judge, 2017). Recent studies have reduced numerous personality traits to a number of factors or concepts to define personality (neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience) (Hellriegel & Slocum, 2008). Yasunaga & Yaguchi (2014) studied Japanese adults and found a negative correlation between exercise self-efficacy and neuroticism and positive correlation between exercise self-efficacy and other four-personality traits. It was found that the five factor personality traits were a significant predictor of teacher self-efficacy (Bahar &

Kağan, 2018; Üstüner, 2017) and associated with teacher competencies (Kalafat, 2012). Extraversion has a positive effect on self-efficacy (Ayan, 2017). Getzel & Jackson (1963) stated that some evidence emphasizes that teacher personality is the most important variable in the classroom. They argued that the educational aspect of a teacher cannot be measured by what he knows and does, but by what he is (Kucukahmet, 2016). When these studies are taken into consideration, it is seen that the research hypothesis [H<sub>3</sub> (a, b, c, d, e)] is supported. Personality traits of prospective teachers can be an important factor in the development of attitudes towards teaching profession. However, it is not clear whether teaching profession self-efficacy has an effect on the relationship between these variables [H<sub>4</sub> (a, b, c, d, e)]. In this study, it was aimed to reveal the mediating role of teaching profession self-efficacy on the relationship between prospective teachers' neuroticism, extraversion, agreeableness, conscientiousness and openness to experience and attitudes towards teaching profession. For this purpose, the following hypotheses have been tested:

H<sub>1</sub> Personality traits of teacher candidates [Agreeableness (H<sub>1</sub> a), Conscientiousness (H<sub>1</sub> b), Extraversion (H<sub>1</sub> c), Neuroticism (H<sub>1</sub> d), Openness to experience (H<sub>1</sub> e)] significantly predict their attitudes toward profession.

H<sub>2</sub> Professional self-efficacy beliefs of teacher candidates significantly predict their attitudes toward profession.

H<sub>3</sub> Personality traits of teacher candidates [Agreeableness (H<sub>3</sub> a), Conscientiousness (H<sub>3</sub> b), Extraversion (H<sub>3</sub> c), Neuroticism (H<sub>3</sub> d), Openness to experience (H<sub>3</sub> e)] significantly predict their professional self-efficacy beliefs.

H<sub>4</sub> Professional self-efficacy beliefs have a mediating effect on the relationship between teacher candidates' personality traits [Agreeableness (H<sub>4</sub> a), Conscientiousness (H<sub>4</sub> b), Extraversion (H<sub>4</sub> c), Neuroticism (H<sub>4</sub> d), Openness to experience (H<sub>4</sub> e)] and their professional attitudes.

### **Theoretical Basis**

This study was based on Bandura's self-efficacy theory (1977, 1986). According to Bandura (1986, 1995), people improve their self-efficacy through mastery experiences, social model, social persuasion, improvement of psychological and physical state. Achieving success in mastery experiences that are effective in the development of the individual's self-efficacy, successful people taken as role model, positive feedback received from the people around, and improvement of psychological and physical condition appear as a function of personality traits. In other words, it is thought that teacher candidates' personality traits, which are considered in five factors as neuroticism, conscientiousness, extraversion, agreeableness and openness to experience, have an effect on mastery experiences, social model, social persuasion, and the improvement of psychological and physiological state that are the source of the development of self-efficacy.

As a matter of fact, many studies have found that personality traits predict self-efficacy beliefs (Çalık, Çoban & Özdemir, 2019; Bahar & Kağan, 2018; Özdemir et al. 2020). On the other hand, according to Bandura (1992), self-efficacy beliefs are effective on people's motivation and performance. Performance of individuals with the same level of knowledge and skills change when their self-efficacy belief levels are different (Gist & Mitchell, 1992; Bandura, 1993). According to Bandura (1995), self-efficacy belief has a more central place than other

causal agency mechanisms that contribute to people's functionality. People's motivational, emotional states and actions arise depending on their beliefs rather than the objective situation. This means that self-efficacy beliefs affect individuals' attitudes. As a matter of fact, findings regarding the relationship between these two variables are frequently encountered (Nakip & Özcan, 2016; Bakaç & Özen, 2017; Yakar & Yelpaze, 2019). There is a consensus in the literature that personality traits affect attitudes towards profession (Hiriyappa, 2009; Uslu, 2013; Üstüner, 2017). Based on this theoretical basis, the last hypothesis of the present study [H4 (a, b, c, d, e)] suggests that professional self-efficacy belief is a mediator variable on the effect of teacher candidates' personality traits on their attitudes towards profession.

## **Method**

### **Research Model**

Quantitative approach and relational design have been preferred in line with the positivist paradigm since it facilitates testing the hypotheses based on the self-efficacy theory, making detailed analyses, and reaching some predictions and results by revealing the relationships between the variables studied. In this design, the relationships between two or more variables and the degree of these relationships are revealed. The degree of the relationship expressed numerically determines whether one variable predicts the other (Creswell, 2012). Mediation tests were performed using structural equation modelling (SEM) (Baron & Kenny, 1986) and regression analysis based on bootstrap method (Hayes, 2018). SEM is a collection of statistical techniques that test the relationship sequences between one or more independent variables and one or more dependent variables. While correlation is used to determine the size and direction of the linear relationship between two variables, regression is used to determine whether one variable predicts the other (Tabachnick & Fidell, 2015).

### **Research Group**

This study was carried out with a sample group of 487 students who were selected from the 3rd and 4th grade undergraduate students studying at Kazım Karabekir Education Faculty of Atatürk University by simple random cluster sampling method, which is one of the probability sampling methods. According to the information obtained from the secretariat of the faculty, there are approximately 2600 3rd and 4th grade students in the Faculty of Education. In this case, 19% of the students in the Faculty of Education were reached.

Of the prospective teachers included in the study, 32 (6.6%) were Social Studies Teaching, 26 (5.3%) were English Teaching, 46 (9.4%) were Turkish Teaching, 66 (13.6%) were Primary School Mathematics Teaching, 7 (1.4%) were Secondary School Mathematics Teaching, 22 (4.5%) were Music Teaching, 9 (1.8%) were Chemistry Teaching, 3 (0.6%) were Biology Teaching, 12 (2.5%) were Turkish Language and Literature Teaching, 60 (12.3%) were Primary school Teaching, 17 (3.5%) were German Teaching, 20 (4.1%) were Art Teaching, 14 (2.9%) were Special Education Teaching, 43 (8.8%) were PDR, 17 (3.5%) were Computer and Instructional Technology Teaching, and 93 (19.1%) were Preschool Teaching candidates. 356 (73.1%) of prospective teachers were female and 131 (26.9%) were male.

**Data Collection Tools***Attitude towards Teaching Profession Scale*

The attitude towards teaching profession scale was developed by Üstüner (2006). The scale, which was developed with the participation of 449 students studying in teaching programs, consists of a single dimension. Factor load values ranged from 0.74 to 0.41. The variance explained by this single dimension scale was 30%, criterion validity was 0.89, test-retest reliability coefficient (stability) was 0.72, and internal consistency reliability coefficient (Cronbach's Alpha) was 0.93. In the present study, the internal consistency coefficient was found to be 0.94 and the explained variance ratio was 39.78%. Since the scale was unidimensional and multi-item, it was difficult to use the scale in the SEM model. Therefore, item parceling method was used.

Item parceling which has become widespread in recent years refers to the use of the sum or average of item scores from two or more items instead of item scores in structural equation modelling (SEM). It has been shown to provide better adaptability and less-impacted solutions if there is a one-dimensional structure, roughly classified or non-normally distributed items or both are present (Bandalos, 2002). Parceling is the collection of scale items under one or more sections and using these sections as descriptors of latent variables in the analysis (Kishton & Widaman, 1994). Parcels as descriptors of the latent variable are generally preferred to the use of individual items as they reduce the number of indicators. Thus, the probability of estimation errors is reduced and the parcels become more likely to comply with multivariate normality assumptions than individual items (Sass & Smith, 2006). When item parcels are used, groups can be formed using a random or semi-random procedure or grouping can be performed on the basis of theoretical or empirical logic developed by the researcher (Hall, Snell & Foust, 1999). In this study, 7 parcels were formed by taking into account item-total correlations of the Attitude towards Teaching Profession Scale. Parcel 1: Items 10,30,1,32,13; Parcel 2: Items 21,18,33,9,31; Parcel 3: Items 17,15,3,20,11; Parcel 4: Items 23,7,28,27,19; Parcel 5: Items 12,14,25,6,22; Parcel 6: Items 8,26,5,24,29; Parcel 7: Items 2,4,34,16. Confirmatory factor analysis performed with the current research data regarding the structure created revealed the following fit indices for the scale: SRMR 0.016, CFI 0.99, NNFI 0.99,  $X^2/df$  3.77, RMSEA 0.076.

*Personality Traits Scale Based on Adjectives*

The scale developed by Bacanlı, İlhan & Aslan (2009) with the participation of 285 university students consists of 5 factors and these factors explain 52.63% of the total variance of the scale. Extraversion consisting of 9 items explains 23.20% of the variance, agreeableness consisting of 9 items explains 10.45% of the variance, conscientiousness consisting of 7 items explains 9.15% of the variance, and neuroticism consisting of 7 items explains 4.56% of the variance. Confirmatory factor analysis performed with the existing research data revealed the following fit indices for the scale: SRMR 0.081, CFI 0.95, NNFI 0.95,  $X^2/df$  2.60, RMSEA 0.069. Internal consistency coefficients of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness dimensions were 0.73, 0.89, 0.80, 0.87, and 0.88, respectively, and test-retest correlation coefficients were 0.85, 0.85, 0.68, 0.86, and 0.71, respectively. Cronbach's Alpha coefficients were 0.67, 0.87, 0.82, 0.85, and 0.83, respectively.

### *Teacher Self-Efficacy Scale*

The scale developed by Tschannen-Moran & Hoy (2001) was adapted to Turkish by Capa, Cakiroğlu & Sarıkaya (2005). The scale was developed as a 9-point Likert type scale and consisted of 24 items. The scale was developed with the participation of 628 prospective teachers, and consisted of 3 components: self-efficacy for classroom management, self-efficacy for student participation, and self-efficacy for teaching strategies. Internal consistency coefficients of these dimensions were 0.84, 0.82, 0.86, respectively. The internal consistency coefficient of the entire scale was 0.93. The internal consistency fit indices calculated with data obtained in the present study were 0.89, 0.88, 0.90, respectively. The internal consistency coefficient of the entire scale was 0.96. Fit indices of the scale obtained from confirmatory factor analysis were listed as TLI 0.99, CFI 0.99, and RMSEA 0.65. Confirmatory factor analysis performed with the existing research data revealed the following fit indices for the scale: SRMR 0.037, CFI 0.99, NNFI 0.98,  $\chi^2/df$  2.84, RMSEA 0.062.

### *Data Analysis*

Missing forms encountered during data entry were removed from the data set. Firstly, the data were examined in terms of minimum and maximum values, and errors arising from data entry were corrected. Secondly, missing data was examined and missing values were identified in the data set, and the related scales were examined again and the missing data were completed. Thirdly, the distributions of the variables whose total scores were calculated were checked. The scores were converted to standardized scores (*Z* score) and their distributions were examined. It was found that almost all of the scores related to the data did not exceed  $\pm 3$  standard scores. Skewness and Kurtosis values of the variables discussed in the study were 0.382 and -0.144 for neuroticism; -0.415 and -0.270 for extraversion; -0.767 and 0.450 for openness to experience; -0.903 and 0.496 for agreeableness; -0.767 and 0.225 for conscientiousness; -0.788 and 0.484 for attitude towards teaching profession; and -0.578 and 0.742 for professional self-efficacy. Mahalanobis distance coefficients of the data distribution were examined and 7 extreme values were removed from the data set. In order to determine whether there was a problem related to multicollinearity, paired correlations were examined first and no correlation of 0.80 and above was found. In the analyses performed for each model, the tolerance value ( $1-R^2$ ), which is the variance ratio that cannot be explained by other independent variables, was higher than 0.20, the variance inflation factor (VIF) was less than 10, and the condition index (CI) was less than 30 (Buyukozturk, 2011). These results show that there is no multicollinearity problem between independent variables.

### **Testing of Measurement Model**

The widely used two-stage approach was used to test the measurement model. This approach is based on the necessity of separately analyzing the measurement model and the structural equation model (SEM) due to their different nature. In the two-stage approach, the measurement model is tested first and the SEM model is tested in the second stage. This model is called a fully defined model because the relationships between the implicit variables in the measurement model are liberated. Testing the measurement model with this method also counts as a confirmatory factor analysis. After the robustness of the structures is determined statistically with the



measurement model, the structure of the structural model is tested. The fact that the measurement model produces valid goodness of fit values means that the measured structures are verified. Unless valid goodness of fit values can be reached in the measurement model, it is meaningless to move to the structural model (Şimşek, 2007). Finally, the measurement models used in the research were tested and the findings are presented in Table 1.

Table 1. Fit Indices of Measurement Models

	N	AGFI	GFI	NFI	NNFI	CFI	RMR	SRMR	RMSEA	X <sup>2</sup> /df
MEA. MOD. 1	487	0.91	0.93	0.97	0.98	0.98	0.56	0.040	0.050	2.24
MEA. MOD. 2	487	0.92	0.94	0.98	0.98	0.99	0.57	0.032	0.050	2.21
MEA. MOD. 3	487	0.90	0.92	0.97	0.98	0.98	0.54	0.039	0.059	2.67
MEA. MOD. 4	487	0.90	0.93	0.96	0.97	0.98	0.65	0.053	0.060	2.78
MEA. MOD. 5	487	0.93	0.95	0.98	0.99	0.99	0.57	0.041	0.041	1.83

AGFI, GFI, NFI, NNFI, CFI, RMR, RMSEA, X<sup>2</sup>/df indexes were used to evaluate the goodness of fit of the measurement and SEM models. Celik & Yılmaz (2016) states that the model has acceptable fit indices when the values of CFI, NFI, AGFI and GFI are above 0.95, 0.90, 0.85, and 0.85, respectively. Özdamar (2016) states that the model has acceptable fit indices when  $\chi^2/sd$  is less than 5, NNFI is above 0.95, CFI is above 0.90, RMSEA is less than 0.1, and RMR is less than 5. Bayram (2016) states that the model has acceptable fit indices when SRMR is less than 0.10. When Table 1 is examined, it can be seen that all measurement models used in the study have a high goodness of fit with the available data.

## Results

### Correlation Coefficients between Latent Variables

The results of the Pearson Product-Moment Correlation Analysis, which was applied to reveal the correlation between latent variables of prospective teachers' personality traits, self-efficacy of teaching profession, and attitudes towards teaching profession, are presented in Table 2.

Table 2. Pearson Correlation Coefficients between Latent Variables\*\*\*

	1.	2.	3.	4.	5.	6.	7.
1. Agreeableness	1	.558**	.517**	-.085	.643**	.264**	.229**
2. Conscientiousness		1	.443**	-.121**	.512**	.297**	.207**
3. Extraversion			1	-.033	.708**	.336**	.189**
4. Neuroticism				1	.021	-.108*	-.178**
5. Openness to experience					1	.329**	.151**
6. Professional self-efficacy						1	.478**
7. Attitude towards profession							1

\*p<.05 \*\*p<.01 \*\*\* Relationships between variables are SPSS outputs.

When the correlations between the variables are examined in Table 2, it can be seen that neuroticism was negatively correlated ( $P < 0.05$  with self-efficacy), and all other dimensions of personality traits were positively correlated with self-efficacy beliefs and attitudes towards teaching profession ( $P < 0.01$ ).

**Mediator Role of Teaching Profession Self-Efficacy in the Relationship between Agreeableness Personality Trait and Attitude towards Teaching Profession (Model 1)**

Firstly, the direct relationship between the agreeableness independent variable and the attitude towards teaching profession was found to be statistically significant ( $\beta = 0.27, P < 0.01$ ). Agreeableness independent variable affects the attitude towards teaching profession dependent variable. Then, it was determined that the direct relationship between agreeableness and teaching self-efficacy was statistically significant ( $\beta = 0.33, P < 0.01$ ). It was determined that the independent variable of agreeableness affected the teaching self-efficacy mediator variable.

Finally, it was found that the direct relationships between teaching self-efficacy and attitude towards teaching profession were statistically significant ( $\beta = 0.52, P < 0.01$ ). These procedures show that the model is suitable for the mediation test. Based on these findings, it was decided to examine the mediator role of teaching self-efficacy variable in the relationship between agreeableness personality trait and attitude towards teaching profession.

Table 3. Findings regarding the First Mediation Model

Variables	$\chi^2/df$	GFI	CFI	NNFI	SRMR	RMSEA	$\beta$	t
AGBL $\longrightarrow$ PSE	2.53	0.96	0.98	0.98	0.039	0.056	0.33	6.65
AGBL $\longrightarrow$ ATP	2.28	0.94	0.98	0.98	0.039	0.051	0.27	5.52
PSE $\longrightarrow$ ATP	3.27	0.96	0.99	0.99	0.028	0.068	0.52	11.16
AGBL $\longrightarrow$ PSE $\longrightarrow$ ATP	2.23	0.93	0.98	0.98	0.040	0.050	0.11	2.46

AGBL=Agreeableness PSE= Professional Self-Efficacy ATP= Attitude towards Profession

When the mediation model is tested, it is understood that there is a decrease ( $\beta = 0.11, t = 2.46$ ) in the level of the pre-existing relationship ( $\beta = 0.27, t = 5.52$ ) between agreeableness and attitude towards the teaching profession, but it remains statistically significant. According to these findings, it can be said that teaching self-efficacy has a partial mediator role in the correlation between agreeableness personality trait and attitude towards teaching profession.

Bootstrap analysis was performed in order to determine whether the mediator role is significant for a sample of 5,000 people and to determine the direct and indirect effect of the agreeableness personality trait on attitude

towards teaching profession (Preacher & Hayes, 2008). The obtained values and confidence intervals (CI) are presented in Table 4.

Table 4. Bootstrap Analysis Findings

Model paths		Predictive Coefficients	95 % CI	
			Low	High
Agreeableness	→ Att. Towards Teaching Profession	.5742	.356	.792
Agreeableness	→ Att. Towards Teaching Profession	.2765	.074	.479
Self-efficacy	→ Att. Towards Teaching Profession	.4245	.348	.500
Agreeableness	→ Teaching Self-efficacy Belief	.7013	.472	.929
Effect Coefficients				
Model paths		Direct and Indirect Effect	95 % CI	
			Low	High
Direct I: Agreeableness	→ Att. Towards Teaching Prof.	.2765	.45	.97
Indirect I: Agreeable.	→ S-E. Bel. → Att. Tow. Tea. Prof.	.2977	.17	.43
Total Effect		.5742	.35	.79

When the table is examined, it can be seen that the predictive coefficient of agreeableness which was .5742 decreases to .2765 when analyzed together with self-efficacy to predict the attitude towards teaching profession. When the Bootstrap standardized value ranges are examined, it can be seen that the significance of the correlation continues since 95% confidence interval does not include zero between the upper and lower value ranges. This shows that the partial mediator role of self-efficacy belief in the relationship between agreeableness and attitude towards teaching profession continues in the multiplied sample group (of 5000 people). When the results of Bootstrap analysis are examined, it can be seen that the direct effect coefficient of agreeableness on the attitude towards teaching profession was .2765, the indirect effect via teaching self-efficacy belief was .2977, the total effect coefficient was .5742, and all of these effects were statistically significant since the 95% confidence interval did not include zero between the lower and upper values.

### **Mediator Role of Teaching Profession Self-Efficacy in the Relationship between Conscientiousness Personality Trait and Attitude towards Teaching Profession (Model 2)**

Conscientiousness independent variable affects the attitude towards teaching profession dependent variable ( $\beta = 0.27$ ,  $P < 0.01$ ). Then, it was determined that the conscientiousness independent variable affected the teaching self-efficacy variable ( $\beta = 0.36$ ,  $P < 0.01$ ). At the last stage, it was found that teaching self-efficacy positively affected the attitude towards teaching profession ( $\beta = 0.52$ ,  $P < 0.01$ ). Based on these findings, it was decided to examine the mediator role of teaching self-efficacy variable in the relationship between conscientiousness personality trait and attitude towards teaching profession.

In the Table 5, after running the model, it is seen that there is a decrease in the level of the relationship between conscientiousness and attitude towards profession, but the relationship continues to be statistically significant ( $\beta = 0.10, p < .05$ ). However, since the t value in the model was 1.99 ( $p < .05$ ), the result was very close to proving the full mediator effect of self-efficacy ( $p > 0.05 = t < 1.96$ ).

Table 5. Findings regarding the Second Mediation Model

Variables	$\chi^2/df$	GFI	CFI	NNFI	SRMR	RMSEA	$\beta$	t
CONSC $\longrightarrow$ PSE	3.58	0.94	0.96	0.96	0.13	0.073	0.36	7.30
CONSC $\longrightarrow$ ATP	2.35	0.95	0.99	0.98	0.032	0.053	0.27	5.42
PSE $\longrightarrow$ ATP	2.75	0.96	0.99	0.99	0.026	0.060	0.52	11.14
CONSC $\longrightarrow$ PSE $\longrightarrow$ ATP	2.05	0.95	0.99	0.99	0.032	0.047	0.10	1.99

CONSC = Conscientiousness      PSE= Professional Self-Efficacy      ATP= Attitude towards Profession

Considering the findings, it could be noted that professional self-efficacy has a partial mediator role (at the border) in the relationship between conscientiousness personality trait and attitude towards teaching profession and this role is very close to a full mediator role. Bootstrap analysis was performed to determine whether the mediator role was significant and to determine the direct and indirect effect of the conscientiousness personality trait on attitude towards teaching profession. The obtained values and confidence intervals (CI) are presented in Table 6.

Table 6. Bootstrap Analysis Findings

Bootstrap analysis findings				
Model paths		Predictive Coefficients	95 % CI	
			Low	High
Conscientiousness	$\longrightarrow$ Att. Tow. Teaching Profession	.6227	.359	.885
Conscientiousness	$\longrightarrow$ Att. Tow. Teaching Profession	.2130	-.033	.459
Self-efficacy Belief	$\longrightarrow$ Att. Tow. Teaching Profession	.4322	.354	.509
Conscientiousness	$\longrightarrow$ Self-efficacy Belief	.9481	.676	1.21
		Direct and Indirect Imp.	95 % CI	
			Low	High
Direct Imp: Conscient.	$\longrightarrow$ Att. Tow. Teaching Prof.	.213	-.033	.459
Indirect Imp: Conscient.	$\longrightarrow$ Self-eff. Bel. $\longrightarrow$ Attitude	.409	.266	.570
Total Effect		.622	.359	.885

In the Table 6, it is understood that the coefficient of predicting the attitude towards the teaching profession of conscientiousness personality trait is 0.6227 and it is statistically significant. When the conscientiousness

variable was analyzed together with self-efficacy, this coefficient decreased to .2130, and 95% confidence interval included zero between the lower and upper values (CI 95% = -0.33 < 0 > .45), which means that the path loses statistical significance. This shows that the full mediator role of self-efficacy in the relationship between conscientiousness and attitude towards teaching profession continues in the multiplied sample group (of 5000 people). When the results of Bootstrap analysis are examined, it can be seen that the indirect effect coefficient of conscientiousness on the attitude towards teaching profession was .409, and this was statistically significant since the 95% confidence interval did not include zero between the lower and upper values. The direct effect of conscientiousness was statistically insignificant since the 95% confidence interval did include zero between the lower and upper values. The total effect coefficient was .622 and was statistically significant (CI 95% = 0.359 < 0.885).

### Mediator Role of Teaching Profession Self-Efficacy in the Relationship between Extraversion Personality Trait and Attitude towards Teaching Profession (Model 3)

Before the model was run, it was determined that the extraversion independent variable had a statistically significant positive effect on the attitude towards the teaching profession ( $\beta = 0.22$ ,  $P < 0.01$ ) and the self-efficacy of the teaching profession ( $\beta = 0.38$ ,  $P < 0.01$ ). It was understood that teaching profession self-efficacy also positively affected the attitude towards the teaching profession ( $\beta = 0.52$ ,  $P < 0.01$ ). Findings show that the model is suitable for mediator testing.

Table 7. Findings regarding the Third Mediation Model

Variables	$\chi^2/df$	GFI	CFI	NNFI	SRMR	RMSEA	$\beta$	t
EXTVER $\longrightarrow$	3.83	0.93	0.97	0.97	0.041	0.076	0.38	7.79
PSE								
EXTVER $\longrightarrow$	3.14	0.92	0.98	0.97	0.041	0.066	0.22	4.48
ATP								
PSE $\longrightarrow$	3.28	0.96	0.99	0.99	0.028	0.068	0.52	11.16
ATP								
EXTVER $\longrightarrow$ $\longrightarrow$ PSE	2.67	0.92	0.98	0.98	0.039	0.059	0.03	0.58
ATP								
EXTVER= Extraversion      PSE = Professional Self-Efficacy      ATP = Attitude towards Profession								

When the model was run, the previously existing relationship ( $\beta = 0.22$ ,  $p < 0.01$ ) between extraversion and attitude towards the teaching profession lost its statistical significance ( $\beta = 0.03$ ,  $p > 0.05$ ). This shows that self-efficacy has a full mediator role in the relationship between extraversion and attitude towards teaching profession.

Bootstrap analysis was performed to determine whether the mediator role was significant and to determine the direct and indirect effect of the extraversion personality trait on attitude towards teaching profession. The obtained values and confidence intervals (CI) are presented in Table 8.

Table 8. Bootstrap Analysis Findings

Model paths		Predictive Coefficients	95 % CI	
			Low	High
Extraversion	→ Attitude Tow. Teaching Profession	.4530	.243	.662
Extraversion	→ Attitude Tow. Teaching Profession	.0765	-.12	.27
Self-efficacy	→ Attitude Tow. Teaching Profession	.4419	.36	.52
Extraversion	→ Teaching Self-efficacy Belief	.8520	.63	1.06
Model paths		Indirect Imp	95 % CI	
Direct Imp: Extraversion	→ Attitude Tow. Profession	.0765	-.12	.27
Indirect Imp: Extraversion	→ Self-efficacy → Att. To. Prof.	.3765	.25	.51
Total Effect		.4530	.243	.662

When Table 8 is examined, it can be seen that the predictive coefficient of extraversion for attitude towards teaching profession was 0.4530 (CI 95%= 0.24 < 0.66). When the extraversion variable was analyzed together with self-efficacy, this coefficient decreased to .765, and 95% confidence interval included zero between the lower and upper values (CI 95%= -0.12 < 0 > 0.27), which means that the path loses statistical significance. This shows that the full mediator role of self-efficacy belief in the relationship between extraversion and attitude towards teaching profession continues in the multiplied sample group (of 5000 people). When the results of Bootstrap analysis are examined, it can be seen that the indirect effect coefficient of extraversion on the attitude towards teaching profession was 0.3765, and this was statistically significant (CI 95%= .25 < .51). The direct effect of extraversion was statistically insignificant (CI 95%= -.12 < .27). The total effect coefficient was .453 and was statistically significant (CI 95% = 0.243 < 0.662).

**Mediator Role of Teaching Profession Self-Efficacy in the Relationship between Neuroticism Personality Trait and Attitude towards Teaching Profession (Model 4)**

Neuroticism independent variable negatively affects attitude towards teaching profession ( $\beta = -0.29$ ,  $P < 0.01$ ) and teaching profession self-efficacy ( $\beta = -0.19$ ,  $P < 0.01$ ). Teaching profession self-efficacy positively affects the attitude towards the teaching profession ( $\beta = 0.52$ ,  $P < 0.01$ ). After revealing the relationships between the variables, these three variables were included in the model together to test the mediation model.

Table 9. Findings regarding the Fourth Mediation Model

Variables	$\chi^2/df$	GFI	CFI	NNFI	SRMR	RMSEA	$\beta$	t	
NEUROT → PSE	3.82	0.95	0.94	0.92	0.057	0.076	-0.19	-3.47	
NEUROT → ATP	3.29	0.93	0.97	0.97	0.058	0.069	-0.29	-5.30	
PSE → ATP	3.27	0.96	0.99	0.99	0.028	0.068	0.52	11.16	
NEUROT → PSE → ATP	2.78	0.93	0.98	0.97	0.053	0.060	-0.19	-4.02	
NEUROT= Neuroticism		PSE= Professional Self-Efficacy		ATP= Attitude towards Profession					

In the table, it can be seen that there was a moderate, negative and statistically significant correlation between neuroticism and attitude towards teaching profession before the model was run ( $\beta = -0.29$ ,  $p < .01$ ), and the level of this correlation decreased after the mediator was included in the model but the correlation was still statistically significant ( $\beta = -0.19$ ,  $p < .01$ ). This shows that self-efficacy has a partial mediator role in the relationship between neuroticism and attitude towards teaching profession.

Bootstrap analysis was performed to determine whether the mediator role was significant and to determine the direct and indirect effect of the neuroticism personality trait on attitude towards teaching profession. The obtained values and confidence intervals (CI) are presented in Table 10.

Table 10. Bootstrap Analysis Findings

Model paths		Predictive	95 % CI	
		Coeff.s	Low	High
Neuroticism	→ Attitude Tow. Profession	-.5774	-.86	-.29
Neuroticism	→ Attitude Tow. Profession	-.4142	-.66	-.16
Self-efficacy Belief	→ Attitude Tow. Profession	-.3718	-.67	-.06
Neuroticism	→ Self-efficacy Belief	.4390	.36	.51
Model paths		Direct and Indirect Effects		95 % CI
Direct Imp.: Neuroticism	→ Attitude Tow. Profession	-.4142	-.66	-.16
Indirect Imp.: Neuroticism	→ Self-efficacy → Attitu.To. Pr.	-.1632	-.31	-.02
Total Effect		-.5774	-.86	-.29

When Table 10 is examined, it can be seen that the predictive coefficient of neuroticism which was .5774 decreased to .4142 when analyzed together with self-efficacy to predict the attitude towards teaching profession. When the Bootstrap standardized value ranges are examined, it can be seen that the significance of the correlation continues since 95% confidence interval does not include zero between the upper and lower value ranges (CI 95% =  $-.66 < -.16$ ). This shows that the partial mediator role of self-efficacy belief in the relationship between neuroticism and attitude towards teaching profession continues in the multiplied sample group (of 5000 people). When the results of Bootstrap analysis are examined, it can be seen that the direct effect coefficient of neuroticism on the attitude towards teaching profession was  $-.4142$ , the indirect effect via teaching self-efficacy belief was  $-.1632$ , the total effect coefficient was  $-.5774$ , and all of these effects were statistically significant since the 95% confidence interval did not include zero between the lower and upper values (CI 95% =  $-.66 < -.16$ ;  $-.31 < -.02$ ;  $-.86 < -.29$ ).

#### **Mediator Role of Teaching Profession Self-Efficacy in the Relationship between Openness to Experience Personality Trait and Attitude towards Teaching Profession (Model 5)**

Initially, it was understood that the personality trait of openness to experience positively affected the attitude towards the teaching profession ( $\beta = 0.20$ ,  $P < .01$ ) and the teaching profession self-efficacy ( $\beta = 0.39$ ,  $P < .01$ ). Afterwards, it was determined that the teaching profession self-efficacy also positively affected the attitude

towards the teaching profession ( $\beta = 0.52, P < 0.01$ ). As the conditions were met, it was decided to examine the mediating role of the self-efficacy belief variable of the teaching profession in the relationship between the personality trait of openness to experience and the attitude towards the teaching profession.

Table 11. Findings regarding the Fifth Mediation Model

Variables		$\chi^2/df$	GFI	CFI	NNFI	SRMR	RMSEA	$\beta$	t
OPENEXP	→ PSE	1.26	0.98	1	1	0.027	0.023	0.39	7.95
OPENEXP	→ ATP	1.96	0.95	0.99	0.99	0.043	0.045	0.20	4.03
PSE	→ ATP	3.27	0.96	0.99	0.99	0.028	0.068	0.52	11.16
OPENEXP	→ PSE → ATP	1.83	0.95	0.99	0.99	0.041	0.041	-0.00	-0.06

OPENEXP = Openness to Experience PSE= Professional Self-Efficacy ATP= Attitude towards Profession

When Table 11 is examined, it is understood that the existing relationship ( $\beta = 0.20, p < .01$ ) between openness to experience and attitude towards the teaching profession before running the model completely disappeared ( $\beta = -0.00, p > 0.05$ ) after the model was run. This shows that self-efficacy has a full mediator role in the relationship between openness to experience and attitude towards teaching profession.

Bootstrap analysis was performed to determine whether the mediator role was significant and to determine the direct and indirect effect of openness to experience personality trait on attitude towards teaching profession. The obtained values and confidence intervals (CI) are presented in Table 12.

Table 12. Bootstrap Analysis Findings

Model paths				95 % CI	
Predictive Coefficients				Low	High
Openness to Exp.	→	Attitude Towards Profession	.4427	.18	.70
Openness to Exp.	→	Attitude Towards Profession	-.0192	-.26	.22
Self-efficacy belief	→	Attitude Towards Profession	.4541	.37	.53
Openness to Exp.	→	Professional Self-efficacy Belief	1.0173	.75	1.27
Model paths			Indirect Imp.	95 % CI	
Direct Imp: Open. to Exp.	→	Att.Tow.Profession	-.0192	-.26	.22
Indirect I: Open. to Exp.	→	Self-ffic. → Att.Tow.Prof.	.4619	.30	.64
Total Effect			.4427	.18	.70

When Table 12 is examined, it can be seen that the predictive coefficient of openness to experience was .4427 (CI 95% = 0.18 < 0.70). When the openness to experience variable was analyzed together with self-efficacy, this coefficient decreased to -.0192, and 95% confidence interval included zero between the lower and upper values (CI 95% = -0.26 < 0 > 0.22), which means that the path loses statistical significance. This shows that the full mediator role of self-efficacy belief in the relationship between openness to experience and attitude towards



teaching profession continues in the multiplied sample group (of 5000 people). When the results of Bootstrap analysis are examined, it can be seen that the indirect effect coefficient of openness to experience on the attitude towards teaching profession was 0.4619 (CI 95% = 0.30 < 0.64). The direct effect of openness to experience was statistically insignificant since the 95% confidence interval did include zero between the lower and upper values (CI 95% = -.26 < 0.22). The total effect coefficient was .4427 and was statistically significant (CI 95% = 0.18 < 0.70).

## **Discussion**

In this study, the mediator role of teacher self-efficacy in the relationship between prospective teachers' personality traits and attitudes towards teaching profession was examined. In this context, direct, indirect and total effects of extraversion, openness to experience, agreeableness, conscientiousness, and neuroticism personality traits on attitudes towards teaching profession were examined. All hypotheses that were formed based on the self-efficacy theory and supported by various arguments in the introduction part of the study were accepted. The findings of the present study are similar to the findings of Üstüner (2017) study with undergraduate students who study in different programs other than teacher training program, but who are included in the pedagogical formation program (a 2-semester program) to be appointed as teachers.

The relationship between agreeableness, conscientiousness, extraversion, neuroticism and openness to experience and attitude towards teaching profession forms the basis of the findings obtained from the models that were analyzed. Of these personality traits, the effect of neuroticism on attitudes towards teaching profession is negative, while the effect of other personality traits is positive. It has been shown that the attitude of prospective teachers" towards the teaching profession can be affected by many personal variables such as psychological well-being, self-esteem, self-confidence, and values (İkiz et al. 2018; Abbasoğlu & Öncü, 2013; Parlar & Cansoy, 2017; Yalçın & Özgen, 2017). According to the study of Şenel et al. (2004), being social, supportive and tolerant, receiving help, trusting others (characteristics related to agreeableness), being balanced (related to neuroticism), cautious, sensitive and determined (characteristics related to the dimension of conscientiousness) personality traits were positively correlated with the attitude of prospective teachers" towards teaching profession, while there was no correlation between the personality traits of being independent and directive and attitudes towards the profession. In a study conducted by Uslu (2013), it was seen that four personality traits of prospective teachers except neuroticism were significant predictors of attitude towards teaching profession on their own, and extraversion was the most significant predictor of attitude towards teaching profession. In another study on the same subject (Aslan & Yalçın, 2013), while neuroticism, agreeableness, and conscientiousness were the predictors of attitude towards teaching profession, extroversion and openness to experience were not significant predictors of this variable. Although some of these findings differ with the results of the present research in terms of neuroticism, extraversion and openness to experience, it is universally accepted in the literature that there are some relationships between personality traits of prospective teachers and their attitudes towards teaching profession.

Neuroticism and agreeableness personality traits have direct effects on attitude towards teaching profession. These personality traits also have indirect effects on attitude towards the profession through self-efficacy of teaching profession. The levels of direct and indirect effects of agreeableness on attitude towards teaching profession appear to be similar. The direct effect of neuroticism personality trait on attitude towards teaching profession is bigger than its indirect effect.

Agreeableness personality trait is an indicator of individuals' tendency to comply with other individuals. People who score high in this dimension are collaborative, warm and reliable, whereas people who score low are cold, incompatible and opposing (Robbins & Judge 2017). Kim, Dar-Nimrod & MacCann (2017) stated that agreeableness is the strongest predictor of teacher effectiveness in terms of teacher's personal support. Unlike other professions, the teaching profession is carried out in an environment of relationship and interaction with a wide range of people (Celikten, Sanal & Yeni, 2005), and requires being a good team in terms of colleagues in order to realize goals related to the school and students, and creating a positive environment for students in the classroom. Establishing intensive and healthy relations with students, colleagues and parents is one of the prerequisites for being an effective teacher. It is expected that individuals who are strong in complying with other people, cooperating, and establishing warm and reliable human relations have more positive attitudes towards teaching profession. This emphasized importance of agreeableness personality trait in the teaching profession makes its direct effects on attitude towards teaching profession understandable. With reference to the above-mentioned importance in achieving educational objectives, it is understood that agreeableness affects the personal beliefs of prospective teachers about their ability of planning and realizing the teaching objectives. Teacher self-efficacy is a powerful self-regulation feature that enables teachers to utilize their potential to increase student learning, and requires the effective use of professional knowledge and skills (Gavora, 2010). As a matter of fact, Chernis (1993) considers the interpersonal domain that covers the teacher's ability to work in harmony with other people as one of the three most important components of teacher self-efficacy. The self-efficacy beliefs of individuals who are in harmony with other people, cooperating, and able to establish warm and reliable human relationships will be positively affected and this will be reflected in their attitudes towards teaching profession. In fact, Bayrakdar, Batik and Barut (2016), Nakip & Özcan (2016), and Bakaç & Özen (2017) found positive moderate correlations between professional self-efficacy and attitudes towards teaching profession.

Neuroticism is a personality trait that is exhibited based on individuals' ability to withstand stress, which manifests itself as the degree of being irritable, anxious, pessimistic and insecure, or vice versa, as calm, confident, and assured. People who score high in this trait are overly cautious. For them, it is difficult to resist the physical and psychological effects of stress (Robbins & Judge 2017). As the scores of individuals in this personality trait increase, the level of perceived stress also increases (Ebstrup et al. 2011). Individuals who score high in this trait may have low self-esteem, irrational beliefs, and pessimistic attitudes (McCrae & Costa, 2008). This personality trait of teachers is negatively correlated with teacher burnout (Kim, Jörg & Klassen, 2019) and is the strongest predictor of student performance self-efficacy (Kim, Dar-Nimrod & MacCann, 2017). Teaching is a profession that requires teachers to be calm, patient and safe, especially towards students. Possessing these characteristics more or less may lead to a number of psychological tendencies in prospective teachers that

include positive or negative evaluations towards teaching, or satisfaction or discontent. This attitude towards the profession that develops directly with the effect of neuroticism personality trait manifests on its own without affecting self-efficacy belief. The negative experiences experienced by the individual who scores high in neuroticism can be attributed to certain deficiencies that are directly linked to the elements outside of the individual without raising any doubt in the individual that s/he can perform the tasks required by the teaching profession.

Depending on the level of this personality trait, which has an important function in interpersonal relationships, the positive and negative experiences experienced by the individual also affect the self-efficacy belief for the teaching profession. Experiences of a calm, confident, positive prospective teacher will strengthen his/her personal belief that he/she can build positive relationships with students. This positively affects the prospective teachers' assessments and psychological tendencies towards teaching profession. However, it should not be forgotten that the direct effect of this dimension on attitude towards the profession is much bigger than the indirect effect through self-efficacy.

Individuals who score high conscientiousness are responsible, orderly, reliable, and determined, whereas individuals who score low are easily distracted, untidy and unreliable (Robbins & Judge, 2017). Conscientiousness personality trait is the strongest predictor of teacher effectiveness in terms of teacher's academic support (Kim, Dar-Nimrod & MacCann, 2017), and it is negatively correlated with teacher burnout (Kim, Jörg & Klassen, 2019). Since conscientiousness personality trait affects self-efficacy belief, it is an expected correlation pattern that teachers with strong conscientiousness traits will perform their duties more methodically, perform their assigned tasks with determination and not disappoint the people trusting them. In the opposite case, self-efficacy belief for teaching profession will decrease. Considering that objectively people's motivation levels, emotional states and actions depend on their beliefs rather than on the situation (Bandura, 1995), this relationship between conscientiousness and self-efficacy is expected to affect attitudes towards the profession. However, it should be noted that the effect of conscientiousness on attitude towards the profession is not direct, rather it is entirely indirect through self-efficacy belief.

The extraversion personality trait, which carries basic characteristics such as being assertive, social, sociable, energetic and talkative (Zel, 2011), affects teachers' self-efficacy beliefs towards teaching. This personality trait is negatively correlated with teacher burnout (Kim, Jörg & Klassen, 2019). In prospective teachers with these traits, reducing stress and negative emotional tendencies, their mastery, social model, verbal persuasion experiences (Bandura, 1995) and beliefs in their ability to regulate the course of and carry out the actions needed to manage potential situations related to teaching increase. This belief affects prospective teachers' thoughts, feelings, self-motivation and behavior. Extraversion does not affect attitudes towards the teaching profession directly; the effect is indirect through teaching self-efficacy.

Individuals who are strong in the dimension of openness are creative, curious and have a high level of artistic sensitivity and interested in innovation. These individuals enjoy being flexible and autonomous, and learning more. Therefore, their educational performances and capacity to adapt to change are high (Robbins and Judge,

2017). As the school is the institution highly affected by change, teachers have to keep up with it. Teachers should constantly renew themselves and be ahead of the students in terms of knowledge (Celikten, Sanal & Yeni, 2005). Prospective teachers realize these characteristics required by the teaching profession during their education. The level of teacher self-efficacy belief varies according to the degree of prospective teachers having these traits, and this affects the attitude towards the profession.

## **Conclusion**

Based on the findings of this study, it was found that teacher self-efficacy belief had a partial mediator role in the relationship between agreeableness and neuroticism personality traits and attitude towards teaching profession, and therefore, these personality traits had direct and indirect effects on the attitude towards the profession. It was found that teacher self-efficacy belief had a full mediator role in the relationships between conscientiousness (on the border), extraversion and openness to experience and attitudes towards teaching profession, these personality traits did not have direct effects on attitude towards teaching profession, and had indirect effects through teaching self-efficacy. According to these findings, it was understood that the personality traits of prospective teachers could contribute to the improvement of their attitudes towards the profession through their self-efficacy beliefs.

Considering that personality traits are taken into account in the selection process of prospective teachers, their biological origin and direct and indirect effects on attitude towards the profession, it may affect teachers' performance positively. In teacher training programs, self-efficacy beliefs and attitudes towards the profession can be improved by ensuring that prospective teachers have lives and experiences that enable them to recognize their own personality traits. By enabling individuals to learn about themselves in the early stages of teacher training programs, flexibility can be provided in higher education programs in order to switch to different programs. In teacher training programs, the processes that will increase prospective teachers' self-efficacy beliefs should be given more attention and experiences establishing opposite outcome should be cautiously avoided.

## **References**

- Abbasoğlu, E., & Öncü, E. (2013). Pre-service physical education teachers' self-esteems and attitudes toward teaching profession. *Journal of Kirsehir Education Faculty*, 14(2), 407-425.
- Akgün, F. (2020). Pedagojik formasyon eğitimi alan öğretmen adaylarının öğretim materyallerinden yararlanmaya yönelik öz-yeterlikleri ve öğretim teknolojilerine yönelik tutumlarının incelenmesi . *Trakya Eğitim Dergisi* , 10 (2) , 412-428 . DOI: 10.24315/tred.639074
- Akıncı, A. Y. (2020). The Relationship between Teacher Candidates' Self-Efficacy and Attitudes of Sports History. *International Education Studies*, 13(7), 105-112.
- Allport, G. W. (1937). *Personality*. A psychological interpretation. Newyork: Holt, Rinehart And Winston, P.48
- Andronache, D., Bocoş, M., Bocoş, V., & Macri, C. (2014). Attitude towards teaching profession. *Procedia-Social and Behavioral Sciences*, 142, 628-632.

- Aslan, S. & Yalçın, M . (2013). Five-factor personality traits predicting attitude towards teaching. *Journal of National Education*, 43 (197), 169-179.
- Ayan, Y. (2017). The effects of the levels of loneliness and shyness on self-efficacy and anger control. *Anadolu University Journal of Social Sciences*, 17 (1), 87-108. DOI: 10.18037/ausbd.415657
- Bacanli, H., Ilhan, T. & Arslan, S. (2009). Development of a personality scale based on five factor theory: adjective based personality test (ABPT). *The Journal of Turkish Educational Sciences*, 7(2), 261-279.
- Bademcioglu, M., Karatas, H., & Bulent, Alci (2014). The investigation of teacher candidates' attitudes towards teaching profession. *The International Journal of Educational Researchers*, 5(2), 16-29.
- Bahar, H. & Kagan, M. (2018). Five-factor personality traits as a predictor of self-efficacy perceptions in pre-service teachers. *Erzincan University Journal of Education Faculty*, 20 (3), 676-686. DOI: 10.17556/erziefd.406102
- Bakac, E. & Ozen R. (2017). Relationship between pedagogical certificate program Students' attitudes and self-efficacy beliefs towards Teacher profession. *Kastamonu Education Journal*, 25(4), 1389-1404.
- Bandalos, D. L. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural equation modeling*, 9(1), 78-102.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1992). Exercise of personal agency through the self-efficacy mechanism. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 3-38). Washington, DC: Hemisphere.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational psychologist*, 28(2), 117-148.
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. *Self-Efficacy in Changing Societies*, 15, 334.
- Baron, R. M. & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Baruah, P., & Gogoi, M. (2017). Attitude towards Teaching Profession in relation to Adjustment among Secondary School Teachers of Dibrugarh District. *International Journal of Humanities & Social Science Studies*, 3, 166-177.
- Bayat, G. (2019). Beş faktör kişilik özellikleri ve konaklama işletmeleri çalışanları kişilik özelliklerinin iş doyumunu düzeyleri üzerindeki etkisi. *İşletme Araştırmaları Dergisi*, 11(3), 1575-1588.
- Bayraktar, U., Vural Batik, M., & Barut, Y. (2016). The teacher self-efficacy of special education Prospective teachers and their attitudes towards teaching profession. *Journal of Kirsehir Education Faculty*, 17(2), 133-149.
- Bayram, N. (2016). *Introduction to structural equation modeling*. Bursa: Ezgi Bookstore.
- Bedel, E. F. (2008). Inter actions among Attitudes toward teaching and personality constructs in early childhood pre-service teachers. *Journal of Theory and Practice in Education*, 4(1), 31-48.

- Bektas, F., & Nalcaci, A. (2012). The Relationship between Personal Values and Attitude towards Teaching Profession. *Educational Sciences: Theory and Practice*, 12(2), 1244-1248.
- Bhargava, A., & Pathy, M. (2014). Attitude of Student Teachers towards Teaching Profession. *Turkish online journal of Distance Education*, 15(3), 27-36.
- Bumen, N. T., & Ozaydin, T. E. (2013). Changes on Teacher Self-Efficacy and Attitudes towards Profession of Teaching from Candidacy to Induction. *Egitim ve Bilim*, 38(169).
- Buyukozturk, S. (2011). *Data analysis handbook for social sciences (14th Edition)*. Ankara: Pegem Academy.
- Çalık, T., Çoban, Ö. & Özdemir, N. (2019). Okul yöneticilerinin teknolojik liderlik öz yeterlikleri ve kişilik özellikleri arasındaki ilişkinin incelenmesi. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 52(1), 83-106.
- Capa, Y., Cakiroğlu, J., & Sarikaya, H. (2005). The Development and Validation of a Turkish Version of the Teachers' Sense of Efficacy Scale. *Educational Science*, 30(137), 74-81.
- Çelik, H. E., & Yılmaz, V. (2016). *Structural equation modeling with LISREL 9.1, basic concepts-applications programming*. Ankara: Anı Publishing.
- Celikten, M., Sanal, M., & Yeni, Y. (2005). Teaching profession and characteristics. *Journal of Erciyes University Institute of Social Sciences*, 19(2), 207-237.
- Çetin, S. (2006). Developing the teaching profession attitude scale (Validity and reliability study). *Gazi University Journal of Industrial Arts Education Faculty*, 18(1), 28-37.
- Ceyhan, S., & Çiçek, H. (2020) Ortaöğretim kurumlarında görev yapan öğretmenlerin a tipi kişilik özelliklerinin tükenmişlik üzerindeki etkisinde genel sinizmin aracı rolü. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 20(2), 888-903.
- Cherniss, C. (1993). *Role of professional self-efficacy in the etiology and amelioration of burnout*. In W.B. Schaufeli, C. Maslach, T. Marek. Professional Burnout. 135-150. Washington, D.C.: Taylor and Francis.
- Creswell John, W. (2012). *Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Lincoln: University of Nebraska Daulat Purnama.
- Dadandi, I., Kalyon, A., & Yazıcı, H. (2016). Teacher self-efficacy beliefs, concerns and attitudes towards teaching profession of faculty of education and pedagogical formation students. *Journal of Bayburt Faculty of Education*, 11(1), 253-269.
- Daft, R. L. (2000). *Management*. (Fifth Edition). Orlando: The Dryden Press.
- Demirtas, H., Comert, M., & Ozer, N. (2011). Pre-Service Teachers' Self-Efficacy Beliefs and Attitudes towards Profession. *Education and Science*, 36(159), 96-111.
- Dhull K., & Jain, M. (2017). A study of attitude towards teaching profession in relation to job satisfaction among secondary school teachers. *International Education & Research Journal*, 3 (1) ,38-40.
- Doğan, T., & Çoban, A. E. (2009). The investigation of the relations between students' attitude toward teaching profession and anxiety level in faculty of education. *Education and Science*, 34(153), 157-168.
- Dolapcı, E., & Kavgacı, H. (2020). Öğretmenlerin çok kültürlü özyeterlik algısı ve okul iklimi ile mülteci öğrencilere yönelik tutumları arasındaki ilişkilerin incelenmesi. *Marmara University Atatürk Education Faculty Journal of Educational Sciences*, 52 (52) , 687-706. DOI: 10.15285/maruaebd.669692
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers.

- Ebstrup, J. F., Eplov, L. F., Pisinger, C., & Jørgensen, T. (2011). Association between the five factor personality traits and perceived stress: is the effect mediated by general self-efficacy? *Anxiety, Stress&Coping*, 24(4), 407-419.
- Emmers, E., Baeyens D. & Petry, K. (2020). Attitudes and self-efficacy of teachers towards inclusion in higher education, *European Journal of Special Needs Education*, 35(2), 139-153, DOI: 10.1080/08856257.2019.1628337
- Freeman, C. (2008). *Teacher efficacy and its impact on student achievement*. Regis University ePublications at Regis University. Retrieved from <https://epublications.regis.edu/cgi/viewcontent.cgi?article=1015&context=theses>
- Gavora, P. (2010) Slovak pre-service teacher self-efficacy: theoretical and research considerations. *The New Educational Review*. 21(2),17-30.
- Getzels, J. W., & Jackson, P. W. (1963). The teacher's personality and characteristics. In N. L. Gage (Ed.), *Handbook of research on teaching: A project of the American educational research association, a department of the national education association* (pp. 506–582). Chicago, IL: Rand McNally. [Google Scholar]
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management review*, 17(2), 183-211.
- Güneyli, A., & Aslan, C. (2009). Evaluation of Turkish prospective teachers' attitudes towards teaching profession (Near East Universitycase). *Procedia-Socialand Behavioral Sciences*, 1(1), 313-319.
- Hajovsky, D. B., Oyen, K. A., Chesnut, S. R., & Curtin, S. J. (2020). Teacher–student relationship quality and math achievement: The mediating role of teacher self- efficacy. *Psychology in the Schools*, 57(1), 111-134.
- Hall, R. J., Snell, A. F., & Foust, M. S. (1999). Item parceling strategies in SEM: Investigating the subtle effects of unmodeled secondary constructs. *Organizational Research Methods*, 2(3), 233-256.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. (2. Edition). New York: The Guilford Press.
- Hellriegel, D., & Slocum, J.W. (2008). *Organizational Behavior*. (Thirteenth Edition). Mason: South-Western, Cengage Learning.
- Hiriyappa, B. (2009). *Organizational behavior*. New Delhi: New Age International (P)Limited Publishers.
- Hoy, W. K., & Miskel, C. G., (2010). *Educational Administration: Theory, Research, and Practice*. Ankara: Nobel Broadcast Distribution.
- Hussain, L., Jamil, A., Noor, A., Sibtain, M., & Shah, S. M. A. (2011). Relationship between the Professional attitudes of secondary school teachers with their teaching behavior. *International Journal of Academic Research in Business and Social Sciences*, 1(3), 38.
- Ikiz, F. E., Asici, E., & Kaya, Z. (2018). The predictive roles of life goals and psychological wellbeing on attitudes towards teaching profession. *Journal of Bayburt Faculty of Education*, 13(25), 7-26.
- James, O. (2018). Teachers' Professional Attitudes and Students' Academic Performance in Secondary Schools in Ilorin Metropolis of Kwara State. *eJEP: eJournal of Education Policy*, 1-8.
- Juliet A.S. & Balaji P.S. (2018) A study on attitude towards teaching profession of secondary school teachers in thiruvallur district. *International education scientific research journal*, 4(3), 38-42.

- Kalafat, S. (2012). The influence of personality traits of high school teachers on their teacher qualifications. *Journal of Higher Education & Science*, 2(3),193-200.
- Kim, L. E., Dar-Nimrod, I., & MacCann, C. (2017). Teacher personality and teacher effectiveness in secondary school: Personality predicts teacher support and student self-efficacy but not academic achievement. *Journal of Educational Psychology*, 110(3), 309.
- Kim, L., Jörg, V., & Klassen, R. M. (2019). A meta-analysis of the effects of teacher personality on teacher effectiveness and burnout. *Educational Psychology Review*, 31, 163-195
- Kishton, J. M., & Widaman, K. F. (1994). Unidimensional versus domain representative parceling of questionnaire items: An empirical example. *Educational and Psychological Measurement*, 54, 757–765.
- Kucukahmet, L. (2016). Teacher education and the role of the teacher in the education system (163-174). In *Introduction to Educational Science* (Ed. Leyla Kucukahmet), 11. Baskı, Ankara: Nobel Publications.
- Manju, N. D. (2016). Attitude of student teacher stowards teaching profession. *Asian Journal of Development Matters*, 10(1), 10-19.
- McCrae, R. R., &Costa, P. T. (2008). *The five-factor theory of personality*. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 182–207). New York: Guilford Press.
- MEB, (2017). *General competencies of teaching profession* [http://oygm.meb.gov.tr/meb\\_iys\\_dosyalar/2017\\_12/11115355\\_YYRETMENLYK\\_MESLEYY\\_GENEL\\_YETERLYKLERY.pdf](http://oygm.meb.gov.tr/meb_iys_dosyalar/2017_12/11115355_YYRETMENLYK_MESLEYY_GENEL_YETERLYKLERY.pdf) has been accessed on 09.06.2019 from the address.
- Nakip, C., & Özcan, G. (2016). The relation between preservice teachers’ sense of self efficacy and attitudes toward teaching profession. *Mersin University Journal of the Faculty of Education*, 12(3),783-795.
- OECD (2009). Teaching Practices, Teachers’ Beliefs and Attitudes. Creating Effective Teaching and Learning Environments: First Results from TALIS – ISBN 978-92-64-05605-3 <https://www.oecd.org/berlin/43541655.pdf> has been accessed on 09.06.2019 from the address.
- Osunde, A. U., & Izevbigie, T. I. (2006). An assessment of teachers' attitude towards teaching profession in midwestern nigeria. *Education*, 126(3), 462-467.
- Özdamar, K. (2016). *Structural equation modeling for scale and test development in education, health and behavioral sciences*. Eskişehir: Nisan.
- Özdemir, M., Özdemir, N., Gören, S. Ç., Ötken, Ş., Ernas, S., & Yalçın, M. T. (2020). Okul müdürlerinin kişilik özellikleri ile yönetsel öz-yeterlik inançları arasındaki ilişki. *Eğitim ve bilim*, 45(201), 273-291.
- Parlar, H., & Cansoy, R. (2016). Personal values as a predictor of prospective teachers’ attitude towards teaching profession. *Marmara University, Atatürk Faculty of Education Journal of Educational Sciences*, 44, 125-141.
- Patel, S., Korde P., &Patel M., (2012). A study of professional attitude of higher secondary teachers in ut of dadraand nagar haveli. *Scholarly research journal for inter disciplinary studies*.1-6.
- Preacher KC, Hayes AF. (2008) Asymptotic and re-sampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav Res Meth*, 40(3), 879-891.
- profession from candidacy to induction. *Education and Science*, 38(169),109-125.
- Robbins, S. P., Judge, T. A. (2017). *Organizational behavior* (İnci Erdem Trans.) Pearson. Nobel: Ankara
- Sabuncuoğlu, Z., Tuz, M.V. (2016). *Organizational Behavior*. Alfa Current Publications: Bursa



- Sahin, C., & Sahin, S. (2017). Teacher candidates' attitudes towards teaching profession, self-efficacy beliefs and student recognition levels. *Turkish Journal of Educational Sciences*, 15(2), 224-238.
- Saks, K., Soosaar, R., & Ilves, H. (2016). The students' perceptions and attitudes to teaching profession, the case of Estonia. *In Proceedings of 7th International Conference on Education and Educational Psychology* (pp. 470-481).
- Sass, D. A., & Smith, P. L. (2006). The effects of parceling unidimensional scales on structural parameter estimates in structural equation modeling. *Structural Equation Modeling*, 13(4), 566-586.
- Şenel, H. G., Demir, İ., Sertelin, Ç., Kılıçaslan, A., & Köksal, A. (2004). The relationship between attitudes toward teaching profession and personality characteristics. *Educational Research*, 15 (4), 99-109.
- Serin, M, Günes, A,& Degirmenci, H. (2015). The Relationship Between the Attitudes Towards Teaching Profession and The Anxiety Level of Prospective Primary School Teachers. *Cumhuriyet International Journal of Education*, 4 (1), 21-34. DOI: 10.30703/cije.321360
- Sharma, R. (2013). Teaching Attitude of Higher Secondary Schools' Teachers of Raebareli. *Journal of Indian research*, 1(3), 154-158.
- Shittu, R. O. & Onaite, R. A. (2015). Teachers' Attitudes: A Great Influence on Teaching and Learning of Social Studies. *Journal of Law, Policy and Globalization*, 42, 131-137
- Şimşek, O. F. (2007). *Yapısal eşitlik modellemesine giriş: Temel ilkeler ve lisrel uygulamaları*. Ankara: Ekinoks.
- Şişman, M. (2014). *Örgütler ve kültürler* (4. Baskı). Pegem Akademi Yayıncılık: Ankara
- Tabachnick, B. G., & Fidell, L. S. (2015). *Çok değişkenli istatistiklerin kullanımı* (M. Baloğlu, Çev.). Ankara: Nobel Akademi.
- Tanel, Z,& Tanel, R. (2013). A Longitudinal Study on Investigation of Physics Teacher Candidates' Attitudes towards Physics Lesson and Teaching Profession. *Amasya University Journal of Education Faculty*, 2 (2), 451-468. Retrieved from <http://dergipark.org.tr/amauefd/issue/1729/21210>
- TEDMEM (2014). The teaching profession from the perspective of the teacher. <https://tedmem.org/download/ogretmen-gozuyle-ogretmenlik-meslegi?wpdmdl=968&refresh=5cfcfe7d9167c1560084093> has been accessed on 09.06.2019 from the address.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and teacher education*, 17(7), 783-805.
- Uslu, M. (2013). Investigation of relationship between pedagogical formation program students' personality traits and attitudes towards teaching profession. *International Journal of Human Sciences*, 10(2), 233-245.
- Üstüner, M. (2006). Reliability and validity study of an attitude scale of teaching profession. *Educational Administration: Theory and Practice*. 45(45), 109-127.
- Üstüner, M. (2017). Personality and attitude towards teaching profession: Mediating role of self efficacy. *Journal of Education and Training Studies*, 5(9), 70-82.
- Woolfolk, A. E.& Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of educational Psychology*, 82(1), 81.


- Yakar, L., & Yelpeze, İ. (2019). Öğretmen Yetiştiren Programlara Kayıtlı Öğrencilerin Öğretmenlik Mesleğine Yönelik Tutumları ve Öğretmen Öz-Yeterlik Algıları. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 47, 107-129 . DOI: 10.9779/pauefd.473678
- Yalçın, O. M., & Ozgen, B. (2017). The examination of pre-school teacher candidates' attitudes towards the profession and self-confidence levels (TRNC). *Journal of Educational Theory and Practice Research*, 3(3), 63-80.
- Yasunaga A., & Yaguchi K. (2014). Personality traits, self-efficacy for exercise, and exercise levels in older Japanese adults. *Japanese J Heal Psychol.* 27, 1-11
- Yıldız, N. I., Şahin, H., & Çelik, F. (2020). Investigation of Pre-Service Social Studies Teachers' Self-Efficacy Perception of and Attitudes towards the Profession of Teaching. *Journal of Curriculum and Teaching*, 9(2), 47-61.
- Zel, U. (2011). *Personality and leadership: research, theories and interpretations from a managerial perspective with universal dimensions*. Ankara: Seckin publishing.

---

### **Author Information**

---

**İsa Yıldırım, Asst. Prof. Dr.**

 <https://orcid.org/0000-0003-0365-3480>

Ataturk University

Kazım Karabekir Faculty of Education

Department of Education Sciences

25240 Yakutiye/Erzurum

Turkey

Contact e-mail: [isa.yildirim@atauni.edu.tr](mailto:isa.yildirim@atauni.edu.tr)

---