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# The predictors of senior pre-service teachers' teacher self-efficacy: achievement goal orientations, and communication skills

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**Abstract**

The purpose of the study was to determine how pre-service teachers with high and low level of teacher self-efficacy beliefs are predicted by achievement goal orientations, communication skills, department, and academic achievement scores of senior pre-service teachers by logistic regression analysis. The study was conducted with a disproportionate stratified sampling, and a total of 2542 teacher candidates from 7 geographical regions of Turkey. The data were collected through Teacher self-efficacy perception scale, Achievement goal orientation scale, and Communication skills scales with personal information form. With the scope of the research, it was concluded that the main factors affecting an individual's teaching profession perception score below/over the average were all the predictive variables that were included in the model. Communication skills, achievement goal orientation, academic achievement, and department did significantly contribute to the probability of high level of teacher self-efficacy. It can be said that as achievement goal orientation, academic achievement and communication skills increase, the probability of an individual's perception of teaching profession to be above the average increases.



***Keywords:*** Teacher self-efficacy, achievement goal orientation, communication skills, pre-service teachers.

## 1. Introduction

### *1.1. Introduce the problem*

The most important factor affecting the quality of education in a country is undoubtedly teachers. The better teachers are trained, the more beneficial students they can contribute to society by raising them for the country.

Educational programs shaped by the educational philosophy and distant goals of a country can only succeed if they can be transferred to the classroom environment and

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real-life conditions by the teachers who are the implementers of the curricula. As one of the most beautiful examples of this idea, M. Kemal Ataturk, Turkey's head teacher stated that the teachers would be the masterpiece to the new generations and gain meaning with teachers' understanding of quality and quality education. Since that day, big efforts have been made to improve teacher efficacy. The most important of these studies is the innovation efforts brought to education faculties. Education faculties, which are the main institutions for teacher training, play a great role in today's conditions, which are described as the digital age in this sense. Faculties of Education teacher training programs have witnessed both partial and radical reform attempts from history to the present day, both quantitatively and qualitatively by following per current living conditions.

Recently, in line with the changes and developments in the field of education, in the world and in our country, the updating of the "General Competencies for the Teaching Profession" was completed within the framework of the action "Updating the Teacher Competencies in line with the Needs" in the Teacher Strategy Document published in the Official Gazette on 9 June 2017. It entered into force with the Ministry's Approval dated /12/2017 and numbered 20525423. In the document, three competency areas under the titles of professional knowledge, professional skills, attitudes, and values related to the general efficacy that teachers should have been defined with 11 efficacy and 65 indicators. And the word “efficacy” was defined as the attitude, values, and skills that he/she possesses to fulfill his teaching profession efficiently, and effectively (oygm.meb.gov.tr). Also, innovations were performed about the course contents of the Faculty of Education programs as the latest change in 2018.

In the light of literature, it was found that the conceptual foundations of teacher self-efficacy are based on Bandura's (1981, 1989) Social Learning Theory. According to this theory, self-efficacy is an individual's own perception, belief, and judgment about the capacity to cope with different situations, organize the necessary activities to show a certain performance, and do it successfully (Gürcan, 2005). Efficacy, according to Bandura (2007), is a generative competence in which cognitive, social, emotional, and behavioral sub-skills must be structured and successfully coordinated to serve a variety of goals. When viewed through the eyes of a teacher, self-efficacy stresses the information, abilities, and attitudes that must be held to perform the obligations and responsibilities of teaching. In addition to having a thorough understanding of their own teaching field, the teacher was expected to plan learning-teaching activities that would provide students with skills such as effective communication, analytical, critical creative, and reflective thinking along with decision-making abilities, as well as a sense of accomplishment. It can be exemplified that when adapted to the educational environment, highly talented students in any field sometimes cannot exhibit successful performance. On the contrary, students who feel competent may have higher performance than ones who are more talented. As it was summarized, having skill or

self-efficacy alone does not pave the way for success for one person, it works when the two are together.

As well as general self-efficacy perception, many self-efficacy areas have been defined and studied in the literature in different combinations such as mathematical self-efficacy (Collins,1982; Öztürk, 2017), interpersonal self-efficacy belief (Saracaloğlu & Aydoğdu, 2012), teacher self-Efficacy (Schwarzer, Schmitz, & Daytner, 1999; Yılmaz, Köseoğlu, Gerçek & Soran, 2004; Yeşilyurt, 2013). Based on Bandura's social learning theory, the idea of teacher efficacy was employed in this study.

The second variable that was researched on teacher efficacy in the study was communication skills. The process of producing, transferring, and understanding information is known as communication (Dökmen, 1997), and communication skills mean being able to demonstrate the effective skills necessary for communication.

Education can be characterized as a form of communication, and it is believed that the more communication there is in an educational setting, the more learning occurs (Kıroğlu, 2012). So, communication skills can be expressed as one of the basic skills that are inherent in the teaching profession that teachers should have for creating effective learning environment.

As a strategic conceptual framework imported to every corner of the world, 21st the educational approach called "century skills" and seen as an indispensable global norm in recent years. According to the 2023 Educational Vision Philosophy published by the Turkish Ministry of National Education, communication skills along with creativity, teamwork, and critical thinking under the name of soft skills were seen as the basic skills that individuals should be acquired (https://2023 vizyonu.meb.gov.tr).

As the communication process in school is thought to be a basic element for effective educational activities, pre-service teachers should effectively use verbal, non-verbal and written communication types to perform the teaching profession as required. Education faculties, which are the most fundamental institutions for training teachers, play a critical role in developing teacher candidates' communication abilities. In this sense, it is important to test the communication skills of pre-service teachers along with teacher efficacy perceptions.

There have been some studies conducted with different measurement tools to determine the communication skills of teacher candidates and their effects on different variables. The relationship between preservice teachers' communication abilities and problem-solving skills, as well as reading interest and habits, has been studied in research on teachers' communication skills (Saracaloğlu, Yenice & Karasakaloğlu, 2009), academic motivation (Saracaloğlu & Dinçer, 2009), classroom management skills (Yılmaz, N., & Altunbaş, Yavuz, 2012), teacher self-efficacy perceptions (Özdemir & Özkan, 2018), academic prosrastination, academic motivation and anxiety about PPSE (Saracaloğlu, Dinçer, Eken & Bayık, 2020) were investigated. However, no large-scale

studies were found that attempted to explain how communication skills and accomplishment objectives impacted teacher candidates' perceptions of self-efficacy.

As another variable in the study motivation is one of the concepts that has a special importance in the teaching profession in affective field. Dweck (1986) demonstrates how motivational processes may make excellent use of children's current abilities and knowledge while also teaching those new skills and information that they can apply to unexpected circumstances. This approach does not deny individual differences in existing skills and knowledge, but rather shows that the use and growth of this ability is noticeably influenced by motivational factors. So, the tendency to do the teaching profession and to show a high performance in the profession is directly related to personal change and development.

In this study, the teaching profession was considered as one of the professions with individual efficacy, and it was considered as one of the concepts thought to have a critical role in the motivational process, whose achievement orientations are associated with high perception of the teaching profession. Although there are different motivation theories, achievement goal theory is one of the widely used theories explaining why students participate in the learning process, the purpose, and justifications of learning (Kadioglu & Uzuntiryaki-Kondakci, 2014).

An achievement goal is a specific type of goal, one in which the focal end state or result is competeny (Elliot & Trash, 2001) and achievement goals are seen as tangible purposes by which individuals pursue their more abstract aspirations, worries, needs, and motives, according to Hulleman, Schrager, Bodmann, & Harackiewicz (2010).

Achievement orientation approach, led by Dweck (1986) in the late 1970s and early 1980s, with the studies in which Nicholls (1984), Ames (1984), and Maehr (1983) examined the characteristics that individuals who want to achieve their success goals should have at their competence levels (as cited in Elliot, 1999) and has been popularly replaced in the literature with the 2x2 model (Elliot, 1999; Elliot & Trash, 2001). There is no agreement, according to Elliot (2005), on whether the term "goal" in "achieving goal orientations" (GO) is best expressed as a "aim," a "overarching orientation incorporating many "aims," or a mix of aims and other activities. Goal theory research provides support for many models of goal orientation as in the opinion of comprehensive explanation describing both the purpose of the behavior and the energy of the behavior (Elliot & Trash, 2001).

The three-dimensional conceptualization of the 2x2 achievement goal framework, which has been developed through experimental studies over the years, basically the approach and avoidance behavior of performance and mastery goals; In other words, it differs between positive / desired and negative / undesirable target categories (Elliot & Trash, 2001); however, it holistically approaches the goals of expertise based on approach (approach orientation). Because these were the most utilized forms of competency-based

objectives, three types of accomplishment goals were highlighted: performance approach, performance avoidance, and mastery (Elliot, 1999; Pintrich, 2000).

Learning-approach goal orientation tends to develop skills and abilities such as learning something, understanding a material (Elliot, 1999), and learning the educational contents that it encounters during the learning process (Akın, 2006; Arslan & Akin, 2015); learning-avoidance, on the contrary, is in the direction of forgetting what you have learned, misunderstanding what you read / material, leaving without completing a task, in short, the development of existing skills and abilities is stagnant or even losing (Elliot, 1999). In contrast to mastery avoidance objectives, which stagnate, mastery approach goals involve trying to improve skills and talents, enhance one's learning, and grasp content. Similarly, performance goals orientations, which have tendencies to approach and avoid, deal with normative competencies. Emotionally, exam anxiety can cause positive and negative consequences such as postponing work, shallow processing of information (Elliot, 1999; McGregor & Elliot, 2002; Arslan & Akin, 2015). They tend not only to focus on their own abilities but also to be compared to others. This methodology doesn't deny contrasts in present abilities and information or "local" capacity or inclination. It proposes, in any case, it proposes, regardless, that the use and improvement of that limit can be affected by powerful factors. Teachers' goal orientations for teaching, as indicated by Yıldızlı (2019), are one of the most significant motivational beliefs influencing instructional processes, and it is expected that teacher candidates will approach learning and performance in ways that reflect their higher motivation levels.

### *1.2. The significance of the study*

Teacher training in Turkey has witnessed radical changes, sometimes partially and sometimes in line with the changing living conditions and expectations of the age. As a recent proof of these changes, Prof Dr. Yekta Saraç, as a chair of the Higher Education Council (HEC) stated that the courses, curricula, and credits of teaching programs in education faculties would be decided by higher education institutions (HEC, 2020). In this case, education faculties and curriculum development specialists in universities have a great job to train prospective teachers well by selected courses.

When the existing teacher training programs, course contents and the content of the Public Personnel Selection Exam (PPSE) which was a must to take to work in any state institutions are examined, it is seen that the criterion of success is often measured as academic success and no practice has been made to measure the affective and social skills of teacher candidates. It is obvious that the development of cognitive processes of teacher candidates is always emphasized with the existing written exams and the importance of their affective and social development is not measured in any exam in teacher training process so such studies conducted by external researchers will shed light on the future teacher training programs in the context of model proposals to be developed. Since it is a large-scale study, it is important in terms of describing the existing situation and revealing the competencies of teacher candidates through a model. How they perceive

themselves professionally is considered valuable in terms of affecting their teacher efficacy at the beginning stage of the profession. Understanding to what extent pre-service have communication skills and their motivation to perform teaching seem very important in terms of conducting studies on the further development of their teaching efficacy on teacher education. There was no direct study integrating all these variables together and examining teacher self-efficacy as a dependent variable in the literature. It is believed that it will contribute to the literature in this respect.

The problem statement of the research was formed as follows:

Is there a statistically significant role of achievement goal orientation, communication skills, academic achievement, and department in the evaluation of teacher candidates' scores obtained from the teacher self-efficacy perception scale as above and below the average (29.2)?

## 2. Method

The study was conceptualized as a relational survey model with the goal of determining whether or not two or more variables are co-variable (Karasar, 2013). In this study logistic model was utilized to explain the effect of achievement goals, communication skills, department, and academic achievement scores on teacher self-efficacy.

### *2.1. Participant characteristics*

The study was conducted in the 2018-2019 academic year. Stratified sampling was used to represent the universe, considering certain characteristics. Certain features mean the layer and substrates representing the universe (Ekiz, 2015). While determining the study group, it was tried to provide maximum diversity by determining 15 universities from each region and their common departments (Classroom, Social and Science Teaching), representing the 7 geographical regions of Turkey. It was delivered to 4th grade students studying in the common three branches of the Education faculties of the selected universities, including regular and evening education, by cargo on paper and via online google form and it was applied on a voluntary basis. The number of students to be included in the sample was calculated but left halfway, and it was decided to make disproportionate stratification considering the missing forms from the universities. For this reason, the number of samples in the universities that can be reached varies. Information about the sampling is given in the Table 1.

Table 1. Characteristics of the study group

| Variables | | f | % |
|---|---|---|---|
| Gender | Female | 1724 | 67.8 |
| | Male | 818 | 32.2 |
| Departments | Science Teaching | 794 | 31.2 |
| | Classroom Teaching | 886 | 34.9 |
| | Social Sciences Teaching | 862 | 33.9 |
| University | Adıyaman University | 140 | 5.5 |
| | Akdeniz University | 151 | 5.9 |
| | Amasya University | 47 | 1.8 |
| | Balıkesir University | 126 | 5.0 |
| | Celal Bayar University | 136 | 5.4 |
| | Çoruh University | 230 | 9.0 |
| | Dicle University | 291 | 11.4 |
| | Ege University | 233 | 9.2 |
| | Erciyes University | 100 | 3.9 |
| | Erzincan University | 310 | 12.2 |
| | Fırat University | 318 | 12.5 |
| | Karadeniz Teknik University | 94 | 3.7 |
| | Kilis University | 84 | 3.3 |
| | Muğla Sıtkı Koçman University | 200 | 7.9 |
| | Uludağ University | 82 | 3.2 |
| | Total | 2542 | 100 |

As seen in the table, 2542 senior students studying in Science Teaching, Classroom Teaching and Social Sciences departments from 15 universities in different geographical regions under the basic roof of the primary education department participated in the study. There were 1724 (67.8 %) females and 818 (32.2 %) males.

### *2.2. Data Collection Tools*

In the study along with personal information form questioned gender, university, department and academic grade score, 3 data collecting tools were used as defined below:

**Teacher Self-Efficacy Perception Scale (TSEPS)**

In this study, "Teacher self-efficacy scale" developed by Schwarzer, Schmitz and Daytner (1999) based on Bandura's Theory was adapted and used to measure teachers' perception of self-efficacy by Gülebağan (2003). It was a 9-item 4-point Likert type scale with one dimension (1=strongly disagree, 4=strongly agree). It can be calculated as low-medium-high perception with one dimension. The internal consistency coefficient (Cronbach) of the scale was found to be α = 79, in the present study it was calculated as α = .84.

**2x2 Achievement Goal Orientations Scale (AGOS)**

It was developed by Elliot & Muraya (2008) and the Turkish adaptation validity-reliability studies were conducted by Arslan & Akın (2015) on students studying in different departments of the Faculty of Education. The 2X2 AGOS has a structure with 12 items and four factors namely learning-approach learning-avoidance, performance-approach and performance-avoidance. It was a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). And Cronbach alpha internal consistency reliability coefficients for the subscales were found as .72, .68, .62, and .69 orderly. In the present study Cronbach alpha coefficients were calculated as .87 for the scale and .67 for learning approach, .74 for learning-avoidance, .84 for performance approach, and .78 for performance-avoidance sub-dimensions.

**Communication skills scale (CSS)**

Communication skills scale was developed by Korkut Owen & Bugay (2014) on university students. It's a 5-point Likert scale with 1 being "never" and 5 being "always". The scale has a structure with 25 items and four factors. These factors factor have been named as, communication principles and basic skills (CPBS), personal expression (PE), nonverbal expression (NE) and lastly willingness to communicate (WTC). For the internal consistency reliability of the scale, the Cronbach alpha coefficient was determined, and the internal consistency coefficient of the 25-item scale was calculated as.88. The internal consistency coefficients of the sub-dimensions of the scale were determined as .79 for the CPBS; .72 for NE; as .64 for NE and .71 for WTC (Korkut Owen & Bugay, 2014). In this study the internal consistency coefficients of the sub-factors of

the whole scale were found as .93, and for sub-dimensions .85, .77, .83, and .73 were found orderly. The results that the all the scales used in the study are sufficient for the level of reliability (above .70).

### *2.3. Data Collecting Procedure*

The study was carried out in accordance with ethical principles after the scale permissions were obtained. It took approximately 10 minutes for voluntary participants to fill in the forms during their free time in their classes or online via by internet.

### *2.4. Data Analysis*

In line with the above problem statement, logistic regression analysis was carried out within the scope of the research. Binomial logistic regression (also called simply "logistic regression") is basically a supervised classification algorithm. Although logistic regression has very similar features to linear regression, it differs from linear regression in some points. In the case of linear regression analysis, the value of the dependent variable; In logistic regression, on the other hand, the probability of realization of one of the values that the dependent variable (also called "target variable" or "output variable") can take is estimated. The most important difference that distinguishes logistic regression from linear regression is that in linear regression the dependent variable is continuous, whereas in logistic regression the dependent variable has two categories. At the same time, there is no requirement to provide the assumption of normality for logistic regression. These differences between logistic regression and linear regression are also reflected in the assumptions that must be made before performing logistic regression. At the same time, normality assumption is not sought for logistic regression analysis.

Before performing the logistic regression analysis within the scope of the research, the assumptions regarding the analysis were tested.

#### *2.4.1 Binomial Logistic Regression Assumptions*

1. The dependent variable must have two categories. The total score obtained from the teaching profession perception scale consists of two categories: below average (0) and above average (1).

2. The independent variable(s) can be in a continuous (interval and ratio scale) structure or (or) categorical. The variables of department and academic achievement were categorical; achievement goal orientation total scores and communication skills total scores are in continuous structure.

3. The independence of observations must be ensured. It is assumed that the independence of the observations is provided by the established model.

5. There should be no multicollinearity between independent variables. Multicollinearity can lead to incorrect estimation of the regression coefficients, exaggeration of the

standard errors of the regression coefficients, resulting in an increase in the confidence intervals and a decrease in the t-test value. In terms of testing multi-connection, the values in Table 2 were examined.

If the absolute value of the correlation coefficient between the variables is close to 1, it is stated that there is a multicollinearity between those independent variables. Variance inflation values (VIF); As these values get larger (VIF values ≥ 10), it can be mentioned that there is a multicollinearity between the relevant independent variables. The larger the VIF value, the greater the multicollinearity between the variables. In general, when the VIF value is above 10, it is accepted that there is a multicollinearity between those variables. In short, for the values in Table 2, the conditions of Tolerance> 0.20 and VIF <10 must be met. When Table 2 is examined, it is striking that the relevant conditions are met for each variable. As a result, it was concluded that there was no multicollinearity between the independent variables.

Table 2. Collinearity statistics

| | VIF | Tolerance |
|---|---|---|
| Achievement goal orientation total score | 1.03 | 0.966 |
| Communication skills total score | 1.03 | 0.967 |
| Department | 1.01 | 0.994 |
| Academic success | 1.01 | 0.991 |

## 3.Results

### *3.1. Logistic Regression Outputs*

The first output obtained within the scope of the logistic regression analysis is the output of the starting block, "Block 0". The table regarding the relevant output is given in Table 3.

Table 3. Iteration history for block 0

| Iteration | | -2 Log likelihood | Coefficients |
|---|---|---|---|
| | | | Constant |
| Step 0 | 1 | 3470,541 | ,286 |
| | 2 | 3470,539 | ,288 |
| | 3 | 3470,539 | ,288 |

The results in the table above are the results of the analysis when all the independent variables in the model are excluded. This will allow us to make comparisons as our predictor variables were included in the analysis. In this regard, the "Iteration History for Block 0" table will be used later in the interpretation of the model.

The next table obtained within the scope of the analysis is the Table 4 which includes information on the classification percentage for Block 0.

Table 4. Classification Table for Block 0

| | Observed | | Predicted | | |
|---|---|---|---|---|---|
| | | | Teacher self-efficacy _total | | Percentage Correct |
| | | | 0 | 1 | |
| Step 0 | Teacher self efficacy_total | 0 | 0 | 1089 | ,0 |
| | | 1 | 0 | 1452 | 100,0 |
| | Overall Percentage | | | | 57,1 |

When Table 4 is examined, the percentage of all correctly classified samples is 57.1. In this case, the program used for analysis (SPSS) estimated that all individuals scored above average. This is because the number of those who scored above average was higher than those who scored below the average (1,452 above-average, 1089 below-average). The program estimates all individuals as belonging to the category with the highest number of individuals (Field, 2009).

What is expected in the continuation of the analysis is that the accuracy of this estimation is proven when the set of predictive variables is included in the model. However, since the aim of the research is to test the model formed when the predictive variables are added to the analysis, from this point on, we will continue with the findings and comments on Block 1, where the model is tested. The first table to be interpreted in this context is Table 5.

Table 5. Omnibus tests of model coefficients

| | | Chi-square | Df | Sig. |
|---|---|---|---|---|
| Step 1 | Step | 471,342 | 10 | ,000 |
| | Block | 471,342 | 10 | ,000 |
| | Model | 471,342 | 10 | ,000 |

Table 5, named "Omnibus Tests of Model Coefficients", gives general findings about how well the model constructed with logistic regression works. It does this through the results obtained for Block 0, where no arguments are added to the model. This is called the goodness of fit test (Pallant, 2005; Tabachnick & Fidell, 2013).

The significance value (Sig. value) for the results set in Table 5 should be less than .05, that is, a very high significance value is expected. The p-value for the application is .000. Thus, it can be said that the model established by logistic regression (including the variables used as predictors) is better than the original prediction appearing in Block 0, where everyone scored above the average. Because the chi-square value is significant, it

indicates that the created model predicts better than the initial model with only the constant term.

The next table in the output is the Table 6 titled “Model Summary”.

Table 6. Model summary

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|---|
| 1 | 2999,197a | ,169 | ,227 |

Table 6 gives some information about the usefulness of the model in general terms. When Table 6, which contains summary information about the model, is examined, first, the -2 Log likelihood value stands out. Then, “The Cox & Snall R Square” and “Nagelkerke R Square” values stand out. These values allow us to make an inference about the amount of change in the dependent variable explained by the model (from the minimum value 0 to the maximum value approximately 1). They are defined as pseudo-R square statistics (pseudonym, unreal) rather than real R square values obtained from the multiple regression output (Field, 2009). In this example, the two values mentioned are .169 and .227. These values indicate that approximately 17% to 23% of the variability is explained by the set of variables.

The next table is Table 7, which contains the Hosmer and Lemeshow test result.

Table 7. Hosmer and Lemeshow test

| Step | Chi-square | df | Sig. |
|---|---|---|---|
| 1 | 13,826 | 8 | ,086 |

The results in the table titled "Hosmer and Lemeshow Test" also support the usefulness of the established model. The Hosmer and Leemeshow test is one of the most reliable model fit tests and is interpreted quite differently from omnibus tests. For the Hosmer and Lemeshow test of goodness of fit, a significance value less than .05 indicates low fit. Therefore, we need a value greater than .05 to support our model (Hosmer

The results in the table titled "Hosmer and Lemeshow Test" also support the usefulness of the established model. The Hosmer and Leemeshow test is one of the most reliable model fit tests and is interpreted quite differently from omnibus tests. For the Hosmer and Lemeshow test of goodness of fit, a significance value less than .05 indicates low fit. Therefore, we need a value greater than .05 to support our model (Hosmer and Lemeshow, 2000; Pallant, 2005). In our example, our chi-square value for the Hosmer-Lemeshow Test is 13,826 with a significance level of.086. This value is greater than .05, so it can be interpreted that the model is supported.

The next table obtained within the scope of logistic regression analysis and to be interpreted is the "Classification table".

Table 8. Classification table for the model

| Observed | | | Predicted | | |
|---|---|---|---|---|---|
| | | | Teacher self efficacy_total | | Percentage Correct |
| | | | 0 | 1 | |
| Step 1 | Teacher self efficacy_total | 0 | 571 | 518 | 52,4 |
| | | 1 | 298 | 1154 | 79,5 |
| | Overall Percentage | | | | 67,9 |

This table gives us an indication of how well the model can predict the correct category (above/below average for perception of teaching profession) for each individual. To see how much of an improvement there is when the predictor variables are included in the model; this table can be compared to the "Classification Table for Block 0" table. When table 8 was examined, it is striking that the established model correctly classifies 67.9% of the individuals in total. This is sometimes referred to as percentage accuracy in classification: PAC. This is an improvement over 57.1% on Block 0.

The sensitivity of the model; the percentage of the group with the feature of interest correctly defined by the model (the true positives). When Table 8 is examined, it is striking that 79.5% of the individuals who are above the average for the perception of teaching profession are correctly classified. The originality of the model is correctly identified (the true negatives) is the percentage of the group that does not have the trait of interest. When Table 8 is examined, it is striking that the originality of the model is 52.4% (in this way, the correct classification of individuals who are below the sampling average in terms of teaching profession perception by the model). Positive predictive value is the percentage of individuals that the model classifies as having the truly observed trait in this group (Kleinbaum & Klein, 2010). As a result of the calculation, the positive predictive value was found to be 69%. Well; 69% of the people who were estimated to be above the average in terms of teaching profession perception were correctly selected by the established model. Negative predictive value is the percentage of individuals that the model predicts as non-featured and who are observed to lack the trait (Kleinbaum & Klein, 2010). In this example, because of the calculation performed using the required values in the table, it was concluded that the negative predictive value is 66%.

The last table obtained because of the logistic regression analysis carried out within the scope of the research is Table 9 named "Variables in the Equation". This table provides information about the importance or contribution of each of our predictor variables. The test used here; It is known as Wald test and in the column named Wald, statistical significance value of each predictor is seen (Pallant, 2005).

Table 9. Variables in the equation

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 1a | Department | | | 11,695 | 5 | ,039 | |
| | Department (1) | -,115 | ,113 | 1,050 | 1 | ,306 | ,891 |
| | Department (2) | -,317 | ,111 | 8,202 | 1 | ,004 | ,729 |
| | Department (3) | 20,649 | 40192,969 | ,000 | 1 | 1,000 | 928295270,436 |
| | Department (4) | -,107 | ,527 | ,042 | 1 | ,839 | ,898 |
| | Department (5) | ,549 | ,394 | 1,938 | 1 | ,164 | 1,731 |
| | Academic success | | | 9,929 | 3 | ,019 | |
| | Academic success (1) | ,475 | ,156 | 9,228 | 1 | ,002 | 1,607 |
| | Academic success (2) | ,467 | ,162 | 8,276 | 1 | ,004 | 1,595 |
| | Academic success (3) | ,507 | ,235 | 4,635 | 1 | ,031 | 1,660 |
| | Achievement goal orientation | ,068 | ,006 | 114,506 | 1 | ,000 | 1,070 |
| | Communication skills | ,041 | ,003 | 143,552 | 1 | ,000 | 1,042 |
| | Constant | -7,355 | ,429 | 293,377 | 1 | ,000 | ,001 |

In Table 9, firstly, the significance value of Wald statistics, Sig. values smaller than .05 in the column named (Significance) were investigated. These are the variables that have statistically significant contributions to the predictive ability of the model. When the Significance column was examined, it was concluded that the variables of achievement goal orientation, academic achievement, department, and communication skills scores were all statistically significant for the model.

In other words, within the scope of the research, it was concluded that the main factors affecting an individual's teaching profession perception score below/over the average are all the predictive variables that we included in the model. Achievement orientation, academic achievement, department, and communication skills significantly contributed to the model. The B values given in the second column are equal to the B values obtained in the multiple regression analysis. These are values to be used in an equation where the probability of a sample falling into a particular category is calculated. It should be checked whether these B values are positive or negative. This gives us information about the direction of the relationship (which factors increase the probability of a yes answer and which factors decrease it) (Field, 2009). At this point, when table 9 is examined, it can be said that as achievement goal orientation, academic achievement and communication skills increase, the probability of an individual's perception of teaching profession to be above the average increases.

Another important statistic is given in the “Exp (B)” column in the Table 9. These values represent the odds coefficients for each of our independent variables (OR: odds ratios). An increase (or decrease if less than 1) of the odds can be reported for a one-unit

increase in each variable that has a statistically significant contribution to the model (Peng & So, 2002).

## 4.Discussion

In this study role of achievement goal orientation, communication skills, academic achievement, and department in the evaluation of teacher candidates' scores (above and below the average) obtained from the teaching profession perception was investigated by logistic regression analysis.

The results of the logistic regression analysis indicated that communication skills and achievement goal orientations along with categorical variables as department and academic achievement scores of senior pre-service teachers have a significant influence on high level of teacher self-efficacy. Achievement orientation, academic achievement, department, and communication skills significantly contributed to the model. In other words, it has been revealed that all variables included in the model are significant on the potential to increase teacher self-efficacy.

The most striking result about the study was that the most significant predictor was communication skills. In other words, having higher communication skills attiribute to higher teacher self-efficacy of senior pre-service teachers. Efficient job performance, career promotion, and success for teaching all fields require strong communication abilities. Similarly in some studies, positive relationship was found between teacher self-efficacy and communication skills and communication skill was found as an important predictor of teacher self-efficacy perception of teacher candidates (Çiftçi & Taşkaya, 2010; Saka & Surmeli, 2010; Özkan, Dalli, Bingol, Metin & Yaralı, 2014; Özdemir & Özkan, 2018).

Different sorts of communication skills and self-efficacy are also investigated in studies. Tucker and McCarthy (2001) investigated whether the experiential character of service-learning increases undergraduate business students' presenting self-efficacy through in-class presentations beyond standard classroom tasks. All pupils were required to give presentations in class. As a result, while students' presentation efficacy was anticipated to improve through classroom practice, this study focused on the influence of service-learning beyond the regular classroom benefits. Furthermore, the results showed that students improved their presentation efficacy; students who had low pre-test presentation efficacy benefited the most from this experiential activity.

Based on total and subscale scores, Erdem (2018) found moderate and substantial positive significant connections between pre-service Turkish teachers' speech self-efficacy views and communication skills. Through a different perspective, Yıldırım (2021) investigated student teachers' attitudes toward teaching and discovered that had a complete mediation impact on the link between instructors' communication skills and student teachers' self-efficacy views. Because of the investigation, it was discovered that the instructors' communication abilities influenced the attitudes of student teachers.

The second significant factor that influence high teacher self-efficacy was achievement goal orientation. The increase in achievement goal orientation leds increase the probability of high teacher self-efficacy in the study. In the literature there have been studies conducted achievement goals of students with different variables. For instance, Harackiewizcz, Barron, Tauer, Carter and Elliot (2000), in their longitudinal studies conducted by university students within the scope of the introductry pschology course, showed that mastery and performance goals had positive and complementary effects in the context of motivation and performance in a long and short time, and that students' academic performance and field. They have achieved positive educational outcomes indicating that their interest continues.

Butler (2007) investigated at teachers' achievement goal orientations and how they relate to their need for assistance. Mastery objectives predicted positive perceptions of help seeking, preferences for getting autonomous support, and frequency of help seeking; ability avoidance predicted negative perceptions and help avoidance; and work avoidance predicted expedient help seeking, according to the findings. Kadioglu, Uzuntiryaki-Kondakci (2014) examined the relation between achievement goals and learning strategies in Chemistry lesson. The findings revealed the same pattern for all strategy types: performance-approach and mastery-approach goals positively predicted students' learning strategies. Turner (2014) found out that elementary teachers' achievement goal orientations were significant predictors of self-efficacy for teaching and teachers' perceptions of their own help-seeking. Tivikelli, Eleftheria, Gonida and Grigoris Kiosseoglou (2015) investigated Greek evaluation educators' motivation for teaching and their obligation to flexible instructional practices and found teachers' power target bearing foreseen their instructional frameworks towards strength clearly, similarly as indirectly by methods for sufficiency feelings. And similar to the present study, combing self-efficacy and burnout measures, Yıldızlı (2019) studied the structural relationship between teachers' goal orientations for teaching and their attitudes toward their jobs. It was discovered that mastery goal orientation, as measured by self-efficacy and burnout, is a positive predictor of attitudes toward teaching, whereas work-avoidance orientation, as measured by self-efficacy and burnout, is a negative predictor of attitudes toward teaching.

Although long years ago, Sinclair (2008) answered the question "what would inspire someone to pursue a career as a teacher?" in his study. Findings revealed that student instructors are driven in a variety of ways to become instructors but the most popular reasons for selecting teaching showed a favorable self-evaluation of their qualities and talents as teachers, as well as their ability to work with children. Also, Dinham and Scott (2000) conducted a massive survey including three different countries and more than 2000 teachers. They 7 reported that when they asked their orientation to become teachers, "always wanting" was the most common answer in all three countries: Australia, England, and New Zealand.

In the teaching-learning process, students are subject to process and mostly product evaluation and at the end of the entire 4-year evaluation process at the faculty. They

graduate with a diploma note that is an important effect on entrance of (PPSE) public personnel selection examination be appointed as teachers or graduate exams to continue their career. In this sense, it is noteworthy that the academic achievement score is a determining variable for teacher self-efficacy as it was indicated in Dağyar & Şahin (2020)'s study.

As a result, when students realize that they are effective in the evaluation process, their enthusiasm in their learning processes grows, indicating that their self-efficacy beliefs are improving. It can be thought that the academic achievements of teacher candidates who have high emotional motivation increase in direct proportion and increase their teaching self-efficacy in a positive way. As a result, those who observe that they are effective in the evaluation process gain confidence in their learning processes, implying that their self-efficacy views are high.

Together with academic achievement scores, the department variable has the potential to increase/decrease the perception of teacher self-efficacy, but the results of the studies conducted in the domestic and international literature show that different results are revealed in comparison of different departments. It is important to remember that teacher self-efficacy is context dependent, with degrees of efficacy varying between subject areas, settings, and student groups (Tschannen-Moran and WoolfolkHoy, 2007). In this study, the department variable was chosen under the basic roof of the primary education department based on the common departments of the universities and it was seen that it significantly increased the teacher's self-efficacy. Considering that all departments included in the research do not create a significant difference in teaching self-efficacy, it can be thought that studies with different departments will yield different results. There are studies examining teacher self-efficacy with different departments, although not exactly. For example, Şahin (2017) mentioned the differences between departments and it was determined that pre-service teachers studying in different departments of Uludağ University, which constitutes the sample of the research, have high self-efficacy beliefs except for the department of social studies teaching. In terms of the department variable, pre-service teachers from the English language education department had the highest mean, followed by those from the pre-school education department. In this regard, pre-service teachers from the department of science and technology education had the lowest mean (Balyer, 2017). As a result of Wangid, Mustadi & Purbani (2021)'s study, there is a substantial difference in teacher perception between students with the social humanity department and students with the exact department; students with the social humanity department have a better perception than students with the exact department.

In conclusion, having the necessary communication and interaction skills, as well as a desire to be a teacher, support strong teacher self-efficacy in this study. The chosen department and academic achievement were also found to increase the likelihood of higher perceptions of teaching self-efficacy as categorical variables. It may be deduced

that all the findings are in the right order. In the broad sense it can be thought that the high self-efficacy of senior pre-service teachers enables them to demonstrate a better performance in their teaching life.

*Limitations*

Assessing teachers' self-efficacy is a diverse field that is generally inferred from behavioral indicators such as goal-directed actions rather than seen directly. This qualitative study was limited to the scales used for evaluating these variables, and the senior pre-service teachers from the selected universities from 7 regions in Turkey.

*Suggestions*

Communication skills are included in the logistic model as one of the most notable variables that predict teacher efficacy areas. It is thought-provoking that the Education Faculties take place only in the status of general culture elective courses, excluding the Guidance and Psychological Counseling department, in the curriculums of all branches updated in 2018 during their candidacy. With the transfer of authority to universities by Higher Education Council (HEC) in 2020, courses and practices such as in class presentations that support the development of communication skills application-based programs can take their place in academic programs. New policies should be advocated to encourage pre-service teachers to improve their communication skills. Also, seminar courses can be added to improve communication skills; participation in conferences, courses, etc. activities can be encouraged. Studies to improve communication skills can be scored.

Longitudinal studies from 1st grade to 4th grade can be carried out and the process can be followed, communication skills trainings can be promoted with effective strategies during the process for the needed ones.

Teacher training is above all a necessity for the development and welfare of society. Based on the competency areas, research can be made on different variables that predict teacher candidates 'and teachers' perceptions of teaching profession, the results can be compared and integrated into teacher training programs with comprehensive projects.

It may be suggested to pay attention to affective field acquisitions to choose the teaching profession of students with high achievements, to provide scholarships, and to support their motivation during their education. Within the scope of the evaluation of the success of the students, it can be suggested that in addition to the academic course success points, the in-class and club activities that require communication, group, cooperation, and teamwork should be increased and it should have an impact on the performance grade.

**References**

Akın, A. (2006). 2x2 Başarı yönelimleri ölçeği: Geçerlik ve güvenirlik çalışması [The validity and reliability study of 2x2 achievement goal orientations scale]. *Sakarya University Journal of Education/ Sakarya Üniversitesi Eğitim Fakültesi Dergisi*, *0*(12), 1-13. https://dergipark.org.tr/tr/pub/sakaefd/issue/11209/134075

Arslan, S., & Akın, A. (2015). 2x2 Başarı yönelimleri ölçeği (revize formu): Geçerlik ve güvenirlik çalışması [The validity and reliability study of 2x2 achievement goal orientations scale (revised form)]. *Sakarya University Journal of Education/ Sakarya Üniversitesi Eğitim Fakultesi Dergisi*, *5*(1),7-15. https://doi.org/10.19126/suje.05454

Ayotola, A., & Adedeji, T. (2009). The relationship between mathematics self-efficacy and achievement in mathematics, *Procedia- Social and Behavioral Sciences*, *1*(1), 953-957. https://doi.org/10.1016/j.sbspro.2009.01.169

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Upper Saddle River, NJ: Prentice Hall.

Bandura, A. (1989). *Social cognitive theory*. In R. Vasta (Ed.), Annals of Child Development, Six theories of child development. (Vol. 6., pp. 1-60). Greenwich, CT: JAI Press.

Bandura, A. (1997). *Self–efficacy: The exercise of control*. New York: Freeman.

Bandura, A. (2007). Reflections on an agentic theory of human agency. *Tidsskrift for Norsk Psykologforening,* 44(8), 995-1004.

Balyer, A. (2017). Pre-service teachers' perceptions of their competency for the teaching profession. *Cumhuriyet International Journal of Education, 6*(2), 230–248.

Butler, R. (2007). Teachers' achievement goal orientations and associations with teachers' help seeking: Examination of a novel approach to teacher motivation. *Journal of Educational Psychology, 99*(2), 241-252. https://doi.org/10.1037/0022-0663.99.2.241

Cingiloğlu, H. (2020). *Hizmet İçi İngilizce Öğretmenlerinin Öğretmeye Yönelik Hedef Yönelim Algıları: Bir Karma Yöntem Çalışması/Öğretmen Motivasyonu*. [In-Service English Teachers' Perceptions of Goal Orientation towards Teaching: A Mixed Method Study/Teacher Motivation ] Bursa Uludağ Üniversitesi Eğitim Bilimleri Enstitüsü. Bursa.

Çiftçi, S., & Taşkaya, S. (2010). Sınıf öğretmeni adaylarının öz yeterlik ve iletişim becerileri arasındaki ilişki. *Education Sciences*, *5* (3), 921-928. https://dergipark.org.tr/en/pub/nwsaedu/issue/19823/212299

Dağyar, M. & Şahin, H (2020). Eğitim fakültesi öğrencilerinin öz düzenleme öğrenme stratejilerinin ve akademik başarılarının öz yeterlik inançlarını yordama gücü [The predictive power of self-regulation learning strategies and academic achievements of education faculty students on their self-efficacy beliefs]. *Bolu Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi/ Bolu Abant İzzet Baysal University Faculty of Education Journal, 20*(1), 396-414.

Dökmen, U. (1997). *İletişim çatışmaları ve empati* [Communication conflicts and empathy] (14th ed.). Sistem Publishing.

Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34,* 169-189. https://doi.org/10.1207/s15326985ep3403_3

Elliot, A. J. (2005). *A conceptual history of achievement goal construct.* In Elliot, A.J. & Dweck, C.S. (Eds.), Handbook of competence and motivation. (pp. 52-72). New York: Guilford Publications.

Elliot, A., & Thrash, T. (2001). Achievement Goals and the Hierarchical Model of Achievement Motivation. *Educational Psychology Review, 13*(2), 139-156. Retrieved June 30, 2021, from http://www.jstor.org/stable/23363530

Erdem, I. (2018). The Correlation between Speech Self-Efficacy and Communication Skills of Pre-Service Turkish Teachers. *International Journal of Progressive Education, 14*(5), 119-129. doi: 10.29329/ijpe.2018.157.10

Field, A. (2009). *Discovering statistics for SPSS* (3rd ed.). Los Angeles, CA: SAGE Publications.

Gülebağlan, C. (2003). *Öğretmenlerin işleri son ana erteleme eğilimlerinin, mesleki yeterlilik algıları, mesleki deneyimleri ve branşları bakımından karşılaştırılmasına yönelik bir araştırma* [A study to compare teachers' tendencies to postpone their jobs in terms of professional competence perceptions, professional experiences and branches] [Unpublished master's thesis]. Ankara University.

Gürcan, A. (2005). Bilgisayar yeterliği algısı ile bilişsel öğrenme stratejileri arasındaki ilişki [Relationship between computer self-efficacy and cognitive learning strategies]. *Eurasian Journal of Educational Research*, *19*(2), 179–193.

Harackiewicz, J. M., Barron, K. E., Tauer, J.M., Carter, S.M., & Elliot, A.J. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology*, *92*, 316-330. https://doi.org/10.1037//0022-0663.92.2.316

Harackiewicz, J. M., Barron, K. E., Tauer, J. M., & Elliot, A. J. (2002). Predicting success in college: A longitudinal study of achievement goals and ability measures as predictors of interest and performance from Freshman year through graduation. *Journal of Educational Psychology, 94*(3), 562-575. https:// doi.org/10.1037/0022-0663.94.3.562

Higher Education Council (2020). *Press briefing* (26.03.2020), 20.03.2020 dated from www.yok.gov.tr.

Heslin, P.A., & Klehe, U.C. (2006). *Self-efficacy*. In S. G. Rogelberg (Eds.), Encyclopedia of Industrial/Organizational Psychology (Vol. 2, pp. 705-708). Thousand Oaks: Sage. SSRN: https://ssrn.com/abstract=1150858

Hosmer, D. W. & Lemeshow, S. (2000). *Applied Logistic Regression* (2nd.edition). New York: Wiley.

Hulleman, C. S., Schrager, S. M., Bodmann, S. M., & Harackiewicz, J. M. (2010). A meta-analytic review of achievement goal measures: different labels for the same constructs or different constructs with similar labels?. *Psychological bulletin*, *136*(3), 422–449. https://doi.org/10.1037/a0018947

Kadioglu, C., & Uzuntiryaki-Kondakci, E. (2014). Relationship between learning strategies and goal orientations: A multilevel analysis. *Eurasian Journal of Educational Research*, *56*, 1-22. http://dx.doi.org/10.14689/ejer.2014.56.4

Kleinbaum, D. G., & Klein, M. (2010). *Logistic regression: A self-learning text* (3rd.edition). New York: Springer.

Korkut Owen, F., & Bugay, A. (2014). İletişim becerileri ölçeğinin geliştirilmesi: Geçerlik ve güvenirlik çalışması [Developing a communication skills scale: Validity and reliability studies]. *Mersin University Journal of the Faculty of Education/ Mersin Üniversitesi Eğitim Fakültesi Dergisi*, *10* (2), 51- 64.

McGregor, H. A., & Elliot, A. J. (2002). Achievement goals as predictors of achievement-relevant processes prior to task engagement. *Journal of Educational Psychology*, *94*(2), 381-395. https://doi.org/10.1037/0022-0663.94.2.381

Milli, M. S., & Yağcı, U. (2017). Öğretmen adaylarının iletişim becerilerinin incelenmesi [Research on communication skills of pre-service teacher]. *Abant Izzet Baysal University Journal of Education Faculty/ Abant Izzet Baysal Universitesi Egitim Fakultesi Dergisi*, *17* (1), 286-298. https://doi.org/10.17240/aibuefd.2017.17.28551-304635

Özdemir, N., & Özkan, G. (2018). The investigation of the relationship between physical education and sports teacher candidates' communicatıon skills and their teacher self-efficacy perceptions. *Journal of History School*, *11*(33),1139-1156.

Özkan, H., Dalli, M., Bingöl, E., Metin, S.C., & Yaralı, D. (2014). Examining the relationship between the communication skills and self-efficacy levels of physical education teacher candidates. *Procedia-Social and Behavioral Sciences*, *152*, 440-445. https://doi.org/ 10.1016/j.sbspro.2014.09.228

Öztürk, B., & Kurtuluş, A. (2017). Ortaokul öğrencilerinin üstbilişsel farkındalık düzeyi ile matematik öz yeterlik algısının matematik başarısına etkisi [The analysis of the effect of metacognitive awareness and mathematics self-efficacy perceptions on mathematics achievement of middle school students]. *Journal of Ziya Gokalp Faculty of Education/ Dicle Üniversitesi Ziya Gokalp Eğitim Fakültesi Dergisi/*, 31, 762-778. https://dx.doi.org/10.14582/DUZGEF.1840

Pallant, J. (2005). *SPSS Survival Manual. Sydney:* Allen & Unwin.

Peng, C. Y. & So, T.S.H. (2002). Logistic Regression Analysis and Reporting. *A Primer. Understanding statistics, 1*(1), 31-70.

Pintrich, P. (2000a). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology*, *92*(3), 544-555. https://doi.org/ 10.I037//0022-O663.92.3.544

Pintrich, P. (2000b). *The role of goal orientation in self-regulated learning.* In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), Handbook of Selfregulation: Theory, Research and Applications (Vol.14, pp. 451-502). San Diego, CA: Academic Press.

Republic of Ministry of National Education (2021). *2023 Educational Vision Conference* (23.11.2018) retrieved (20.02.2020) from https://2023 vizyonu.meb.gov.tr

Saka, M., & Surmeli, H. (2010). Examination of relationship between preservice science teachers' sense of efficacy and communication skills. *Procedia-Social and Behavioral Sciences*, *2*(2), 4722–4727. https://doi.org/10.1016/j.sbspro.2010.03.757

Saracaloglu, A. S., & Yenice, N. (2009). Fen bilgisi ve sınıf öğretmenlerinin öz yeterlik inançlarının bazı degişkenler açısından incelenmesi [Investigating the self-efficacy beliefs of science and elementary teachers with respect to some variables]. *Journal of Theory and Practise in Education/ Egitimde Kuram ve Uygulama, 5*(2), 244-260. https://dergipark.org.tr/en/pub/eku/issue/5450/73853

Saracaloglu, A. S., Karasakaloglu, N., & Gencel, I. E. (2010). Türkçe oğretmenlerinin özyeterlik düzeylerinin çeşitli degişkenlere göre incelenmesi [Analysis on Turkish teachers' self efficacy levels according to various variables]. *Electronic Journal of Social Sciences/ Elektronik Sosyal Bilimler Dergisi*, *9* (33), 265-283. https://dergipark.org.tr/en/pub/esosder/issue/6147/82535

Saracaloğlu, A.S., & Aydoğdu, B. (2012). Fen ve teknoloji öğretmenlerinin kişilerarası yeterlik inançlarının bazı değişkenler açısından incelenmesi [An investigation of science teachers' interpersonal self-efficacy beliefs in terms of some variables]. *International Journal of New Trends in Arts, Sports & Science Education, 1*(1), 21-35.

Schwarzer, R., Gerdamarie S., & Gary T. D. (1999). Teacher Self-efficacy. http://web.fuberlin.de/gesund/skalen/Language_Selection/Turkish/Teacher_Self Efficacy/hauptteil_teacher_self-efficacy.htm (Retrieved 02.02.2021)

Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education*, 36 (2), 79–104. doi:10.1080/13598660801971658.

Şahin, Ş. (2017). Eğitim ve spor bilimleri fakültesi öğretmen adaylarının özyeterlik algı düzeylerinin incelenmesi [Investigation Of The Self-Efficacy Perception Levels Of Preservıce Teachers In The Faculty Of Educatıon]. *Uluslararası İnsan ve Sanat Araştırmaları Dergisi/ International Journal of Humanities and Art Research,* Ek Sayı , 9-13 .

Tabachnick, B. G. & Fidell, L. S. (2013). Using Multivariate Statistics (6. Baskı). Boston: Pearson.

Tivikelli, A., Gonida, E.N., & Kiosseoglou, G. (2015). Achievement goals for teaching and teacher efficacy: Their association with instructional practices. *Scientific Annals-School of Psychology AUTh*, 11, 148-174. https://doi.org/10.26262/sasp.v11i0.5934

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education,23*(6), 944–956. doi:10.1016/j.tate.2006.05.003.

Turner, A. (2014). *Elementary teachers' achievement goal orientations in a high-stakes accountability context: A validation study.* [Unpublished Doctoral dissertation]. Virginia Commonwealth University.

Tucker, M., & McCarthy, A. (2001). Presentation Self-Efficacy: Increasing Communication Skills Through Service-Learning. *Journal of Managerial Issues, 13*(2), 227-244. Retrieved May 29, 2021, from http://www.jstor.org/stable/40604346

Yeşilyurt, E. (2013). Öğretmen adaylarının öğretmen öz-yeterlik algıları [Teacher self-efficacy perceptions of teacher candidates]. *Electronic Journal of Social Sciences/ Elektronik Sosyal Bilimler Dergisi*, *12*(45), 88-104.

Yıldızlı, H. (2019). Structural relationships among teachers' goal orientations for teaching, self-efficacy, burnout, and attitudes towards teaching. *Journal on Efficiency and Responsibility in Education and Science*, *12*(4), 111-125. https://doi.org/10.7160/eriesj.2019.120402**.**

Yılmaz, M., Köseoğlu, P., Gerçek, C., & Soran, H. (2004). Yabancı dilde hazırlanan bir öğretmen öz-yeterlik ölçeğinin Türkçeye uygulanması [Adaptation of a teacher self-efficacy scale to Turkish]. *Journal of Hacettepe Faculty of Education/ Hacettepe Universitesi Egitim Fakültesi Dergisi*, *27*(27), 260-267. https://dergipark.org.tr/tr/pub/hunefd/issue/7811/102525

Yılmaz, N., & Altunbaş, S. (2012). Öğretmen adaylarının iletişim becerileri ile sınıf yönetimi becerilerinin incelenmesi [Investigation of preservice teachers' communication and classroom management skills]. *EU Journal of Education Faculty/ Erzincan Üniversitesi Eğitim Fakültesi Dergisi*, *14*(1), 183-196. https://dergipark.org.tr/en/pub/erziefd/issue/6009/80246

Yıldırım, İ. (2021). A study on the effect of instructors' communication skills on the professional attitudes and self-efficacy of student teachers. *Journal of Education for Teaching,* DOI: 10.1080/02607476.2021.1902237.

Wangid, M. N., & Widyastuti, P. (2021). Effect of gender and department on motivation, self-efficacy, and perception as teacher of pre-service teacher students. *Multicultural Education, 7*(6), 68-76.