



<http://kefad.ahievran.edu.tr>

Ahi Evran University Journal of Kırşehir Education Faculty

ISSN: 2147 - 1037

Examination of the Relations amongst Support, Class Belonging and Teacher Self-Efficacy in Turkish Pre-Service Teachers*

Muhammet Mustafa Alpaslan

Özgür Ulubey

Kasım Yıldırım

DOI:.....

Article Information

Received:24/08/2017 Revised:09/11/2017 Accepted:11/04/2018

Summary

In this study, it was aimed to investigate the contributions of support and class belonging to teacher self-efficacy. A total of 357 teacher candidates from the different departments enrolled in the Pedagogical Formation Education Certificate Program at a state university in the Aegean Region of Turkey participated in the study. Teacher Self-Efficacy Scale, Psychological Sense of Membership Scale and Perceived Support Scale were used to collect data. To examine the relationship between variables, structural equation modeling technique was utilized in the MPLUS program. It was found that the teacher candidates received the most support from their families and the least support from their instructors. Analysis revealed that the support received from the instructors was statistically significantly related to all the sub-dimensions of teacher self-efficacy. Findings showed that class belonging was positively related to all of the sub-dimensions of teacher self-efficacy. Findings suggest that when teacher candidates receive support from their classmates and instructors, their sense of class belonging would increase and eventually, their teacher self-efficacy would grow up.

Keywords: Belonging, Structural equation modeling, Support, Teacher self-efficacy.

*A part of this study was presented at II. International Symposium on Philosophy, Education, Arts and History of Science held in 3-7 May 2017 in Mugla Turkey. This study is financially supported by Mugla Sitki Kocman University Scientific Research Board (Project No: BAP-17/047)

Corresponding Author: Muhammet Mustafa Alpaslan, Ph.D., Mugla Sitki Kocman University, Türkiye, mustafaalpaslan@mu.edu.tr, 0000-0003-4222-7468.

Özgür Ulubey, Ph.D., Mugla Sitki Kocman University, Turkey, oulubey@mu.edu.tr, 0000-0001-7672-1937.

Kasım Yıldırım, Ph.D., Mugla Sitki Kocman University, Turkey, kasimyildirim@mu.edu.tr. Researcher is supported by the Scientific and Technological Research Council of Turkey under the grant 2219 Postdoctoral Scholarships. 0000-0003-1406-709X.

262

Examination of the Relations amongst Support, Class Belonging and Teacher Self-Efficacy in Turkish Pre-Service Teachers

The quality of the teachers directly and indirectly influences the success and performance of the students. In order to have qualified teachers, it is necessary to foster teachers' skills relating to teaching profession as well as their affective characteristics (beliefs and values). One of these affective characteristics is teacher self-efficacy. While self-efficacy is generally defined as the one's perception of her ability to perform an action, teacher self-efficacy refers to the individual's belief about her capacity of teaching. Teacher self-efficacy is related to teachers' ability to cope with difficulties (Deneroff, 2016) and the quality of education that they can do (Garvis, 2013). Therefore, it is necessary to foster teachers' teacher self-efficacy order to increase the quality of education. To do this, it is important to determine the variables contributing to teacher self-efficacy as to train teacher candidates with high teacher self-efficacy.

Bandura (1997) proposed self-efficacy based on social-cognitive theory. For this reason, self-efficacy can be considered together with socio-contextual variables. In other words, what kind of social environment teachers live in, what kinds of experience they gain and with whom they interact can make a significant contribution to their teacher self-efficacy. However, there is a limited number of studies examining the contribution of social-contextual variables to teacher candidates' teacher self-efficacy. In this study, the focus was given on the contributions of two social-contextual variables including support and class belonging to teacher self-efficacy. Determining the relations of support and class belonging to teacher self-efficacy can provide important clues as to what needs to be done to develop teacher candidates' self-efficacy in teacher education. Therefore, in this study, it was aimed to hypothesize a theoretical model demonstrating the contributions of support and class belonging to teacher self-efficacy and to test this model with structural equation modelling technique.

Teacher Self-efficacy

According to Bandura (2006), self-efficacy is the ability to make conscious choices and actions to show the performance of an individual (cognitive or physical) and to have the belief in organizing them. Self-efficacy also refers to that someone believes in the ability to produce a desired outcome

Whether self-efficacy is high or low can influence the level of the individual achievement. Individuals with high self-efficacy work harder to make their actions successful. Individuals with low self-efficacy perceive their environment as dangerous, lack in coping with problems and exaggerate potential risks. They are afraid of the difficult tasks they perceive as a threat and weaken their commitment to the goals they set (Allinder, 1994; Bandura, 1994; Deneroff, 2016) Self-efficacy is also an important concept for teachers who guide the teaching process at classrooms. Teachers' teacher self-efficacy can affect the quality of education they implement at classroom (Garvis, 2013). Teachers

with high self-efficacy tend to believe that all children can learn with their help (Deemer, 2004). Teachers with high self-efficacy tend to apply new teaching methods and techniques in the classroom, use new approaches in classroom management to eliminate problems emerging in class, and protect the autonomy of students (Guskey, 1988). They are eager to try various materials and approaches to the classroom (Chacon, 2005). They will be willing to use new teaching strategies and apply alternative methods and practice teaching.

Class Belonging

Belonging is one of the basic requirements of an individual (Deci & Ryan, 2000). According to the hierarchy of needs, belonging is among the requirements that need to be eliminated (Maslow, 1999). Belonging is defined as the need to establish a positive relationship with the individual at a minimal emotional level (Baumeister and Leary, 1995). It is important to ensure that students who have spent a significant part of their day at school are provided with an environment in which they feel happy, peaceful and safe (Sari, 2013).

There are two important types of belonging named as school and classroom belonging in the field of education. School belonging refers to the degree to which students are accepted, respected and supported by the individuals at the school (Goodenow and Grady, 1993). Class belonging is as important as school belonging. Goodenow (1993b) defined the sense of class belonging as accepted, classified, and valued by others in the classroom. When students are accepted by their teachers and peers in the classroom, they see themselves as an important part of class and classroom activities. Teachers may influence students' feelings of class belonging (Goodenow, 1993a). Teachers who have established a satisfying relationship with their students and have developed empathy skills can provide important contributions to the development of the sense of class belonging. While the main cause for positive relations teachers provide students for class belonging is honesty and helpfulness; the main reason for negative relationships could be that teachers do not behave equally and fairly to their students and not respond to the students who need help (Nichols, 2008). A cognitive, emotional and psychomotor development of a student who feels a part of the class can also develop in a healthy way. Although no study examining the link of class belonging with teacher self-efficacy, previous studies have reported classroom belonging is positively related to students' self-efficacy (Goodenow, 1993a). For example, Walker (2004) reported that class belonging was positively associated with high school students' self-efficacy and mastery goals. Therefore, it can be assumed that when a teacher candidate feels as accepted by classmates, he or she would have good physiological states and eventually may foster his or her teaching self-efficacy.

Perceived Support

Support can be seen as a process that improves social relations. Support includes social resources provided by a social environment to the individual (Cohen, Gottlieb and Underwood 2000). In recent years, support provided to teacher has taken an important role in teacher education research. It has been stated that the support that teachers receive from family, school managers and colleagues is important for professional continuity (Skaalvik and Skaalvik, 2011; Song and Alpaslan, 2015). Supported teachers were found to be influential and enjoyed their work (Hobson, 2009; Pogodzinski, 2013). In addition, it is stated that when teachers face problem relating to teaching, they tend to solve these problems with support from other colleagues and eventually they can serve better (Soini, Pyhältö and Pietarinen, 2010). Teachers who receive support from their colleagues about planning and classroom management, are usually easier to transfer to teaching (Gersten, Keating, Yovanoff and Harniss, 2001). Teachers who do not receive enough support tend to leave their profession (Goddard and Goddard 2006; Schlichte, Yssel and Merbler, 2005). Accordingly, it would be useful to activate the support system in teacher education (Le Cornu, 2005).

Teachers usually need support in their first years of teaching. Teachers are generally eager in their first years of starting their profession (Goddard and Goddard 2006; Stockard and Lehman 2004). At the same time, teachers think that teaching is a hard profession (Hagger, Mutton and Burn 2011) and may get stressed (Chan, 2002). In particular, support at the beginning of the teaching career strengthens the professional experience of teachers (Hobson, 2009; Pogodzinski, 2013). This situation also applies to teacher candidates. When teacher candidates receive feedback in the teaching-learning process of teacher education may become less stressful in their teacher education. In addition, support from other candidates can help them overcome difficulties (Ferguson, 2011; Soini, Pyhältö and Pietarinen 2010). During teacher education, teacher candidates can cope with problems they experience when they receive support from their families, classmates and instructors in the manner of teaching profession knowledge, school experience and teaching practice lessons. By doing so, teacher candidates' teacher self-efficacy may increase.

Perceived Support, Relationship to Class and Self-efficacy

The concept of self-efficacy was put forward by Bandura (1997) based on socio-cognitive theory. In this view, self-efficacy may be related to socio-contextual variables. There are four sources of self-self-efficacy in the literature of education. These are mastery experiences, vicarious experiences, social persuasions and physiological states. A teacher who receives positive feedback from his surroundings may move away from perceptions such as stress and burnout and this situation may positively affect her teacher self-efficacy. Vicarious experience stresses that witnessing the success or failure of a colleague in a particular behavior may influence the self-efficacy of a person. Social persuasion is a positive feedback from the individual's social environment about his or her own skills

or experiences. Self-efficacy of individuals who are persuaded verbally in the case that they are successful in certain behaviors may be positively influenced. The physiological states are situations that one can cope with emotions such as stress and burnout. Physiological states including fear, anxiety or excitement, can affect the way individuals see their abilities (Bandura, 1977, Çakıroğlu, Çapa-Aydın and Woolfolk Hoy, 2012). Therefore, the social context plays an important role in the development of teacher candidates' teacher self-efficacy.

Research has demonstrated that feelings of belonging are positively related with self-efficacy (Adelabu, 2007, Cemalcilar, 2010; Goodenow, 1993a). Studies suggest that a positive social environment and support may increase the satisfaction of teachers (Hakanen, Bakker & Schaufeli, 2006; Schaufeli & Bakker, 2004). The support they receive from the teacher candidates' families, faculty, and classmates can make them feel a part of the class. Teacher candidates who feel a sense of class belonging can also make more efforts to attend the lesson attendance and teaching profession. This can lead to an increase teacher self-efficacy. In this study, it was aimed to develop a model that hypothesizes the contributions of class belonging and support on teacher self-efficacy by utilizing structural equation modeling. For this purpose, the following questions were sought to address.

- 1- What are the levels of self-efficacy, class belonging and perceived support of teacher candidates?
2. Is perceived support that teacher candidates receive from their classmates, teachers and family related to their class belonging?
3. Is class belonging related to teacher candidates' teacher self-efficacy?
4. Is perceived support that teacher candidates receive from their classmates, teachers and family related to teacher candidates' teacher self-efficacy through class belonging?



Figure 1. The hypothesized model showing the relationship between variables.

Method

Research Model

In this study, a quantitative descriptive research and relational research models were used to address research questions (Karasar, 2017). The descriptive model was used to determine the level of teacher self-efficacy, class belonging and support teacher candidates perceived. Relational research

model was used to determine the relationship between teacher self-efficacy, class belonging and support teacher candidates perceived.

Participants

In this study, a total of 357 teacher candidates who took teacher training education at the Pedagogical Formation Education Certificate Program at a state university located in the Aegean Region in Turkey participated. Of these participants, 238 were girl and 112 were boy. Seven students did not specify their gender. Participants were at different teaching areas including math, chemistry, physics, biology, history, Turkish language, English language and philosophy. Demographics of the participants was presented in Table 1. Participants' ages ranged from 22 to 35 years and their mean age was 24.3 (3.2).

Table 1. *Demographic characteristics of participants*

| Subject area | Frequency | Percent |
|------------------|-----------|---------|
| Math | 35 | 9.8 |
| Physics | 2 | 0.6 |
| Chemistry | 8 | 2.2 |
| Biology | 11 | 3.1 |
| History | 72 | 20.2 |
| Philosophy | 32 | 9.0 |
| Turkish language | 86 | 24.1 |
| The English | 12 | 3.4 |
| Others | 99 | 28 |
| Total | 357 | 100 |

Data Collection Tools

The following questionnaires were used in this study.

Teacher Self-Efficacy Scale (TSES). As a 9-point Likert-type scale (1= nothing, 9= great deal), the TSES was developed by Tschannen-Moran and Hoy (2001) and adapted into Turkish culture by Çapa, Çakıroğlu and Sarıkaya (2005). The TSES measures teacher self-efficacy in three sub-dimensions as classroom management, instructional strategies and student engagement. In the literature, two versions of the TSES as long and short versions exist. The long version consists of a total of 24 items, and eight items for each sub-dimension. The short version consists of a total of 12 items and four items for each sub-dimension. To save time and money, the short version of the TSES was used in this study. Before analyzing collected data, validity and reliability analysis were run. Confirmatory Factor Analysis (CFA) was performed to test the validity of the TSES. The results of CFA showed that the scale was in moderate fit ($\chi^2 (98) = 322.45, p < .001, RMSEA = 0.067, CFI = 0.92, TLI = 0.91$). According to these results, it can be said that the TSES was valid. In addition, Cronbach alpha values were calculated to test the reliability of the TSES and presented in Table 2. The Cronbach alpha values for

the subscales ranged from .74 to .81, and for the whole scale, 0.90. The values obtained show that the reliability values of subscales were at an acceptable level.

Psychological Sense of Membership Scale (PSMS). The PSMS, developed by Goodman (1993), is a 5-point Likert-type scale (1 = not at all true and 5= completely true) measuring school belonging. The PSMS was adapted into Turkish culture by Sarı (2011). The PSMS consists of 18 items in two sub-dimensions as class belonging (13 items) and rejection (5 items). The PSMS was also used to assess students' class belonging. Freeman, Anderman and Jensen (2007), for example, used the PSMS to measure middle school students' class belonging by replacing "school" with "class" in the original measure. In this study, the class version was used because the teacher candidates spent more time in the class. CFA was run to test the validity of the scale. The results of CFA were in acceptable fit ($\chi^2(134) = 316.06$, $p < .001$, RMSEA = 0.068, CFI = 0.91, TLI = 0.90). Cronbach's alpha values were calculated as .86 for class belonging, .79 for rejection, and .78 for the whole scale. These results indicated that the reliability of the PSMS was acceptable.

Perceived Support Scale (PSS). The PSS was developed by researchers to determine the level of support that teacher candidates perceived. Once examining the previous studies in the literature, three different sources of support including family, instructors and classmates were identified. Three items were developed for each support sub-dimensions by adapting items that Skaalvik and Skaalvik (2011) used to identify support from social environment (manager, family and colleague). The PSS consists of a total of nine items in a five Likert type (1 = strongly disagree, 5 = strongly agree). CFA was performed to test the validity of the PSS. The results of CFA showed that the PSS was in good fit ($\chi^2(24) = 56.11$, $p < .001$, RMSEA = 0.058, CFI = 0.97, TLI = 0.96). The Cronbach alpha values for the reliability of the PSS were between .80 and .88 for sub-dimensions. The Cronbach alpha value for the whole scale was .83. These values indicated that the reliability of the PSS was acceptable.

Data Collection

Data were collected at the end of the spring semester of the 2016-2017 academic year when the teacher candidates were about to complete the Pedagogical Formation Education Certificate Program. Permission was obtained from the Institution of Research Board. Teacher candidates were informed about the scope of the study and asked to voluntarily participate in the study. All questionnaires were administered at the same time and participants were given 30 minutes to fill in the questionnaires. Participants were administrated under the supervision of the instructors.

Data Analysis

Data were analyzed with different quantitative analysis methods in accordance with the study purposes. Mean and standard deviation values were calculated to determine the level of teacher self-

efficacy, class belonging and support of teacher candidates. In order to examine the relationship between the variables, structural equation modelling technique (SEM) was used. SEM is a method used to examine the direct and indirect relationship between variables. In the SEM analysis, each variable can be taken as observed or latent. Because using variable as latent ones in SEM reduces the measurement errors rather than the observed ones, in this study variables of the interest were considered as latent variables in SEM (Kline, 2015).

Findings

The findings of this study were presented under two sub-headings. In the first sub-heading, findings related to descriptive statistics and addressing the first research question of the study were presented. In the second sub-heading, findings regarding structural equation modelling analysis and addressing second, third and fourth research questions of the study were presented.

Descriptive Statistics

Descriptive statistics on the sub-dimensions of the scales used in the study are given in Table 2.

Table 2. *Descriptive statistics of Instruments used in the study*

| Instrument | Sub-scale | \bar{x} | SS | Skewness | Kurtosis | α |
|------------|------------------------|-----------|-------|----------|----------|----------|
| TSS* | Class management | 6.87 | 1.219 | 0.99 | 1.23 | .81 |
| | Instruction management | 6.98 | 1.104 | 0.79 | .90 | .79 |
| | Student engagement | 7.04 | 1.166 | 0.87 | .98 | .74 |
| | Whole TSS | | | | | |
| PSMS** | Class belonging | 3.79 | .545 | 1.20 | -1.01 | .86 |
| | Rejection feeling | 2.49 | .843 | -0.98 | .97 | .79 |
| | Whole PSMS | | | | | |
| PSS** | Instructors | 3.58 | .929 | -1.01 | .96 | .80 |
| | Classmate | 4.05 | .799 | 0.99 | 1.11 | .84 |
| | Family | 4.27 | .907 | 0.97 | -1.43 | .88 |

Note: * 9 Likert type, ** 5 Likert type, α : Cronbach Alfa

The mean values given in Table 2 may give an idea of the teacher self-efficacy levels of teacher candidates regarding teaching. According to the table, teacher candidates reported that their self-efficacy level were between moderate and high in all sub-dimensions of teacher self-efficacy (1 = low, 5 = moderate, 9 = high). In the sub-dimensions, the highest mean value was reported in the self-efficacy for student engagement whereas the lowest mean value was in self-efficacy for class management. According to this, teacher candidates reported them as self-efficacious at most at student engagement and at least classroom management.

Teacher candidates' classroom self-efficacy perception levels overlap with other studies in the field. Because classroom management requires more experience than other teaching skills. It can be said that teacher candidates are inadequate in their self-sufficiency due to their inexperience in classroom management. In addition, according to the findings in Table 3, the mean values of the teacher candidates' class affiliation levels are between medium and high, while rejected feelings are between low and middle level (1 = low, 3 = moderate, 5 = high). When the level of support received by the prospective teachers is examined, it is seen that they receive the most support from the support families and are at the lowest level from the support they receive from the instructors.

Structural Equation Modelling

In this study, based on the previous studies and theories, a model showing the relationship between support, class belonging, and teacher self-efficacy was proposed. By using structural equation modelling, first the fit indices of the model were examined and then, path coefficients between variables were examined. Kline (2015) suggest not to adhere to only the hypothesized model, but rather to compare at least one nested model with the hypothesized model. Therefore, an alternative model showing that support was directly related to teacher self-efficacy was established. The alternative model and the original model were presented in Figure 2.

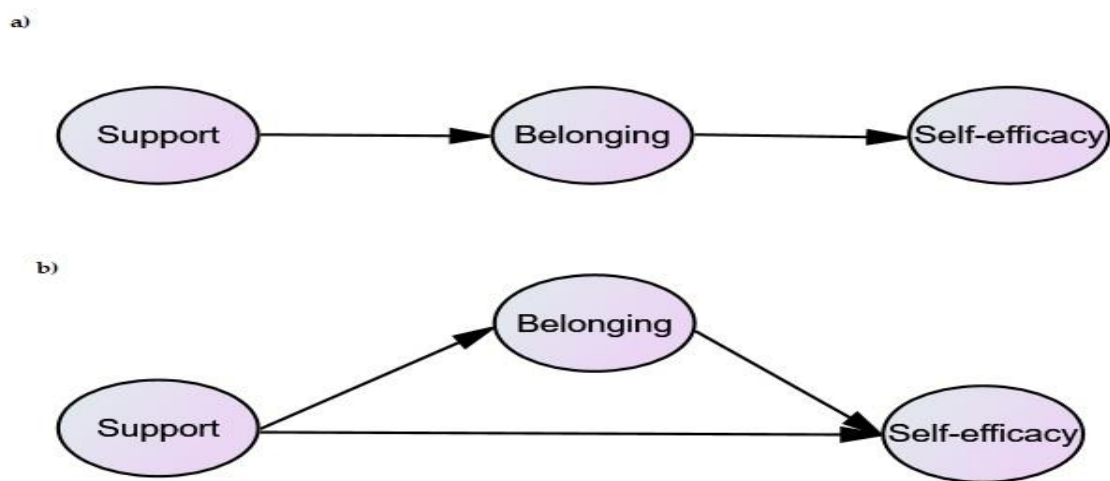


Figure 2. a) Original model, b) Alternative model

In Table 3, the fit indices of the two models were presented. Kline (2015) recommend that if the chi-square difference test (testing whether there is a significant difference between the two models) yielded significant difference, the model with low AIC (Akaike Information Criterion) value should be chosen.

Table 3. Fit indices of original and alternative models

| Model | χ^2 | df | RMSEA | CFU | AIC |
|-------|----------|----|-------|-----|-----|
|-------|----------|----|-------|-----|-----|

| | | | | | |
|---------------------|---------|---------------|------|------|---------|
| Original model | 1608.77 | 583 | 0068 | 0.91 | 1774.77 |
| Alternative model | 1238.51 | 574 | 0055 | 0.93 | 1422.51 |
| χ^2 difference | 370.26 | df difference | 9 | | |

Statistically significant difference was found as a result of the chi-square test in Table 3, $\chi^2_{\text{difference}}(9) = 370.26$, $p < .001$. In addition, the AIC value was smaller in the alternative model than the original model. Because the chi-square test was statistically significant and the AIC value of the alternative model was smaller, it was decided to select the alternative model in determining the relationship between the variables (Kline, 2015). This finding also showed that support was directly related to teacher self-efficacy as well as indirectly associated with teacher self-efficacy through class belonging. The fit indices presented in Table 3 indicated that the model explaining the relations between the variables fit well with data. RMSEA value less than 0.06, and CFI value higher than .90 indicated that the fit indices of model were at acceptable range (Hooper, Coughan and Mullen, 2008). The direct relationships between the variables were presented in Figure 3 and Table 4

Table 4. Path coefficient and variance explained by the model

| | SBD | SRD | SYO | OKO | OYO |
|----------------|--------|---------|--------|--------|--------|
| OED | .26 ** | .03 | .31 ** | .28 ** | .32 ** |
| SAD | .41 ** | -.39 ** | .16 * | .03 | .07 |
| AUD | .18 ** | -.16 * | .02 | .03 | .04 |
| SBD | | -.18 ** | .48 ** | .27** | .28 ** |
| SRD | | | -.16 * | -.01 | -.04 |
| R ² | .45 | .20 | .34 | .23 | .21 |

Note: ** $p < .01$ * $p < .05$, SYO: Classroom management self-efficacy, OYO: Instruction management self-efficacy, OKO: Student engagement self-efficacy, SBD: Sense of belonging, SRD: Rejection feeling, OED: Support from instructor, SAD: Support from classmates, AUD: Support from family

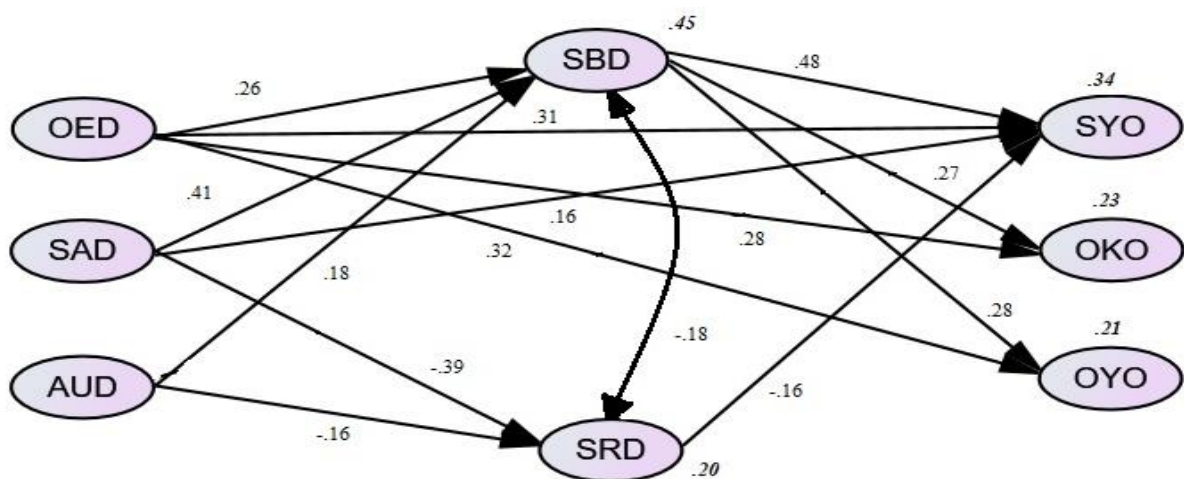


Figure 3. The path coefficients between the variables in the model and the variance explained by the model. Note: Statistically insignificant relationships have not been shown to simplify the figure.

When the path coefficients in Table 5 were examined, it was found that the support teacher candidates perceived was statistically related with the class belonging, but there was no statistically significant relationship between the support from the instructor and the rejection feeling. The highest correlation was found between the support from classmates and sense of class belonging ($\beta = .41, p < .01$). In addition, this type of support had a negative relation with the sense of rejection ($\beta = -.39, p < .01$). The support from family members was negatively related to the rejection feeling ($\beta = -.16, p < .05$) while it was positively related to class belonging ($\beta = .18, p < .01$).

The path coefficients indicated that the sense of class belonging was positively related to all subscales of teacher self-efficacy. The largest coefficient was between class belonging and self-efficacy for classroom management ($\beta = .48, p < .01$). This result indicated that when teacher candidates felt themselves as a part of the class, they would be more self-efficacious at classroom management. The feeling of rejection was related only with the self-efficacy for classroom management at a statistically significant level ($\beta = -.16, p < .05$). These findings showed that teacher candidates' self-efficacy for classroom management was related to their class belonging: in other words, class belonging contributed significantly to the perception of self-efficacy for classroom management.

Analysis revealed that support from instructors was statistically significantly related to all sub-dimensions of teacher self-efficacy of teacher candidates. The largest path coefficient was found to be between support from instructors and self-efficacy for instruction management ($\beta = .32, p < .01$). In addition, it was found that the support that teacher candidates receive from their classmates was significantly related to the self-efficacy for classroom management ($\beta = .16, p < .05$).

The explained variance of variable in the model were presented in Table 4 (R^2). The support teacher candidates received can be accounted for 45% variance of class belonging. In addition, these support variables explained 20% of the sense of rejection. When examining the subscales of self-efficacy, the most explained variance by the model was the self-efficacy for classroom management ($R^2 = .34$). In addition, the model explained 21% and 23%, of variances of self-efficacy for instruction management and student engagement. These R^2 values indicated that the social-contextual variables used in the model were important for the development and better understanding of the nature of teacher self-efficacy.

In order to better understand the relationship between the subscales of teacher self-efficacy scale and other variables, the indirect relationships between support and self-efficacy were examined and given in Table 5. Analysis revealed that support from instructors and classmates were related to teacher self-efficacy through sense of class belonging. The largest indirect path coefficient was between self-efficacy for classroom management and support from classmates through class

belonging ($\beta = .20, p < .01$). This relationship indicated that when teacher candidates had the support from their classmates and instructors, their teacher self-efficacy increases. Support from family members was only related to self-efficacy for classroom management through class belonging ($\beta = .09, p < .01$). The relationship between support from family members and self-efficacy for classroom management can be explained by a) the strong relationship between class belonging and self-efficacy for classroom management, and b) the lowest mean value teacher candidates reported was for classroom management.

Table 5. *Path coefficients for indirect implications in the model*

| | SYO | | OKO | | OYO | |
|-----|--------|--------|---------|-----|--------|-------|
| | SBD | SRD | SBD | SRD | SBD | SRD |
| OED | .12** | .01 | .07 * | .01 | .08 ** | 12:01 |
| SAD | .20 ** | -.06 * | .11th** | .01 | .10 ** | -.03 |
| AUD | .09 ** | -.03 | .05 * | .01 | .05 * | .01 |

Note: ** $p < .01$ * $p < .05$

Discussion and Conclusions

The results of this study are important for teacher education and teacher education research. Overall, results showed that fit indices of alternative model were at acceptable range and the directions of the relations between variables were as hypothesized.

The findings showed that the perceived level of support was statistically related to the sense of class belonging, while there was no statistically significant relationship between the support received from the instructor and the class rejection. The support received from classmates was found to be the highest positive relation with the class belonging feelings of the teacher candidates. In addition, this type of support had a negative relationship with class rejection of teacher candidates. Support from family members was positively associated with class belonging, while it was negatively associated with class rejection.

Belonging is seen as one of the basic human needs, and individuals are motivated when they are met with this need. For example, by interacting with others, individuals can develop belonging. Therefore, people who have not develop a sense of belonging can experience negative feelings including stress (Sánchez, Colón and Esparza, 2005). When considering the psychological function of belonging, researchers have begun to investigate the factors that influence this process in examining the effects of belonging on educational processes and outcomes.

It is stated that the sense of class belonging is influenced by the students' thoughts about the class and at the same time the educational values are important in terms of belonging. The sense of class belonging helps pupils see the class as a supporting social element (Finn, 1989). In addition, positive contributions of teachers, friends, and administrators in the school have a positive effect on the sense of class belonging (Goodenow and Grady, 1993; Ho, Schweitzer and Khawaja, 2017).

Because the student's family, friends, teachers, and cultural and ethnic groups are the main dynamics of class social environment, the student's sense of class belonging depends on how much the class teachers and other adults in this social environment are personally respected to the student. Therefore, the findings of this research also contributed to the class belonging process. In this study it was found that the teacher candidates' beliefs about the support they received from the teachers, friends and relatives in the social environment showed positive relations with the feeling of class belonging and showed a negative relation with class rejection. The results of this study are consistent with the study by Finn (1989) conducted. In this study, it was found that teacher support, in particular, helped the students to feel that they belonged to the class and to participate more effectively in the academic process. In the study conducted by Goodenow and Grady (1993), the effects of class belonging on the motivation of the students were investigated. The results of their study showed that some of the biggest causes of these problems were poor support from teachers, friends and family had students develop a weak sense of belonging and therefore low motivation.

As stated by Anderman (2003), there are social variables that affect feelings of class belonging. In this study, social variables such as family, teacher and friend support were examined. In this direction, the students who received the necessary support reported that they would exhibit a positive and high sense of class belonging.

Other important findings of the study indicated that the regression coefficients of class belonging were positively related to all of the subscales of teacher self-efficacy beliefs. The rejection feeling was found to be a statistically negatively significant relationship only with the self-efficacy for classroom management. The results of this research were consistent with the results of many different studies. McMahon, Wernsman, and Rose (2009), for example, investigated the effects of feelings of class belonging on self-efficacy. The results of their study showed that sense of class belonging was associated with a high level of self-efficacy. In other studies, similar positive correlations have been found (Goodenow, 1993b; Freeman et al., 2007; Trujillo and Tanner, 2014).

When studied theoretically, self-efficacy is mainly influenced by personal experiences and observations related to learning (Bandura, 1986). Individuals gather information from different sources including teachers 'and peers' learned or modulated behaviors and psychological reactions and construct self-efficacy related to their own performance (Schunk and Zimmerman, 2007). For example, students who receive encouragement feedback from the teacher and those who see the positive support of the class or friends in the school begin to show higher self-efficacy (Schunk and Zimmerman, 2007). This supportive environment also contributes positively to the sense of class belonging. This indicates the positive relationships between self-efficacy and feelings of class

belonging and both variables should be considered together (Goodenow, 1993b). Theoretically, in this sense, it is thought that sense of belonging influences self-efficacy.

In some studies, there was no relationship between sense of class belonging and self-efficacy. In the study conducted by Uwah, McMahon and Furlow (2008), the relationship between the sense of class belonging, educational desires and self-efficacy was examined. Results of their study showed that educational desires did not make a significant contribution to predicting self-efficacy and the sense of class belonging while there was a relationship between class belonging and self-efficacy.

Another result from this study is that support from the instructors was significantly related to all sub-dimensions of self-efficacy of teacher candidates. Again, the results of this study indicated that support from instructors and classmates were related to the all sub-dimensions of self-efficacy. Support from family members only contributed to the teacher candidates' sense of self-efficacy for classroom management. The findings of this study showed that the support teacher candidates perceived were directly related to their self-efficacy and indirectly contributed to the self-efficacy beliefs of the teacher candidates through the sense of belonging. Chan (2002) expressed that support was an important factor that influence self-efficacy. Within the social environment, family, teacher and peer play an important role in the success of the individual. They contribute to the cognitive, social and affective development of the individual with the support they provide in different forms. Family support emerges in different forms. Preparing for school, giving educational value, ensuring academic follow-up, rewarding efforts can be a way for family support. Peers contribute in an academic sense and well-being. Teachers offer successful models. Therefore, family, teaching and the family support in this manner emerge as a strong predictor of self-efficacy (Bandura, 1993). The results of this research also show how important support is in terms of teacher self-efficacy of teacher candidates. Likewise, support for self-efficacy has been positively related to support in different studies (eg, Brouwers, Evers and Tomic, 200, Kruger, 1997, Rosenfeld, Richman and Bowen, 2000, Shen, 2009, Skaalvik and Skaalvik, 2010).

For future directions it can be said that similar studies can be done with the teacher candidates who enrolled in the education faculties. It may also be possible to do similar studies with in-service teachers. In particular, the findings from in-service teachers will be an important source of in-service training programs. It is because teachers' feelings of belonging to the school, their self-efficacy, and the support they receive from school administrators are thought to be important variables to be investigated in this process.

References:

- Adelabu, D. H. (2007). Time perspective and school membership as correlates to academic achievement among African American adolescents. *Adolescence, 42*(167), 525-538.
- Allinder, R.M (1994) The Relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education, 17*, 86-95.
- Anderman, L. H. (2003). Academic and social perception as predictors of change in middle school students' sense of school belonging. *The Journal of Experimental Education, 72*, 5-22.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 117-128.
- Bandura, A. (1986) *Social foundations of thought and action: A cognitive theory*. New York, Prentice-Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*(2), 117-148.
- Bandura, A. (1994) Self-efficacy. In V. S. Ramachaudran (Ed.) *Encyclopedia of Human Behavior* (ss. 71-81). New York: Academic Press,
- Bandura, A. (1997). Editorial. *American Journal of Health Promotion, 12*(1), 8-10.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. *Self-efficacy beliefs of adolescents, 5*(1), 307-337.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497-529.
- Brouwers, A., Evers, W. J., & Tomic, W. (2001). Self-efficacy in eliciting social support and burnout among secondary-school teachers. *Journal of Applied Social Psychology, 31*(7), 1474-1491.
- Cemalcilar, Z. (2010). Schools as socialisation contexts: Understanding the impact of school climate factors on students' sense of school belonging. *Applied Psychology, 59*(2), 243-272.
- Chacon, C. (2005). Teachers' perceived efficacy among English as a foreign language teachers in Venezuela. *Teaching and Teacher Education, 21*, 257-272.
- Chan, D. W. (2002). Stress, self-efficacy, social support, and psychological distress among prospective Chinese teachers in Hong Kong. *Educational Psychology, 22*(5), 557-569.
- Cohen, S., Underwood, L. G., & Gottlieb, B. H. (2000). *Social support measurement and intervention*. New York: Oxford University Press.
- Cornu, R. L. (2005). Peer mentoring: Engaging pre-service teachers in mentoring one another. *Mentoring & Tutoring: Partnership in Learning, 13*(3), 355-366.

- Cakiroglu, J., Capa-Aydin, Y., & Hoy, A. W. (2012). Science teaching efficacy beliefs. İçinde Fraser, B.J., Tobin, K.G. ve McRobbie, C.J. (Ed.) *Second international handbook of science education* (ss. 449-461). Springer, Dordrecht.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits. Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11, 227-268.
- Deemer, S. A. (2004). Classroom goal orientation in high school classrooms: Revealing links between teacher beliefs and classroom environments. *Educational Research*, 46(1), 73-90.
- Deneroff, V. (2016). Professional development in person: Identity and the construction of teaching within a high school science department. *Cultural Studies of Science Education*, 11(2), 213-233.
- Ferguson, P. (2011). Student perceptions of quality feedback in teacher education. *Assessment & Evaluation in Higher Education* 36 (1), 51–62.
- Finn, J. (1989). Withdrawing from school. *Review of Educational Research*, 59, 117-142.
- Freeman, T., Anderman, L., & Jensen, J. (2007). Sense of belonging in college freshmen at the classroom and campus levels. *The Journal of Experimental Education*, 75(3), 203-220.
- Garvis, S. (2013). Arts learning in Australian kindergartens: One case study exploring the scaffolding of domain specific knowledge. *The International Journal of Early Childhood Learning*, 19, 15-22.
- Gersten, R., Keating, T., Yovanoff, P. and Harniss, M. K. (2001). Working in special education: factors that enhance special educators’ intent to stay. *Exceptional Children*, 67(4), 549-567.
- Goodenow, C. (1993a). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools*, 30, 79-90.
- Goodenow, C. (1993b). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *Journal of Early Adolescence*, 13, 21-43.
- Goodenow, C., & Grady, K. E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *The Journal of Experimental Education*, 62(1), 60-71.
- Goddard, R. D., Tschannen-Moran, M., & Hoy, W. K. (2001). A multilevel examination of the distribution and effects of teacher trust in students and parents in urban elementary schools. *The Elementary School Journal*, 102(1), 3-17.
- Guskey, T. R. (1981). Measurement of responsibility teachers assume for academic successes and failures in the classroom. *Journal of Teacher Education*, 32,44-51.
- Hagger, H., Mutton, T., & Burn, K. (2011). Surprising but not shocking: The reality of the first year of teaching. *Cambridge Journal of Education*, 41(4), 387-405.

- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*, 495-513.
- Ho, N. K. N., Schweitzer, R. D., & Khawaja, N. G. (2017). Academic achievement among recently arrived Chinese adolescent migrants: The role of social support, school belonging, and acculturative stress. *Journal of Psychologists and Counsellors in Schools, 27*(1), 24-36.
- Hobson, A. J. 2009. On being bottom of the pecking order: beginner teachers Perceptions and Experiences of Support. *Teacher Development, 13* (4), 299–320.
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Articles, 2*.
- Karasar, N. (2017). *Bilimsel araştırma yöntemi: kavramlar ilkeler teknikler* (32. Baskı). Ankara: Nobel Yayıncılık.
- Klassen, R. M. (2004). A cross-cultural investigation of the efficacy beliefs of South Asian immigrant and Anglo Canadian nonimmigrant early adolescents. *Journal of Educational Psychology, 96*(4), 731-742.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.) New York: Guilford Press.
- Kruger, L. J. (1997). Social support and self-efficacy in problem solving among teacher assistance teams and school staff. *The Journal of Educational Research, 90*(3), 164-168.
- Maslow, A. (1999). *Toward a psychology of being* (3rd ed.). Princeton, NJ: Van Nostrand.
- McMahon, S. D., Wernsman, J., & Rose, D. S. (2009). The relation of classroom environment and school belonging to academic self-efficacy among urban fourth-and fifth-grade students. *The Elementary School Journal, 109*(3), 267-281.
- Nichols, S. L. (2008). An exploration of students' belongingness beliefs in one middle school. *The Journal of Experimental Education, 76*(2), 145–169.
- Pogodzinski, B. (2013). Collegial support and novice teachers' perceptions of working conditions. *Journal of Educational Change 15*, 467–489. doi:10.1007/s10833-013-9221-x.
- Rosenfeld, L. B., Richman, J. M., & Bowen, G. L. (2000). Social support networks and school outcomes: The centrality of the teacher. *Child and Adolescent Social Work Journal, 17*(3), 205-226.
- Sánchez, B., Colón, Y., & Esparza, P. (2005). The role of sense of school belonging and gender in the academic adjustment of Latino adolescents. *Journal of Youth and Adolescence, 34*(6), 619-628.
- Sarı, M. (2013). Lise öğrencilerinde okula aidiyet duygusu. [*Anadolu Üniversitesi Sosyal Bilimler Dergisi, 13*](#)(1), 147-160.

- Schaufeli, W. B., & Bakker, A. D. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*, 293-315.
- Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-efficacy and self-regulation of reading and writing through modeling. *Reading and Writing Quarterly, 23*, 7-25.
- Schlichte, J., Yssel, N., & Merbler, J. (2005). Pathways to burnout: Case studies in teacher isolation and alienation. Preventing school failure: *Alternative Education for Children and Youth, 50*(1), 35-40.
- Shen, Y. E. (2009). Relationships between self-efficacy, social support and stress coping strategies in Chinese primary and secondary school teachers. *Stress and Health, 25*(2), 129-138.
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education, 26*(4), 1059-1069.
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and teacher education, 27*(6), 1029-1038.
- Soini, T., Pyhältö, K., & Pietarinen, J. (2010). Pedagogical well-being: reflecting learning and well-being in teachers' work. *Teachers and Teaching: theory and practice, 16*(6), 735-751.
- Song, S. & Alpaslan, M. M. (2015). Factors impacting on teachers' job satisfaction related to science teaching: A mixed methods study. *Science Education International, 26*(3), 358-375
- Stockard, J., & Lehman, M. B. (2004). Influences on the satisfaction and retention of 1st-year teachers: The importance of effective school management. *Educational Administration Quarterly, 40*(5), 742-771.
- Trujillo, G., & Tanner, K. D. (2014). Considering the role of affect in learning: Monitoring students' self-efficacy, sense of belonging, and science identity. *CBE-Life Sciences Education, 13*(1), 6-15.
- Uwah, C., McMahon, H., & Furlow, C. (2008). School belonging, educational aspirations, and academic self-efficacy among African American male high school students: Implications for school counselors. *Professional School Counseling, 11*(5), 296-305.
- Walker, C. O. (2004). *Classroom belonging, self-efficacy, and perceived instrumentality: Influences on academic engagement and achievement*. (Unpublished doctoral dissertation) University of Oklahoma, Norman, Oklahoma.
- Väisänen, S., Pietarinen, J., Pyhältö, K., Toom, A., & Soini, T. (2017). Social support as a contributor to student teachers' experienced well-being. *Research Papers in Education, 32*(1), 41-55.