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Teacher Self-Efficacy Beliefs of Candidate Teachers in Education Faculty and Pedagogical Formation Program

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## Teacher Self-Efficacy Beliefs of Candidate Teachers in Education Faculty and Pedagogical Formation Program

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## Abstract

The purpose of this study is to determine the self-efficacy beliefs of education faculty and pedagogical formation program (literally teaching certificate program) students about the profession of teaching and compare them in relation to some variables. The data of the study were collected through the administration of Teachers' Self Efficacy Scale to 454 pre-service teachers attending the education faculty and the pedagogical formation program. The findings of the study revealed that the level of self-efficacy beliefs of the Education Faculty and Pedagogical Formation Program students about the profession of teaching are high and there is no significant difference between the levels of the self-efficacy beliefs of the two groups. Moreover, no significant difference was found between the students' self-efficacy beliefs and gender variable.

**Keywords:** teacher education, pedagogical formation program, teacher self-efficacy, pre-service teachers.

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#### Introduction

The success of education systems is directly connected with the level of competencies possessed by teachers. Teachers' competency levels are of great importance in terms of designing classroom processes and effective implementation of them. There are many factors affecting how effective teacher competencies can be implemented. One of these factors is their level of self-efficacy beliefs of teachers.

Bandura (1982, 1997) defines self-efficacy as an individual's belief in his/her capacity for organizing an activity required to demonstrate a certain performance and being successful in this endeavor. The individual's belief in his/her capacity to achieve something can be effective in his/her getting into action and being successful. The concept of self-efficacy has been the subject of a great deal of research since its introduction in 1970s and it has been concluded that it is influential on the individual's learning, motivation and performance (Hoy & Spero, 2005). In this regard, it can be argued that teachers' self-efficacy levels can be influential on their educational practices. While high level of self-efficacy increases teachers' eagerness to demonstrate some certain performance, low level of it may result in their avoidance of effective execution of their competencies. Self-efficacy belief possessed by a teacher may have a positive impact on his/her rendering a positive influence on his/her students.

Teacher self-efficacy is defined as teachers' beliefs or judgments in their skills to enhance students' learning (Hoy & Spero, 2005). Thus, self-efficacy affects the teacher's mental structure capitalized on in the organization of learning activities and his/her capacity to do activities in the class (Pendergast, Garvis, & Keogh, 2011). Therefore, it can be said that during the process of teacher training, attempts should be made not only to impart teaching competencies to pre-service teachers but also to improve their self-efficacy beliefs. Results of many studies encourage such attempts. Results of the research revealed that high selfefficacy perception positively affects both teacher behaviors and student outcomes (Bandura, 1997; Henson, Kogan, & Vacha-Haase, 2001). Findings related to positive outcomes of high teacher self-efficacy reported in the relevant literature can be summarized as follows. Tschannen- Moran and Woolfolk Hoy (2001) stress that in the training of determined and enthusiastic teachers, reinforcing their self-efficacy beliefs is of great importance. As teacher self-efficacy is directly associated with motivation, it directly affects learning outcomes generated in the class (Pendergast et al., 2011; Ross, 1992). Teachers' self-efficacy levels affect job satisfaction (Caprara, Barbaranelli, Borgogni, & Steca, 2003), sense of devotion to the profession (Coladarci, 1992) and planning and in-class application skills (Milner & Woolfolk, 2003). Teachers having high self-efficacy beliefs spend more time on students experiencing difficulties in learning process (Gibson & Dembo, 1984). Furthermore, research conducted in Turkey showed that self-efficacy beliefs of the preservice teachers thinking to be a teacher and those of the pre-service teachers who are undecided about being a teacher are higher than those of the pre-service teachers not thinking to be a teacher (Orhan, 2005; Ozdemir, 2008) and there is a significant correlation between the teacher's self-efficacy perception and students' self-concepts related to course for civic studies (Ozerkan, 2007). A teacher having a high level of self-efficacy is naturally expected to have a higher level of self-confidence. This may have positive influence on classroom management and success of learning activities.

Considering the effect of past experiences on self-efficacy belief, it seems to be possible to positively influence students' self-efficacy by means of interventions taking place during their education. Like the rings of a chain, some variables are affecting each other positively. In the training of teachers having positive beliefs about their competencies, the most important role should be assumed by teacher training institutions and implemented policies. Since 1983 when the responsibility of teacher training was assigned to education faculties in Turkey, education faculties have been on the center of teacher training. Since then, though some changes have been observed in teacher training policies, the structure of education faculties has not undergone much change. During this period, three ways of teacher training have been adopted: (1) Training teachers for elementary and secondary schools through different programs offered in education faculties; the main objective of the students attending these programs is assumed to be a teacher. (2) Teacher training through "master's programs without thesis" offered to the graduates of the faculties apart from education faculties. (3) Teacher training through "teaching certificate" programs offered to the students of faculties apart from education faculties. It is assumed that the main objective of the students attending faculties different from education faculties is not being a teacher (Sen & Gogus, 2011; Simsek 2005; Karagozoglu, 2009; YOK, 1997; Yuksel, 2004, 2011). First and third options of teacher training are still in progress. The basic discussion focuses on which of these three options of teacher training should be preferred; the fact that these three options will yield different outcomes and these different outcomes will affect teaching competencies differently. While the effectiveness of education faculties in training teachers is still under question, teacher training through short-term pedagogical formation programs gives rise to more serious discussions.

Some of the problems mentioned in the related literature are that the criteria followed and adopted in teacher training are contradictory, complex and inadequate; that the Ministry of National Education does not need teachers for secondary education and that opportunities are provided for the graduates of the faculties of science and letters in a period in which many of the education faculty graduates are not appointed as a teacher and all these problems make the existing problems more serious and thus the quality of teacher training given at education faculties has been deteriorated (Atac, 2003; Azar, 2011; Yuksel, 2011). In a country, whether teaching is considered to be a profession depends on the success of the government in determining teacher training and working criteria (Atac, 2003). The complex structure of teacher training in Turkey hinders the professionalization of teaching.

There is a great deal of research looking at the effectiveness of the two different programs of teacher training and their effects on pre-service teachers' motivation and attitudes towards the profession. Teaching qualifications of the students of education faculties are expected to be better. However, the results of the research investigating pre-service teachers' attitudes towards the profession differ greatly (Gurbuz & Kisoglu, 2007; Ozturk, Dogan, & Koc, 2005; Sen & Gogus, 2011; Turhan & Agaoglu, 2011; Simsek, 2005). Though there is a great amount of research focusing on teacher self-efficacy, there is no study comparing the self-efficacy levels of pre-service teachers educated in these two programs.

The purpose of this study is to determine the level of self-efficacy beliefs of the pedagogical formation program students and education faculty students about the

profession of teaching based on their own opinions and to compare them depending on program and gender variables.

#### Methodology

The present study is designed in line with the survey model. The population of the study is comprised of the Pedagogical Formation Program (PFP) (literally Teaching Certificate Program) students having graduated from faculties of science and letters and/or still attending the final grade of these faculties and the fourth-year students attending the following departments of the Education Faculty (EF) of Mugla Sitki Kocman University in 2010-2011 academic year: The Fine Arts Teacher Education Programs-FA (Music and Art), Primary Teacher Education Programs-EE (Pre-school Classroom Teacher, Education, Civic Studies, and Science), Foreign Language Teacher Education Programs-FL (English and German) and Turkish Teacher Education Program-TT (Turkish). The final population of the study consists of the students who were available in their classes in the day when the data collection instrument was administered and completed the data collection instrument; thus, totally 482 students participated in the study and 285 of the participants are education faculty students and 197 are pedagogical formation program students.

The data of the current study were collected through the administration of Teachers' Self Efficacy Scale (TSES) developed by Tschannen-Moran and Woolfolk (2001) and adapted to Turkish by Capa, Cakiroglu, & Sarikaya (2005) to the sample group. The scale consists of 24 items and three sub-scales. Each sub-scale includes eight items. These are Student Engagement (SE), Instructional Strategies (IS) and Classroom Management (CM). SE includes items related to what extend the teacher can persuade students that they could be successful in classroom activities. CM includes items related to what extent the teacher can control misbehaviors in the classroom and IS includes items related to what extent the teacher can use various teaching and evaluation strategies.

The sample items from TSES for each scale are: Instructional Strategies - "To what extent can you use a variety of assessment strategies?" (IS) "How much can you do to control disruptive behavior in the classroom? (CM), "How much can you do to get students to believe they can do well in schoolwork? (SE).

The scale is designed in the form of 9-point Likert scale ranging from 1- *Strongly Disagree* to 9- *Strongly Agree*. In the adaptation study, construct validity and reliability procedures were carried out by the authors. Confirmatory factor analysis (CFA) based on efficacy data for 628 pre-service teachers was conducted to model with a three factor solution. The findings provided a single piece of evidence for the construct validity of the TSES scores with the sample of Turkish pre-service teachers. Cronbach alfa reliability coefficients were found to be .82 for *Student Engagement*, .86 for *Instructional Strategies* and .84 for *Classroom Management*. For the whole scale, Cronbach alfa reliability coefficient was calculated to be .93. All items were contributing to the reliability with high item-total correlations (Capa et al., 2005). Moreover, on the basis of the current data, Cronbach alfa coefficients were calculated and for the first factor, it was found to be .84; for the second one, it was found to be .85; for the third one, it was found to be .85 and for the whole of the scale, it was found to be .94.

As it was assumed that teaching practicum course would be effective in introducing the pre-service teachers to the teaching of profession and making them aware of their teaching capacity, the scale was administered to the pre-service teachers in the last week of the spring term of 2010-2011 academic year when the students took teaching practicum course. The scale was administered to 285 fourth-year students of the education faculty and 197 pedagogical formation program students and totally 28 scales were excluded from the analysis as they were not properly completed. Of the scales analyzed, 272 are from the education faculty students and 182 are from pedagogical formation program students; thus, analyses were conducted on the data collected from 454 (265 females and 188 males) students.

In the description of the students' self-efficacy levels, arithmetic means scores and standard deviations were used. The means scores graded based on the calculated interval score were turned into verbal expressions as seen in the table below. The highest mean score to be taken from each sub-dimension of the scale is 72 (8 items x 9 points) and the lowest mean score to be taken is 8 (8 items x 1 point). The highest mean score to be taken from the whole scale is 216 (24 items x 9 points) and the lowest mean score is 24 (24 items x 1 point). In the determination of the difference between the means, t-test was used and the significance level was set to be .05.

General self-efficacy score		Self-efficacy score intervals
intervals	Self-efficacy levels	for the sub-scales
(interval value: 21.35)		(interval value: 7.11)
8.00-15.11	Verylow	24.00-45.35
15.12-22.23	Very low	45.36-66.71
22.24-29.35	Low	66.72-88.07
29.36-36.47	Low	88.08-109.43
36.48-43.59	Medium	109.44-130.79
43.60-50.71	Medium	130.80-152.14
50.72-57.83	High	152.15-173.51
57.84-64.95	High	173.52-194.87
64.96-72.00	Very high	194.88-216.00

Table 1. Teachers' self-efficacy level score intervals for the whole scale and the sub-scales

#### Findings

When the mean score taken by the participants related to their general self-efficacy level in Table 2 is examined, it is seen that the self-efficacy level of the pedagogical formation program students ( $\overline{X}$ =163.98) and that of the education faculty students ( $\overline{X}$ =162.79) are very close to each other and both are high.

Table 2. General description of the pre-service teachers' self-efficacy levels

					/		
	PFP		E	EF		General	
	$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S	
Student engagement	53.81	7.25	53.74	8.45	53.77	7.98	
Instructional strategies	54.53	7.81	55.18	8.51	54.92	8.23	
Classroom	55.64	7.69	53.85	8.78	54.57	8.40	

Ν	182		272		45	4
General self-efficacy	163.98	20.33	162.79	23.89	163.26	22.51
management						

When the general mean scores taken from the sub-dimensions of the scale are examined, it is seen that the pre-service teachers have a high level of self-efficacy perception of all the sub-scales; *student engagement* (53.77), *instructional strategies* (54.92), *classroom management* (54.57).

When the mean scores taken from the sub-dimensions of the scale are examined in relation to the programs, it is also seen that the scores are close to each other. The mean scores of the pedagogical formation program students from the sub-dimensions of *student engagement, instructional strategies and classroom management* are 53.81-54.53-55.64, respectively and those of the education faculty students are 53.74-55.18-53.85, respectively. These values show that both of the groups have high levels of self-efficacy beliefs.

In Table 3, the pre-service teachers' general self-efficacy levels according to the programs can be seen and here it is clear that there is no significant difference between the levels of the pedagogical formation program students and that of the education faculty students (t= .550 p>.05).

		-		0	1 0	
Dimensions	Programs	Ν	$\overline{X}$	S	t	р
Student engagement	PDF	182	53.81	7.25	.09	.93
	EF.	272	53.75	8.46		
Instructional strategies	PDF	182	54.53	7.81	.83	.40
	EF.	272	55.19	8.51		
Classroom management	PDF	182	55.64	7.69	2.22*	.03
	EF.	272	53.86	8.79		
General self-efficacy	PDF	182	163.98	20.33	.55	.58
	EF.	272	162.79	23.90		

Table 3. Comparison of teacher self-efficacy levels according to the programs

\*p<.05

When the sub-dimensions of the scale are considered, while there is no significant difference between the self-efficacy levels of the pedagogical formation program students and the education faculty students at the sub-dimensions of *student engagement* (t=.09 p>.05) and *instructional strategies* (t=,83 p>.05), there is a significant difference favoring PFP students (t= 2.22 p>.05) at the sub-dimension of *classroom management*.

It can be claimed that the levels of the self-efficacy beliefs of the pedagogical formation program students and the education faculty students are similar to each other.

Table 4. Comparison of the	pre-service teachers'	self-efficacy	levels according to gender

Gender	N	_	-		
	IN	X	S	t	р
Female	265	53.93	8.08	.48	.63
Male	188	53.57	7.89		
Female	265	54.75	8.31	.54	.59
Male	188	55.18	8.15		
	Male Female	Male188Female265	Male18853.57Female26554.75	Male18853.577.89Female26554.758.31	Male 188 53.57 7.89   Female 265 54.75 8.31 .54

Female	265	54.11	8.38	1 40	.14
Male	188	55.29	8.36	1.48	
Female	265	162.80	22.64	.58	.56
Male	188	164.04	22.39		
	Male Female	Male188Female265	Male18855.29Female265162.80	Male18855.298.36Female265162.8022.64	Male 188 55.29 8.36 1.48   Female 265 162.80 22.64 .58

#### \*p<.05

The data presented in Table 4 show that the pre-service teachers' general self-efficacy levels do not vary significantly depending on gender variable (t= .58 p>.05).

When the sub-dimensions of the scale are considered, again it is seen that there are no significant differences observed at the sub-dimensions of *student engagement* (t= .48 p>.05), *instructional strategies* (t= .54 p>.05) and *classroom management* (t= 1.48 p>.05) depending on gender variable.

Thus, it can be argued that gender does not have a significant role in determining the pre-service teachers' levels of self-efficacy beliefs.

#### **Conclusion and Discussion**

The purpose of the current study was to determine the self-efficacy levels of the pedagogical formation students and senior students of the education faculty. It was concluded that the levels of self-efficacy beliefs of the pedagogical formation program and education faculty are close to each other and both of the groups have high levels of teaching self-efficacy beliefs. Having a high level of professional self-efficacy is believed to enhance the quality of a teacher. The teacher's belief in his/her self-efficacy is effective in shaping the classroom atmosphere (Bandura, 1997). Teachers having a high level of self-efficacy spend more time on learning activities in their classrooms. They provide greater assistance to students experiencing learning difficulties and appreciate their success more. They prepare activities meaningful and supportive to students. Teachers having a low level of self-efficacy spend more time on non-academic activities and display a tendency of giving up fast when the desired outcomes have not been achieved by students. They criticize their students in case of failure easily (Gibson & Dembo, 1984). Teachers having a high level of self-efficacy conduct educational activities to promote their students' interests and academic orientations (Woolfolk & Hoy, 1990). The pre-service teachers prepared to be a teacher by two different programs seem to be qualified teachers. Thus, it can be concluded that both of the programs are good enough to train qualified teachers.

When the reasons for the pre-service teachers' having high levels of self-efficacy beliefs are examined, it is seen that there are four sources contributing to the self-efficacy of an individual (Bandura, 1997):

(1) Performance experiences: This is directly related to an individual's own experiences; positive past experiences are influential on the future potential behaviors of an individual. (2) Affective state: An individual's being mentally and physically healthy increases his/her potential for initiating an action. (3) Indirect experiences: when an individual sees the achievements of others, he/she may more strongly believe that he/she can also be successful. 4) Oral persuasion: In accomplishing a task, encouraging statements may help an individual. Positive experiences related to these four factors support the development of self-efficacy belief. In addition to this, when the sub-reasons for the high level of the preservice teachers' self-efficacy beliefs are considered, it is expected that the education faculty students should have high level of self-efficacy belief. They are expected to have developed

their self-efficacy beliefs based on the competencies they acquired throughout their undergraduate education. During their undergraduate education, the activities, assignments and applications they carried out may have resulted in the formation of more realistic perception.

The fact that the pedagogical formation program students developed high levels of selfefficacy beliefs during the pedagogical formation program lasting two terms can be explained through different reasons. Given that the education taken for two terms can not be adequate for the pre-service teachers to acquire a realistic perception of the profession of teaching, the high level of self-efficacy of the pedagogical formation students can be explained by their perception of the profession of teaching as an easy job to do. Second reason may be that as a result of the professional training they underwent during their pedagogical formation education, the graduates of the faculty of science and letters increased their self-confidence in their professional competencies. Besides these, as a result of taking part in the pedagogical formation program, they may have become more willing and serious to be a teacher.

Another finding of the current study is that gender is not an influential factor on the preservice teachers' level of self-efficacy beliefs. This finding is supported by Kahyaoglu & Yangin (2007), Oguz & Topkaya (2008), Azar (2010). On the other hand, Capri & Celikkaleli (2008), Ozdemir (2008) and Saracaloglu, Kumral, & Kanmaz (2009) reported that gender is influential in favor of female students.

In light of these findings, by looking at the success of the pre-service teachers' high level of self-efficacy perception in application, restructuring of the teacher training programs can be considered. Moreover, more in-depth investigation of teachers' self-efficacy by means of qualitative methods is believed to be useful.

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