

Academic Self-Efficacy Perceptions of Teacher Candidates

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This study aims determining academic self-efficacy perception of teacher candidates. It is survey model. Population of the study consists of teacher candidates in 2010-2011 academic years at Ahmet Keleşoğlu Education Faculty of Education Formation of Selçuk University. A simple random sample was selected as sampling method and the study was conducted on 312 teacher candidates. The data of this study was obtained by “academic self-efficacy scale” which was developed by Jerusalem and Schwazer (1981) and translated into Turkish by Yılmaz, Gürçay, and Ekici (2007) and its reliability value was determined as .79. However, Cronbach Alfa reliability value of this scale became .76 with the result of the data analysis of the study. SPSS package program was used to analyze the data; and the data analysis, frequency, percentage, arithmetic mean, standard deviation, independent samples t-test, one-way analysis of variance (ANOVA) and post hoc tests (LSD) test were used. When the findings of the research were considered in general, the result showed that the academic self-efficacy perception level of the candidates was at desired level. However, teachers' views about the level of academic self-efficacy perception showed that most of them preferred a lower level option "suits me", instead of "totally suits me" option that was the highest degree of participation of four likert-type scale. This illustrated that their perception about this issue was not at a very high level. When independent variables were taken into account, among the academic perception levels of teacher candidates, a significant difference was detected in terms of working as a teacher or not and academic achievement variables but it revealed no significant difference in terms of gender and type of education program variables.

Introduction

Fundamental aim of the education is to raise quality individuals. And for them to be raised with quality, first of all, the ones who raise them need to be sufficient. At this point, things which first come to mind are tutorhood and the ones who carry out this profession. Also, teachers being sufficient is closely related to the education they receive during the education process before executing the profession. In order for this education to reach its purpose, teachers are expected to have a set of efficacies that partake in academic self-efficacy between each other during the candidacy.

Efficacy is the degree of having necessary knowledge, ability and attitudes so that a role can be played (Balçı, 2005). According to another definition, efficacy is defined as carrying out the roles assigned by one's employers with quantity and quality and as having the required knowledge and ability so that an attitude will be exercised (Şişman, 2006). The notion efficacy taking place in an individual is self-efficacy. The notion self-efficacy is based on Bandura's Social Learning Theory.

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According to Bandura, self-efficacy is a person's belief in his own exercise capacity after organizing the necessary activities, thus that person can put forward certain performances (Bandura, 1995). Self-efficacy is a person's trust on his capability of organizing his knowledge and abilities and putting these into action, so that a problem will be solved and a task will be carried out with success (Eccles & Wigfield, 2002; Cited by Fırat Durdukoca, 2010). Bandura, concerning this matter, emphasizes on there being four sources of self-efficacy beliefs. These are a) "performance achievements", b) "experiences", c) "persuasion", and d) "physical /emotional situation".

In the literature, there are different types of efficacy as self-efficacy, professional efficacy, teacher efficacy. One of these concepts is "academic self-efficacy." Academic self-efficacy is the belief of the student regarding whether he will be able to fulfill an academic job successfully (Linnenbrink & Pintrich, 2003). According to another definition, academic self-efficacy is the judgments concerning people's arrangement and realization skills of the required acts in order to achieve their education goals (Schunk, 1991). And Bandura (1997), in a similar way with these definitions, stated that academic self-efficacy is an individual's belief regarding that individual being successful in an academic subject field.

Self-efficacy is seen in people with high or low levels. Individuals whose self-efficacy belief is high are more willing to partake in the activities in their lives, put more effort in these activities, develop more effective strategies against the challenges they face (Eggen & Kauchak, 1999). Linnenbrink and Pintrich (2003), in this context, have laid stress on the relationship of the contribution of academic self-efficacy perception regarding the learning process with its behavioral, cognitive, and motivational aspects. As accordance with this, while students' self-efficacy perceptions determine their learning and achievements, the student's self-efficacy also increases equally as he learns more and achieves more. Hence Brannick, Miles and Kisamore (2005) emphasizes that as individuals' accumulation of knowledge on some matter increases, then the academic self-efficacy perception on that matter increases directly.

Linnenbrink and Pintrich (2003) have laid stress on the relationship of the contribution of academic self-efficacy perception regarding the learning process with its behavioral, cognitive, and motivational aspects. According to this, while students' self-efficacy perceptions determine their learning and success through their participation to the school events, the student's self-efficacy also increases equally as he learns more and achieves more. As the accumulation of knowledge increases on a particular subject, then the academic self-efficacy perception on that particular subject scales up as well (Brannick, Miles & Kisamore, 2005). Thus, studies concerning the subject show that high academic self-efficacy has a huge effect on the students' academic lives (Caprara et al, 2006; Chemers, Hu & Garcia, 2001; Goddard, Hoy & Woolfolk-Hoy, 2000; Pajares & Graham, 1999; Pajares, 1996; Schunk, 1991; Schunk, 1995; Shell, Murphy & Bruning, 1989; Vrugt, Langereis & Hoogstraten, 1998).

There are numerous studies on self-efficacy in Turkey. These involve subjects such as, particularly, computer self-efficacy perception (Akkoyunlu & Kurbanoğlu, 2003; Aşkar & Umay, 2001), teachers' and teacher candidates' self-efficacy perception (Arslan, 2008; Baykara, 2011; Çalışkan, Selçuk & Özcan, 2010; Çubukçu & Girmen, 2007; Hevedanlı & Ekici, 2009; Kan & Akbaş, 2006; Özerkan, 2007; Üstüner et al, 2009, Yeşilyurt, 2011), scale development self-efficacy perception (Ekici, 2005; Hancı Yanar & Bümen, 2012; Yılmaz et al, 2004), and examining the self-efficacies in terms of various variables such as gender, branch, school type, education level etc. (Aykaç Duman, 2007; Bulut & Oral, 2012; Çoşkun, 2010; Odacı & Berber Çelik, 2011), and also the relationship of self-efficacy with academic success (Köseoğlu, 2010) and life satisfaction (Aydiner, 2011).

Nevertheless, a limited number of researches were achieved in the subject of self-efficiency. These researches can be summed up in two sections. In the first section, scale adaptation studies regarding

self-efficacy (Ekici, 2012; Öncü, 2012; Yılmaz, Gürçay & Ekici, 2007), and in the second section, studies conducted upon the academic self-efficacies of teacher candidates (Arslan, 2010; Fırat Durdukoca, 2010; Odacı & Berber Çelik, 2011; Ünlü & Kalemoğlu, 2011). Though a number of researches related to self-efficacy can be come up against in the literature, sufficient amount of researches on the academic self-efficacy perceptions of teacher candidates have not been reached. Thus, also examining the academic self-efficacy perceptions of teacher candidates alongside with this study is expected to contribute to the field.

Purpose of the Study

The main purpose of the study is to set forth the academic self-efficacy perception of teacher candidates. In accordance with this aim, answers were sought to the questions below.

- a. What is the self-efficacy perception level of teacher candidates?
- b. Does self-efficacy perception level of teacher candidates show significant difference according to the variables below?
 - ✓ Gender,
 - ✓ Working- not working as a teacher,
 - ✓ Academic achievement and,
 - ✓ Type of education program.

Method

Research Model

The research presents a descriptive feature as well as being a screening model. The screening model aims to describe a situation existing in our day or in the past as it is (Karasar, 2012). Within the scope of the research, self-efficacy perceptions of teacher candidates are described.

Population and Sample

Demographic characteristics of the teacher candidates participating in the study are shown in Table 1.

Table 1: The demographic characteristics of the teacher candidates participating in the study

Demographic Characteristics		f	%
Gender			
1	Female	234	75,0
2	Male	78	25,0
Whether or Not Working as a Teacher			
1	Yes	79	25,3
2	No	233	74,7
Academic Achievement			
1	61-70	43	13,8
2	71-80	146	46,8
3	81-90	123	39,4
Program Type			
1	Mathematic Teaching	90	28,8
2	Physics Teaching	17	5,4
3	Chemistry Teaching	20	6,4
4	Biology Teaching	29	9,3
5	Turkish Language and Literature Teaching	61	19,6
6	Philosophy Group Teaching	58	18,6
7	Language (English, French, Deutsch) Group Teaching	37	11,9
Total		312	100,0

Population of the study consists of teacher candidates in 2010-2011 academic years at Ahmet Keleşoğlu Education Faculty of Education Formation of Selçuk University. A simple random sample was selected as sampling method in the research. This method was selected because every unit in the population has a chance of being an equal and independent sample (Balcı, 2011), samples are selected without replacing the individuals who entered the sample with others (Aziz, 2008), and everyone in the population has an equal chance of getting selected (Karasar, 2012). The sample of the research composes of 312 teacher candidates and the demographic characteristics of the teacher candidates participating in the sample are shown in Table 1. It was determined that in terms of the gender variable of participants, females (75,0%), in terms of the academic achievement, 71-80 (46,8%), in terms of the program type, Math (28,8%), and in terms of whether or not working as a teacher, ones who don't work (74,7) seem to prevail.

Data Collection Instrument

The data of this study was obtained by “Academic Self-Efficacy Scale” which was developed by Jerusalem ve Schwarzer (1981). The Cronbach's alpha reliability value of the original scale was determined to be .87. Scale was translated into Turkish by Yılmaz, Gürçay and Ekici (2007). The Cronbach's alpha reliability value of the scale composing of seven subjects and only one aspect is .79. And the Cronbach's alpha reliability value in the wake of the analysis conducted on the data acquired from this research appeared to be .76.

Data Analysis

SPSS package program was used to analyze the data. The demographic characteristics of participants have been determined through frequency and percentage. Arithmetic mean, standard deviations were used to establish the academic self-efficacy perceptions of the teacher candidates. As stated in Taşvancıl (2002), the data which is acquired from equally spaced scales can be analyzed by arithmetic mean, standard deviation and variance. So to figure out if there is a significant difference between the participant groups in terms of the gender and the whether or not working as a teacher variables or not, “independent samples t-test” was used. Büyüköztürk (2007), Ak (2006), Balcı (2011) and Demirgil (2006) emphasize that “independent samples t-test” can be used in determining if the difference between the means of two irrelevant samples is meaningful or not. In addition to these, One-way Analysis of Variance (ANOVA) was conducted to determine if there is a significant difference between the participant groups in the sense of the academic achievement and the type of education program variables or not. To determine between which groups the differences that were established in the wake of this analysis are, the post hoc tests (LSD) test, which determine view differences lower than ,05 between the participant groups with a more radical point of view than tests such as Scheffe, Tukey etc., is used. Between two or more irrelevant sample means, it's emphasized that using “one-way analysis of variance” in putting forward if three or more average points regarding a factor differ from each other in a significant way or not is ideal (Antalyalı, 2006; Balcı, 2011; Büyüköztürk, 2006; Demirgil, 2006). Four likert-type subjects are graded as “1” – Doesn't suit me at all (1.00–1.75), “2” – Suits me slightly (1.76–2.50), “3”- Suits me (2.51–3.25), “4”- Suits me totally (3.26–4.00) and the significance level was accepted as .05.

Results

The results, which were obtained after analyzing the data acquired in accordance with the study's purpose, take place below taking account of the subgoals of the study and the sequence of these goals.

Academic Self-efficacy Perception Level of Teacher Candidates

Findings that were acquired regarding academic self-efficacy perceptions of teacher candidates are given in Table 2.

Table 2: Arithmetic mean and standard deviation results of the data that was acquired regarding academic self-efficacy perceptions of teacher candidates

Academic Self-efficacy Scale		\bar{x}	SD
1	In my university education, I am always able to accomplish the work to be done	3,250	,590
2	I always achieve high success when I am adequately prepared for the exam.	3,576	,573
3	To get good grades, I know very well what I need to do.	3,381	,599
4	Even if a written exam is very hard, I know I will succeed.	2,955	,674
5	I cannot think of failing any exam	2,471	,821
6	I am comfortable in the exam because I trust my intelligence.	2,888	,734
7	When I prepare for an exam, I often do not know how to deal with the topics that I need to learn (-)	3,448	,779
General Mean		3,138	,416

The arithmetic mean of the opinions put forth by the teacher candidates regarding their self-efficacy perceptions is 3,138. This ratio shows that the views of the teacher candidates agree on the option “suits me” of the five likert-type scale. Obtained finding can be interpreted as being higher than the averages of the academic self-efficacy perception level of the teacher candidates, though not being on a desired level. Also the standard deviation result of the teacher candidate views regarding their self-efficacy perceptions is ,416. This finding puts forth that parallelism, consistency, consensus between the views of the teacher candidates are of high level, and that the candidates state views similar to one another’s.

Academic Self-efficacy Perception Level of the Teacher Candidates in Terms of Independent Variables

Findings that put forth the academic self-efficacy perception level as accordance with the gender, whether or not working as a teacher, academic achievement and the type of education program variables of the teacher candidates take place in Table 3.

There was no significant difference between the views of the teacher candidates in terms of the gender variable regarding academic self-efficacy perception levels. This finding shows that male and female teacher candidates have similar academic self-efficacy perception to each other. According to the findings obtained from the study, no statistically significant difference between the self-efficacy perception levels of teachers concerning the whether or not working as a teacher variable was found. It was determined that teachers who’re working as a teacher in an institute have a higher academic self-efficacy perception level than the ones who’re not working. This finding can be described as working as a teacher having a positive effect on academic self-efficacies of the teacher candidates. In terms of academic achievement, no significant difference between academic self-efficacy perception levels of the teacher candidates was determined. Academic self-efficacy perception level of the teacher candidates whose academic achievements are somewhere between 81-90 seems to be higher than those candidates’ who have other achievements. This revealed finding can be put into words as academic achievement affecting the academic self-efficacies of the teacher candidates in a positive way. In terms of the type of education program variable, no statistically significant difference between the academic self-efficacy perception levels of teachers was found. This finding, in terms of the type of education program variable, portrays that candidates have an academic self-efficacy perception similar and close to each other.

Table 3: Analysis results of the academic self-efficacy perception of the teacher candidates in terms of independent variables

Gender	Female (f=234; %75,0)		Male (f=78; %25,0)		t & p values		Levene's test												
	\bar{x}	SD	\bar{x}	SD	t	p	F	p											
Academic self-efficacy	3,146	,407	3,113	,446	,605	,546	,266	,606											
Whether or not working as a teacher	Yes (f=79; %25,3)		No (f=233; %74,7)		t & p values		Levene's test												
	\bar{x}	SD	\bar{x}	SD	t	p	F	p											
Academic self-efficacy	3,224	,395	3,109	,420	2,134	,034*	,016	,899											
Academic achievement	61-70 (f=43; %13,8) 1		71-80 (f=146; %46,8) 2		81-90 (f=123; %39,4) 3		Test of Homogeneity		Anova	GD									
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	Levene	p	F		p								
Academic self-efficacy	3,04	,38	3,08	,42	3,23	,03	,049	,95	5,31	,005*	3-1,2								
Program type	Mathematic (f=90; %28,8) 1		Physics (f=17; %5,4) 2		Chemistry (f=20; %6,4) 3		Biology (f=29; %9,3) 4		Turkish Lang. (f=61; %19,6) 5		Philosophy Grp. (f=58; %18,6) 6		Language Grp. (f=37; %11,9) 7		Test of Homogeneity		Anova	GD	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD	Lev.	p	F		p
Academic self-efficacy	3,044	,437	3,134	,455	3,192	,402	3,123	,336	3,194	,409	3,170	,413	3,208	,417	1,030	,406	1,246	,283	-

P<,05 **GD:** Groups which have Differences

Discussion and Conclusion

These results were recovered in the light of the findings obtained from the study. Academic self-efficacy perception level of the teacher candidates is above the average and at a sufficient level. That said, it was found that academic self-efficacy perception level regarding the candidates themselves in terms of always being able to accomplish the work to be done, always achieving high success, being comfortable in the exam, trusting oneself in succeeding and dealing with the topics that need to be learnt is high. In the literature there are researches supporting this result which was reached in the wake of this study. Hence, some of the researches regarding the topic put forth that the self-efficacies of the teacher candidates are above the average (Gürol, Altunbaş & Karaaslan, 2010; Oğuz & Topkaya, 2008; Ülper & Bağcı, 2012; Ünlü & Kalemoğlu, 2011; Yeşilyurt, 2011; Yılmaz, Yılmaz & Türk, 2010). On the other hand, there are also researches that which don't go with the research results, that which put forward that the self-efficacies of the teacher candidates are on an average level (Altunçekiç, Yaman & Koray, 2005; Çevik, 2011; Gelbal & Kelecioğlu, 2007; Seferoğlu, 2005). The main purpose of this study being academic self-efficacy and the main purpose of other studies being self-efficacy may have very well resulted in them studies putting forth different outcomes.

When independent variables are taken into account, no significant difference between the candidates was found in terms of the gender variable regarding the academic self-efficacy perception levels. Some of the researches regarding the topic do support this obtained result. Thusly, in the literature, there are lots of studies saying that both two genders have a similar self-efficacy perception, in that there is no significant relationship between gender and self-efficacy

(Akbaş & Çelikkaleli, 2006; Çapri & Kan, 2007; Jegede & Taplin, 2000; Özçelik & Kurt, 2007; Taşkın Can, Cantürk Günhan & Öngel Erdal, 2005; Tschannen-Moran & Woolfolk-Hoy, 2001; Yılmaz & Çokluk Bökeoğlu, 2008). On the other side, some studies regarding the gender variable say that self-efficacy and academic self-efficacy of females are higher (Busch, 1995; Bong 1999) and some of them say that males' are higher (Demirtaş, Cömert & Özer, 2011; Firat Durdukoca, 2010; Morgil, Seçken & Yücel, 2004; Zeldin & Pajares, 2000). Henceforth, what can be derived from this is that results obtained from this study don't tally with the results of the studies in the literature. This situation may have stemmed from participants from the relevant researches having different socio-cultural structures.

A statistically significant difference was determined between academic self-efficacy perception levels of the teacher candidates in terms of the whether or not working as a teacher and academic achievement variables. As accordance with this, it was established that academic self-efficacy perception level of teacher candidates who work as a teacher, and of teacher candidates whose academic achievement is high, is higher. This revealed result shows parallelism with the result of the research conducted by Yenilmez and Turgut (2012) with Ülper and Bağcı (2012) regarding this topic. Amongst the results of relevant researches, it is stated that teacher candidates whose academic achievement level is high have a higher self-efficacy perception. But, thanks to a study conducted by Şahin-Taşkın and Hacıömeroğlu (2010), it was found out that there was no significant difference between academic achievements and self-efficacy perceptions of candidates.

Among the study results, it is stated that no significant difference was found between the views of the teacher candidates in the sense of the type of education program variable concerning the academic self-efficacy perception levels. Similar results were acquired from the studies relevant to this topic that were made by Demirtaş, Cömert and Özer (2011), and Özdemir (2008). This situation establishes that study results support each other and are consistent with one another.

When the obtained findings are generally reviewed, the result is that teacher candidates are in general just slightly above the average of the academic self-efficacy perception level. This situation at the same time points out that academic self-efficacy perception levels of the candidates are not at high levels. The obtained result, in other words views regarding the academic self-efficacy perception level of the teacher candidates, joining in on the option "suits me" rather than on the option "suits me totally", which is the highest participation level of the four likert-type scale, can be given as proof of this result.

Recommendations

These advices were presented in the light of the results obtained from the research.

- a. Instructors who guide the teacher candidates (consulting) can give scientific support in the fields of academic self-efficacy.
- b. In the fields of academic self-efficacy, activities such as informative seminars, panels etc. to candidates can be organized.
- c. For it was found out that working as a teacher contributes to the academic self-efficacy of the candidates, number of lessons in which the practice such as School Experience and Teaching Practice is focused, or course hours of these lessons can be increased.
- d. This study was conducted upon the teacher candidates being educated in the pedagogical formation program. Similar studies can be conducted upon teacher candidates who take up undergraduate programs of faculties that bring up different teachers.

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References

- Ak, B. (2006). SPSS uygulamalı çok değişkenli istatistik teknikleri (Applied SPSS on multivariate statistical techniques), Ş. Kalaycı (Ed.) *Hipotez testi (Hypothesis testing)*, (pp. 63-69), Ankara, Asil Pub.
- Akbaş, A. & Çelikkaleli, Ö. (2006). The investigation of the pre-service elementary teachers' science instruction self-efficacy beliefs according to their gender, type of education, and universities, *Mersin University Faculty of Education*, 2(1), 98-110.
- Akkoyunlu, B. & Kurbanoglu, S. (2003). A study on teacher candidates' perceived information literacy self-efficacy and perceived computer self-efficacy, *H.U. Journal of Education*, (24), 1-10.
- Altunçekiç, A., Yaman, S. & Koray, Ö. (2005). The research on prospective teachers' self-efficacy belief level and problem solving skills, *Kastamonu Education Journal*, 13(1), 93-102.
- Antalyalı, Ö. L. (2006). SPSS uygulamalı çok değişkenli istatistik teknikleri, (Applied SPSS on multivariate statistical techniques), Ş. Kalaycı (Ed.) *Varyans analizi (Analysis of variance)* (pp. 130-183), Ankara, Asil Pub.
- Arslan, A. (2008). The correlation between attitude and self-efficacy with regard to computer assisted education, *Electronic Journal of Social Sciences*, 7(24), 101-109.
- Arslan, C. (2010). The opinions of the Turkish education postgraduate students about their academic self-efficacy, *M.A.Ersoy University Journal of Education Faculty*, 10(19), 87-115.
- Aşkar, P. & Umay, A. (2001). Perceived computer self-efficacy of the students in the elementary mathematics teaching programme, *H.U. Journal of Education*, (21), 1-8.
- Aydiner, B. B. (2011). *The relationship between sub-dimensions of the life goals with general self-efficacy, life-satisfaction and some variables*, Unpublished Master's Thesis, Sakarya University, Institute of Educational Sciences, Turkey.
- Aykaç Duman, B. (2007). *The effects of the self-efficacy beliefs of high school students about English on their English performance due to gender, range and grade*, Unpublished Master's Thesis, Yıldız Teknik University, Institute of Social Sciences, Turkey.
- Aziz, A. (2008). *Sosyal bilimlerde araştırma yöntemleri ve teknikleri (Social science research methods and techniques)*, Ankara, Nobel Pub.
- Balcı, A. (2005). *Açıklamalı eğitim yönetim terimleri sözlüğü (Explanatory dictionary of educational administration)*, Ankara, Tektaş Pub.
- Balcı, A. (2011). *Sosyal bilimlerde araştırma yöntem, teknik ve ilkeler (Research methods techniques and principles in social sciences)*, Ankara, Pegem A Pub.
- Bandura, A. (1995). *Self-efficacy in changing societies*, New York, Cambridge University Press.
- Baykara, K. (2011). A study on "teacher efficacy perceptions" and "metacognitive learning strategies" of prospective teachers, *H.U. Journal of Education*, (40), 80-92.
- Bong, M. (1999). Personal factors affecting the generality of academic self-efficacy judgments: gender, ethnicity, and relative expertise, *Journal of Experimental Education*, 67(4), 315-331.
- Brannick, M. T., Miles, D. E. & Kisamore, J. L. (2005). Calibration between student mastery and self-efficacy, *Studies in Higher Education*, (4), 473-483. doi: 10.1080/0307507050016024 4
- Bulut, İ. & Oral, B. (2012). Self-efficacy perceptions regarding teaching profession: The case of faculty of science, letters, theology and fine arts graduates attending pedagogic formation program, *Inonu University Journal of the Faculty of Education*, 12(3), 1-18.

- Busch, T. (1995). Gender differences in self-efficacy and academic performance among students of business administration, *Scandinavian Journal of Educational Research*, 39(4), 311-318.
- Büyüköztürk, Ş. (2007). *Sosyal bilimler için veri analizi el kitabı, (Handbook of data analysis for social sciences)*, Ankara, Pegem A Pub.
- Caprara, G. V., Barbaranelli, C., Steca, P. & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level, *Journal of School Psychology*, 44(6), 473-490. doi:10.1016/j.jsp.2006.09.001
- Chemers, M. M., Hu, L. & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment, *Journal of Educational Psychology*, 93(1), 55-64.
- Coşkun, M. K. (2010). Investigating religious culture & moral knowledge teacher' self-sufficiency perception in terms of various variables, *Gazi Osmanpaşa University Journal of Social Science*, 5(1), 95-109.
- Çalışkan, S., Selçuk, G. S. & Özcan, Ö. (2012). Self-efficacy beliefs of physics student teachers': effects of gender, class level and academic achievement, *Kastamonu Education Journal*, 18(2), 449-466.
- Çapri, B. & Kan, A. (2007). The investigation of the teachers' interpersonal self-efficacy beliefs according to working experiences, type of school worked in, educational level worked in, and professional position, *Mersin University Faculty of Education*, 3(1), 63-83.
- Çevik, D. B. (2011). Examining elementary education pre-service teachers' self-efficacy beliefs, *Ahi Evran University Journal of Kırşehir Education Faculty*, 12(1), 145-168.
- Çubukçu, Z. & Girmen, P. (2007). Determining the social self-efficacy perception of candidate teachers, *Eskişehir Osmangazi University Journal of Social Sciences*, 8(1), 57-74.
- Demirgil, H. (2006). SPSS uygulamalı çok değişkenli istatistik teknikleri, (Applied SPSS on multivariate statistical techniques), Ş. Kalaycı (Ed.) *Parametrik olmayan hipotez testleri (Non-parametric hypothesis tests)* (pp. 83-112), Ankara, Asil Pub.
- Demirtaş, H., Cömert, M. & Özer, N. (2011). Pre-service teachers' self-efficacy beliefs and attitudes toward profession. *Education and Science*, 36(159), 96-111.
- Eggen, P. & Kauchak, D. (1999). *Educational psychology*, New Jersey, Printice-Hall, Inc.
- Ekici, G. (2005). The validity and reliability of the biology self-efficacy instrument, *H.U. Journal of Education*, (29), 85-94.
- Ekici, G. (2012). Academic self-efficacy scale: The study of adaptation to Turkish validity and reliability, *H.U. Journal of Education*, (43), 174-185.
- Fırat Durdukoca, Ş. (2010). Analysis of academic self-efficiency beliefs of elementary school teacher candidates using different variables, *Abant İzzet Baysal University Journal of Faculty of Education*, 10(1), 69-77.
- Gelbal, S. & Kelecgoğlu, H. (2007). Teachers' proficiency perceptions of about the measurement and evaluation techniques and the problems they confront, *H.U. Journal of Education*, (33), 135-145.
- Goddard, R. D., Hoy, W. K. & Woolfolk-Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement, *American Educational Research Journal*, 37(2), 479-507. doi:10.3102/00028312037002479
- Gürol, A., Altunbaş, S. & Karaaslan, N. (2010). A study of self-efficacy and epistemological beliefs of prospective teachers, *e-Journal of New World Sciences Academy*, 5(3), 1395-1404.

- Hancı Yanar, B. & Bümen, N. T. (2012). Developing a self-efficacy scale for English, *Kastamonu Education Journal*, 20(1), 97-110.
- Hevedanlı, M. & Ekici, G. (2009). Analyzing university students' biology self-efficacy levels in the aspect of different variables, *Ege Journal of Education*, 10(1), 24-47.
- Jegede, O. & Taplin, M. (2000). Trainee teachers' perception of their knowledge about expert teaching, *Educational Research*, 42(3), 287-308.
- Kan, A. & Akbaş, A. (2006). Affective factors that influence chemistry achievement (attitude and self-efficacy) and the power of these factors to predict chemistry achievement-I, *Journal of Turkish Science Education (TUSED)*, 3(1), 76-85.
- Karasar, N. (2012). *Bilimsel araştırma yöntemi, (Scientific research methods)*, Ankara, Nobel Pub.
- Köseoğlu, P. (2010). The influence of jigsaw technique-based teaching on academic achievement, self-efficacy and attitudes in biology education, *H.U. Journal of Education*, (39), 244-254.
- Linnenbrink, E. A. & Pintrich, P. R. (2003). The role of self-efficacy beliefs in student engagement and learning, *Reading and Writing Quarterly*, 19(2), 119-137. doi: 10.1080/10573560308223
- Morgil, İ., Seçken, N. & Yücel, A. S. (2004). Based on some investigation of self-efficacy beliefs of pre-service chemistry teachers variables, *Journal of the Institute of Science and Technology of Balıkesir University*, 6(1), 62-72.
- Odacı, H. & Berber Çelik, Ç. (2011). Relationship between university students' problematic internet use and their academic self-efficacy, academic procrastination, and eating attitudes, *5th International Computer & Instructional Technologies Symposium*, Elazığ.
- Oğuz, A. & Topkaya, N. (2008). Ortaöğretim alan öğretmenliği öğrencilerinin öğretmen özyeterlik inançları ile öğretmenliğe ilişkin tutumları (Examine the relationship between secondary school non- thesis graduate program students' teaching self-efficacy beliefs and their attitudes toward teaching), *Academic Sight*, (14), 1-20.
- Öncü, H. (2012). Adaptation of academic self-efficacy scale into Turkish, *Ahi Evran University Journal of Kırşehir Education Faculty*, 13(1), 183-206.
- Özçelik, H. & Kurt, A. A. (2007). Primary school teachers' computer self-efficacies: Sample of Balıkesir, *Elementary Education Online*, 6(3), 441-451.
- Özdemir, M. S. (2008). An investigation of prospective primary teachers' self-efficacy beliefs regarding teaching process in terms of certain variables, *Educational Administration: Theory and Practice*, 14(54), 277-306.
- Özerkan, E. (2007). The relationship between the teacher self-efficacy and the students social studies self-concept, Unpublished Master's Thesis, Trakya University, Institute of Social Sciences, Turkey.
- Pajares, F. & Graham, L. (1999). Self-efficacy, motivation constructs, and mathematics performance of entering middle school students, *Contemporary Educational Psychology*, 24(2), 124-139. doi: <http://dx.doi.org/10.1006/ceps.1998.0991>
- Pajares, F. (1996). Self-efficacy beliefs in academic settings, *Review of Educational Research*, 66(4), 543-578. doi: 10.3102/00346543066004543
- Schunk, D. H. (1991). Self-efficacy and academic motivation, *Educational Psychologist*, 26(3), 207-231. doi: 10.1080/00461520.1991.9653133
- Schunk, D. H. (1995). Self-efficacy, motivation, and performance, *Journal of Applied Sport Psychology*, 7(2), 112-137. doi: 10.1080/10413209508406961

- Seferoğlu, S. (2005). A study on primary school teachers' perceived computer self-efficacy, *Eurasian Journal of Educational Research (EJER)*, (19), 89-101.
- Shell, D. F., Murphy, C. C. & Bruning, R. H. (1989). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement, *Journal of Educational Psychology*, 81(1), 91-100.
- Şahin Taşkın, Ç. & Hacıömeroğlu, G. (2010). Examining elementary preservice teachers' self-efficacy beliefs: Combination of quantitative and qualitative methods, *Inonu University Journal of the Faculty of Education*, 11(1), 21-40.
- Şişman, M. (2006). *Eğitim bilimine giriş (Introduction to education)*, Ankara, Anı Pub.
- Taşkın Can, B., Cantürk Günhan, B. & Öngel Erdal, S. (2005). Investigates whether science teachers' self-efficacy beliefs toward the use of mathematics in science lessons, *Pamukkale University Journal of Education*, (17), 47-52.
- Tavşancıl, E. (2002). *Tutumların ölçülmesi ve SPSS ile veri analizi (Measurement of attitudes and data analysis with SPSS)*, Ankara, Nobel Pub.
- Tschannen-Moran, M. & Woolfolk-Hoy, A. (2001). Teacher efficacy: Capturing an elusive concept, *Teaching and Teacher Education*, 17(7), 783-805.
- Ülper, H. & Bağcı, H. (2012). Self-efficacy perceptions of Turkish teacher candidate, *Turkish Studies*, 7(2), 1115-1131.
- Ünlü, H. & Kalemoglu, Y. (2011). Academic self-efficacy of Turkish physical education and sport school students, *Journal of Human Kinetics Section III – Sport, Physical Education & Recreation*, (27), 190-203. doi: 10.2478/v10078-011-0015-z
- Üstüner, M., Demirtaş, H., Cömert, M. & Özer, N. (2009). Secondary school teachers' self-efficacy beliefs, *Mehmet Akif Ersoy University Journal of Education Faculty*, 9(17), 1-16.
- Vrugt, A. J., Langereis, M. P. & Hoogstraten, J. (1997). Academic self-efficacy and malleability of relevant capabilities as predictors of exam performance, *The Journal of Experimental Education*, 66(1), 61-72. doi:10.1080/00220979709601395
- Yenilmez, K. & Turgut, M. (2012). Pre-service mathematics teachers' self-efficacy levels of mathematical literacy, *Journal of Research in Education and Teaching*, 1(2), 253-258.
- Yeşilyurt, E. (2011). Teacher candidates' qualification perceptions about teaching profession's general qualifications, *Journal of Turkish Educational Sciences*, 9(1), 71-100.
- Yılmaz, G., Yılmaz, B. & Türk, N. (2010). Over-graduate thesis physical education and sports teacher's self-efficacy of their jobs (Nevşehir city model), *Selçuk University Journal of Physical Education and Sport Science*, 12(2), 85-90.
- Yılmaz, K. & Çokluk-Bökeoğlu, Ö. (2008). Primary school teachers' belief of efficacy, *Ankara University Journal of Faculty of Educational Sciences*, 41(2), 143-167. doi: 10.1501/Egifak_0000001128
- Yılmaz, M., Gürçay, D. & Ekici, G. (2007). Adaptation of the academic self-efficacy scale to Turkish, *H.U. Journal of Education*, (33), 253-259.
- Yılmaz, M., Köseoğlu, P., Gerçek, C. & Soran, H. (2004). Adaptation of a teacher self-efficacy scale to Turkish, *H.U. Journal of Education*, (27), 260-267.
- Zeldin, A. L. & Pajares, F. (2000). Against the odds: Self-efficacy beliefs of women in mathematical, scientific and technological careers, *American Educational Research Journal*, 37(1), 215-246. doi: 10.3102/00028312037001215