



Self-Efficacy Beliefs of Special Education Student Teachers: Implications for Teacher Training Programmes

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Abstract

This study investigated the perceptions of the special education student teachers about self-efficacy beliefs. It also attempted to explore whether there were any differences in the perceptions of the special education student teachers about self-efficacy beliefs regarding gender, age and year of class. The participants of the study were 221 special education student teachers studying in the teacher training programme of a private university in Northern Cyprus context. In this study, there were 97 female and 124 male participants. To collect data, Turkish Version of the Teachers' Sense of Efficacy Scale (TTSES) was utilized. The Teachers' Sense of Self Efficacy Scale was originally developed by Tschannen-Moran & Woolfolk Hoy (2001) and later adapted to Turkish by Çapa, Çakıroğlu & Sarıkaya (2005). In order to test the gender-related differences in the perceptions of the participant special education student teachers regarding self-efficacy beliefs, if any, a t-test was employed. To find out whether there were any significant differences in the perceptions of the participant student teachers self-efficacy in relation to age, an ANOVA (Analysis of Variance) test was administered. In order to explore if the participant student teachers' perceptions about self-efficacy beliefs differed in relation to year of class, the collected data was subjected to an ANOVA test. The findings of the study revealed that all the participants had high self-efficacy beliefs. They also indicated that there were no gender-related, age-related and year of class-related differences in the perceptions of the participants regarding their sense of self-efficacy beliefs.

Keywords: Self-Efficacy, Student Teachers, Special Education, Teacher Education

Özel Eğitim Öğretmenliği Bölümü Öğretmen Adaylarının Öz-Yeterlilik İnançları: Öğretmen Eğitim Programları için Öneriler

Özet

History science that enables the members of a society to be proud of their state, nation and self confidence and Bu çalışma Özel Eğitim Bölümü'nde öğrenim gören öğretmen adaylarının öğretmenlik mesleğine yönelik öz-yeterlilik algı düzeylerini tesbit etmeyi amaçlamıştır. Aynı zamanda, bu çalışmada katılımcıların öğretmenlik mesleği ile ilgili öz-yeterlilik algılarında cinsiyet, yaşa ve okudukları sınıfa göre herhangi bir anlamlı farklılık olup olmadığı da araştırılmıştır. Kuzey Kıbrıs'ta bir üniversitenin Özel Eğitim Öğretmenliği lisans programında okuyan 97 kadın 124 erkek olmak üzere toplamda 221 öğretmen adayı çalışmada yer almıştır. Veri toplama aracı olarak Tschannen-Moran & Woolfolk Hoy (2001) tarafından geliştirilen ve daha sonra Çapa, Çakıroğlu & Sarıkaya (2005) tarafından Türkçe'ye uyarlanan Öğretmen Öz-Yeterlilik Algı Ölçeği'nin Türkçe versiyonu kullanılmıştır. Kadın ve Erkek öğretmen adaylarının öz-yeterlilik algıları arasında herhangi bir anlamlı fark bulunup bulunmadığını ölçmek amacıyla toplanan veriler t-testine tabi tutulmuştur. Yaş faktörünün öğretmen adaylarının öz-yeterlilik algılarında herhangi bir anlamlı farklılığa sebep olup olmadığını ölçmek amacıyla ise ANOVA testi uygulanmıştır. Çalışmanın bulguları Özel eğitim Bölümü'nde okuyan tüm öğretmen adaylarının yüksek öz-yeterlilik algısına sahip olduğunu göstermiştir. Ayrıca, katılımcıların algılarında cinsiyet faktörüyle, yaş faktörüyle ve okudukları sınıfla ilgili herhangi bir anlamlı farklılık bulunmadığı tesbit edilmiştir.

Anahtar Kelimeler: Öz-Yeterlilik, Öğretmen Adayları, Özel Eğitim, Öğretmen Eğitimi.

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Introduction

Learning and teaching is a complex process which involve many different dynamics. This process is much more complicated for student teachers compared to experienced teachers because experience has a profound impact on the development of teachers' personal practical theories for teaching and learning. Learner motivation, contextual realities of teaching contexts, learner differences, teachers' and learners' beliefs about learning and teaching process, cultural and educational expectations of teachers and learners from each other and many other issues influence teachers' decisions for learning and teaching. Teacher self-efficacy beliefs is believed to be another key factor that influence learning and teaching process.

Definitions and Beliefs about Self-Efficacy

Bandura (1997) defines self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p.3). According to Brigido et. al. "self-efficacy refers to a person's confidence that they can do what they have to do" (p. 202). For Woolfolk (2004) self-efficacy is considered as "our beliefs about our personal competence or effectiveness in a given area"(p.368). It is "future-oriented" (Woolfolk, 2004, p.368) "a context-specific assessment of competence to perform a specific task" (Pajares,1997, p.15). Bandura (1997) identified four sources of efficacy beliefs: mastery experiences, physiological and emotional arousal, vicarious experiences or modelling, and social persuasion (i.e. verbal persuasion or information in the environment). The most powerful and source that can influence self-efficacy is mastery experiences (Bandura, 1997) which are the individuals' direct experiences. Success in individuals' experiences raise efficacy beliefs, while failures in experiences lower efficacy. Level of physiological and emotional arousal has impact on self-efficacy, depending on how it is interpreted (Woolfolk, 2004). In vicarious experiences or modelling, when a student identifies himself/herself close to the model, there is more impact on self-efficacy. "When the model performs well, the student's efficacy is enhanced, but when the model performs poorly, efficacy expectations decrease" (Woolfolk, 2004, p. 369). Social persuasion can be regarded as feedback given for special performance. It is believed to be one of the sources of self-efficacy yet the impact of persuasion depends on credibility, trustworthiness, and expertise of the persuader (Bandura, 1997).

Sense of Efficacy in Teaching

There has been a plethora of investigations on different aspects of teachers' sense of self-efficacy (Gibson & Dembo, 1984; Hoy & Woolfolk, 1990, 1993; Klassen et. al., 2010; Tschannen-Moran & Woolfolk Hoy, 2001, 2007) and prospective teachers' sense of self-efficacy in teaching (Hebert et. al., 1998; Liaw, 2009; Woolfolk & Hoy, 1990). Teacher efficacy or self-efficacy in teaching is "about teachers' beliefs that they are capable of carrying out good teaching in the classroom" (Christophersen et. al., 2016, p. 241) and it has been considered as a key issue (Bandura, 1997; Skaalvik & Skaalvik, 2007, 2010). There are several lines of investigations on self-efficacy. Muijs & Reynolds (2002) carried out an investigation on the predictive value of self-efficacy on teachers' aspirations while Fuchs et. al.'s study (1988) provided evidence for that teacher efficacy predicts attitudes towards innovation and change. Some other studies have focused on the impact of self-efficacy on students' motivation (Graham, 1994, 1995). Since Christophersen et. al. emphasized "efficacy beliefs operate as a key organizer and motivator of teaching practice"(p.243) there is a need to investigate the self-efficacy beliefs of the prospective teachers in order to give support to them to build self-efficacy beliefs if needed. Therefore, in this paper, the researcher's focus is on to explore the self-efficacy beliefs of the special education student teachers' efficacy beliefs.

Methods

In this study, to investigate the perceptions of the participant special education student teachers studying at the Faculty of Education at a private University in Northern Cyprus about self-efficacy beliefs, quantitative means of investigation was carried out. For this purpose, a survey was used. This study had four objectives: (1) to explore the degree of self-efficacy beliefs of the special education student teachers (2) to find out whether the perceptions of the self-efficacy beliefs of the participant student teachers differed in relation to gender (3) to investigate whether there were any differences in the perceptions of the participants about self-efficacy beliefs in relation to age (4) to explore if the participant student teachers' perceptions about self-efficacy beliefs showed any year of class-related differences.

Participants

In this investigation, 221 special education student teachers, with no experience as teachers, took part.

Table 1 below, shows the number and the percentage of the female and male participants of the study.

Table 1: Number and the Percentage of the Participants According to Gender

Gender	N	%
Female	97	43.9
Male	124	56.1
Total	221	100.0

As it can be seen from Table 1 above, of 221 participants, 97 were female and 124 male participants. In other words, 43.9 % of the participants were female while 56.1 % were male.

Table 2 below, demonstrates the number and the percentage of the participant student teachers studying in the Department of Special Education.

Table 2 below, shows the frequency and the percentage of the participants according to age.

Table 2: Number and the Percentage of the Participants According to Age

Age	N	%
17-18	13	5.9
19-20	80	36.2
21-23	83	37.6
24-26	31	14.0
Above 26	14	6.3
Total	221	100.0

As it can be seen from the Table 2 above, the descriptive statistics for the perceptions of the participants about self-efficacy and age show the number of the participant special education student teachers in five different age categories. Most of the participants (83) were in the age category 21-23 with 37.6%. Following that there were 80 participants in the age group 19-20 with 36.2 %. In the age category 24-26 there were 31 participants with 14%. The number of the participants in the age category 'above 26' was 14 with 6.3% and the least number of the participants (13) was in the age category 17-18 with 5.9%.

Table 3 below, shows the frequency and the percentage of the participant special education student teachers according to their year of class in the department.

Table 3: Number and the Percentage of the Participants According to Year of Class

Year of Class	n	%
Year 1	51	23.1
Year2	69	31.2
Year 3	38	17.2
Year 4	63	28.5
Total	221	100.0

As it can be seen from Table 3 above, 51 (23.1%) first year, 69 (31.2) second year, 38 (17.2) third year and 63 (28.5) fourth year students participated in this study. Most of the participants were second year students constituting 31.2 % of 221 participants and third year students constituted 17.2 % of all the participants of the investigation.

Data Collection Instrument

In order to collect data, Turkish version of the Teachers' Sense of Efficacy Scale (TTSES) (Çapa, Çakıroğlu & Sarıkaya, 2005) was utilized. The scale was originally developed by Tschannen-Moran & Woolfolk Hoy (2001). The questionnaire consisted of 24 items that measured the participant student teachers' perspectives about self-efficacy beliefs. The questionnaire measured the perceptions of the participants about self-efficacy beliefs in three main categories: "Efficacy in Student Engagement"(SE), "Efficacy in Instructional Strategies"(IS) and "Efficacy in Classroom Management"(CM). The questionnaire items measuring "Efficacy in Student Engagement"(SE) were 1, 2, 4, 6, 9, 12, 14 and 22. The items for "Efficacy in Instructional Strategies"(IS) were 7, 10, 11, 17, 18, 20, 23 and 24. The items which measured "Efficacy in Classroom Management"(CM) were 3, 5, 8, 13, 15, 16, 19 and 21. The respondents were asked to indicate their responses on a 9-point likert scale ranging from 1= "nothing" to 9= "a great deal". The total mean scores of the questionnaire ranged from 24 to 216. The mean scores between 24 and 62 were considered as holding very low self-efficacy beliefs. The mean scores between 63 to 101 were considered as having low self-efficacy beliefs. The mean scores between 102 and 140 indicated holding adequate self-efficacy beliefs. The mean scores between 141 and 179 indicated holding high self-efficacy and the mean scores between 180 and 216 were the indication of having very high self-efficacy beliefs. The Cronbach's alpha reliabilities for the questionnaire was .82 for SE (Student Engagement), .86 for IS (Instructional Strategies) and .84 for CM (Classroom Management). The respondents were also asked to provide demographic information about their gender, age and year of class.

Data Analysis

The collected data was statistically analyzed. The data was subjected to One-sample Kolmogorov-Smirnov Test in order to see the distribution. As it is shown in Table 4 below, the data exhibited normal distribution. Therefore, parametric tests such as 't' test and ANOVA were utilized.

Table 4: One-Sample Kolmogorov-Smirnov Test

		Engagement	Strategies	Management
N		221	221	221
Normal Parameters ^{a,b}	Mean	56.3575	55.7376	55.6652
	Std. Deviation	8.83299	8.86638	8.71707
Most Extreme Differences	Absolute	.074	.066	.072
	Positive	.062	.033	.036
	Negative	-.074	-.066	-.072
Kolmogorov-Smirnov Z		1.093	.978	1.069
Asymp. Sig. (2-tailed)		.183	.294	.204

a. Test distribution is Normal.

b. Calculated from data.

The data was analyzed statistically with the help of SPSS 21 (Statistical Package for Social Sciences). To find out whether there were any differences in the perceptions of the participant teachers about self-efficacy beliefs regarding gender, an independent samples t-test was utilized. To test if the perceptions of the participant student teachers differed according to age, the collected data was subjected a one way ANOVA (Analysis of Variance). To find out whether the perceptions of the participants showed any significant differences about self-efficacy beliefs in relation to year of class, a one way ANOVA (Analysis of Variance) was employed.

Findings

In this part, descriptive and inferential statistics of the study will be presented. The statistical findings of the study about the perceptions of the participants in regarding their sense of self-efficacy beliefs in relation to gender, age and year class will be given, respectively.

Perceptions about Sense of Self-Efficacy Beliefs in Relation to Gender

Table 5 below, indicates the means, standard deviations and the t-test results for the male and female participants' perceptions about the Teachers' Sense of Self-efficacy Scale Sub-dimension categories (i.e. Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management). In the table, the higher the number indicates the higher the perception for sense of self-efficacy score.

Table 5: The Participants' Perceptions about the "Teachers' Sense of Self-Efficacy Scale Sub-dimensions" by Variable "Gender" (Independent samples "t" Test)

	Gender	n	x	sd	t-value	P
Efficacy in Student Engagement	Female	97	57.1443	8.90574	1.172	.242
	Male	124	55.7419	8.76233		
Efficacy in Instructional Strategies	Female	97	56.7010	8.88253	1.432	.154
	Male	124	54.9839	8.81608		
Efficacy in Classroom Management	Female	97	56.2474	56.2474	.878	.381

Classroom Management	Male	124	55.2097	55.2097
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As it can be seen from Table 5 above, the participants' reported perceptions about their self-efficacy beliefs indicated that there were no significant differences in their perceptions regarding gender. In other words, female and male participants were not different in their perceptions in relation to their self-efficacy beliefs.

Perceptions about Sense of Self-Efficacy Beliefs in Relation to Age

Table 6 below, shows the descriptive statistics regarding the perceptions of the participants about sense of self-efficacy beliefs in relation to age.

Table 6: Descriptives for the Participants' Perceptions about their Sense of Self-Efficacy Beliefs Regarding Different Age Categories

Age	n	X	sd.
17-18	13	165.08	27.58
19-20	80	166.85	24.72
21-23	83	166.89	24.04
24-26	31	169.13	18.74
Above 26	14	177.57	28.65
Total	221	167.76	24.09

As it can be seen from Table 6 above, the reported perceptions of the participant special education student teachers revealed that all the participants held high self-efficacy beliefs with the mean scores between 141 and 179 with the mean score of 167.76. Particularly, the participants who were above 26 years old reported the highest mean score for having high self-efficacy beliefs with the mean score of 177.57. Following that, the participants in the age category 24-26 reported their perceptions with the mean score of 169.13. The mean scores of the participants' reported perceptions in the age categories 21-23 and 19-20 were very close to each other being as 166.89 and 166.85, respectively.

Table 7 below, shows the ANOVA test results for the participants' perceptions about self-efficacy beliefs in relation to age.

Table 7: ANOVA (Analysis of Variance) Test for Teachers' Sense of Self-Efficacy Beliefs Scale Sub-dimensions and Age

Teachers' Sense of Self- efficacy Scale Sub- dimensions	Age Categories	n	x	sd	F	P
Efficacy in Student Engagement	17-18	13	59.0000	7.49444	1.248	.292
	19-20	80	55.6750	9.46516		
	21-23	83	55.5904	8.18541		
	24-26	31	57.4839	8.70583		
	Above 26	14	59.8571	9.83602		
	Total	221	56.3575	8.83299		
Efficacy in Instructional Strategies	17-18	13	52.0000	10.78579	1.162	.328
	19-20	80	55.4500	8.82014		
	21-23	83	55.6747	8.59539		
	24-26	31	56.7742	8.13925		
	Above 26	14	58.9286	10.16377		
	Total	221	55.7376	8.86638		
Efficacy in Classroom Management	17-18	13	54.0769	11.33918	.618	.650
	19-20	80	55.7250	8.47031		
	21-23	83	55.6265	8.78290		
	24-26	31	54.8710	7.44644		
	Above 26	14	58.7857	10.10848		
	Total	221	55.6652	8.71707		

Table 7 above, indicates that the ANOVA test results revealed that there were no significant age-related differences in the perceptions of the participant student teachers studying in the Department of Special Education regarding their sense of self-efficacy beliefs.

Perceptions about Sense of Self-Efficacy Beliefs in Relation to Year of Class

Table 8 below, indicates the descriptive statistics for the participant special education student teachers' perceptions about their sense of self-efficacy beliefs in relation to year of class. The findings revealed that the participant student teachers studying in the Department of Special Education did not differ in their perceptions according to their year of class they were studying regarding their sense of self-efficacy beliefs.

Table 8: Number and the Percentage of the Participants According to Year of Class

Year of Class	n	x
Year 1	51	165.37
Year 2	69	172.64
Year 3	38	162.58
Year 4	63	167.48
Total	221	167.76

As it can be seen from Table 8 above, the perceptions of the participants in year 2 scored the highest mean score with 172.64 compared to the other students. This means that the participant students studying in their second year held the highest self-efficacy beliefs. Following that the participant students in the fourth year with the mean score of 167.48 showed that they had high self-efficacy beliefs. First year students' perceptions for self-efficacy indicated the mean score of 162.58 following the fourth year students and the mean score for the third year students' perceptions for self-efficacy was found as 162.58 being the lowest compared to the other year of class categories.

Table 9 below, shows the ANOVA test results for the perceptions of the special education student teachers about their sense of self-efficacy beliefs in relation to their year of class.

Table 9: ANOVA (Analysis of Variance) Test for Teachers' Sense of Self-Efficacy Beliefs Scale Sub-dimensions and Year of Class

Teachers' Sense of Self-efficacy Scale Sub-dimensions	Year of Class	n	x	sd	F	P
Efficacy in Student Engagement	Year 1	51	56.5098	9.26147	1.858	.138
	Year 2	69	58.0000	7.10012		
	Year 3	38	53.8947	10.16297		
	Year 4	63	55.9206	9.15512		
	Total	221	56.3575	8.83299		
Efficacy in Instructional Strategies	Year 1	51	53.8627	10.31895	2.300	.078
	Year 2	69	57.7681	7.15818		
	Year 3	38	54.3947	9.83798		
	Year 4	63	55.8413	8.39778		
	Total	221	55.7376	8.86638		
Efficacy in Classroom Management	Year 1	51	55.0000	9.44669	.852	.467
	Year 2	69	56.8696	6.73864		
	Year 3	38	54.2895	11.02309		
	Year 4	63	55.7143	8.49749		
	Total	221	55.6652	8.71707		

As it can be seen from the Table 9 above, the ANOVA test results showed that the perceptions of participant student teachers' studying in the Department of Special Education about their self-efficacy beliefs regarding year of class revealed no significant results.

Discussion

In general, the findings of this study revealed that the participant special education student teachers' perceptions indicated that they hold high self-efficacy beliefs for all the subcategories, namely: "Instructional Strategies (IS)", "Classroom Management (CM)" and

“Student Engagement (SE)”. Some other studies have confirming findings with this study. For instance, Leyser et. al. (2011) found that the participant prospective special education teachers had high scores on self-efficacy beliefs. Similarly, Christophersen et. al. (2016) found that the participant students who were in the university college teacher education program hold high teacher efficacy beliefs. Brigido et al. (2017) also found that over 60 % of the participant prospective teachers indicated positive beliefs of their self-efficacy. In the same vein, Çakır & Alıcı (2009) found that the participant prospective teachers’ perceptions were high regarding self-efficacy beliefs.

The statistical analysis of the collected data demonstrated that the participants’ perceptions about self-efficacy beliefs did not reveal any significant gender-related differences. There are some studies supporting the findings of this study regarding gender. For example, Akbaş & Çelikkaleli (2006), Akbulut (2006), Altunçekiç et. al. (2005) and Oğuz & Topkaya (2008) also found no gender related differences in the participants’ perceptions about self-efficacy beliefs. However, Korkut & Babaoğlu (2012), who conducted a similar study with 423 primary school teachers, found that there were gender-related differences in the participants’ perceptions. This difference might have been due to the characteristics of the participants and the context in which the study was carried out.

The statistical analysis of the collected data also indicated that the participant student teachers’ perceptions did not differ significantly in relation to age. The findings of this study supports the findings of Uysal & Kösemen (2013) who carried out a study with 117 pre-service teachers and found that age was not a significant factor for the participants’ self-efficacy beliefs. Besides, Yıldırım & İlhan’s (2010) study and Brink et. al.’s (2012) study support the findings of this study that age was not a significant factor for self-efficacy beliefs. However, the findings of a study conducted by Tabanlı & Çelik (2013) showed that there were significant differences in the perceptions of the teacher candidates in relation to age. Similarly, Adalier (2011), Adalier and Serin (2012) found that age was a significant factor for self efficacy beliefs of the 82 teacher candidates studying at one of the Faculties of Education in Cyprus Turkish context. The differences in the findings might have been due to the participant characteristics and the context of the study.

The findings of this study also indicated that the participant special education student teachers’ perceptions did not show meaningful significance regarding year of class. In research literature although there are some confirming studies with the findings of this study, there are some others that have different findings. For example, Woolfolk & Burke Spero

(2005) found that there was increase in the degree of teacher efficacy from the beginning to the end of the teacher preparation program. Similarly, Lin et al. (2002) found that the total teacher efficacy score of the participants was lower at the end of the preparatory program for Taiwanese teachers while it was higher for the teachers in the United States. Therefore, it might be said that teacher self efficacy may not be directly related to the year of class but to the intensity of the teacher education program. Leyser et. al. (2011) found that the degree of the participant student teachers' self-efficacy beliefs was not associated with years of class but it was associated with the intensity of training.

Limitations and Suggestions

As with all research studies, this study also has some limitations. It was conducted in a specific context with a limited number of participants so the findings cannot be generalized to a wider population. Therefore, there is a need for other qualitative and quantitative studies conducted with a larger number of participants in different context to get a better picture of the issue. Besides, this study has a cross-sectional nature. It would be simplistic to disregard the value of carrying out a longitudinal in such an investigation since it would yield a better picture of the change in self-efficacy beliefs of the learners. Although this study has some limitations, it has got some contribution to our understanding of the value of boosting self-efficacy beliefs for better teaching because it is believed that teachers who have high self-efficacy beliefs are more willing to try new methods to meet the needs of their learners (Guskey, 1988) and are more enthusiastic in their teaching (Bandura, 1993). Therefore, it is obvious that the nature of the teacher training program plays critical role in lowering or increasing the degree of self-efficacy beliefs of the prospective teachers. Moreover, there is a need for teacher training programs to strengthen the self-efficacy of the prospective teachers during their four year education by creating learning environments and experiences that incorporate Bandura's (1997) four sources of self-efficacy beliefs: mastery experiences, physiological and emotional arousal, vicarious experiences or modelling, and social persuasion (i.e. verbal persuasion or information in the environment). It needs to be acknowledged that cultural issues also need to be taken into account when supporting the prospective teachers for the purpose of increasing their self-efficacy beliefs for teaching because the prospective teachers practice experiences and the feedback they receive from their mentor teachers, supervisors or any other significant person seem to play crucial role in developing high self-efficacy beliefs. Besides, it needs to bear in mind that prospective teachers need to face real teaching environments and gain intensive experience in order to become aware of the

responsibilities that await them when they go into the teaching profession in real teaching contexts.

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