

Full Length Research Paper

The relationship between teacher self-efficacy beliefs and educational beliefs of pre-service teachers

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The purpose of this research is to determine the relationship between 'educational beliefs' and 'teacher self-efficacy perceptions' of pre-service teachers in the faculty of education. A total of 1002 pre-service teachers, 463 final year undergraduate and 539 certificate program students, participated in the study voluntarily at the Necatibey Faculty of Education in Balıkesir University. 'Educational Beliefs Scale' developed by Yılmaz and 'Turkish Teacher Self-Efficacy Scale' developed by Tschannen-Moran and Hoy which was adapted to Turkish by Çapa were applied on the participants. As a result of the research, a significant difference was found in pre-service teachers' self-efficacy opinions regarding gender variable in favor of men. Besides that, a significant difference was found in favor of women in terms of progressivism and existentialism in education beliefs and in favor of men in terms of essentialism. Other results of the research are as follows: when the beliefs of education and self-efficacy beliefs of teacher trainees were examined in terms of academic discipline variable, there was no significant difference in self-efficacy beliefs of teacher candidates. In terms of educational belief variable, only a significant difference was observed in existentialism dimension. According to sources of teacher education variable, a significant difference was found in favor of formation students in self-efficacy dimension related to classroom management. Lastly, according to the source of teacher training, it was seen that the students of the faculty of education adopted the philosophy of existentialism more, whereas the formation students adopted the essentialism more.

Key words: Teacher education, pre-service teachers, self-efficacy beliefs, educational beliefs.

INTRODUCTION

Philosophy is a field of study that teaches how to think, inquire and look at events from different perspectives but unfortunately loses its prestige in today's world, especially in Turkey. Philosophy is the general understanding of the world; it explains the universe and analyzes universal questions (Politzer, 2018). Philosophy is an area of

knowledge originating from human's systematic, in depth, and speculative thinking over the universe and its relationship with people (Gutek, 2014). Philosophy of Education, on the other hand, is a discipline of philosophy, which discusses what education is, the problem, and solves activities that determine it and the

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concepts that engender it (Cevizci, 2014). Philosophy of Education is a philosophical analysis of education and problems of education. The main subject of Philosophy of Education is education, and the method it uses is that of philosophy. Philosophers of education approach problems of education through the lens of philosophy. They focus on analyzing and explaining the concepts and problems at the center of education. What should be the target and goals of education? Who should be educated and how? Should education vary according to natural interests and talents? What kind of role should the state play in education? (Noddings, 2016). Nevertheless, the answers to these questions play a crucial role at defining the educational systems and curricula of countries; therefore constructing the desired student profile.

Philosophy of Education is the philosophy which takes education as its subject matter. It first asks whether education is possible from a philosophical perspective. Then it undertakes a thorough philosophical questioning of what will be taught to whom by whom (Çüçen, 2007). Philosophy of education takes interest in many elements within the framework of education. First and foremost, it investigates student or person who are educated, teacher or the person who educates or the curriculum, educational activities and their goals, values, and perspectives gained through education. In its approach to the phenomenon and subject of education, Philosophy of Education tackles what education is and discusses the criteria for education. It brings up questions about the course of education, the kind of individual to be raised, and about which knowledge, skills, and values should be transferred to the student (Cevizci, 2014). When developing the curriculum, the discipline consults with philosophy on explaining the main premises, contributing to prospective goals, sustaining consistency within and outraises the goals, and sequencing the goals according to their priority (Demirel, 2017). When determining the curriculum, factors such as considering the goals of education, their practice, and determining their exact clarity are involved. When instruction is being planned, philosophy of education asks questions as such: what knowledge is more important/valuable? What knowledge should be taught to the students? What knowledge is more beneficial for the learner as a member of a society and an individual? Answering these questions is not only limited to determining what knowledge should be excluded from and included in the curriculum, but it also provides the curriculum with the most current information about the nature of a good living, society and people (Guttek, 2014). When determining the curricular design models to develop the curriculum, education makes decisions according to the dominant philosophy within the target society and state. In the states with fundamentalist and perennial philosophy of education, policy makers choose models that centralize the subject focus; whereas in educational systems where progressive philosophy is dominant, preference is for student-centered models.

Within the scope of educational beliefs, this study is based on the educational philosophies of Perennialism, Essentialism, Progressivism, Reconstructivism and Existentialism. The mentioned philosophical schools are explained below:

In *Perennialism*, which is based on Classical Realism and Idealism, human is overall an intelligent creature (Sönmez, 2002). According to perennialists, school is a societal institution founded to improve human's intellectual potential. First problem of the educational thinker is to explain the human nature and build a curriculum based on the universal characteristics of the human nature (Guttek, 2014). In Perennialism wherein lies the permanence of human nature and moral principles, foundational curricular models do not change either. That is why people need be raised according to these permanent realities. Education should be the same for all; a common curriculum should be used for all students. Proponents of this philosophy defend universal and intellectual education. Educators should prioritize universal and recurring subjects in human life; students' psychological and mental potential should be developed with a subject focused curriculum centralizing disciplines such as history, language, math, literature, humanities and science (Guttek, 2014; Demirel, 2012; Arslan, 2017; Ornstein and Hunkins, 2004).

Essentialism is based on Realism and Idealism. According to this philosophy, although human is a social and cultural entity, she is not equipped with any information at birth (Sönmez, 2002). For this reason, the main target of education-school is to provide the individual's socialization, to have them gain dominant values in the society as well as main components of the culture of human, to protect the origin of these values and its permanence (Ergün, 1996; Guttek, 2014; Sönmez, 2002). Essentialism represents an educational understanding governed by a predetermined curriculum, a specialist teacher who represents the authority, and by discipline.

Progressivism stands on pragmatics. In this philosophy, the student is at the center. The main goal of education is to teach students research and learning methods, in addition develop their intellectual growth so that students construct their own knowledge and comprehension (Sönmez 2002; Guttek, 2014; Cevizci, 2014). Education should be tailored to students' interests; school should be life itself and not only a preparation for it. Education should include such approaches as problem-solving, project, stages of scientific method and cooperative learning. According to this view which claims that there is no permanent and absolute information, a democratic classroom environment is prepared for students where they will experience real life and adapt to society in a cooperative atmosphere (Cevizci, 2014; Çüçen, 2007; Demirel, 2012). Guttek (2014) summarized the characteristics of Progressivist education as follows: 1.

Learner is more important than the subject. 2. It sides with direct experience and practice than oral and writing skills. 3. It emphasizes group learning and encouragement more than individualized learning. 4. It criticizes inherited perspectives and values as it adopts cultural and moral relativity.

As a continuation of Progressivism, *Reconstructivism* claims that education is a tool for balance as well as change because life continually changes (Sönmez, 2002, 94). Education is not only life but future. Education's responsibility is to give shape to and organize the society. Education will realize a social reform. The main responsibility falls on the school to change the society. Power lies in the teacher. Reconstructionists state that the main function of schools is to diagnose crises of the modern society. According to them, teachers should not be afraid to indoctrinate into the students the idea of a reconstructed society; they should tell students the goal of education. Students are to rebuild the society and the world peace. Students should be educated in a way to help them reconstruct the society and oversee it. Classroom environment should be democratic and education should concentrate on practice, and new methods and technics should be executed (Çüçen, 2007; Ergün, 1996; Gutek, 2014; Sönmez, 2002).

In *Existentialism*, existence comes before essence. According to existentialists, human creates her own essence, and she is the only object who does so (Hançerlioğlu, 1999). Therefore, it rejects an understanding of human nature that is preconstructed; and related practices of directing education, sequencing its duties, foreseeing the fate, and identifying human's role in the universe (Bilhan, 1991; Noddings, 2016). Although existentialism oftentimes falls apart with traditional religious philosophy, there have been religious existentialists, and both clusters have emphasized human freedom (Noddings, 2016). Existentialism tries to improve the human's power to choose; student is more important than the teacher and curriculum. Curricula should encourage individuals' absolute freedom, enrich their worldview, teach them how to make choices and take responsibility, and how to use these freedoms provided for themselves (Ergün, 1996; Sönmez, 2002).

This study also analyzes teachers' perceptions of *self-efficacy* in relation to educational beliefs. Bandura (1997) defines self-efficacy as teacher's own judgment related to her capacity to successfully plan and execute necessary activities to display a specific performance (As cited in Senemoğlu, 2018). Senemoğlu (2018) explains it as teachers' own judgments and beliefs about themselves regarding the degree of success in difficult conditions students will face in the future such as taking a test, entering a competition, teaching in a classroom, speaking in public. Erdamar (2007) proposes that perception of self-efficacy has an effect on choosing activities, the time to spend on an activity, period of patience when faced with hardship, and on emotions of anxiety and trust. Self-

efficacy trust influences people's goals for themselves, how much effort they will spend to reach those goals, how long they will endure hardships to reach their goals, and their reactions towards failure (Bıkmaz, 2004).

According to Klausmeier and Allen (1978), one of the factors of success in educational setting is self-efficacy trust. A teacher's trust in self-efficacy influences the quality of education, her methods, techniques, student participation and student comprehension, and this determines students' success accordingly. Well prepared candidate teachers thus are expected to have high trust in self-efficacy (As cited in Üredi and Üredi, 2005). Plourde (2001) argues that teachers with high self-efficacy trust use student-centered teaching techniques in their classrooms. Henson (2001) explains that such teachers are also inclined to do research to improve the educational methods they use (As cited in Arslan and Sağır, 2008).

While Ashton (1984) describes teachers' beliefs in self-efficacy as "beliefs about the capacity to influence student performance," they claim that no other teacher quality has this much consistent correlation with students' success (As cited in Bıkmaz, 2004). Self-efficacy beliefs mostly emerge in areas of private space. One of the most important among these private spaces is teacher self-efficacy. It is an important element in teacher education and is fundamental in order to determine how self-efficacy improves, which components it involves, which factors contribute to strong and positive teacher sufficiency, and how to develop which curricula targeted to improve teacher sufficiency (Pajares, 1997; As cited in Çapri and Çelikkaleli, 2008). Hoy and Woolfolk (1993), Pajares and Miller (1994), point out that teachers' belief in self-efficacy is an important variable in constructing a productive school or reconstructing schools (As cited in Çapri and Çelikkaleli, 2008). Bıkmaz (2004) purports that for the last two decades; self-efficacy beliefs become one of the significant research topics of specialists who have expertise particularly in teacher education.

While educational beliefs significantly affect self-efficacy beliefs, teacher self-efficacy beliefs affect their in-class performances. Therefore, it is believed that portraying the relationship between educational beliefs and self-efficacy will highly contribute to the literature and teacher education curricula.

The aim of this study is to identify the relationship between "educational beliefs" and "perceptions of teacher self-efficacy" of candidate teachers who study at colleges of education. In order to achieve this goal, the study seeks to answer these following questions:

- 1) Is there a meaningful difference between candidate teachers' levels of educational beliefs and self-efficacy beliefs in terms of variables (sex, field, source of teacher education)?
- 2) Are candidate teachers' educational beliefs related to their self-efficacy beliefs?

METHODOLOGY

Research design

In this research, as it was aimed to investigate the relationship between teacher beliefs and self-efficacy perceptions of the teacher candidates, correlational research design is used. Research models that aim to determine the existence of mutual change and/or the degree of such change between two or more variables are called "correlational research models (Gay and Airasian, 2000). In addition, ex post facto research design is preferred as the research aims to define whether there is a difference in terms of various variables (teacher training source, department and gender).

Participants

The study group consisted of 4th grade pre-service teachers who have attended School of Education in Turkey during 2017-2018 academic year and students who have attended the teacher certificate program during the same academic year. The study included students who participated in the classes and participated in the research voluntarily during the 2017-2018 academic year. Of the 1002 students who volunteered to participate in the study, 463 (46.2%) were students enrolled in the Necatibey School of Education and 539 (53.8%) were students of the pedagogical formation program. Of these, 739 (73.8%) were female and 263 (26.2%) were male. Of the students in the study group, 199 (19.9%) were hard science (Mathematics, Science, Physics, Chemistry, etc.) and 803 (80.1%) were students in soft science (Pre-School, Social Studies, Turkish, Geography, etc.).

Data collection instrument tools

The research data is collected via "Educational Beliefs Scale (EBS)" developed by Yılmaz et al. (2011), and "Turkish Teacher Self-Efficacy Scale (TTSES)" developed by Tschannen-Moran and Hoy (2001) and adopted to Turkish by Çapa et al. (2005). EBS contains 40 items of Likert type in order to determine the educational beliefs adopted by teachers in the study. EBS consists of 5 factors: "Perennialism", "Essentialism", "Progressivism", "Reconstructivism", and "Existentialism". The distribution of the 40 items in the scale to the subscales is as follows: 8 items in Perennialism, 5 items Essentialism, 13 items Progressivism, 7 items Reconstructivism, and 7 items Existentialism. The items in the scale are scored from 1-Strongly Disagree to 5-Strongly Agree. The scale does not contain any items that are rated as reverse. A total score is not obtained from the scale, and it tried to determine how much the participants adopt each education philosophy. According to the analyses carried out by Yılmaz, et al. (2011) determine the reliability of EBS, the internal consistency coefficients calculated for each dimension are as follows: Progressivism "0.91", Existentialism ".89", Reconstructivism "0.81", Perennialism "0.70", Essentialism "0.70". According to the the internal consistency coefficients obtained from the analyses our research are as follows: Progressivism "0.88", Existentialism "0.87", Reconstructivism "0.79", Perennialism "0.74", Essentialism "0.79".

On the other hand, TTSES contains 24 items to determine teachers' self-efficacy. TTSES consists of 3 factors: "Self-Efficacy for Student Participation", "Self-efficacy for Class Management", and "Self-Efficacy for Teaching Strategies". The first dimension called "ensuring student participation" consists of items related to what extent teachers can assure students that they can do well in school activities. The second dimension called "class management" consists of items related to what extent teachers can control unwanted behavior in the classroom. The third dimension called "Instructional Strategies" consists of items related to what extent

teachers can make use of different teaching and evaluation strategies. Each factor in the scale consists of 8 items. According to the analyses to determine the reliability of TTSES, the internal consistency coefficients calculated for each dimension are as follows: "Self-efficacy for Class Management" is calculated as "0.84", "Self-Efficacy for Student Participation" "0.82", "Self-Efficacy for Teaching Strategies" "0.86". According to the internal consistency coefficients obtained from the analysis, the research are as follows: "Self-efficacy for Class Management" ".85", "Self-Efficacy for Student Participation" "0.84", "Self-Efficacy for Teaching Strategies" "0.85".

Data collection and analysis

Before starting the study, permission was obtained from Necatibey Faculty of Education, where the research was conducted in accordance with ethical rules. In the study, before the questionnaires were given to the students, they were informed about the aims of the research and asked whether they would participate voluntarily. A total of 1040 students who volunteered for the study were informed about how to fill in the questionnaires and data collection process was completed. In addition, it was stated to the volunteer students that the results obtained from the research will be used only for scientific purposes and it is not necessary to write their names. The data collection process was carried out in the first thirty minutes of the course as it was thought that the students were not exhausted yet; thus, reliability and validity were not negatively affected. It took approximately 20-25 minutes for the students to fill in the questionnaires. Later on, 38 of the questionnaires were excluded due to incomplete and inappropriate answers.

In this study, descriptive statistics calculations are carried out to evaluate the gathered data. As a result of the analysis, it is concluded that the distribution of the answers given by the participants is normal. Normal distribution test is applied in this research. Since the sample population is high (1002), Skewnes and Kurtosis values are investigated rather than applying Kolmogorov-Smirnov test (Denis, 2018; Morgan et al., 2004; Stevens, 2012). After determining that the variances are homogeneous, t-test is conducted for independent groups in order to determine whether pre-service teachers differ in "Educational Beliefs" and "Teacher Self-Efficacy" according to gender, field of science, and teacher training source variables, and Pearson correlation analysis is conducted in order to determine the level of the relationship between educational beliefs and self-efficacy of the pre-service teachers.

It is interpreted that the correlation coefficient, when examining relationships between factors, indicates very weak relationship if $r < 0.2$, weak relationship if between 0.2-0.4, medium level of relationship if between 0.4-0.6, high level of relationship if it is between 0.6-0.8, very high level of relationship if > 0.8 (Cohen, 1988).

FINDINGS

In this study, firstly data are investigated in terms of following a normal distribution or not. Hence, mode, median, skewness, and kurtosis are calculated. Based on means and standard deviations, explanations about self-efficacy and educational beliefs of teacher candidates were given a place (Table 1). At the end of the analysis, if the range of the skewness and kurtosis values is (+ -1.5), this refers to the data to be normally distributed (Morgan et al., 2004; Tabachnick and Fidell, 2013). As seen in

Table 1. Level educational belief, Self-Efficacy and test of normality.

Parameter	N	Mean (M)	Sd	Mode	Median	Skewness	Kurtosis
SEFCM	1002	3.88	0.56	3.88	4.00	-0.49	0.74
SEFSP	1002	3.87	0.54	3.88	3.88	-0.46	0.54
SEFTS	1002	3.83	0.55	3.88	4.00	-0.38	0.58
TTSES	1002	3.86	.50	4	3.87	-.44	.81
Progressivist	1002	4.57	0.42	4.71	5.00	-1.17	1.48
Existentialist	1002	4.44	0.39	4.46	4.62	-0.93	1.31
Reconstructionist	1002	3.90	0.66	3.86	3.86	-0.50	0.49
Reconstructionist	1002	3.86	0.65	3.88	4.00	-0.63	0.97
Essentialist	1002	2.38	0.86	2.20	2.20	0.69	0.54

Table 1, teacher candidates have a mean of 3.86 in the entire scale as follows: SEFCM (mean=3.88, sd= 0.56), SEFSP (mean= 3.88, sd=0.54) and SEFTS(mean=3,83, sd=0,55). Based on these findings, it can be stated that teacher candidates have high self-efficacy. Furthermore, when the philosophical beliefs of teacher candidates are taken into consideration, Table 1 also demonstrates that the highest belief level is progressivism (mean= 4.57, sd=0.42) and the lowest belief level is essentialism (mean=2.38, sd=0.86).

Findings are related to the first sub-problem (Results obtained from the first part of the questionnaire): The findings related to the beliefs of pre-service teachers regarding education and self-efficacy are listed below in the order of independent co-variances.

The assessment of the beliefs of pre-service teachers regarding education and self-efficacy in terms of the gender covariance:

The t-test results to determine whether the beliefs of pre-service teachers regarding education and self-efficacy differ by gender covariance are listed in Table 2.

As shown in Table 2, self-efficacy related to class management demonstrates a significant difference in favor of male gender. When the effect of gender on philosophical beliefs is considered, progressivism and existentialism dimensions show a substantial difference in favor of females while essentialism shows a difference in favor of males.

The assessment of the beliefs of pre-service teachers regarding education and self-efficacy in terms of the academic field covariance

The t-test results to determine whether the beliefs of pre-service teachers regarding education and self-efficacy differ by academic field covariance are listed in Table 3.

As shown in Table 3, only educational beliefs demonstrate a significant difference in existentialism

dimension. It was observed that the graduates of Soft Sciences adopt the existentialist education philosophy more than the students continuing to study in Hard Sciences.

The assessment of the beliefs of pre-service teachers regarding education and self-efficacy in terms of the teacher education background covariance:

The t-test results to determine whether the beliefs of pre-service teachers regarding education and self-efficacy differ by teacher education background covariance are listed in Table 4.

As shown in Table 4, a statistically significant difference was observed in self-efficacy dimension related to class management and in existentialism and essentialism dimensions of adopted educational beliefs. Students of the teacher certificate program found themselves more adequate about class management related self-efficacy dimension compared to students of the School of Education. Looking at the findings regarding existentialism, students of the School of Education adopted this philosophical belief more than students of the teacher certificate program while it was observed to be reversed for essentialism dimension.

Findings related to second *sub-problem* (Results obtained from the first part of the questionnaire): The findings related to the relationship between educational beliefs and self-efficacy perceptions of pre-service teachers are described below (Table 5).

The relationship between educational beliefs and self-efficacy perceptions of pre-service teachers

The secondary sub-aim in this study is the determination of the extent of the relationship between educational beliefs and self-efficacy of pre-service teachers. With this aim, the Pearson correlation analysis was performed as shown in Table 5. When the relationship between the whole and the dimensions of the self-efficacy scale and

Table 2. The assessment results for the beliefs of pre-service teachers regarding education and self-efficacy in terms of the gender covariance.

Parameter	Groups	N	M	sd	Se \bar{x}	t Test			Cohen's d	Diff
						t	Df	p		
SEFCM	F	739	3.85	0.55	0.02	-3.189	1000	0.001*	0.23	M>F
	M	263	3.98	0.57	0.04					
SEFSP	F	739	3.86	0.52	0.02	-.288	419.883	0.774	-	
	M	263	3.88	0.58	0.04					
SEFTS	F	739	3.81	0.54	0.02	-1.690	429.115	0.092	-	
	M	263	3.88	0.59	0.04					
TTSES	F	739	3.84	0.50	0.02	-1.904	1000	0.057	-	
	M	263	3.91	0.54	0.03					
Progressivist	F	739	4.41	0.50	0.02	2.421	361.158	0.016*	0.18	F>M
	M	263	4.30	0.71	0.04					
Existentialist	F	739	4.56	0.52	0.02	3.131	372.974	0.002*	0.25	F>M
	M	263	4.41	0.69	0.04					
Reconstructionist	F	739	3.90	0.62	0.02	-.405	398.786	0.685	-	
	M	263	3.92	0.75	0.05					
Perennialist	F	739	3.84	0.63	0.02	-1.371	415.356	0.171	-	
	M	263	3.91	0.71	0.04					
Essentialist	F	739	2.33	0.82	0.03	-2.530	409.849	0.012*	-	M>F
	M	263	2.50	0.95	0.06					

*p< .05.

Table 3. The assessment results for the beliefs of pre-service teachers regarding education and self-efficacy in terms of the academic field covariance.

Parameter	Groups	N	M	Sd	Se \bar{x}	t Test			Cohen's d	Diff
						t	df	p		
SEFCM	Hard Sci.	199	3.84	0.51	0.04	-1.135	1000	0.257		
	Soft Sci.	803	3.89	0.57	0.02					
SEFSP	Hard Sci.	199	3.81	0.50	0.04	-1.702	1000	0.089		
	Soft Sci.	803	3.88	0.55	0.02					
SEFTS	Hard Sci.	199	3.81	0.50	0.04	-.698	1000	0.485		
	Soft Sci.	803	3.84	0.57	0.02					
TTSES	Hard Sci.	199	3.82	0.46	0.03	-1.267	1000	0.205		
	Soft Sci.	803	3.87	0.52	0.02					
Progressivist	Hard Sci.	199	4.35	0.55	0.04	-.970	1000	0.332		
	Soft Sci.	803	4.39	0.57	0.02					

Table 3. Contd.

Existentialist	Hard Sci.	199	4.43	0.58	0.04	-2.412	1000	0.016*	0.19	SS>HS
	Soft Sci.	803	4.54	0.57	0.02					
Reconstructionist	Hard Sci.	199	3.83	0.61	0.04	-1.849	1000	0.065		
	Soft Sci.	803	3.92	0.67	0.02					
Perennialist	Hard Sci.	199	3.83	0.64	0.05	-0.899	1000	0.369		
	Soft Sci.	803	3.87	0.66	0.02					
Essentialist	Hard Sci.	199	2.42	0.79	0.06	0.740	1000	0.460		
	Soft Sci.	803	2.37	0.88	0.03					

*p< .05.

Table 4. The independent group t-test results to determine if the grades differ due to the teacher education background covariance.

Parameter	Groups	N	M	Sd	Se \bar{x}	t Test			Cohen's d	Diff
						t	df	p		
SEFCM	Sch. of Edu.	463	3.84	0.51	0.02	-2.114	999.883	0.035*	-	C>S
	Cert. Prog.	539	3.92	0.59	0.03					
SEFSP	Sch. of Edu.	463	3.85	0.50	0.02	-0.954	999.678	0.340	-	
	Cert. Prog.	539	3.88	0.57	0.03					
SEFTS	Sch. of Edu.	463	3.82	0.52	0.02	-0.624	997.568	0.533	-	
	Cert. Prog.	539	3.84	0.58	0.03					
TTSES	Sch. of Edu.	463	3.84	0.46	0.02	-1.335	999.599	0.182	-	
	Cert. Prog.	539	3.88	0.55	0.02					
Progressivist	Sch. of Edu.	463	4.41	0.50	0.02	1.685	996.057	0.092	-	
	Cert. Prog.	539	4.36	0.62	0.03					
Existentialist	Sch. of Edu.	463	4.56	0.52	0.02	2.205	999.746	0.028*	0.14	S>C
	Cert. Prog.	539	4.48	0.62	0.03					
Reconstructionist	Sch. of Edu.	463	3.90	0.62	0.03	-0.393	997.264	0.695	-	
	Cert. Prog.	539	3.91	0.69	0.03					
Perennialist	Sch. of Edu.	463	3.86	0.61	0.03	-0.150	999.655	0.881	-	
	Cert. Prog.	539	3.87	0.69	0.03					
Essentialist	Sch. of Edu.	463	2.30	0.76	0.04	-2.796	996.879	0.005*	.18	C>S
	Cert. Prog.	539	2.45	0.94	0.04					

*p< .05.

the educational beliefs is investigated, the whole and the dimensions related to progressivism, existentialism, reconstructionism and perennialism show a weak and

direct correlation at 0.01 level. A weak inverse correlation was found between essentialism and self-efficacy related to student attendance at 0.05 level.

Table 5. The Correlation between Scores of Teacher Self-efficacy Scale and Education Beliefs Scale.

Parameter	Progressivism	Existentialism	Reconstructionism	Perennialism	Essentialism
SEFCM	0.213**	0.212**	0.236**	0.231**	0.009
SEFSP	0.267**	0.251**	0.259**	0.207**	-0.062*
SEFTS	0.218**	0.206**	0.266**	0.212**	-0.010
TTSES	0.251**	0.240**	0.274**	0.234**	-0.023

** 0.01 significance * 0.05 significance.

DISCUSSION

The aim of this study was to examine the relationship between the “educational beliefs” and “self-efficacy perceptions of pre-service teachers” of the students at an education faculty. Findings indicated that there is a significant difference in the self-efficacy in class management dimension according to gender, where the male students scored higher. Some other studies on self-efficacy conducted in Turkey showed significant difference according to gender, in some males (Dolapçı, 2013; Elkatmış et al., 2013; Yeşilyurt, 2013) and other females (Aydın et al., 2014; Özdemir, 2008; Ünlü et al., 2017; Yalçın, 2011) scored significantly higher. However, in contrast to these results, studies that show no difference according to gender are more (Altunçekiç et al., 2005; Azar, 2010; Bakaç and Özen, 2017; Berkant, 2017; Çocuk et al., 2015; Erişen and Çeliköz, 2003; Eroğlu and Ünlü, 2015; Gerçek et al., 2006; Ilgaz et al., 2013; Kahyaoğlu and Yangın, 2007; Özcan and Sert, 2017; Özkurt and Keçici, 2017; Uygur, 2010; Uzun et al., 2010; Ülper and Bağcı, 2012; Üstün and Tekin, 2009; Varol, 2007; Yıldırım, 2011).

When the results are investigated according to relation of gender to educational beliefs, female participants scored significantly higher in progressivism and existentialism dimensions, while male participants scored higher on essentialism. Alkın-Şahin et al. (2014) reported similar results. Çakmak et al. (2016) identified that female participants scored higher in existentialism and progressivism, while no difference was detected in perennialism, essentialism, and reconstructionism according to gender. In Kozikoğlu and Erden's (2018) study, however, it was shown that female participants scored higher on progressivism and existentialism, while male participants scored higher on perennialism and essentialism. No difference was detected in reconstructionism. Çelik and Orçan (2016) did not report any gender differences on reconstructivism and essentialism, while there were significant differences in existentialism dimension which female participants scored higher. Aslan (2017), on the other hand, found out that male participants scored higher on more traditional educational philosophies, essentialism and perennialism, but no gender difference was detected in the dimensions of progressivism, and reconstructivism. In a similar study,

Kumral (2015) also reported that male participants scored higher on more traditional educational philosophies, essentialism and perennialism, but female participants scored higher on more popular educational philosophies of progressivism, and reconstructivism. However, some other studies did not report any significant difference in educational philosophies according to gender (Biçer et al., 2013; Çetin et al., 2012; Ilgaz et al., 2013; Yokuş, 2016). In an educational system that is based on constructivism, it is expected that teachers identify themselves with progressivism and existentialism which are known to underlie constructivism.

Study also investigated the relationship between self-efficacy and educational beliefs according to academic discipline of the pre-service teachers. Results showed no significant differences in self-efficacy according to their academic disciplines. However, Aydın et al. (2014) study which used the same scale showed that pre-service teachers at the Turkish Language Teaching programme significantly differed from the pre-service teachers in elementary school teaching and English language teaching. Moreover, Fine arts students performed significantly different from students in Mathematics, Special Education and Turkish Language Teaching departments in student participation dimension.

For the educational beliefs scale, there was a significant difference only on existentialism according to academic disciplines. It was observed that students from soft sciences identified themselves more with the existentialism compared to students from hard sciences. In a similar vein, Çetin et al. (2012) study found significant differences in educational philosophy dimension according academic disciplines. Pre-service teachers from Social Sciences Education Department scored higher on contemporary educational philosophies (Existentialism, reconstructivism, progressivism) compared to pre-service teachers from Science Education Department, while these students scored higher on more traditional educational philosophies (perennialism and essentialism). Kumral (2015) further investigated the educational beliefs within the soft science departments. Results indicated that pre-school education department students adopted a more traditional philosophy (essentialism and perennialism) compared to students from English language teaching and Turkish language teaching department who adopted more popular (progressivism

and reconstructivism) educational philosophies. Çelik and Orcan (2016), on the other hand, did not find any difference on educational philosophies of the pre-service teachers concerning their academic discipline. These different and somewhat contradictory results indicate that teacher education institutions do not provide training and education for pre-service teachers in line with the current and modern educational philosophies. Moreover, pre-service teachers did not internalize these educational philosophies regardless of their gender and their academic discipline.

The relationship between educational beliefs and self-efficacy of the pre-service teachers was also investigated according to the sources of teacher education. Results indicated that there was a significant difference on the class management dimension of the self-efficacy scale where students from certificate program scored higher. This indicates that students who were trained in other faculties rate themselves higher in class management compared to education faculty students. However, it is surprising that students who were coming from disciplines other than education perceive themselves more sufficient in class management compared to students who studied four years in educational faculties.

According to the sources of teacher education, a significant difference was found on existentialism and essentialism dimensions. When existentialism dimension was examined, results indicated that pre-service teachers who studied at education faculties adopted existentialism as their educational philosophy compared to pre-service teachers from certification program, and in the dimension "essentialism" students from certification program scored higher. In their study, Ilgaz et al., (2013) reported a significant difference in favor of pre-service teachers from other faculties in terms of perennialism and essentialism.

When the relationship between the whole and dimensions of self-efficacy scale and educational beliefs was investigated, the study discovered a linear weak relationship at 0.01 level between progressivism, existentialism, reconstructivism, and perennialism. A very weak negative relationship at 0.05 level was found out between the self-efficacy dimension towards student participation and essentialism. In their study, Ilgaz et al. (2013) found a significant relationship between educational beliefs and self-efficacy perceptions. The emergence of a weak relation between the self-efficacy perceptions and educational beliefs of pre-service teachers is one of the remarkable findings of this study.

This study examined the educational beliefs and self-efficacy perceptions of the pre-service teachers according to various variables and investigated the existence of a relationship among them. Self-efficacy belief serves as a key factor in the system of a productive person (Bandura, 1997). According to Pajares (1996), self-efficacy belief is a concept that acts as the determiner of human behavior and strengthens through choices made, effort given, and persistence towards difficulties by people as well as their

patterns of thought and emotional reactions. Pendergast et al. (2011) state that teachers' self-efficacy beliefs is an important factor in the construction of their teaching profession, and teachers with high self-efficacy levels are more flexible during teaching and tend to be more eager to make effort in order to help all students, while teachers with low self-efficacy levels make less effort to meet the learning needs of all students. Various research findings manifested that teacher self-efficacy has a direct effect on students' success, and teachers with high self-efficacy levels planned teaching on a superior level and allocated more time towards students' problems (Allinder, 1994; Caprara et al., 2003; Gibson and Dembo, 1984 as cited in Pendergast, et al., 2011; Moore and Esselman, 1992).

Educational belief determines the answer to the question of how students will learn based on the teaching method that the teacher will choose (Hermans et al., 2008). The belief system of the teacher determines whether his/her teaching approach will be teacher-centered or student-centered (Jackson, 1986). The beliefs and attitudes of pre-service teachers is a significant concept for understanding their in-class practices, teaching processes, and tendencies towards change (Richardson, 1996). Educational beliefs are constructed by previous learning experiences and influenced by professional context. When pre-service teachers proceed to the teacher training institutions, their educational beliefs have already been shaped by their previous learning experiences, and their beliefs are relatively steady and resistant to change as a result (Pajares, 1992). Therefore, teacher training institutions should lay stress on the development of pre-service teachers' educational beliefs and self-efficacy perceptions starting from the first years of their training, because teachers' educational beliefs and self-efficacy perceptions affect their teaching ways and teacher identities (Pajares, 1992; Kagan, 1992). Pre-service teachers with high level self-efficacy perceptions and educational beliefs will in the future educate students with high level self-efficacy perceptions and educational beliefs through using contemporary and student-centered approaches in the schools that they will serve as teachers.

With the establishment of The Council of Higher Education, there have been two sources of teacher training: Faculties of Education and Faculties of Science and Literature with their pedagogical training certificate programs. In the studies carried out in Turkey on pre-service teachers' educational and self-efficacy beliefs, there have been very few articles that include students both from faculty of education and Faculty of Science and Literature. This study was aimed to find out how effective the certificate program, which only lasts for one year, is on the educational and self-efficacy beliefs of the pre-service teachers, and to compare these results with the educational and self-efficacy beliefs of the students studying in the Faculties of Education. It is believed that this study will give an opinion on the practices of

certificate program in the future and the effectiveness of Faculties of Education.

Recommendation

In line with the findings obtained from this research, the following recommendations can be made for researchers and practice. It is suggested that qualitative studies (interviews) should be conducted with both groups of students (those studying in Faculty of Education and having a pedagogic formation) in order to reveal the differences in the educational beliefs through using contemporary and student-centered approaches in the schools that they will serve as teachers.

With the establishment of The Council of Higher Education, there have been two sources of teacher training: Faculties of Education and Faculties of Science and Literature with their pedagogical training certificate programs. In the studies carried out in Turkey on pre-service teachers' educational and self-efficacy beliefs, there have been very few articles that include students both from faculty of education and Faculty of Science and Literature. In this study, it was aimed to find out how effective the certificate program, which only lasts for one year, is on the educational and self-efficacy beliefs of the pre-service teachers, and to compare these results with the educational and self-efficacy beliefs of the students studying in the Faculties of Education. It is believed that this study will give an opinion on the practices of certificate program in the future and the effectiveness of Faculties of Education.

Pre-service teachers' educational and self-efficacy belief levels are denoted in the existing studies in terms of some variables such as age, teacher training source, gender and department. It is believed that such studies can contribute to the development of teaching practices and learning environments used in teachers' training.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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