

## Research Article

# Do preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession predict their entrepreneurship?

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This study aimed to examine preschool teacher candidates' self-efficacy beliefs and their attitudes towards the profession as predictors of their entrepreneurship. 269 teacher candidates studying at different universities in Turkey and volunteering to participate in the study constitute the participants of the study designed in the correlational study model. Participant teacher candidates' self-efficacy beliefs and attitudes towards the profession and entrepreneurship were examined; self-efficacy beliefs and attitudes towards the profession, which are thought to have an impact on entrepreneurship, were evaluated. Also discussed about were the differences between these factors based on the teacher candidates' gender, the grade they got in college, and what they thought about doing the job after they graduated. As a result, it was determined that the self-efficacy beliefs, attitudes towards the profession, and entrepreneurship of preschool teacher candidates participating in the research were above the mean score of the scale, and the teacher candidates' self-efficacy beliefs and attitudes towards the profession predicted their entrepreneurship significantly. It was found that the self-efficacy beliefs and entrepreneurial spirit of female preschool teacher candidates were much higher than those of male preschool teacher candidates. Also, the entrepreneurial spirit of first-grade teacher candidates was higher than that of fourth-grade teacher candidates. Besides, it was determined that the attitude scores towards the profession of teacher candidates who do not have any other career plans other than teaching were significantly higher. Because teacher candidates who have high self-efficacy beliefs and positive attitudes towards their profession are more entrepreneurial, it is more likely that they will be more open to new ideas, try new things, and notice opportunities.

**Keywords:** Teacher candidates; Preschool education; Self-efficacy beliefs; Attitudes towards the profession; Entrepreneurship

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## 1. Introduction

Many critical tasks in human life are fulfilled in the early childhood period where the developmental journey is experienced in its most intense form. Children's development and school readiness are supported by educational programs to be offered to them during this period (Bekman, 2004; Sezgin & Demiriz, 2019; UNICEF, 2017). Quality programs should be prepared for the support they need, and the qualifications of teachers who will implement these programs should be strengthened. Teacher quality can be explained as an increase in the teacher's professional competence and more positive relationships with children, interacting with them in various ways. These characteristics of the teacher will also facilitate the preschool education program in achieving its goals (Hatfield et al., 2016; Reynolds et al., 2017). Teachers' vital role in the early childhood era necessitates their support in terms of both professional and personal development, beginning in the preservice phase. The quality of teachers and thus the quality of education will increase by strengthening the self-efficacy beliefs of teacher candidates and supporting the positive development of their attitudes towards the profession (Dadandı et al., 2016; Şahin & Şahin, 2017).

In cases where quality education is not achieved, children will face obstacles in realizing their potential and finding a job (UNICEF, 2022). Strategies commonly used by institutions to provide quality education for all include the following: to have an innovative perspective in areas such as educational models and teacher training; to build a knowledge base and share it with education policymakers by establishing collaborations that will enrich their resources, contacts, and experiences, with a focus on improving education, ensuring quality learning. (OECD, 2019). Within this scope, teachers must be well prepared for the roles they will play by being trained with a quality education approach in the preservice education phase (Arastaman, 2013).

To provide quality education and raise qualified people, teachers need to have self-efficacy (Şahin & Şahin, 2017) and positive attitudes towards the profession (Arastaman, 2013). While teachers' attitudes towards the profession affect their success, professional satisfaction, and productivity (Arastaman, 2013; Erdem et al., 2005); it can be said that having positive attitudes, competence in knowing students, and self-efficacy in teaching profession positively affect each other (Şahin & Şahin, 2017).

In addition to these variables that are closely related to teacher quality, entrepreneurship is another skill that teachers who contribute to the education of 21st-century people are considered to have (Salamon & Verboon, 2020). Entrepreneurial teachers are innovative, collaborative, proactive, opportunity-oriented, knowledgeable, committed, resourceful, risk-taking, visionary, and socially motivated individuals focused on self-development (Ayaita & Stürmer, 2019; Salamon & Verboon, 2020). As a matter of fact, it has been observed that instructors in underprivileged areas who have a high level of social entrepreneurship do very well in terms of the growth of the students they teach and the fulfilment of the educational objectives (Sherry-Chand & Amin-Choudhury, 2006).

Teaching requires the responsibility to train well-equipped manpower for the changing needs of the age (Goodson & Hargreaves, 2005). In this sense, it is valuable for teachers to be equipped with 21st-century skills, versatile, and have high professional qualifications during their undergraduate education period. According to this line of thinking, teachers' professional self-efficacy, professional attitude, and entrepreneurship are factors that interact to produce high-quality instruction for kids. The problem of the study is to examine the contribution of teacher candidates' perceptions of professional competence and their attitudes towards their profession to their entrepreneurship. Thus, "What are the effects of professional self-efficacy views and professional attitudes on the entrepreneurship of teacher candidates?" is the research topic that the study looks at. Examining the roles of these two factors, which are thought to have an impact on teacher candidates' entrepreneurship, will help the literature to reveal the interaction between these skills, which affect teacher quality and are related to 21st-century skills.

### **1.1. Self-efficacy Beliefs**

Bandura (1977) defines self-efficacy belief as an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments. Teacher self-efficacy belief is defined as the belief in the capacity of students to influence their performance. Teachers' belief that they have the necessary teaching skills will enable their students to learn. It is stated that teachers' self-efficacy beliefs are strongly related to choice, effort, and perseverance (Güngör & Gül, 2021; Woolfolk-Hoy et al., 2009). If the teacher's self-efficacy belief is high, the self-efficacy beliefs, attitudes, academic achievements, behaviors of the students in the class, and the roles of the teachers in this process are positively affected (Çolak et al., 2017). Besides, students in the teacher's class with high self-efficacy beliefs perceive the teaching process as interesting and fun and develop a positive attitude towards learning (Daumiller et al., 2021; Kol, 2015; Yılmaz et al., 2004).

### **1.2. Attitudes towards the Teaching Profession**

A teacher candidate, who is aware of their profession, will make important contributions to the identification, evaluation, and resolution of the problems that arise in the education-teaching process; it is important for teacher candidates to know the history and emergence of their profession and to have teaching profession skills (Akyüz, 2002). The attitude of the teacher candidate, who is conscious of the requirements of their profession, towards the profession will also be positive. An individual's feelings, behaviors, and commitment to their profession are defined by their attitude towards the profession (Hussain et al., 2011). Teachers' attitudes towards their profession change concerning their love and commitment to the profession, awareness of the place and importance of their profession in social life, and openness to professional development (Ayık & Ataş, 2014). For teacher candidates' to have more positive attitudes towards their profession when they enter the profession, that is, when they become teachers, they should receive the education that will positively support their attitudes towards the profession from the undergraduate education process. For this purpose, during the undergraduate education process, appropriate opportunities should be created for students of different age groups to observe many preschool education institutions, make observations in their classrooms, and to gain experience by doing internships in different institutions such as public schools and private schools. While creating suitable environments, arrangements should be made to enable teacher candidates to experience 21st-century skills such as entrepreneurship (Aksoy, 2017).

### **1.3. Entrepreneurship**

Entrepreneurship education should be counted as basic competence in terms of the qualifications of every teacher, rather than being seen as a special field, and should be embedded in the entire teaching program (European Commission, 2014). The curriculum was updated to integrate 21st-century skills into all levels of education by making arrangements for 8 competencies determined in the Turkish Qualifications Framework by the Ministry of National Education. Within this scope, teacher training programs were updated in 2018, especially by adding courses that would support the competence of "taking the initiative and entrepreneurship" (Ministry of National Education [MoNE], 2018). Entrepreneurship education should be counted as basic competence in terms of the qualifications of every teacher, rather than being seen as a special field, and should be embedded in the entire teaching program (European Commission, 2014). Teacher candidates need to have entrepreneurial skills to be able to be entrepreneurial individuals themselves and to teach entrepreneurship to their students. Considering the characteristics of entrepreneurial individuals, it is noteworthy that they are individuals with foresight, problem-solving skills, and developed imagination and creativity (Bozgeyik, 2005; Tican, 2020). Teacher candidates who enter the profession with knowledge and experience in the preservice training process on entrepreneurship will easily be able to light the "entrepreneurship spark" for both themselves and their students (European Commission, 2014). Therefore, it is considered important to support and increase the entrepreneurial skills of teacher candidates.

#### 1.4. Literature Review

The most important feature for a country to achieve its socio-economic development and growth targets has always been to accelerate entrepreneurial activities (Ghafar, 2020). With this feature, in terms of the reflections of entrepreneurship, which is still talked about more today in education, the presence of entrepreneurial teachers will contribute to the training of entrepreneurial students.

Entrepreneurship education, which has been on the agenda worldwide in recent years, is aimed to increase the entrepreneurial characteristics of students by being included in education programs, especially in European countries (European Commission, 2016). Schools specialize in entrepreneurship education as teachers professionalize in entrepreneurship education (Oksanen et al., 2022). Teachers' lack of knowledge about the concept of entrepreneurship and inadequate ideas about the purpose, method, practices, and results of entrepreneurship education are one of the important situations encountered in entrepreneurship education program implementations carried out in this context (Sommarström et al., 2017). Considering that teacher quality is one of the factors affecting student quality (Antony & Elangkumaran, 2020), it is necessary to examine in depth the factors that affect teachers' entrepreneurship education and their entrepreneurship (Oksanen et al., 2022).

There are studies in the literature that conclude that various personality traits of teacher candidates are related to their entrepreneurship. Adatepe (2018) and Köstekçi (2016) determined that teacher candidates' reflective thinking skills are related to their entrepreneurship. Furthermore, the teacher candidates' critical thinking skills predict their entrepreneurship (Gözübüyük, 2019; Öztürk, 2019). Tican (2019) also determined that teachers' entrepreneurship and creative thinking tendencies are related. According to the common result of these studies, the fact that teacher candidates have various ways of thinking is related to their entrepreneurship.

When the factors related to entrepreneurship in preschool teacher candidates are examined; in the study of Yavuz Konokman and Yanpar Yelken (2014), in which they examined preschool teacher candidates' attitudes towards learning and their entrepreneurship levels, it was determined that the attitude toward learning is not a variable that affects the entrepreneurship level of the candidates. In line with this result, it was suggested that teacher candidates should be offered the opportunity to produce projects, exhibit, and evaluate these projects during their undergraduate education. Biçer (2019) examined the relationship between the social entrepreneurship levels of preschool teacher candidates and their problem-solving skills. As a consequence of this study, it was concluded that as the risk-taking, self-confidence, and personal creativity levels of the candidates increase, their entrepreneurship also increases (Biçer, 2019). According to the research results mentioned so far, it is understood that preschool teacher candidates' personality traits, thinking styles, attitudes towards learning, self-confidence, creativity, problem solving, and risk-taking skills may be related to their entrepreneurship characteristics.

The professional learning and development of teachers are important tools in teaching new models such as entrepreneurship education that they will transfer to their students (Oksanen et al., 2022). Professional learning and development are also related to professional competence (Karacaoğlu, 2008). When the literature on specialization in the teaching profession is reviewed, it can be said that teachers' professional competencies are important in terms of their ability to adopt new pedagogical frameworks (Ben-Peretz, 2001), their attitudes towards changes in education (Bentea & Anghelache, 2012) and their professional vulnerability about educational reforms (Kelchtermans, 2005; Kirsten 2020).

Preschool teacher candidates' attitudes towards the profession are related to personal values (Yılmaz, 2009), self-confidence levels (Manolova Yalçın & Özgen, 2016), self-efficacy beliefs (Elaldi & Yerliyurt, 2016) and professional self-esteem (Aslan & Köksal Akyol, 2006). Also, their reflective thinking dispositions (Zembat et al., 2019), academic motivations and achievements (Zembat et al., 2018) revealed the necessity of determining whether preschool teacher candidates' self-efficacy

beliefs and attitudes towards the profession predict their entrepreneurship. Besides, it has been understood that the attitudes of preschool teacher candidates towards the profession are affected in various ways in terms of demographic characteristics such as the place of residence, class levels, preference order, the type of high school they graduated from, the presence of teachers in their families, the factors affecting their preferences, the people affecting their preferences, and the variables of satisfaction with the field (Doğrul & Kılıç, 2020; Kızıldağ et al., 2012; Kol, 2015). Therefore, in the present study, the attitudes of teacher candidates towards the profession were examined according to gender, grade level, and having a professional plan other than teaching.

Attitudes about the teaching profession are related to self-efficacy in the teaching profession (Akkuzu, 2011). In studies comparing preschool teacher candidates' self-efficacy beliefs with preschool teachers, it was determined that the self-efficacy beliefs of preschool teachers are higher than that of teacher candidates (Şenol & Ergün, 2015; Yoldaş et al., 2016). Hereunder, it can be said that having experience in the teaching profession is effective for professional self-efficacy belief.

In the study conducted by Demirtaş et al. (2011), in which preschool teacher candidates were also participants, teacher candidates studying at the faculty of education (in the whole faculty study group, preschool teacher candidates are also included) it was determined that there is a positive and significant relationship between teacher candidates' self-efficacy beliefs and their attitudes towards the profession. As a result of the research conducted by Subas (2018), the relationship between preschool teacher candidates' self-control, which is a dimension of their character traits, and teacher self-efficacy beliefs, concluded that there is a significant relationship between preschool teacher candidates' self-efficacy beliefs and their self-control. In a study conducted by Kaplan and Kurtulmuş (2019), it was determined that there is a positive and significant relationship in all sub-dimensions of preschool teacher candidates' visual-spatial intelligence and naturalistic intelligence from multiple intelligences and self-efficacy beliefs.

Finally, the self-efficacy beliefs of preschool teacher candidates were examined in the context of gender roles by Öztürk et al. (2021), and it has been determined that the self-efficacy beliefs of teacher candidates are not affected by gender roles (Öztürk et al., 2021). On the other hand, there are also studies in the literature that conclude that teacher candidates' self-efficacy beliefs differ according to gender (Biçer, 2019; Demirtaş et al., 2011; Deniz & Tican, 2017; Kaplan & Kurtulmuş, 2019; Koçak et al., 2019). Finally, it was determined that the preschool teacher candidates' self-efficacy beliefs were not affected by gender roles (Öztürk et al., 2021). It is thought that the entrepreneurship, attitudes towards the profession, and professional self-efficacy of teacher candidates who are on the way to becoming teachers are important for them to be equipped to provide qualified education in their teaching lives and to educate students with 21st-century skills. Accordingly, the present study focuses on examining the effect of preschool teacher candidates' entrepreneurial skills, professional self-efficacy, and professional attitudes.

Based on the results of these studies in the literature, examining the preschool teacher candidates' self-efficacy beliefs and their attitudes towards the profession as predictors of their entrepreneurship was deemed necessary. Because no study has been found in which teacher candidates' entrepreneurship has been examined in terms of their self-efficacy beliefs and professional attitudes, this study helps examine teacher candidates entrepreneurship which is one of the 21st century skills. It is important to make necessary arrangements in preservice education and to support them in terms of factors that may affect their entrepreneurship since teacher candidates have entrepreneurship skills that come first among the 21st-century skills and bring future generations together with entrepreneurship at an early age.

When the literature was reviewed, it was observed that studies had been conducted on many qualities and skills of teacher candidates, but there is no study on the effect of self-efficacy beliefs and attitudes towards the profession on entrepreneurial skills. From these points forth, this study aimed to examine preschool teacher candidates' self-efficacy beliefs and their attitudes towards the profession as predictors of their entrepreneurship. In line with this basic aim, answers to the following questions were sought:

RQ 1) What are preschool teacher candidates' self-efficacy beliefs, attitudes towards the profession, and entrepreneurship mean scores?

RQ 2) Do preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession significantly predict their entrepreneurship?

RQ 3) Do preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession and entrepreneurship differ significantly according to their gender, grade level, and having a career plan other than the teaching profession status?

## 2. Method

### 2.1. Research Design

The research design was made with the survey model, which is an observation-based approach. Screening models are the research method preferred by the researcher when measuring the degree of relationship between variables or trying to predict a result based on predictive variables. The use of correlational analyzes or regression analyses within the scope of screening models allows for measuring the strength (large) and direction of the relationship between variables or predicting the effect of one variable on another. In this design, there is no application, intervention, or similar guidance other than the measurement tools planned to be used in the research application (Büyüköztürk et al., 2008; Edmonds & Kennedy, 2017). Since the present study mainly examines preschool teacher candidates' professional self-efficacy, their attitudes towards the profession, and its predicament towards entrepreneurship, correlational research design has been chosen to reveal the relationship network among the research variables.

### 2.2. Participants

Two hundred and sixty nine preschool teacher candidates who voluntarily accepted to participate in the research and received undergraduate education in the Preschool Education Department of the Faculties of Education of four different universities where researchers have easy access constitute the study group of the research. Of the teacher candidates who constitute the study group of the research, 89.2% are female, and 10.8% are male. The average age of teacher candidates is 20.72 years. Of the candidates, 24.2% are studying in the 1st grade, 31.2% are in the 2nd grade, 23.8% are in the 3rd grade, and 20.8% are in the 4th grade. Of the candidates, 60.6% do not have any plans to engage in another profession other than teaching after graduation.

### 2.3. Data Collection Tools

Demographic information form developed by researchers, Self-Efficacy Beliefs Scale of Preschool Teachers (Tepe & Demir, 2012), Attitude Scale Towards Teaching Profession (Üstüner, 2006), and Entrepreneurship Scale for Teacher Candidates (Deveci & Çepni, 2015) were used as a data collection tool in the study.

The demographic information form was prepared by the researchers considering personal characteristics that are stated to be likely to create differentiation in the variables examined in the research in line with the purpose of the literature review. The form consists of a total of four questions aimed at obtaining the participants' gender, age, grade level, and career plan other than preschool teaching after graduation information.

#### 2.3.1. Preschool Teachers' Self-Efficacy Beliefs Scale

The scale developed by Tepe and Demir (2012) to determine the self-efficacy beliefs of preschool teachers and teacher candidates consists of 37 items. The scale is a 5-point Likert type for agreement with options ranging from strongly disagree (1) to completely agree (5). A high score on the scale indicates high self-efficacy beliefs. The one-dimensional version of the scale explains 45.78% of the total variance. There is also a version of the scale consisting of 6 dimensions. These sub-dimensions are "Learning and Teaching Process," "Communication Skills," "Family Participation," "Planning," "Organization of Learning Environments," and "Classroom

Management," respectively. Factor loadings ranged between .54 and .71 in the first factor, .55 and .78 in the second factor, .70 and .80 in the third factor, .56 and .71 in the fourth factor, .57 and .68 in the fifth factor, and .45 and .69 in the sixth factor. For the one-dimensional version of the scale, the internal consistency coefficient is .97 (Tepe & Demir, 2012). In this study, a one-dimensional version scale was used. For the current study, the internal consistency coefficient of the scale has been found to be .97.

### 2.3.2. Attitude Scale Towards Teaching Profession

The Attitude Scale Towards Teaching Profession, developed by Üstüner (2006) to determine attitudes of teacher candidates studying in teacher education undergraduate programs towards the teaching profession, consists of 34 items. The one-dimensional scale is in five-point Likert type for agreement with options ranging from strongly disagree (1) to completely agree (5). A positive attitude towards the teaching profession is expressed by the high score obtained from the measurement tool. The internal consistency coefficient of the scale is .93 (Üstüner, 2006). In this study, the internal consistency coefficient of the scale has been found to be .81.

### 2.3.3. Entrepreneurship Scale for Teacher Candidates

The scale developed by Deveci and Çepni (2015) to determine the entrepreneurship levels of teacher candidates consists of 5 sub-dimensions and 38 items. The sub-dimensions are risk-taking, innovativeness, self-confidence, seeing opportunities, and emotional intelligence, respectively. The scale is a 5-point Likert type for agreement with options ranging from strongly disagree (1) to completely agree (5). The factor loading values of the subscales ranged between .51 and .79, and the item-total correlations ranged between .35 and .68. Cronbach's alpha reliability coefficient was found to be .77 (Deveci & Çepni, 2015). In this study, a one-dimensional version of the scale was used. In this study, the internal consistency coefficient of the scale has been found to be .88.

## 2.4. Procedure and Statistical Analysis

The forms and scales used in the study were prepared in an online format. Data were collected for five weeks in the fall semester of the 2021-2022 academic year. Prospective instructors who continue their education at the universities were sent online forms of the scales. The voluntary participation of the teacher candidates was taken into consideration.

All of the data obtained from the data collection tools used in the research were analyzed with an appropriate statistical analysis. Descriptive statistics, simple linear regression analysis, and difference tests were applied in the analysis of the data. Parametric analyzes were applied due to the homogeneity of the distribution of the data, as can be seen in Table 1 (Creswell, 2008).

Table 1

*One-Sample Kolmogorov-Smirnov Test*

		<i>Entrepreneurship</i>	<i>Self-Efficacy Beliefs</i>	<i>Professional Attitude</i>
N		269	269	269
Normal Parameters	Mean	150.6468	164.3048	122.7435
	Std. Deviation	15.20377	19.32007	11.45747
	Absolute	.067	.142	.105
Most Extreme Differences	Positive	.053	.142	.102
	Negative	-.067	-.102	-.105
Kolmogorov-Smirnov Z		1,094	2,330	1,722
Asymp. Sig. (2-tailed)		.183	.000	.005

## 3. Results

Descriptive analyzes of preschool teacher candidates' self-efficacy beliefs, attitudes towards the profession, and entrepreneurship scores are shown in Table 2.

Table 2

The results of the mean and standard deviation values of the preschool teacher candidates' self-efficacy beliefs, attitudes toward the profession, and entrepreneurship

	N	Min.	Max	Mean	SD
Self-Efficacy Beliefs	269	72	185	164.30	19.32
Attitude Towards Profession	269	69	161	122.74	11.45
Entrepreneurship	269	78	187	150.64	15.20

Table 2 shows that the maximum score for preschool teacher candidates' self-efficacy beliefs is 185, the mean score is 164.30, and the standard deviation is 19.32; while the maximum score for the attitude towards the profession is 161, the mean score is 122.74, and the standard deviation is 11.45; and while the maximum score for entrepreneurship is 187, the mean score is 150.64, and the standard deviation is 15.20. Hence, it is understood that teacher candidates have averages above the average score of each scale in terms of self-efficacy beliefs, attitudes towards the profession, and entrepreneurship. That is to say, in terms of the participant group average, it can be said that they have the above-average level of these characteristics.

Regression analysis of preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession to predict their entrepreneurship is shown in Table 3.

Table 3

Regression analysis results of preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession to predict their entrepreneurship

Independent variables	Dependent variable	F	p	R	R <sup>2</sup>	Mean	t	p
Self-Efficacy Beliefs	Entrepreneurship	143.99	.00	.72	.52	.584	11.858	.000***
Attitudes Towards Profession						.220	4.458	

Note. \*\*\*p < .001

The results of the regression analysis showed that teacher candidates' self-efficacy beliefs and attitudes towards the profession significantly predicted their entrepreneurship scores. It was determined that self-efficacy beliefs and attitudes towards the profession scores of teacher candidates explained 52% of the variance of entrepreneurship scores ( $R^2 = .52$ ;  $p < .001$ ) in a statistically significant way. To put it differently, the entrepreneurship skills of preschool teacher candidates participating in the research is affected by their self-efficacy beliefs and attitudes towards the profession with a rate of 52%.

The results of the possible difference in the professional self-efficacy beliefs, attitudes towards the profession, and entrepreneurship of the preschool teacher candidates according to their gender are shown in Table 4.

Table 4

The results of the independent group's t-test on the differentiation status of self-efficacy beliefs, attitudes towards the profession and entrepreneurship of preschool teacher candidates according to the gender variable

Score	Gender	N	Mean	SD	t-test		
					t	df	p
Self-Efficacy Beliefs	Female	240	165.55	17.79	3,110	267	.002**
	Male	29	153.93	27.28			
Attitude Towards Profession	Female	240	122.74	10.70	.010	267	.992
	Male	29	122.72	16.70			
Entrepreneurship	Female	240	151.35	13.82	2,224	267	.027*
	Male	29	144.75	23.24			

Note. \*\*p < .01; \*p < .05



As seen in Table 4, it was found that the difference between the self-efficacy beliefs and entrepreneurship scores of preschool teacher candidates is significant for female teacher candidates ( $p = .002$ ;  $p = .027$ ). All the same, in terms of gender, the difference between the arithmetic mean scores of the attitudes towards the profession was not significant ( $p = .992$ ). In this case, it can be said that female teacher candidates participating in the research have higher professional self-efficacy and are more entrepreneurial compared to males.

The results of the possible difference in the professional self-efficacy beliefs, attitudes towards the profession, and entrepreneurship of the preschool teacher candidates according to the grade level in which they continue their education are shown in Table 5.

Table 5

*The results of the one-way analysis of variance (ANOVA) test on the differentiation status of self-efficacy beliefs, attitudes towards the profession and entrepreneurship of preschool teacher candidates according to the grade level variable*

Score	Var. S.	KT	df	KO	F	p	Source of Difference
Self-Efficacy Beliefs	Intergroup	1382.23	3	460,745	1,238	.296	
	In-group	98652.76	265	372,275			
	Total	100035	268				-
Attitude Towards Profession	Intergroup	855,920	3	285,307	2,203	.088	
	In-group	34325.381	265	129,530			
	Total	35181.301	268				-
Entrepreneurship	Intergroup	1831.318	3	610,439	2,691	.047*	1 <sup>st</sup> grade- 3 <sup>rd</sup> grade
	In-group	60118.132	265	226,861			
	Total	61949.450	268				.014*

Note. \* $p < .05$

As seen in Table 5, it was found that the grade of teacher candidates does not make a difference in their self-efficacy beliefs and attitudes towards the profession; however, their entrepreneurship skills differ according to the grade level variable. According to the results of the Tamhane test, which is used as a result of non homogeneous distribution, it was determined that the entrepreneurship scores of the 1st-grade teacher candidates were higher ( $p = .014$ ) than the 3rd graders.

The results of the possible differences in the professional self-efficacy beliefs, attitudes towards the profession, and entrepreneurship skills of the preschool teacher candidates according to having another plan are shown in Table 6.

Table 6

*The results of the independent group's t-test on the differentiation status of self-efficacy beliefs, attitudes towards the profession and entrepreneurship of preschool teacher candidates according to the status of having another professional plan variable*

Score	Status of Having Another Professional Plan	N	Mean	SD	t-test		
					t	df	p
Self-Efficacy Beliefs	Those who have a plan	106	162.64	20.56	-1.139	267	.256
	Those who do not have a plan	163	165.38	18.44			
Attitude Towards Profession	Those who have a plan	106	120.60	11.82	-2.494	267	.013*
	Those who do not have a plan	163	124.13	11.02			
	Those who have a plan	106	149.72	14.71			
Entrepreneurship	Those who do not have a plan	163	151.24	15.52			

Note. \* $p < .05$

As seen in Table 6, the difference between the arithmetic mean scores of the attitudes towards the profession was found to be significant for teacher candidates who do not plan to pursue another profession, that is, who want to be a preschool teacher after graduation ( $p=.013$ ). Accordingly, it can be said that while the attitudes of teacher candidates who are thinking of doing another profession are lower towards the profession, those who are considering doing the profession have a higher attitude towards the profession. On the other hand, teacher candidates' self-efficacy beliefs and entrepreneurship skills did not yield a significant difference according to the status of having or not having a plan to do the profession ( $p = .256$ ;  $p = .424$ ).

#### 4. Discussion

In the study conducted to reveal the effect of preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession on their entrepreneurship, first of all, teacher candidates' self-efficacy beliefs, attitudes towards the profession, and entrepreneurship mean scores were calculated. In consequence of the calculation made by considering the lowest and highest scores that can be obtained from the measurement tools, it can be said that the self-efficacy beliefs scores of the teacher candidates forming the study group are above the mean score that can be obtained from the scale, that is, they have these characteristics at an above-mean level. Bandura (1997) states that people with high self-efficacy beliefs do not escape from the problems they face; on the contrary, he states that they are stronger. Besides, it can be said that the entrepreneurial characteristics of people who receive support in terms of self-efficacy also increase (Chai et al., 2013; Laguna, 2013). It was determined that the teacher candidates' attitude scores towards the profession are at a high level. The literature, along with the studies (Baykara Pehlivan, 2008; Engin & Koç, 2014; Keskin, 2017; Nakip & Özcan, 2016; Özder et al., 2010; Terzi & Tezci, 2007) that reached similar results to this result, there are also studies (Doğan & Çoban, 2009; Tunçeli, 2013; Üstün et al., 2004; Yılmaz, 2009) that determined that teacher candidates have a positive attitude towards the profession. Furthermore, a study with low attitudes of teacher candidates towards the profession was also found (Kahyaoglu et al., 2013). The reason for this differentiation is thought to be other possible variables that may affect the attitude towards the profession.

According to the results of the present study, the high level of teacher candidates' attitudes towards the profession can be evaluated as an indicator of motivated teachers in the profession. Özdemir et al. (2004) states that a teacher should be aware of the profession's requirements, take into account the needs of his/her students in the learning-teaching process, have a positive attitude, and willingness for the whole process.

It was also determined that the entrepreneurship scores of the preschool teacher candidates participating in the research are above the average. There are studies with similar results in the literature (Ali et al., 2009; Armut, & Kılınc, 2018; Köstekçi, 2016; Pan & Akay, 2015; Yavuz Konokman & Yanpar Yelken, 2014; Yıldız, & Kapu, 2012; Zembat & Yılmaz, 2019). It is known that teachers with high entrepreneurial characteristics are innovative, active, opportunity-oriented, responsible, knowledgeable, self-sacrificing, resourceful, visionary, self-development-oriented, and socially motivated, and tend to work collaboratively and take risks (Keyhani, & Kim, 2021). It is thought that it is important for preschool teacher candidates who will touch the lives of young children in this sense to have positive attitudes towards their profession, with high self-efficacy beliefs and entrepreneurial characteristics.

When the effect of preschool teacher candidates' self-efficacy beliefs and attitudes towards the profession on their entrepreneurship is evaluated, as for that, it was revealed that teacher candidates' self-efficacy beliefs and attitudes towards the profession explain 52% of their entrepreneurship. That is to say, self-efficacy beliefs and attitudes towards the profession have a significant share of 52% of the entrepreneurial characteristics of teacher candidates. Balcı (2016) states that the power of estimation increases as this value rises. A person's self-efficacy belief can be defined as their belief in themselves that they will succeed in the job. Research indicates that teacher candidates' while self-efficacy is effective in their entrepreneurship (Konaklı, 2015),

emotional intelligence level is also effective on social entrepreneurship characteristics together with their self-efficacy perception (Akar & Üstüner, 2017). In line with the results of the present study, Zhao et al. (2005) revealed that the self-efficacy beliefs of graduate students and Neto et al. (2018) of primary school teachers predict entrepreneurship. Similarly, it has been determined that people are affected by their entrepreneurship, personal attitude (Kalkan, 2011), and attitude towards behavior (Çetinkaya Bozkurt, 2014). Akar and Aydın (2015) also found that openness to experience and extroverted personality traits of preservice teachers predicted their entrepreneurship. It is thought that studies should be carried out regarding positive attitudes towards the profession by supporting entrepreneurship as an important teaching skill (Keyhani & Kim, 2021) and increasing self-efficacy belief will strengthen preschool teacher candidates in terms of these characteristics.

According to another result of the present study, the self-efficacy beliefs of female teacher candidates are higher compared to male teacher candidates. In a sense, it can be said that female teacher candidates feel more professionally competent compared to males. In various studies on professional self-efficacy beliefs, there are studies in which female teacher candidates score higher than males (Biçer, 2019; Deniz & Tican, 2017; Kaplan & Kurtulmuş, 2019; Koçak et al., 2019). On the contrary, there are studies (Demirtaş et al., 2011) in which male teacher candidates have high self-efficacy beliefs and studies (Subaş, 2018; Şenol & Ergün, 2015) stating that self-efficacy beliefs do not differ according to being male or female. These different results suggest that having self-efficacy beliefs about the teaching profession in terms of being male or female suggest that gender alone may not be a determining factor in professional self-efficacy beliefs. Hence, Yaşar Ekici (2017) stated that the self-efficacy beliefs of preschool teachers who prefer the teaching profession according to their own will are higher, and Koçak et al. (2019) also stated that the self-efficacy beliefs of prospective teachers who came to the department willingly increased. Within this scope, it is thought that a more detailed result can be reached by taking into account other factors that may affect how teacher candidates feel about their ability to do their jobs well.

According to the results of the study, gender does not cause any difference in the attitudes towards the profession. There are studies in the literature that support this finding (Bedel, 2016; Demirtaş et al., 2011; Doğrul & Kılıç, 2020; Elaldı & Yerliyurt, 2016; Kol, 2015; Nakip & Özcan, 2016; Özder et al., 2010; Tunçeli, 2013; Ünal & Akay, 2017; Yılmaz, 2012). On the other hand, there are also studies that show that female teacher candidates have higher attitudes towards the profession (Akpınar et al., 2006; Aydın & Tekneci, 2013; Zembat et al., 2019). In the study conducted by Avcı et al. (2019) on male preschool teacher candidates, it is thought that they may be worried that society will be biased towards male preschool teachers and that they may experience personal/professional inadequacy, and that the attitudes of male preschool teacher candidates who have such concerns towards the profession may also be affected. Although study results indicate that female or male preschool teacher candidates have different opinions on their attitudes towards their profession, as it is understood in the current research, it is the general opinion obtained from the literature that there is no difference between being a female or male and having an attitude towards the profession. While it is interpreted by Şenel et al. (2014) that these teacher candidates see the teaching profession as a respected profession in society, regardless of gender, Yaşar Ekici (2017) interpreted it as the fact that his/her attitude towards the teaching profession emerges as a result of her internal and external motivation rather than gender.

According to another result of the present study, it was determined that female teacher candidates are more entrepreneurial compared to male teacher candidates. Some studies support the result of the present study in which female teacher candidates have higher entrepreneurship skills (Alan, 2019; Ali et al., 2009; Karademir et al., 2018). On the other hand, there are also studies in which male teacher candidates' entrepreneurship skills are higher (Aydın & Öner, 2016; Korkmaz et al., 2019; Tican, 2019) and there is no differentiation according to gender (Memduhoğlu, & Şahin, 2017; Ocak & Su, 2016; Pan & Akay, 2015; Yavuz Konokman & Yanpar Yelken, 2014) were also found. In terms of gender, it is known that the rate of female entrepreneurs in Turkey is quite low compared

to males (Büyükbeşe et al., 2021). On the other hand, when entrepreneurship within the teaching profession is evaluated, it was determined that the number of female teachers and teacher candidates is higher compared to males and that females are more willing to choose the profession (Erdem, 2001). This situation makes us think that this result may be effective in favor of women when evaluating the entrepreneurship of preschool teacher candidates. In addition to this, based on the results of the study stating that entrepreneurship programs are more effective for females than for males (Wilson et al., 2009), it is thought that this situation can be brought to a better level with the entrepreneurship training to be given to female teacher candidates. It is important to increase entrepreneurship among all teachers, both male and female.

According to the results of the study, the self-efficacy beliefs and attitudes towards the profession did not differ according to the grade levels of the teacher candidates. In the literature, some studies show that teacher candidates' self-efficacy beliefs toward the profession do not differ according to grade level (Akkuş, 2013; Seçkin & Başbay, 2013). Besides, it was stated by Yaman et al. (2004) that the self-efficacy beliefs of teacher candidates decrease as the grade level increases. Similar to the result of the present study, which is that teacher candidates' attitudes towards the profession do not differ according to grade level, studies were also found (Aslan & Köksal Akyol, 2006; Baykara Pehlivan, 2008). It was determined by Pektaş and Kamer (2011) that the attitudes of the 1st and 2nd-grade teacher candidates towards the profession are higher than the 4th graders. Considering the studies, it is predicted that the fact that teacher candidates develop their own professional skills as a result of what they learn during the education process may also be effective in the formation and change of attitude towards the profession.

According to the results of the present study, the entrepreneurial spirit of the teacher candidates attending the 1st grade is higher than that of the teacher candidates attending the 3rd grade. While Özbilen (2019) revealed that the entrepreneurship of 4th-grade teacher candidates is higher than that of 1st-grade teachers, Çermik and Şahin (2015) revealed that the social entrepreneurship risk-taking scores of the 3rd-grade teacher candidates are higher than the 1st-grade students. It was determined by Pan and Akay (2015) that the entrepreneurial skills of the education faculty students did not differ according to the grade level. In the present study, we noticed that a result that does not correspond to the literature has emerged. In particular, detailed research needs to be conducted on the reasons for the high entrepreneurship of 1st-grade teacher candidates. A vibrant social structure of potential entrepreneurs needs to be created to discover the talents of future generations in creating new ventures and to maintain the level of entrepreneurship in our society (Wilson et al., 2009). However, the excitement (Mercan & Yıldız, 2011) and risk-taking (Özdemir et al., 2016) of 1st-grade teacher candidates who have just started at the faculty of education and university can be considered as the reason for their high level of entrepreneurship. In the study by Pihie (2009) on the entrepreneurship of university students, it was suggested that students should use specific instructional strategies to develop their entrepreneurship and sense of self-efficacy, and that university policymakers should add more value to their graduates by including development-enhancing factors.

According to the results of the research, the attitudes of teacher candidates who do not plan to pursue another profession other than teaching when they graduate from the profession are more positive than those who are considering another profession. It is thought that this may be because choosing and doing the profession that one likes is a critical situation that enables the individual to achieve satisfaction in both their private and business life (Gökdeniz & Merdan, 2016). Hence, when the literature was reviewed, it was observed that Doğan and Çoban (2009) concluded that the professional attitudes of teacher candidates who want to enter the teaching profession after graduation are higher than teacher candidates who have a high desire to be a teacher have high attitudes towards the profession (Aslan & Köksal Akyol, 2006; Beşoluk & Horzum, 2011).

A professional attitude is affected by teachers' willingness to choose the profession (Gömleksiz & Kan, 2008). On the other hand, the fact that teacher candidates have a plan or not to pursue another profession after graduation did not cause any change in their professional self-efficacy and

entrepreneurship as preschool teachers. This situation can be interpreted as teacher candidates feel competent enough to do the profession while they are still at the stage of learning the profession in undergraduate education, even if they do not think of doing the profession. It is important to identify other variables that affect this result about professional self-efficacy and entrepreneurship.

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