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TEACHER CANDIDATES' TEACHING-LEARNING CONCEPTIONS AND SELF-EFFICACY IN ORGANIZING OUT-OF-SCHOOL TRIPS: THE MEDIATING ROLE OF LIFELONG LEARNING

Abstract: This study aimed to examine whether lifelong learning has a mediating role in the relationship between teacher candidates' teaching-learning conceptions and self-efficacy in organizing out-of-school trips. Structural Equation Modeling was used to determine this relationship. The study sample consisted of 341 teacher candidates. The study data were collected using the Teaching and Learning Conceptions Questionnaire, the Self-Efficacy Belief Scale for Planning and Organizing Educational Out-of-school Trips, and the Lifelong Learning Scale. Participants' ages ranged from 18 to 30 (M = 23.26; SD = 2.62). According to the findings of the study, positive and significant relationships were found between teacher candidates' teaching-learning conceptions and lifelong learning and their self-efficacy in organizing out-of-school trips. The structural equation model of the study was confirmed. In conclusion, teacher candidates' lifelong learning tendencies were found to strengthen the relationship between teaching-learning conceptions and self-efficacy in organizing out-of-school trips.

Keywords: Teacher candidate, teaching and learning conceptions, self-efficacy in organizing out-of-school trips, lifelong learning.

1.   Introduction

The changing world has brought about some differences also in teaching-learning conception. There has been a shift from teacher-centered teaching towards student-centered teaching conceptions, where reward and punishment are not emphasized. This has made the constructivist approach, which emerged especially in developed countries after the 1980s, popular. Vygotsky, one of the scientists who laid the foundations of constructivism, brought a socio-cultural perspective on learning. According to him, for learning and development to occur, individuals must interact with the social environment (Kozulin, 2003). Out-of-school learning environments are one of the environments where the individual interacts best with the social environment and can structure knowledge. Out-of-school learning environments are non-formal learning environments that cover a lifelong process (Oner & Ozturk, 2019) where learners play an active role in structuring and developing knowledge, as supported by a constructivist conception. The UNESCO commission on the development of education, which convened in 1972, made four proposals. The first of these included the statement, "it is wrong to limit education to age and buildings." Therefore, out-of-school learning environments have gained importance in lifelong learning (Roulstone, 2010; Soran, Akkoyunlu, & Kavak, 2006). Lifelong learning is a general arrangement covering all kinds of formal and non-formal

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educational activities, aiming to restructure the existing education system and to improve education other than formal education (Gulec, Celik & Demirhan, 2012). Teachers are the individuals who will make this arrangement. When teachers have lifelong learning competencies, this means that they can achieve social change effectively (Yildirim, 2015). Fenwick (2001) mentions two important and prominent trends in teacher education. The first includes expanding the professional development process of teacher candidates with the concept of lifelong learning, and the other aims to make individual teaching abilities comprehensive with practices performed in society. In this context, Chapman et al. (2003) emphasize the necessity of developing teacher candidates' competencies for applying the life-long learning and constructivist approach in education to become a lifelong learning society. Saisana and Cartwright (2007) expressed the building blocks of lifelong learning in four sections: learning to know, learning to do, learning to live together, and learning to exist. These building blocks are about learning to know and learning to do. One of the roles of higher education institutions in lifelong learning is to provide professional development opportunities (Dinevski & Dinevski, 2004; Kivrak, 2007). It is thought that having self-efficacy in teaching in out-of-school learning environments is related to professional development. Moreover, in the Faure report published by UNESCO in 1972, lifelong learning was described as in the following statement: "Teaching should adapt to self-learning, contrary to the understanding of traditional education." For this reason, it is thought that the learning-teaching understanding of the individual is related to lifelong learning. Therefore, this study aims to examine whether lifelong learning has a mediating role in the relationship between teacher candidates' teaching-learning conceptions and self-efficacy trips out of school.

1.1. Teaching-Learning Conceptions

Teaching-learning conceptions involve individuals' conceptions of what constitutes effective teaching-learning and how these affect students' learning processes (Brownlee, Purdie & Boulton-Lewis, 2001). Teaching-learning conceptions are discussed under two headings: traditional-teacher-centered and constructivist-student-centered (Aypay 2011; Brooks & Brooks, 1999; Chan & Elliott, 2004; Teo, Chai, Hung, & Lee, 2008). In the traditional conception, a teacher-centered approach dominates, students are passive, extrinsic motivation is needed, memorization is the primary practice of learning, and knowledge is taken from the outside world as a whole independent of the learner (Bas & Beyhan, 2013; Ozden, 2014; Skinner, 1953; Yurdakul, 2015). In the constructivist approach, on the other hand, a student-centered approach is dominant, students are active, collaborative learning is actively applied, and learners make sense of their knowledge and experience and actively participate in the construction and development of knowledge (Cheng, Chan, Tang, & Cheng, 2009). The teaching-learning conceptions of teachers play an effective role in their educational behaviors, practices, and strategies to be used (Abdelraheem 2004; Aydin, 2010; Richardson, 1996). In other words, teachers' beliefs and conceptions have an important effect on the success of the implementation of educational reforms (Aydin, 2010; Karhan, 2007; Khader, 2012; Stipek, Givvin, Salmon, & Macgyvers, 2001). Accordingly, it is thought that it is important to know the teaching-learning conceptions of teacher candidates and to reveal whether they are correlated with some variables. There are some studies in the literature revealing the relationship between teaching-learning conceptions and self-efficacy (Yener &Yılmaz, 2017; Sacici, 2013). These studies have found a positive and significant relationship between perceived self-efficacy and teaching-learning conceptions. Bas (2014) argued that teachers' teaching-learning conceptions differed significantly by gender, professional seniority, and educational status. In addition, epistemological beliefs were also found effective in predicting teaching-learning conceptions (Akyildiz, 2014; Aypay, 2011; Bikmaz, 2017; Karhan, 2007). These findings in the literature showed

that variables affecting the teaching-learning conception were general self-efficacy, individual innovativeness, seniority and gender, and epistemological beliefs.

1.2. Self-Efficacy in Organizing Out-of-SchoolTrips

Today, teaching and learning are carried out not only within the school walls but also out of school in a planned manner. Out-of-school learning environments include both "real out-of-school learning environments", such as museums, science centers, industrial institutions and organizations, zoos, planetariums, or nature camps and "digital/virtual out-of-school learning environments", such as social media, web with educational content, web 2.0 tools, etc (Karademir, 2018). Teachers who want to conduct lessons in out-of-school environments should know well what they should do in such environments so that they can fulfill their goals effectively and efficiently. Things to consider in out of school learning environments are divided into three: before-, during- and after-trip preparations (Bozdogan, 2007; DeWitt & Osborne, 2007). The before-trip stage includes educational preparations, bureaucratic procedures (e.g. permits), transportation, food and beverage, and accommodation possibilities. The during-trip activities include the implementation of the plan prepared before the trip. The after-trip stage consists of activities for reinforcing what has been learned after returning to school. It is known that the knowledge acquired in out-of-school learning environments is retained for a long time (Anderson, Kisiel, & Storksdieck, 2006), these environments allow students to learn in depth, and that activities carried out in these environments provide cognitive and social benefits to students (Rapp, 2005). Besides, most teachers think that extracurricular activities have a positive effect on students (Cox-Petersen, Marsh, Kisiel, & Melber, 2003; Griffin, 2004; Lucas, 2000). Despite all these positive effects, some studies have revealed that teachers do not have enough knowledge and self-efficacy regarding the lessons conducted in out-of-school settings, they, therefore, feel anxious, and that they are incompetent to guide students in these environments (Bozdogan, 2012; Griffin & Symington, 1997; Kisiel, 2005; Orion & Hofstein, 1994; Thomas, 2010). For this reason, it is important to examine teacher candidates' self-efficacy beliefs about out-of-school environments. Self-efficacy belief shows whether a person can exhibit necessary behaviors to achieve a desired outcome (Bandura, 1977). Self-efficacy has been discussed in Bandura's Social Cognitive Learning Theory. Bandura argued that an individual's self-efficacy belief is influenced by many areas, such as personal experiences, indirect experiences, verbal persuasion, and psychological and physiological state. The concept of self-efficacy, which is considered important in many professions, is also very significant in the teaching profession. Teacher self-efficacy is the belief of teachers that they have the capacity to affect students' performance or exhibit the behaviors necessary to successfully fulfill their duties (Aston, 1984). It is also related to the teacher's behaviors, being open to new ideas, and developing a positive attitude for teaching (Tschannen & Woolfolk, 2001). Teachers with high self-efficacy beliefs use different teaching methods in their teaching practices, search ways for improving the teaching methods they use, and do student-centered lessons (constructivist conception), whereas teachers with low self-efficacy do teacher-centered lessons (traditional conception) (Henson, 2001; Plourde,2001). In studies revealing the relationship between teaching-learning conceptions and self-efficacy, a significant positive relationship has been found between perceived self-efficacy and teaching-learning conceptions (Yener & Yilmaz, 2017; Sacici, 2013). Also, a positive relationship has been found between lifelong learning and self-efficacy (Garipagaoglu, 2013), academic self-efficacy (Kozikoglu & Onur, 2019), and teacher self-efficacy (Akyol, 2016; Ayra & Kosterelioglu, 2015).

1.3. Lifelong Learning

According to Delors (1996), lifelong learning is a long-term learning process, where individualsare aware of the available possibilities and utilize them appropriately, can find solutions to the problems they encounter with their problem-solving skills, and live peacefully in society. Lifelong learning is based on the idea of an educational approach beyond traditional teaching (Bagci, 2007). According to Holmes (2002), in an education program shaped according to lifelong learning, all materials, methods, and techniques of learning and teaching are different from those of the traditional teaching approach. Teachers, who have an important role in teaching-learning approaches, should get rid of traditional approaches and adapt to the changes that come with lifelong learning (State Planning Organization [SPO], 2001). With the Prague Ministerial Meeting (2001), the place of lifelong learning in higher education has started to gain importance. In this meeting, having the students gain the concept of lifelong learning in higher education was discussed, and the necessity of using learning strategies to become a qualified individual in the information age was emphasized. This is because the development of appropriate learning methods related to the rapidly changing knowledge and skill needs of individuals during and after higher education is related to lifelong learning competencies (Demirel &Yagci, 2012). In the report published by UNESCO in 1972, Faure mentioned the principles of lifelong learning and said, "Teaching should adapt itself to learning; contrary to the understanding of traditional education, the learner should not submit to the predetermined rules of teaching." With this statement, he revealed the importance of teaching-learning understandings. Studies on lifelong learning and self-efficacy (Garipagaoglu, 2013) and lifelong learning have focused on examining participants in terms of lifelong learning levels and various variables (Kaya, 2010; Tortop, 2010; Ersoy, 2009). While some studies have found a positive effect on lifelong learning trends and professional self-efficacy (Ayra & Kosterelioglu, 2015), others have reached different findings in terms of gender (Kurt, Cevher, & Arslan, 2019; Kangalgil & Ozgul, 2018; Mulhim, 2018; Ozciftci, 2014).

1.4. Present Study

Many studies have been conducted on lifelong learning in the last decade (Eksi, Ozgenel, & Metlilo, 2020; Kan & Murat, 2020; Kurt, Cevher & Arslan, 2019; Seifi, Habibi, & Ayati, 2020; Mitkovska & Hristovska, 2011; Woonsun, 2013). These studies on lifelong learning have mainly focused on participants' lifelong learning levels and their relationship with various variables. For example, while a positive effect was found on lifelong learning tendencies and professional self-efficacy (Ayra & Kosterelioglu, 2015), some studies reached different findings on gender (Arcagok & Sahin, 2014; Demiralay, 2008; Ozciftci, 2014). However, no study was found in the literatue on lifelong learning and teaching-learning approaches.

In the literature, teaching and learning conceptions and lifelong learning are seen as related variables. Teaching and learning conceptions have also been found to be associated with teacher self-efficacy (Yener & Yilmaz, 2017; Sacici, 2013). Moreover, some research findings show that there is a positive relationship between lifelong learning and teacher self-efficacy (Akyol, 2016; Ayra & Kosterelioglu, 2015; Garipagaoglu, 2013).

A review of the literature indicated that there were no studies examining the relationship between self-efficacy in organizing trips and lifelong learning tendencies in out-of-school learning environments. It is thought that learning to know and learning to do, which are the building blocks of lifelong learning, are related to professional development and that the individual's self-efficacy in teaching in out-of-school learning environments is related to professional development (Dinevski & Dinevski, 2004; Kivrak, 2007; Saisana & Cartwright,

2007). It is considered that it is important to reveal the role of lifelong learning in the relationship between teacher candidates' teaching-learning conceptions and their self-efficacy in organizing out-of-school trips. For this reason, in this study, teaching-learning conceptions and self-efficacy in organizing out-of-school trips and the mediating role of lifelong learning were investigated. The hypothetical model of the research is given in Figure 1.
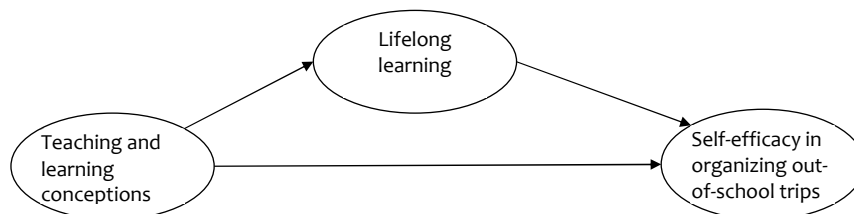

Figure 1. The hypothesed structural model

Based on the literature presented here, we put forward the following hypotheses. Each of these hypotheses represents a part of Fig. 1.

H1. Teaching and learning conceptions will be positively related to self-efficacy in organizing out-of-school trips.
H2. Teaching and learning conceptions will be positively related to lifelong learning tendencies.
H3. Lifelong learning will be positively related to self-efficacy in organizing out-of-school trips.
H4. The relationships between teaching and learning conceptions and self-efficacy in organizing out-of-school trips will be mediated by lifelong learning.

2. Method

2.1. Research Model

Structural Equation Modeling was used in this quantitative study. The study data were collected through a survey. Structural Equation Modeling is a statistical technique that tests the series of relationships between one or more independent variables, continuous or discontinuous, and one or more dependent variables. Independent and dependent variables can be either a factor or an observed variable (Tabachnick & Fidell, 2007).

2.2. Participants and Procedure

The study sample consisted of 341 Turkish volunteer teacher candidates, including 257 females (75.4%) and 84 males (24.6 %). Participants' ages ranged from 18 to 30 years (Mean = 23.26, SD= 2.62). Data were collected with a cross-sectional study using the convenience sampling method in March 2020. A web-based survey was created to collect the data. Participants were first informed about the study and its importance, and then their informed consent was obtained. While collecting the data, participants were informed that no personal information would be collected, no individual evaluation would be done, and that the results of the research would only be used for scientific purposes. The web-based questionnaire was designed in such a way that participants could quit at any time. At the end of the survey, they were asked whether they would like to send their responses, and only those who volunteered could complete the survey.

2.3. Measures

Teaching and Learning Conceptions Questionnaire: The teaching and learning conceptions of the participants in this study were assessed using the Teaching and Learning Conceptions Questionnaire (TLCQ; Chan & Elliott, 2004). The scale consists of two sub-dimensions (constructivist and traditional). There are 12 items in the constructivist sub-dimension and 18 items in the traditional sub-dimension. Participants assess 30 items (e.g., "It is important that a teacher understands the feelings of the students") on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of constructivist and traditional conceptions. In the present study, the Turkish version of the Teaching and Learning Conceptions Questionnaire (Aypay, 2011) was used. It was shown to have very good internal consistency reliability (constructivist sub-dimension, α=.88; traditional sub-dimension, α= .83), as well as acceptable construct validity (Aypay, 2011). The internal consistency coefficient in the present study was found as very good (Cronbach's α for the constructivist sub-dimension = .81; Cronbach's α for the traditional sub-dimension = .86).

Self-Efficacy Belief Scale for Planning and Organizing Educational Trips out of School: Participants' self-efficacy to organize out-of-school trips in this study was assessed using the Self-Efficacy Belief Scale for Planning and Organizing Educational Trips out of School (SEBS; Bozdogan, 2016). Of the 30 items on the scale, 13 are related to the before-trip stage, 12 to the during-trip stage, and 5 to the after-trip stage. Participants assess 30 items (e.g., "I know the necessary steps to organize an effective trip to out-of-school environments.", "I find it difficult to guide the students during the trip.", "I do not have difficulty giving information about the trip to students' families.") on a 5-point Likert-type scale ranging from 1 (never) to 5 (always), with higher scores indicating higher levels of self-efficacy of organizing trips to out-of-school environments. It was shown to have very good internal consistency reliability (α= .93), as well as very good construct validity (Bozdogan, 2016). The internal consistency coefficient in the present study was found as very good (Cronbach's α = .93).

Lifelong Learning Scale: The lifelong learning tendencies of the participants in this study were assessed using the Lifelong Learning Scale (LLS; Wielkiewicz & Meuwissen, 2014). Participants assess 16 items (e.g., "I enjoy intellectual challenges") on a 5-point Likert-type scale ranging from 1 (never) to 5 (always or daily), with higher scores indicating higher levels of lifelong learning tendencies. In the present study, the Turkish version of the Lifelong Learning Scale (Engin, Kor, & Erbay, 2017) was used. It was shown to have very good internal consistency reliability (α= .93), as well as excellent construct validity (CFI = 1.00; NFI = 1.00; AGFI = .97; IFI = .97; SRMR = .040; RMSEA = .061; Engin, Kor, & Erbay, 2017). The internal consistency coefficient in the present study was found as very good (Cronbach's α = .83).

2.4. Data Analysis

First, descriptive statistics, and then Pearson's correlation coefficients were calculated. Next, the mediation model of the study was tested. Maximum likelihood estimation was used in the structural equation model. Fit indices (χ2 / df <5, CFI, TLI, GFI, IFI> .90, SRMR and RMSEA <.08; (Hu & Bentler, 1999; Tabachnick & Fidell, 2007)) were used to evaluate the research model. The item parceling method was used to reduce the number of observed variables and ensure normality (Alhija & Wisenbaker, 2006). The parceling technique is used to reduce measurement error in one-dimensional scales with a large number of items (Little, Cunningham, Shahar, & Widaman, 2002). Two plots were created for the Teaching and Learning Conceptions (constructivist conception) Questionnaire and three plots for the Lifelong Learning Scale. Besides, bootstrapping analysis was performed to determine whether lifelong learning had a

mediating role in the relationship between teacher candidates' teaching-learning conceptions and self-efficacy in organizingout-of-school trips (Preacher & Hayes, 2008). The data of the study were analyzed on IBM SPSS Statistics 21 (for descriptive statistics) and AMOS Graphics 23 (for hypothetical model) software packages.

3. Results

3.1. Descriptive Statistics

In this section, the mean scores of females, males, and all participants regarding teaching-learning conceptions, self-efficacy in organizing out-of-school trips, and lifelong learning tendencies are given. Descriptive statistics are presented in Table 1.

Table 1. Descriptive statistics

	Female		Male		Total		Mean difference	
	M	SD	M	SD	M	SD	t	p
Constructivist	52.51	4.70	50.19	4.59	51.93	4.78	3.95	.00
Traditional	56.51	10.15	58.43	10.77	56.98	10.32	-1.48	.14
Self-efficacy in organizingout-of-school trips	124.01	16.08	117.64	20.37	122.44	17.42	2.94	.00
Lifelong learning	55.97	7.26	55.32	7.66	55.81	7.36	.70	.48

Note. *M,* mean; SD, standard deviation *******

Mean scores for all variables in the study are given in Table 1. The mean score of the females from the constructivist conception ($\overline{X}$: 52.51) was found significantly higher than that of the males ($\overline{X}$: 50.19). The mean score of females from the self-efficacy in organizing out-of-school trips ($\overline{X}$: 124.01) was found significantly higher than that of males ($\overline{X}$: 117.64). However, the mean scores of females from the traditional conception ($\overline{X}$: 56.51) and lifelong learning tendencies ($\overline{X}$: 55.97) were found close to those of males ($\overline{X}$: 58.43 and $\overline{X}$: 55.81, respectively).

3.2. Correlation Analysis for Relationships between the Variables

In the study, the relationships between teaching-learning conceptions, self-efficacy in organizing out-of-school trips, and lifelong learning were examined. Correlation values of the relationships between variables are presented in Table 2.

Table 2. Correlations between the variables

Variables	1	2	3	4
1. Constructivist conception	-			
2. Traditional conception	.08	-		
3. Self-efficacy in organizing out-of-school trips	.36[**]	-.12[*]	-	
4. Lifelong learning	.34[**]	.08	.35[**]	-

Note. [**]*p<.01,* [*]*p<.05*

Constructivist conception was found to be positively related to both self-efficacy in organizing out-of-school trips (r= .36, p<.01) and lifelong learning (r= .34, p<.01) (Table 2). Self-efficacy in organizing out-of-school trips was found to be positively related to lifelong learning (r= .35,

p<.01). There was no significant relationship between lifelong learning and traditional conception and constructivist conception. Therefore, traditional conception scores were not used in the hypothetical model of the study. In other words, of the teaching-learning conceptions, only constructivist conception scores were used.

3.3. Measurement Model and CFA

First, the measurement model was tested in the study. The measurement model included three latent variables and eight observed variables. As a result of the analysis, fit indices of the measurement model indicated a good fit ($\chi^2_{(17, N = 341)}$ = 62.004, *p*<.001; χ^2/df= 3.647; GFI = .96; CFI = .97; NFI = .96; TLI = .95; SRMR = .043; RMSEA =.08). The loading, mean, standard deviation, composite reliability (CR), average variance extracted (AVE), and Cronbach's α values of the measurement model of the study are presented in Table 3. Results showed that factor loadings ranged from .73 to .93, CRs were greater than 0.70, and that AVEs were greater than 0.50. Reliability coefficients (Cronbach's α) were found above .72. All these results showed that the observed variables represented the latent variables.

Table 3. Correlations between the variables

Latent variables	Indicator	Loading	M	SD	CR	AVE	α
Constructivist conceptions	CQPar1	.75	25.73	2.62	.78	.71	.81
	CQPar2	.93	26.21	2.57			
Self-efficacy in organizing out-of-school trips	BT	.90	48.30	7.78	.86	.74	.93
	DT	.89	49.23	7.04			
	AT	.79	20.81	3.50			
Lifelong learning	LLPar1	.83	17.87	2.81	.72	.58	.83
	LLPar2	.74	18.69	3.01			
	LLPar3	.73	19.24	2.82			

Note: CQPar, constructivist conception parcels; BT, before the trip; DT, during the trip; AT, after the trip; LLPar, lifelong learning parcels; M, mean; SD, standard deviation; CR, composite reliability; AVE, average variance extracted

3.4. Structural Equation Model

At this stage, the hypothetical model of the research was tested. In the model of the study, the mediating role of lifelong learning in the relationship between teaching-learning conceptions (constructivist conception) and self-efficacy in organizing out-of-school trips was tested. Results of the mediation model are presented in Figure 2.
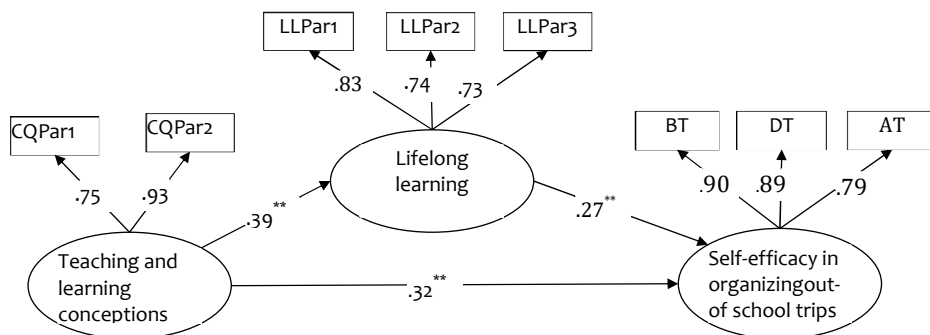
Figure 2. *Mediation for teaching and learning conceptionsonself-efficacy in organizing out-of school trips via lifelong learning*

As seen in Figure 2, all path coefficients are significant. In the model, teaching-learning conceptions (constructivist conception) positively predicted the self-efficacy in organizing out-of-school trips (β = .32, p <.01) (supporting H1) and lifelong learning (β = .39, p <.01) (supporting H2). Lifelong learning positively predicted self-efficacy in organizing out-of-school trips (β= .27, p <.01) (supporting H3). In addition, the coefficient for teaching-learning conceptions predicting self-efficacy in organizing out-of-school trips through lifelong learning was found to be .11 (supporting H4). The fit indices of the model ($\chi^2_{(16, N = 341)}$ = 31.425, *p*<.001; χ^2/df= 1.964; GFI = .98; CFI = .99; NFI = .98; TLI = .98; SRMR = .036; RMSEA =.05) were all at a good level, and the structural equation model was confirmed.

Bootstrapping analysis was used to determine whether direct and indirect effects were significant in the study. In bootstrapping analysis, a resampling size of 10000 and a 95% confidence interval were used. The results of the Bootstrapping analysis are presented in Table 4.

Table 4. *The results of the bootstrapping analysis*

Model paths	Coefficient	Lower	Upper
Direct effect			
Teaching and learning conceptions → Self-efficacy in organizing out-of-school trips	.32	.18	.45
Teaching and learning conceptions → Lifelong learning	.39	.25	.52
Lifelong learning → Self-efficacy in organizingout-of-school trips	.27	.15	.39
Indirect effect			
Teaching and learning conceptions → Lifelong learning → Self-efficacy in organizing out-of-school trips	.11	.05	.17

According to the results of the bootstrapping analysis in Table 4, all direct and indirect effects were significant. There was no zero in the lower and upper coefficient range of the direct and indirect effects, and this result showed that all effects were significant.

4. Discussion

We investigated the mediating role of lifelong learning in the relationship between teaching-learning conceptions and self-efficacy in organizing out-of-school trips in this study. All of the

fit indices of the structural equation model of the study were accepted (Hu & Bentler, 1999). As a result, it was observed that the structural equation model of the study, which examined the mediating role of lifelong learning in the relationship between teacher candidates' teaching-learning conceptions and self-efficacy for out-of-school trips, was confirmed.

Discussion of each result obtained in the study is considered important in terms of understanding the relationships between variables. There was no significant relationship between the traditional conception, which is one of the teaching-learning approaches, and other variables of the study. For this reason, the mean traditional conception scores were not used in the hypothetical model of the study. In other words, only the mean constructivist conception scores, one of the teaching-learning conceptions, were employed.

First, we examined whether gender had an effect on the variables of the study. The mean scores of females from the teaching-learning conceptions (constructivist approach) were found to be significantly higher than those of males. The results of some studies in the literature are similar to ours (Erdogan, 2014; Evin Gencel, 2013), but there are some different results, as well (Arcagok & Sahin, 2014; Tunca, Sahin, & Aydin, 2015). According to research findings, female teacher candidates have a more constructivist conception than male teacher candidates. This difference in the literature is thought to stem from the fact that teacher candidates receive education in different disciplines, live in different regions, and grow up in different cultures. The mean scores of females from the self-efficacy in organizing out of school trips were found to be significantly higher than those of males. While there are few studies in the literature showing that teachers' self-efficacy differs according to gender, parallel to the findings obtained from this study, (Aypay, 2010; Capri & Celikkaleli, 2008; Ekici, 2005), some studies indicate that self-efficacy beliefs do not differ by gender (Akyildiz, 2016; Ekici, 2008; Endler, Speer, Johnson, & Flett, 2001; Inel Ekici, 2014; Ozpulat, 2016; Uysal & Kosemen, 2013; Yalmanci & Aydin, 2014). For example, Sontay and Karamustafaoglu found that science teachers' self-efficacy for organizing out-of-school trips did not differ by gender. According to the findings of the present study, it can be concluded that male and female teacher candidates have different self-efficacy beliefs for organizing out-of-school trips and that female teacher candidates believe in themselves more in this respect. Oner (2015) stated that female teachers were more willing to organize out-of-school trips than male teachers. This finding may explain why female teacher candidates' self-efficacy scores for organizing out-of-school trips are higher than those of male teacher candidates.

The mean lifelong learning scores of female teacher candidates were close to the mean scores of male teacher candidates. Some studies in the literature have findings similar to those of the present study (Arcagok & Sahin, 2014; Aydin, 2018; Dogan & Kavtelek, 2015; Kurt, Cevher & Arslan, 2019; Oral &Yazar, 2013; Tunca, Sahin, & Aydin, 2015; Yaman & Yazar, 2015). There are also some studies that show differences in terms of gender (Demiralay, 2008; Evin Gencel, 2013; Erdogan, 2014; Kangalgil & Ozgul, 2018; Yavuz Konokman & Yanpar Yelken, 2014) and those in favor of males (Diker, Coskun, 2009; Mulhim, 2018; Ozciftci, 2014). According to the findings of the present study, the mean lifelong learning scores of female teacher candidates were close to those of male teacher candidates. In the study conducted by Johnstone (1965) in the USA, females and males were found to participate equally in activities of adult education. It can be concluded that the gender variable is not effective in lifelong learning tendencies, females take on an active role in academic and business life today, and that males gain knowledge and skills because they need to further develop themselves in areas other than traditional fields. The gender variable may have caused no differences in lifelong learning tendencies for these reasons.

In the model of the study, the teaching-learning conceptions of the teacher candidates (constructivist conception) positively predicted self-efficacy in organizing out-of-school trips (H1). No research findings addressing the relationship between these two variables have been found in the literature. However, there are some studies that have shown the relationship between teaching-learning conceptions and self-efficacy (Yener & Yilmaz, 2017; Sacici, 2013). These studies reported that there was a significant positive relationship between perceived self-efficacy and teaching-learning conceptions. In general, the research results mentioned here support the results of the current study. When the results of the present study are evaluated, it can be thought that as the teacher candidates' beliefs in the constructivist approach increase, their self-efficacy in organizing trips to out-of-school learning environments increases, as well. Self-efficacy belief can be defined as individuals' thoughts about their own capacity in the process of performing a certain job, and their confidence in their ability and skills to perform it (Bandura, 1977). It is thought that the self-efficacy of teacher candidates who have a constructivist conception in organizing trips to out-of-school environments increases because according to the constructivist approach, individuals who learn by doing-experiencing will believe in themselves more to do a job, and thus their self-efficacy beliefs will increase.

Teacher candidates' teaching-learning conceptions (constructivist conception) positively predicted their lifelong learning (H2). No relationship was found between these two variables in the literature. According to the results of the present study, it can be thought that as teacher candidates' beliefs in the constructivist conception increase, their lifelong learning increases, as well. In the constructivist conception, a student-centered approach dominates, the student is active, collaborative learning takes place, learners make sense of their knowledge and experiences, and they actively participate in the construction and development of knowledge (Cheng, Chan, Tang, & Cheng, 2009). Lifelong learning, on the other hand, has a structure that involves more than one teaching style and provides individuals with education options ranging from appropriate personal development education to formal education or from unplanned education in daily life to non-formal education. An individual who is educated with a constructivist approach is prepared for life through learning by doing and experiencing. It is thought that lifelong learning situations will develop in this way. The individual is active in both constructivist education and lifelong learning. For this reason, it can be concluded that teacher candidates who have a constructivist conception will maintain and increase lifelong learning.

The life-long learning of the teacher candidates positively predicted their self-efficacy in organizing out-of-school trips (H3). Some studies have shown that there is a positive relationship between lifelong learning and self-efficacy (Garipagaoglu, 2013), academic self-efficacy (Kozikoglu & Onur, 2019), and teacher self-efficacy (Akyol, 2016; Ayra & Kosterelioglu, 2015). According to Delors (1996), lifelong learning is a long-term learning process where individuals see the available possibilities and can evaluate them appropriately, they can find solutions to the problems they encounter by using their problem-solving skills, and they can live peacefully in society. In lifelong learning, individuals see it as their responsibility/preference to make appropriate choices among the educational services or learning areas offered. It is thought that individuals with these skills will also have high self-efficacy. Therefore, it can be inferred that individuals with high lifelong learning tendencies also have high self-efficacy.

Finally, the mediating role of lifelong learning in the prediction of teacher candidates' self-efficacy in organizing out-of-school trips through their teaching-learning conceptions was confirmed (H4). There are no studies in the literature that test the variables aforementioned through a model. An innovative teacher is a person who has lifelong tendencies and improved self-efficacy, has adopted a constructivist approach (learner-centered), and is collaborative and creative (Chen, 2002; Karwowski, Jacek, Lebuda, & Wisniewska, 2007; OECD, 2009). It is

considered that this study revealed the relationship between teacher candidates' lifelong learning and their teaching-learning conceptions and self-efficacy in organizing out-of-school trips and indicated that teacher candidates' lifelong learning tendencies strengthened the relationship between their teaching-learning conceptions and self-efficacy in organizing out-of-school trips.

5. Limitation and Suggestions

In this study, the mediating role of lifelong learning between teaching-learning conceptions and self-efficacy in organizing out-of-school trips was investigated. First, the personal characteristics of teacher candidates who participated in the study and the sample size do not represent all teacher candidates in Turkey. In future studies, the use of a larger sample and the inclusion of teacher candidates from various regions of Turkey can increase the generalizability of the study. Secondly, this study used self-report scales. We also recommend using qualitative data collection methods. Besides, the data were collected under the effect of the COVID-19 pandemic. Future studies can be carried out in the absence of pandemic fear. Thirdly, the fact that the participants were reached during the pandemic process prevented the homogeneous distribution of some variables such as gender because the data collection process was carried out online and voluntarily. We spent some effort to make up for this drawback, but the problem could not be prevented. Finally, this study can be conducted with teacher candidates from other countries, too, to make intercultural comparisons.

6. Conclusion

In conclusion, it was determined that lifelong learning tendencies had a mediating role in the relationship between teaching-learning conceptions and self-efficacy in organizing out-of-school trips. The study used the structural equation model. As teacher candidates' beliefs in the constructivist approach increased, their self-efficacy in organizing trips to out-of-school learning environments increased, as well. It is thought that the self-efficacy of teacher candidates who have a constructivist conception in organizing trips to out-of-school environments increases because according to the constructivist approach, individuals who learn by doing-experiencing will believe in themselves more to perform a job, and thus their self-efficacy beliefs will increase. Besides, as teacher candidates' beliefs in constructivist conception increase, their lifelong learning tendencies also increase. An individual who is educated based on a constructivist approach is prepared for life through learning by doing and experiencing. Thus, it is thought that this will develop their lifelong learning capacity. In the study, the life-long learning of the teacher candidates positively predicted their self-efficacy in organizing out-of-school trips. In lifelong learning, it is individuals' own responsibility/ preference to make appropriate choices among educational services or learning areas offered. It is thought that individuals with these tendencies will also have high self-efficacy. Therefore, it can be concluded that individuals with high lifelong learning tendencies also have high self-efficacy.

Finally, the mediating role of lifelong learning in the prediction of teacher candidates' self-efficacy in organizing out-of-school trips through their teaching-learning conceptions was confirmed. This study revealed the relationship between the lifelong learning of teacher candidates, who will start their profession for the first time, and their teaching-learning conceptions and self-efficacy in organizing out-of-school trips. In conclusion, it can be said that teacher candidates' lifelong learning tendencies strengthen the relationship between their teaching-learning conceptions and self-efficacy in organizing out-of-school trips.

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