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A Structural Equation Modelling of Middle School Students' Metacognitive Awareness, Self-efficacy Beliefs and Foreign Language Learning Anxiety*

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Abstract

This study aims to investigate the impact of metacognitive awareness and self-efficacy beliefs of middle school students on their level of foreign language learning anxiety by using structural equation modelling. A total of 285 7th and 8th grade students from a middle school in Turkey during the 2018-2019 academic year were included in the study. In the study, Personal Information Form, Foreign Language Anxiety Scale, The Self-Efficacy Questionnaire for Children, and The Junior Metacognitive Awareness Inventory were used as data collection tools. As a result of the study, the descriptive statistics indicated that the students had moderate levels of metacognitive awareness, self-efficacy beliefs, and foreign language learning anxiety. According to the results obtained from the structural equation modelling, it was concluded that the metacognitive awareness levels of the students did not have a mediating effect on the relationship between the students' level of foreign language learning anxiety and self-efficacy beliefs. In conclusion, it was determined that metacognitive awareness, self-efficacy beliefs, and foreign language learning anxiety are individual differences which interact with each other and are of great importance in foreign language learning, and that metacognitive awareness and self-efficacy beliefs have the power to affect foreign language learning anxiety.

Key words: Metacognitive awareness, Self-efficacy belief, Foreign language learning anxiety, Structural equation modelling.

Introduction

Today, cheaper and widespread mass media such as the internet, easier travel opportunities across countries and universal capital circulation, that is the transformation of individuals who form information society from a lifestyle at the national level to a new way of life at the international level, have led to the arousal of the need for a "common language" (Jenkins, 2009), which makes inter-communal communication more necessary than ever (Balay, 2004; Tezcan, 2002). This common language has been English. This is because English is widely used as a second language and science language in addition to its use as a mother tongue by a large number of people and as a second language for historical and economic reasons (Öner, 2008; Soruç, 2015).

In Turkey, English education, which emerged as an inevitable necessity of modernization initiatives (Göktürk, 1982), has always been a subject of great importance and was made compulsory from the second grade of primary school to the last year of high school with the change in the English curriculum in 2012. Today, the importance given by the Ministry of National Education to foreign language education is increasing day by day and depending on this situation, changes are made in the education plans (Zengin and Radmard, 2019). However, despite all these changes and the importance given, it is emphasized in the literature that English education is problematic (Aydemir, 2007; Doğan, 2016). The mistakes in the education system and curriculum principles are shown to be the reasons for this situation (Işık, 2008). In addition to the troubles caused by the program, the fact that language teaching is affected by many variables due to its being a very complex process

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(Demirel, 1999) may bring about problems in foreign language education. One of the variables that complicates language teaching is the individual differences of the learner who is at the centre of the learning process in today's educational approaches (Aydın and Zengin, 2008; Başbay and Gözüm, 2019; Doğan, 2016). Therefore, individual characteristics of students are of great importance in foreign language education. Individuals perform their learning by processing information according to their cognitive, affective, social and physiological characteristics and by using their individual methods and approaches (Cesur, 2008). Affective variables such as motivation, anxiety, and self-efficacy and cognitive variables such as intelligence, learning strategies, and cognitive/metacognitive awareness can be shown as an example to these individual differences, which make learning as personal as fingerprints (Boydak, 2008; Horwitz, 1986).

Anxiety, which is one of the individual differences that affect foreign language education and has an important place in the affective domain, is described in the general sense by Aydın and Zengin (2008) as an emotional situation in which a sense of weakness is experienced when a danger is sensed. Horwitz, Horwitz, and Cope (1986) first addressed the concept of foreign language anxiety as a concept specific to the field of foreign language learning and defined it as a sense of self-perceptions, feelings, and behaviours arising from the uncertainties of the foreign language learning process. When the relevant literature is examined, foreign language anxiety is seen to be an important individual difference that affects one's foreign language learning hardly positively but mostly negatively (Cheng, Horwitz, and Shallert, 1999; Demirdaş and Bozdoğan, 2013; Horwitz and Young, 1991; Horwitz et al., 1986; Krashen, 1985; MacIntyre and Gardner, 1994; Öner and Gedikoğlu, 2007).

One of the individual differences that affect foreign language education is self-efficacy belief, which is thought to interact with foreign language learning anxiety (Aktaş, 2014; Anyadubalu, 2010; Cheng, 2004; Krashen, 1987; Öztürk and Saydam, 2014; Pajares, 2003; Raoofi, Tan, and Chan, 2012; Woodrow, 2011). Pajares (1997) claims that if one feels inadequate in a subject, he believes that he will fail and this belief leads to anxiety. From this point of view, it can be suggested that there is a relationship between anxiety and self-efficacy belief. Bandura (1997), who introduced the concept of self-efficacy to the literature, defines self-efficacy as an individual's belief in his or her ability to succeed in an area. The examination of the studies conducted indicates that self-efficacy belief has a vital role in education. Pintrich, Smith, Garcia, and McKeachie (1993) concluded that self-efficacy belief had a greater impact than ability. In the study conducted by Lee (2009) using PISA 2003 data, one of the variables that predicted academic achievement was reported to be self-efficacy. When the studies examining the relationship between self-efficacy belief and anxiety are examined, it is observed that these two important variables which belong to the affective domain among the individual differences that have an impact on learning affect each other (Aktaş, 2014; Anyadubalu, 2010; Cheng, 2004; Krashen, 1987; Öztürk and Saydam, 2014; Pajares, 2003; Raoofi, et al., 2012; Woodrow, 2011). As a result of his research, Krashen (1987) pointed out that self-efficacy belief and anxiety were among the factors that affected foreign language learning success. In a research on writing skill in foreign languages, Pajares (2003) concluded that people who had positive self-efficacy beliefs about writing were less anxious while writing. In a study on writing skill in foreign language, Cheng (2004) also revealed a negative relationship between writing anxiety and self-efficacy belief in writing. In another research, Raoofi, et al. (2012) came to conclusion that as the level of anxiety decreased, self-efficacy beliefs increased. In their study examining the relationship between writing anxiety in foreign language and self-efficacy beliefs, Öztürk and Saydam (2014) argued that self-efficacy beliefs decreased significantly as students' writing anxiety in English increased.

It is believed that foreign language learning anxiety and self-efficacy belief are related to metacognitive awareness, a sub-dimension of self-regulation which is another individual difference (Doğan, 2016). Pintrich, et al. (1993) reported that people with high self-efficacy tended to use self-regulation skills such as setting goals and trying to correct their mistakes. In education, the concept of self-regulation has emerged with the increasing importance of approaches that put the student in the centre and expect the learner to take responsibility for their own learning process (Üredi, 2005). The definitions made by various researchers (Kauffman, 2004; Pintrich, 1999; Zimmerman, 1990) indicate that the concept of self-regulation means that individuals have effects on their own learning processes in behavioural, cognitive and motivational aspects; in other words, it can be defined as a process in which the individual manages his or her own learning process and directs it and becomes an independent learner (Aktan, 2012). Stressing the importance of individual differences in education, Gardner (1963) points out the concept of self-regulation by stating that the main purpose of education is to make one take responsibility for his or her education (cited in Zimmerman, 1990).

Self-regulation includes cognitive, metacognitive, and behavioural learning strategies, and motivational elements also have a significant impact on self-regulation process (Pintrich, 2004; Pintrich and De Groot, 1990). When the relevant literature is examined, it is concluded that metacognitive awareness affects self-efficacy

belief and foreign language learning anxiety, which are the other variables of the study (Baykara, 2011; Çikrıkci and Odacı, 2013; Doğan, 2016; Nosratinia, Saveiy, and Zaker, 2014; Kocakulah, Özdemir, Çoramık, and Işıldak, 2016; Koç and Arslan, 2017; Öztürk and Kurtuluş, 2017). Therefore, in this study, the metacognitive awareness dimension of self-regulated learning is discussed. In addition, the fact that self-efficacy belief and metacognitive awareness are among the important individual characteristics required to have problem solving, information, and technology utilization, and knowledge generation skills, which are expected from the 21st century people (Oğuz and Kutlu Kalender, 2018) has been effective in including metacognitive awareness in the study. Tseng, Dörnyei, and Schmitt (2006) reported that metacognitive awareness affected the tendency to learn a foreign language positively. The term metacognition, used for the first time by Flavell, is defined as one's knowledge of his or her own cognitive process (Flavell, 1979). Metacognition is in constant interaction with cognition (Memiş and Arıcan, 2013). While cognition is the ability to understand and learn a situation, metacognition is being aware of how one understands and learns a situation (Senemoğlu, 2015). If one facilitates his or her learning by being aware of his or her knowledge and offering effective solutions to solve a problem confronted without being dependent on others, this means the person has metacognitive awareness (Oğuz & Kutlu Kalender, 2018). When the relevant literature is examined, it is concluded that metacognitive awareness of individuals is an essential individual difference that affects foreign language education (Alcı and Yüksel, 2012; Flavell, 1979; Pishghadam and Khajavy, 2013; Victori and Lockhart, 1995; Wenden, 1998). In addition, the studies conducted by Baykara (2011), Çikrıkci and Odacı (2013), Kocakulah et al. (2016), Koç and Arslan (2017), Nosratinia et al. (2014), and Öztürk and Kurtuluş (2017) have revealed that metacognitive awareness and self-efficacy beliefs are related, and the study by Doğan (2016) has indicated that metacognitive awareness and foreign language learning anxiety are related.

Significance of the Study

In the globalizing world, the importance of English, which is accepted as the common language of communication, science and economy, and which is valid all over the world in accessing and transmitting information, is increasing day by day (Hancı Yanar, 2008; Kuyumcu Vardar and Arsal, 2014). In many countries, this has made English proficiency a prerequisite for introduction to the international business world, education, science and technology, and increased the importance of English education (Oğuz and Baysal, 2015). In order to meet people's growing need for learning foreign languages, teaching and learning methods and techniques are developed for English education, and changes are made in English curriculum in Turkey and in the world (Öner, 2008). Although Turkey has been in a unique struggle in language education around the world by allocating its limited resources for language education, (Hancı Yanar, 2008; Sezer, 1987), quantity does not coincide with quality in English education in Turkey (Aydın and Zengin, 2008), and the desired success level has not been reached in English education (Aydemir, 2007; Doğan, 2016; Hancı Yanar, 2008). Öner (2008) also confirms the failure in English education by stating that most of the students who come to universities as graduates from foreign language high schools have not been very successful in preparatory class proficiency exams and preparatory classes.

Powers, Echevarria and Short (2006) argue that the lack of success in foreign language education despite the use of the right methods and techniques stems from the application of these techniques. Woodrow (2011) suggests that failure to provide prerequisites for the course and students during the teaching process lead to failure in foreign language education and Chomsky (2006) reports that success in foreign languages cannot be explained only by the teaching methods and techniques used and points out the effect of individual differences in foreign language education.

In foreign language education, the characteristics of the individual, which is at the centre of the learning process, are of great importance (Horwitz, 1986; Çimen, 2011). According to Başbay and Gözüm (2019), the most important factor that affects foreign language education is individual differences with cognitive or affective nature. Considering that emotional preparation is the prerequisite for mental preparation (Chastain, 1988), the importance of affective characteristics in language education can be understood. Foreign language learning anxiety, which is an individual difference in the affective field, stems from the negative thoughts developed by the individual against the language as a result of the negative experiences experienced by the individual (MacIntyre and Gardner, 1989). Individuals who are anxious about foreign languages are afraid to be corrected by their teachers and humiliated in front of their friends if they make mistakes in the new language they have been learning in the classroom; and they think that there may be social pressure on them (Öner and Gedikoğlu, 2007). When one feels insecure in an environment, he or she psychologically avoids communication in a foreign language, and when this situation further proceeds, it may prevent learning (Öner and Gedikoğlu, 2007). Therefore, it is emphasized that self-confident individuals do not have foreign language anxiety, and even if

they have anxiety, it is not at a level to prevent them from learning (Brown, 1994). The self-confidence of the individual reveals the importance of the concept of self-efficacy, another variable discussed in this study, in foreign language education.

Educated people living in the 21st century are expected to be individuals who have high-order thinking skills, science, mathematics and foreign language literacy, and leadership characteristics, and can take responsibility for his or her own learning process and use technology effectively (Aktan, 2012). The most important goal of the 21st century education system is to raise independent individuals who can direct their own learning processes without the need for any support (Barron and Harackiewicz, 2000). Lifelong learners who learn by directing their own learning process have brought up the concept of self-regulation in education (Zimmerman, 2002). With the concept of self-regulation, the terms “teacher and teaching” have been replaced by the terms “student and learning” (Başbay and Gözüm, 2019). The terms “student and learning” mean that the individual can regulate his/her own learning process; in other words, it requires metacognitive awareness, which is the sub-dimension of self-regulation. Metacognitive awareness is regarded as the most essential element of the learning process (Oğuz and Kutlu Kalender, 2018).

As seen in the literature, students' metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety are among the individual differences that are important in the process of teaching and learning foreign languages and each student has at different levels. It is emphasized in the literature that it is necessary to conduct more studies to investigate the relationships between individual differences (Roberts and Meyer, 2012). In the studies conducted by Doğan (2016) and Tuncer and Doğan (2016), the relationships between metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety of university students were examined via structural equation modelling. However, the fact that the sample group of that study was composed of university students and the preferred measurement tools were different from the ones used in this study differentiate the studies. As a result, the fact that there is no research in the literature that investigates the structural relationships between metacognitive awareness, self-efficacy belief and foreign language learning anxiety at middle school level makes the present study unique. In addition, it can be suggested that the study is important in terms of providing information about the student characteristics that should be emphasized for an effective foreign language teaching-learning process whose importance is believed to be never-ending in a world globalizing around a common language.

As discussed in the literature review above, this study assumes that the metacognitive awareness variable has a mediating effect on the predicted relationship between middle school students' self-efficacy beliefs and foreign language anxiety. The mediation effect in question has been put forward because the following conditions are supported by the literature:

Link 1. Students' self-efficacy belief significantly predicts foreign language learning anxiety. According to the literature, this procedure is that students with high self-efficacy have lower foreign language learning anxiety (Pajares, 2003; Raoofi, Tan, and Chan, 2012; Aktaş, 2014; Anyadubalu, 2010).

Link 2. Students' self-efficacy belief significantly predicts their metacognitive awareness. According to the literature, this procedure is that students with high self-efficacy belief have high metacognitive awareness (Koç and Aslan, 2017; Öztürk and Kurtuluş, 2017).

Link 3. Students' metacognitive awareness significantly predicts foreign language learning anxiety. According to the literature, this procedure is that students with high cognitive awareness will have low anxiety to learn foreign languages (Kaçar and Sariçam, 2015; Everson, Smodlake, and Tobias, 2015).

When the effect of metacognitive awareness is checked and it is added to the model as variable (Doğan, 2016; Başbay, 2013), a significant decrease in the amount of relationship between students' self-efficacy beliefs and foreign language learning anxiety is expected (partial mediation) or the determined relationship is no longer statistically significant (fully mediated) (Şimşek, 2007). The proposed structure of the model is summarized schematically in Figure 1.

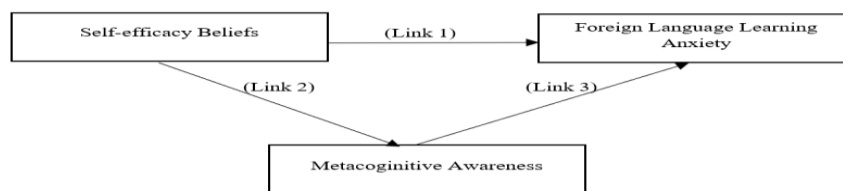


Figure 1. The proposed model

According to the proposed model, it can be said that in an environment where middle school students' self-efficacy beliefs are supported with metacognitive awareness, their foreign language learning anxieties will decrease more.

In this context, the main problem of the research is “What is the structural model explaining the effect of the levels of metacognitive awareness and self-efficacy beliefs of middle school students on their foreign language learning anxiety?”

The sub-problems of the study are given below:

1. What is the relationship between middle school students' metacognitive awareness levels, self-efficacy beliefs and foreign language learning anxiety?
2. Are the self-efficacy beliefs of middle school students a significant predictor of their foreign language learning anxiety?
3. Do the metacognitive awareness levels of middle school students have a mediating effect on the relationship between their self-efficacy beliefs and foreign language learning anxiety?

Method

Research Model

This study was designed in the relational survey model, which is one of the descriptive research types. This model is a research model that aims to reflect the existence and size of the change between two or more variables as it is (Karasar, 2008).

Participants

The participants of the study included a total of 285 7th and 8th grade students, who were selected via convenience sampling method and studying at a middle school with middle socio-economic status in Antalya in the 2018-2019 academic year. The frequency and percentage distributions of the students according to their gender and class level are illustrated in Table 1.

Table 1. Frequency and percentage distribution of the sample by gender and class levels

		Class Levels			
		7 th grade	8 th grade	Total	
Gender	Female	F	90	59	149
		%	60.4	39.6	100
	Male	F	77	59	136
		%	56.6	43.4	100
Total		F	167	118	285
		%	58.6	41.4	100

As can be seen in Table 1, when the demographic characteristics of the 7th and 8th grade students included in the study were examined; 149 of them were female and 136 of them were male, and 167 of them were in 7th grade and 118 of them were in 8th grade.

Data Collection Tools

Personal Information Form, the Junior Metacognitive Awareness Inventory, the Self-Efficacy Questionnaire for Children and Foreign Language Learning Anxiety Scale were used as data collection instruments.

Personal Information Form

The personal information form created by the researcher included questions about the gender of the students, the grade they studied in, their English marks in their first semester report card and their grade point averages in their first semester report card for the 2018-2019 academic year.

The Junior Metacognitive Awareness Inventory

In the study, “the Junior Metacognitive Awareness Inventory (Jr. MAI) B Form” developed by Sperling, Howard, Miller, and Murphy (2002) and adapted to Turkish by Karakelle and Saraç (2007) was used to measure the metacognitive awareness of the students. The scale is comprised of two sections as Form A for the 3rd, 4th and 5th graders and Form B for the 6th, 7th, 8th and 9th graders. Since the sample of this study consisted of 7th and 8th grade students, Form B was employed. The Junior Metacognitive Awareness Inventory- B Form comprise 18 items and is 5-likert type as “never (1)”, “rarely (2)”, “sometimes (3)”, “often (4)”, “always (5)”. As a result of exploratory factor analysis, it was considered more appropriate to evaluate the scale as a single factor (Karakelle and Saraç, 2007). The validity analysis of the scale was performed by Karakelle and Saraç (2007). As a result of the t-test conducted, a significant difference was found between the upper and lower bounds. Cronbach's alpha value was revealed as 0.80 and the scale was determined to be reliable.

The validity and reliability analyses of the Junior Metacognitive Awareness Inventory were re-conducted for this study. As a result of confirmatory factor analysis, values were found as ($\chi^2 = 325.52 / df = 135 = 2.41$, $p = 0.00$), GFI = 0.89, IFI = 0.91, CFI = 0.91, NFI = 0.85, AGFI = 0.86, RMSEA = 0.07, and SRMR = 0.06. The obtained values indicate that the model has an acceptable level of fit (Jöreskog and Sörbom, 1993). In addition, the t-values obtained from the model confirm the significance of the factor loadings. As a result of the reliability analysis, Cronbach's alpha coefficient of the scale was found to be 0.81. Accordingly, the measurements made by using the scale can be stated to be highly reliable (Büyükoztürk, 2016).

The Self-Efficacy Questionnaire for Children

In the study, “The Self-Efficacy Questionnaire for Children” developed by Muris (2001) and adapted to Turkish by Telef and Karaca (2012) was used to measure the self-efficacy beliefs of the students. The questionnaire consisting of 21 items was prepared as five-point Likert type as “not good at all (1)”, “slightly good (2)”, “quite good (3)”, “good (4)”, “very good (5)”. Exploratory factor analysis revealed that it consisted of three factors as social, academic, and emotional self-efficacy as in the original form of the scale. Cronbach alpha values were calculated as 0.86 for the overall scale, 0.84 for the academic self-efficacy, 0.64 for the social self-efficacy, and 0.78 for the emotional self-efficacy. As a result of the confirmatory factor analysis, fit index values were found as RMSEA = 0.04, NFI = .95, CFI = 0.96, GFI = 0.94, and SRMR = 0.06.

Confirmatory factor analysis of the Self-Efficacy Questionnaire for Children was re-conducted for this study. Goodness of fit index values of the scale were revealed as ($\chi^2 = 314.31 / df = 186 = 1.68$ ($p = 0.00$), GFI = 0.90, IFI = 0.95, CFI = 0.95, NFI = 0.89, AGFI = 0.88, RMSEA = 0.04, and SRMR = 0.05. As a result of the analyses conducted, the factor structures were confirmed and the model was found to have good fit (Jöreskog and Sörbom, 1993). The t-values obtained from the model confirmed the significance of the factor loadings. In addition, Cronbach's alpha internal consistency coefficients were calculated for the overall scale and sub-factors. Cronbach alpha values were calculated as 0.83 for the overall scale, 0.70 for the “social efficacy” factor, 0.75 for the “academic efficacy” factor, and 0.73 for the “emotional efficacy” factor. According to these reliability coefficients, it can be argued that the measurements obtained from the scale and the sub-factors are reliable (Büyükoztürk, 2016).

Foreign Language Learning Anxiety Scale

In the study, Foreign Language Learning Anxiety Scale developed by Baş (2013) was used to measure foreign language learning anxiety of the students. The scale consisted of 27 items. The scale is 5-likert type as “Strongly disagree (1)”, “disagree (2)”, “undecided (3)”, “agree (4)” and “strongly agree (5)”. To test the construct validity of the scale, exploratory factor analysis and reliability analysis were performed. As a result of the analysis, it was found that the scale is composed of a three-factor structure as “personality”, “communication” and “evaluation”. Cronbach's alpha internal consistency coefficient was used for reliability of the scale. This

coefficient was found to be 0.93 for the overall scale, 0.89 for the “personality” factor, 0.88 for the “communication” factor, and 0.83 for the “evaluation” factor. Considering that Cronbach's alpha value should be at least 0.70 (Peers, 1996), the overall scale and each factor have reliable values (Baş, 2013).

Confirmatory factor analysis for the Foreign Language Learning Anxiety Scale was re-conducted for this study and the values were found as ($\chi^2 = 1548.30 / df = 321 = 4.82$ ($p = 0.00$), GFI = 0.92, IFI = 0.83, CFI = 0.83, NFI = 0.80, AGFI = 0.91, RMSEA = 0.09, and SRMR = 0.09). The obtained values indicate that the fit indices of the model are acceptable (Hair, Black, Babin, and Anderson, 2010; Marsh, Balla, and McDonald, 1988). The t-values obtained from the model also confirm the significance of the factor loadings. In addition, Cronbach Alpha internal consistency coefficient was calculated to measure the reliability of the Foreign Language Learning Anxiety Scale. The Cronbach Alpha internal consistency coefficients were found as 0.89 for the overall scale, 0.73 for the “personality” factor, 0.81 for the “communication” factor, and 0.72 for the “evaluation” factor. Accordingly, it can be stated that the measurements obtained from the scale and its sub-factors are reliable (Büyükoztürk, 2016).

Data Collection Process

In the study, the scales were applied under the guidance of the researcher in different course hours on different days determined for each class. Since multiple scales will be applied to the students, data were collected in two sessions of 40 minutes each. Personal information form and Foreign Language Learning Anxiety Scale were applied in the first session, and the Junior Metacognitive Awareness Inventory and the Self-Efficacy Questionnaire for Children were applied in the second session one week later. Since the students did not specify their first and last names in the scales, they were asked to code in order to match the scales of two different sessions. Since English was the only language taught as a foreign language course in the Middle School where the research was conducted, “foreign language course” meant “English course” for children. It was also emphasized by the researcher that the Foreign Language Learning Anxiety Scale should be answered by considering the English course. The scales were filled by 298 students by putting ticks on the scales. The data of 13 students who left some items of the scales unanswered were not included in the study. The data of 285 students were transferred to SPSS 23 statistical program and made ready for analysis.

Data Analysis

Structural equation modelling was used to develop the structural model that would explain the impact of the metacognitive awareness and self-efficacy beliefs of middle school students on their foreign language learning anxiety. In addition, descriptive statistics and correlations of the variables were calculated. In the analysis, LISREL 8.7 was used for the structural equation modelling and SPSS 23 programs were used for the descriptive statistics and correlations.

Results

Assumptions of Structural Equation Modeling

The assumptions regarding structural equation modeling are given below (Varol, 2014):

1. Multivariate normality has been achieved.
2. Having linear relationships between variables.
3. Sample size is sufficient.
4. Data being measured on a continuous scale.

Multivariate Normality

One of the assumptions of structural equation modeling is the normalization of the multivariate data (Varol, 2014). Multivariate normality analysis was performed to check the normal distribution of the data obtained in the study. The results of the multivariate normality test with LISREL are given in Table 2.

Table 2. LISREL multivariate normality test

Skewness		Kurtosis			Skewness and Kurtosis		
Value	z-score	P	Value	z-score	P	Chi-square (χ^2)	p
11.365	8.489	0.00	150.802	3.751	0.00	86.138	0.00

According to the data obtained from Table 2, the multivariate normality assumption could not be achieved ($p < 0.05$; $z\text{-score} > 1.96$) (Varol, 2014). In data without normal distribution, it is recommended to use WLS (weighted least squares) method as the prediction method of structural equation modeling (Raykov and Marcoulides, 2006; Müthen, 1993). However, since the WLS estimation method requires samples larger than 1000, Robust WLS estimation methods are specified as a more suitable estimation method considering the number of samples ($N = 285$) (Finney and DiStefano, 2006). While WLS method generates parameter estimates using traditional chi-square and standard errors, Robust WLS methods provide estimation of the weighted least squares parameter using robust standard errors, mean and variance corrected statistics (Varol, 2014). It is reported that Robust WLS estimation methods perform better in small samples than WLS method (Yang-Wallentin, Jöreskog, and Lüo). Robust WLS estimation methods are generally called as diagonal and analyzed by selecting DWLS method in LISREL (Yıldırım, Saraç, and Büyüköztürk, 2018). Therefore, DWLS method was used in this study.

Linear Relationship

In structural equation modeling, the relationships between variables are assumed to be linear. This assumption can be evaluated by examining scatter plots (Büyüköztürk, 2016). Below are the scatter plots that demonstrate the linearity between the observed variables in the structural equation modeling of the study. The graphs demonstrating the linear relationship of all the variables (the latent and the observed variables) are not included because they take up too much place.

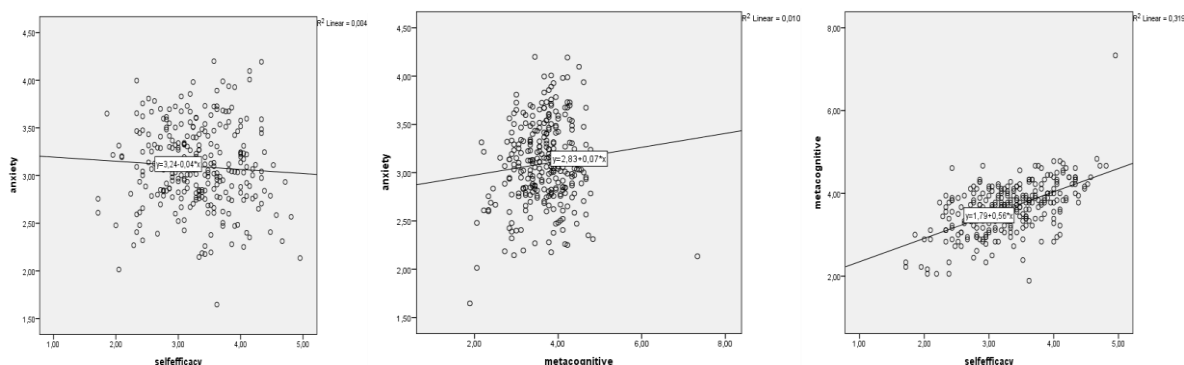


Figure 2. Scatter plots showing the relationship between the observed variables

As can be seen in Figure 2, it can be said that there is a linear relationship between the variables in all three graphs, as the points showing the values related to the variables are gathered around a line (Büyüköztürk, 2016).

Sample Size

The DWLS method has been found to cause problems in samples less than 200 (Forero, Maydeu-Olivares, and Gallardo-Pujol, 2009). Also, in structural equation modeling, the ideal sample size was specified as 20 times the number of estimates in the model and 10 times in less ideal studies (Kline, 2011). Since the number of parameters is 11 in the study, it can be said that the sample size is the ideal size.

Scale Type

Structural equation modeling assumes that data is measured on a continuous scale. However, as in the relevant study, psychological data are generally more suitable for collecting data with the sequential scale (the data was collected with the likert type scale in the study). At this point, the WLS method is considered as an appropriate estimation method as it is handled independently of the normal distribution of variables (Yıldırım et al., 2018; Varol, 2014). In the study, the preferred DWLS (Robust WLS) method was used when the sample size did not meet the WLS method. Therefore, it can be said that the study meets the assumption of continuous measurement.

Findings Related to the First Sub-Problem

First of all, descriptive statistics of the variables of the study were revealed. Arithmetic mean, standard deviation and Pearson correlation coefficient values were calculated, and the results are illustrated in Table 3.

Table 3. Arithmetic mean, standard deviation and Pearson correlation coefficient values

Variables	Mean	df	1	2	3	4	5	6	7	8	9	10	11
Foreign Language Learning Anxiety	2.98												
1. Personality	2.78	0.78											
2. Communication	2.92	0.85	0.74**										
3. Evaluation	3.24	0.82	0.61**	0.68**									
Self-efficacy Belief	3.30												
4. Academic	3.31	0.75	-0.31**	-0.33**	-0.24**								
5. Social	3.51	0.77	-0.24**	-0.29**	-0.17**	0.42**							
6. Emotional	3.09	0.84	-0.19**	-0.19**	-0.17**	0.43**	0.38**						
Metacognitive Awareness	3.68												
7. Metacog1	3.33	0.97	-0.17**	-0.10	-0.00	0.37**	0.23**	0.22**					
8. Metacog2	3.73	0.74	-0.23**	-0.16**	-0.07	0.40**	0.39**	0.23**	0.42**				
9. Metacog3	4.26	0.83	-0.15*	-0.13*	0.02	0.34**	0.24**	0.14*	0.30**	0.33**			
10. Metacog4	3.32	0.81	0.00	0.04	0.10	0.32**	0.24**	0.21**	0.40**	0.44**	0.21**		
11. Metacog5	3.77	0.80	-0.27**	-0.33**	-0.21**	0.39**	0.41**	0.31**	0.29**	0.40**	0.26**	0.20**	1

As revealed in Table 3, the metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety levels of the middle school students are close to 3, which is the midpoint of the 5-point Likert-type scale. In this case, it can be put forward that the students included in the sample had moderate levels of foreign language learning anxiety, self-efficacy belief, and metacognitive awareness. Also, their foreign language learning anxiety was found highest in the evaluation sub-scale ($M = 3.24$) and lowest in the personality sub-scale ($M = 2.78$). In addition, their self-efficacy beliefs were highest in the social domain ($M = 3.51$) and lowest in the emotional domain ($M = 3.09$), and their metacognitive awareness was highest in the third subscale ($M = 4.26$) and lowest in the fourth sub-scale ($M = 3.32$).

The correlation coefficients given in Table 3 indicate a low, significant and negative correlation between the personality and communication sub-scales of the foreign language learning anxiety scale and the sub-scales of the self-efficacy belief scale from -0.33 to -0.19 ($p < .01$). Significant, low and negative relationships were found between the sub-scales created by the researcher by means of item parcelling in the foreign language learning anxiety scale and the metacognitive awareness scale between -0.13 and -0.27 ($p < .05$).

In the analysis of the data related to the first sub-problem of the study, foreign language learning anxiety, self-efficacy belief, and metacognitive awareness were defined as latent variables. The three sub-scales of the Foreign Language Learning Anxiety Scale and the three sub-scales of the Self-Efficacy Questionnaire for

Children were assigned as the observed variables. In addition, item parcelling was performed for the metacognitive awareness variable through exploratory factor analysis and five observed variables were determined. In item parcelling, five sub-factors were created by considering the factor loadings of the scale items. As a result, a measurement model was created for the three scales with a total of three latent variables and eleven observed variables. The model is given in Figure 3.

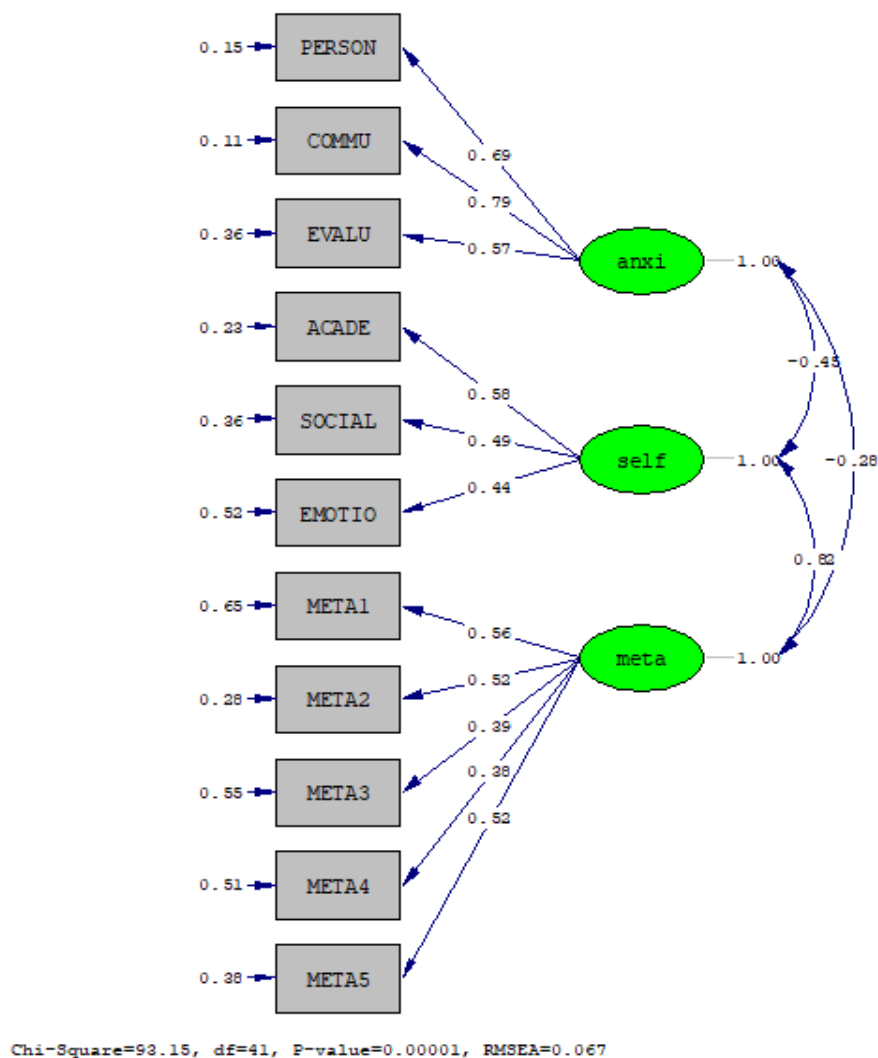


Figure 3. The measurement model

In the study, fit indices were evaluated and reported through RMSEA, SRMR, CFI, and NNFI fit indices as well as χ^2 / df . In structural equation modeling, the indicated indexes are among the indexes that are considered sufficient to be reported (İlhan and Çetin, 2014). Accordingly, the fit indices of measurement model seen in Figure 3 were determined as [$\chi^2 = 93.15$, $df = 41$, $p = .000$, $\chi^2 / df = 2.27$], NNFI = 0.94, CFI = 0.97, RMSEA = 0.06, and SRMR = 0.06. Among the determined fit indices, the fact that NNFI value ranges from 0.90 to 0.95, and the χ^2 / df value is between 2 and 3 are an indicator of acceptable compliance. It can be said that it has a perfect fit because the CFI value is higher than 0.95. Since RMSEA and SRMR values were also between 0.05 and 0.08, they were in the acceptable fit range (Kline, 2011; Schermelleh-Engel, Moosbrugger, and Müller, 2003). The model indicates a moderate, negative and significant (-0.45) relationship between the students' foreign language learning anxiety levels and self-efficacy beliefs, and a low, negative and significant (-0.28) relationship between their anxiety levels and metacognitive awareness levels. According to the findings, it can be suggested that the self-efficacy beliefs and metacognitive awareness levels of the students decrease as their

foreign language learning anxiety levels increase. In the measurement model, t-values were examined to test the significance of the direct effects and the significance of the t-values and factor loadings were confirmed.

Findings Related to the Second Sub-Problem

As a result of the analysis conducted for the second sub-problem of the study, the direct relationship between the variables of self-efficacy beliefs and foreign language learning anxiety was tested. The structural model created is illustrated in Figure 4.

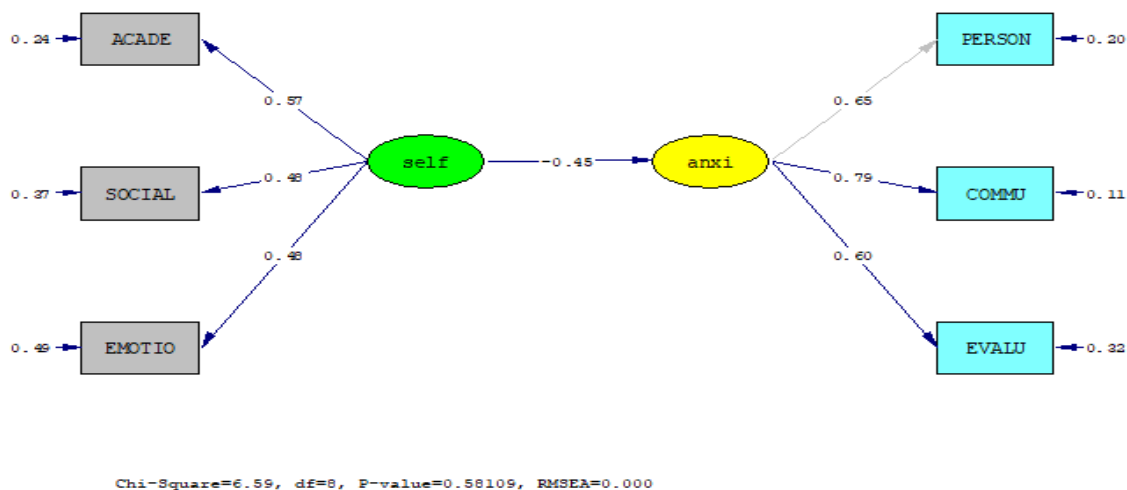


Figure 4. The model showing the direct relationship between the variables of self-efficacy beliefs and foreign language learning anxiety

As can be in Figure 4, the relationship between the self-efficacy beliefs and foreign language learning anxiety (-0.45) was found to be negative and moderate. The fit indices obtained were determined as [$\chi^2=6.59$, $df=8$, $p=.58$], NNFI = 1.00, CFI = 1.00, RMSEA = 0.00, and SRMR = 0.02. In order for the model to be acceptable, the χ^2 value is not expected to be significant (Şimşek, 2007). Therefore, it is not necessary to determine the χ^2 / df value as the fit index. When other fit indexes are examined, it can be said that the model shows perfect fit (Kline, 2011; Schermelleh-Engel, et al., 2003).

Findings Related to the Third Sub-Problem

In the analysis conducted for the third sub-problem of the study, metacognitive awareness was added as the mediating variable to the model between self-efficacy beliefs and foreign language learning anxiety, and the model consisting of the partial mediation relationship was tested. Mediation effect in structural equation modelling can be expressed as a situation in which a mediating variable affects the independent variable and thus indirectly affects the dependent variable in addition to the direct relationship between the dependent and independent variables (İlhan and Çetin, 2014; MacKinnon, 2008). The mediator variable provides a better understanding of the relationship between the dependent and independent variable. The partial mediation model is shown in Figure 5.

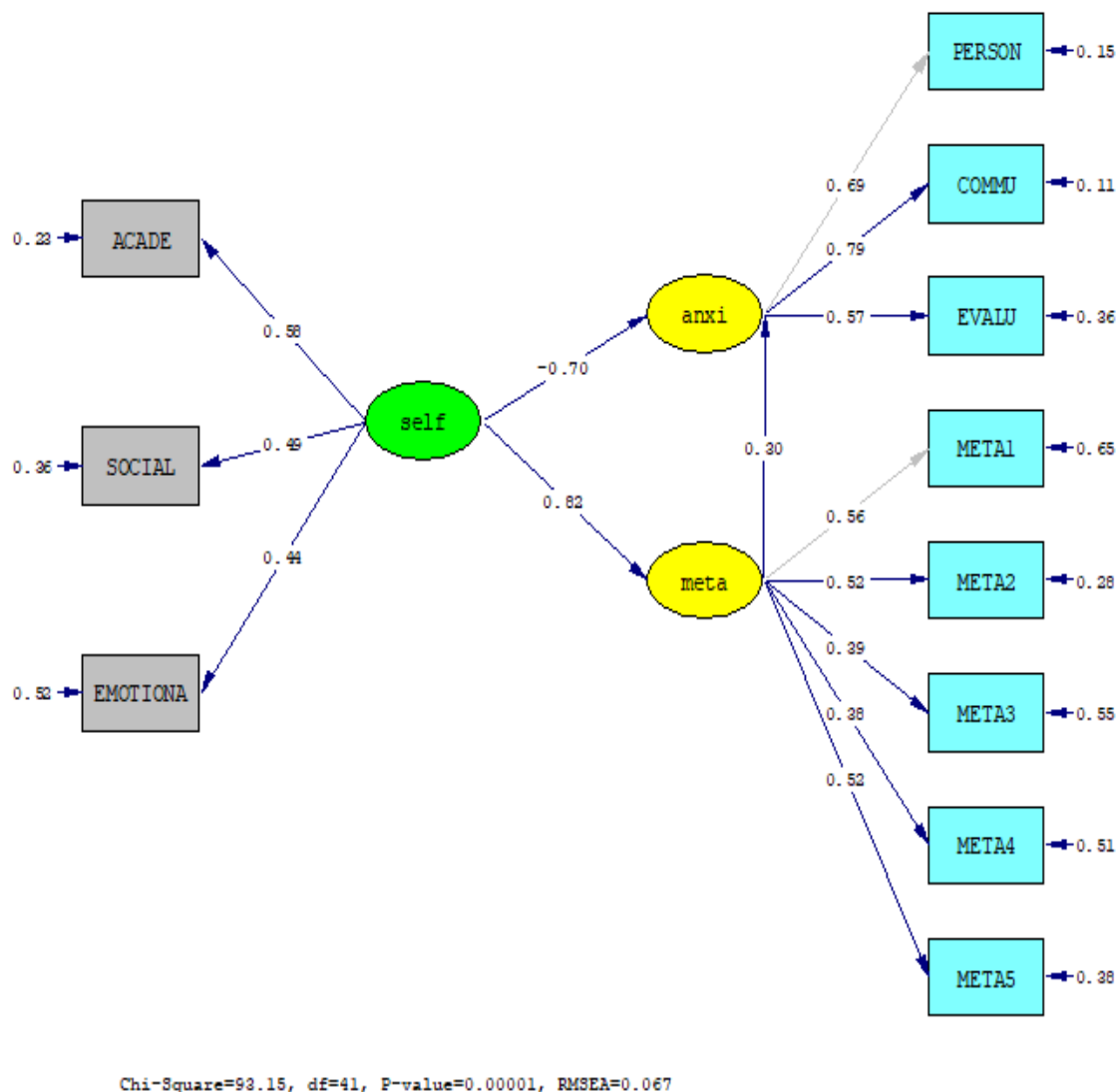


Figure 5. The model showing the impact of metacognitive awareness on foreign language learning anxiety as the mediator variable

Figure 4 shows that the direct effect of self-efficacy belief on foreign language learning anxiety is -0.45, and Figure 5 indicates that the effect of self-efficacy belief on foreign language learning anxiety is -0.70 when metacognitive awareness is added as the mediator variable. Based on this increase in the level of the relationship, it can be argued that metacognitive awareness does not have a partial mediation effect on the relationship between self-efficacy belief and foreign language learning anxiety. Accordingly, self-efficacy belief affects foreign language learning anxiety; however, the level of metacognitive awareness has no effect on this relationship. When the fit indices of the model are examined, it is seen that the fit indices are good (Kline, 2011; Schermelleh-Engel, et al. 2003): Chi-square value is $\chi^2 = 93.15$, $df = 41$, $p = 0.00$, $\chi^2/df=2.27$; NNFI = 0.95, CFI = 0.97, RMSEA = 0.06, and SRMR = 0.06.

Discussion

The results obtained based on the sub-problems of the research are discussed below.

The first sub-problem of the study aims to investigate the metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety levels of the participants. According to the descriptive statistics, it has been determined that the students have moderate levels of foreign language learning anxiety, self-efficacy belief and metacognitive awareness. There are studies supporting this finding in the relevant literature. The studies conducted by Baysal, Ayvaz, Çekirdekçi, and Malbeleşi (2013) and by Özsoy and Günindi (2011) on university students have revealed moderate levels of metacognitive awareness. Similarly, the studies carried out by Berkant and Ekici (2007) on university students and by Ekici (2006) on vocational high school teachers have found moderate levels of self-efficacy beliefs, and the studies of Ateş (2013), Doğan (2016), and Tuncer and Doğan (2015) have revealed moderate levels of foreign language learning anxiety. On the other hand, in their study which investigates the study approaches and academic self-efficacy of the university students studying in Computer and Instructional Technologies Department, Çuhadar, Gündüz, and Tanyeri (2013) have found high levels of self-efficacy beliefs. Likewise, Seçkin and Başbay (2013) have found high levels of self-efficacy belief in their study which examines the self-efficacy beliefs of pre-service physical education and sports teacher candidates about the teaching profession. This situation can be interpreted in a way that self-efficacy belief increases as the education level and age increase (Zimmerman, Bandura, and Martinez-Pons, 1992). In addition, based on the finding revealed by Aydın (2011) and Vardarlı (2005) reporting that socio-economic status positively affects self-efficacy belief, it can be suggested that the middle socio-economic status of the sample group might affect the self-efficacy belief, which was found moderate in the study. On the other hand, in another study investigating the relationship between the foreign language course anxiety and academic self-efficacy of the preparatory school students at university, Tuncer and Doğan (2015) have found moderate foreign language anxiety, which is in parallel with the findings of this research, and reported that moderate levels of anxiety do not affect learning negatively.

In addition, in the first sub-problem of the study, the relationships between the middle school students' self-efficacy beliefs, metacognitive awareness and foreign language learning anxiety and their sub-variables were examined via correlation analysis. As a result of the analysis, a significant, high and positive correlation was observed between the metacognitive awareness levels and self-efficacy beliefs of the students. Based on this finding; It can be suggested that students who believe that they can be successful manage their cognitive processes better on the way to success. Tunca and Alkın Şahin (2014) also have found a moderate, positive and significant relationship between prospective teachers' metacognitive learning strategies and their academic self-efficacy beliefs. In their study conducted on high school students, Bektaş Bedir and Dursun (2019) indicate that teaching students metacognitive reading strategies has a positive effect on their self-efficacy beliefs. In another study carried out with high school students, Lindsay (2010) has reached a high, positive and significant relationship between metacognitive awareness and self-efficacy belief. In addition, a positive and significant relationship have been detected between these two variables in the studies conducted with high school students by Cera, Mancini and Antonietti (2013) and by Rahimi and Abedi (2014), with university students by Nosratinia et al. (2014), with prospective teachers in the Department of Painting and Music Education by Sapanıcı (2010), and with middle school students by Oguz and Kutlu Kalender (2018).

Another relationship revealed as a result of correlation analysis is also between the variables of metacognitive awareness and foreign language learning anxiety. A low and negative correlation was observed between the metacognitive awareness levels and foreign language learning anxiety of the students involved in the study. Based on the findings, it can be maintained that students' foreign language learning anxiety decreases as their metacognitive awareness levels increase. In their study examining the relationship between the metacognitive awareness and math anxiety levels of prospective elementary school teachers, Kacar and Sarıçam (2015) have found a significant and negative relationship between these two variables. In another study investigating the relationship between high school students' anxiety and metacognitive awareness in reading skills, Everson, Smohlaka, and Tobias (1994) have concluded that the metacognitive word knowledge of the students with high anxiety is weaker and found a significant and negative relationship between these two variables.

A significant and negative correlation was observed between the variables of self-efficacy belief and foreign language learning anxiety. When the studies in the literature that investigate the correlation between self-efficacy beliefs and learning anxiety are examined, it is seen that in a study conducted with students studying at seven different colleges in Taiwan and learning English as a foreign language, Cheng (2004) maintains that students with low self-efficacy have a high level of anxiety. In their study conducted with undergraduate students studying at eight different universities in Turkey, Öztürk, and Saydam (2014) have revealed a

significant and negative relationship between self-efficacy beliefs and foreign language anxiety. In another study carried out at middle school, Anyadubalu (2010) conclude that students with high foreign language anxiety have low self-efficacy beliefs. Kafkas, Açak, Çoban, and Karademir (2010) have examined the relationship between the self-efficacy beliefs and professional anxiety of the prospective physical education teachers and maintained that there is a moderate and negative correlation between these two variables. Adal and Yavuz (2017) have found a low and negative correlation between mathematics self-efficacy and math anxiety levels of middle school students. Dobson (2012), Erkan and Saban (2011), Oğuz and Baysal (2015), Tsai (2013), and Yıldırım (2011) report a negative relationship between foreign language learning anxiety and self-efficacy beliefs as well. In addition, Horwitz and Young (1991) argue that learners' low self-esteem, personal problems and fear of losing their identity in society pave the way for foreign language anxiety. On the other hand, Çubukçu (2008) point out that there is no significant relationship between self-efficacy beliefs and foreign language learning anxiety in a study conducted with university students studying in the foreign language department. The reason for this situation can be explained by the fact that the sample consisted of university students studying in the foreign language department, because students who have an interest and desire to learn foreign languages and who are less anxious to learn foreign languages are expected to go to foreign language departments. In the study of Tuncer and Doğan (2015), which examines the relationship between the foreign language anxiety and academic self-efficacy of preparatory class students at university, a positive relationship has been detected between the variables. This may be caused by the fact that the preparatory class students, who make up the sample, do not attach much importance to the preparatory class and see the preparatory class as a stage when they can feel at ease and get used to the university environment before moving on to the department they have won. As a matter of fact, this situation will decrease the learning anxiety of students in a negative way, and the desire to learn will not be intense in students who do not have enough learning anxiety. In this respect, students who lack the necessary level of anxiety that help them learn can be expected to have low self-efficacy beliefs. Tuncer and Doğan (2015) have reported that high or low level of anxiety affects learning negatively and moderate level of anxiety is suitable for learning environments. In addition, based on Pajares (2002)'s finding that individuals with high self-efficacy are more persistent in difficult tasks and do not give up easily, it can be put forward that people with low self-efficacy avoid difficult tasks with the prejudice that they will fail and thus keep themselves away from situations that may cause high levels of anxiety.

In the study, since significant relationships were found between metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety as a result of correlation analysis and these relationships were supported by the relevant literature, structural equation modelling was performed to examine the multidimensional relationships between the variables. In order to explain to what extent the variables directly and indirectly affect each other, it is necessary to investigate the structural relationships of the variables with each other (Veenman, Van Hout-Wolters, and Afflerbach, 2006). For this reason, the structural relationships between the variables of the study were determined through the structural equation modelling.

The findings obtained from the structural equation modelling are the answer to the second sub-problem of the research. According to the model created via structural equation modelling, a moderate, negative and significant relationship was found between the foreign language learning anxiety and self-efficacy beliefs of the middle school students. This finding can be explained in a way that students with low self-efficacy beliefs have high anxiety about learning foreign languages. Students who consider themselves inadequate and have low self-esteem in the learning process have high level of anxiety about learning in general, which can also affect their foreign language learning negatively and may even push students into learned helplessness, a burden they will carry throughout their lives (Pajares, 1997). Doğan (2016) conducted a study with preparatory class students at university in order to examine the relationship between metacognitive awareness, self-efficacy beliefs, foreign language learning anxiety, attitudes towards foreign language and academic achievement in foreign language by structural equation modelling and reported a significant and negative relationship between self-efficacy beliefs and foreign language learning anxiety, which is in parallel with the finding of the present research. In another study examining the relationships between goal orientation, anxiety, self-efficacy belief, metacognitive awareness and academic performance through structural equation modelling, Lindsay (2010) has found a significant and negative relationship between anxiety and self-efficacy belief. As a result of their structural equation modelling, Ahmed, Minnaert, Kuyper, and Van der Werf (2011) have asserted that individuals with low self-efficacy have higher math anxiety.

As can be seen from the literature, there is a direct relationship between self-efficacy beliefs and foreign language learning anxiety. In addition, statistically significant relationships have been observed between both self-efficacy beliefs and metacognitive awareness and foreign language learning anxiety and metacognitive awareness. However, the studies in the literature examining the relationships between these three variables (Adal and Yavuz, 2017; Cheng, 2004; Everson et al., 1994; Kacar and Sariçam, 2015; Lindsay, 2010; Tunca and

Alkın Şahin, 2014) mostly address these relationships separately and reveal the direct relationships between the variables. Starting from this limitation in the literature, in order to include the indirect relationships between these three variables, the mediating effect of metacognitive awareness was investigated in the relationship between self-efficacy belief and foreign language learning anxiety in the third sub-problem of this study. In this study, it was seen that students with high self-efficacy beliefs had low foreign language learning anxiety. If the students with high self-efficacy beliefs also had high cognitive awareness, whether there was a great decrease in foreign language learning anxiety, in other words, whether the metacognitive awareness variable had mediating effect in this relationship was investigated. In the study, the results obtained from the model developed for this purpose indicated that the metacognitive awareness variable had no impact on foreign language learning anxiety as the mediator variable. This could result from the developmental characteristics of the adolescence period since the sample consisted of students aged 13-15. As a matter of fact, Flavell (1987), Yalçın and Karakaş (2008) argue that metacognitive awareness level increases with age. In addition, according to Slavin (2012), a decrease is observed in self-efficacy belief and metacognitive awareness level in adolescence with emotional fluctuations. Noushad (2008) also points out that self-efficacy beliefs and metacognitive awareness of students are higher in the age group of 11-12 years compared to younger ages; however, he also adds that these characteristics decrease with puberty. In addition, the fact that metacognitive awareness variable had no mediating effect in the present study could result from the socioeconomic status of the students. In the study by Balcı (2007), it has been concluded that the higher the socioeconomic status, the higher the metacognitive awareness level. This situation could be due to the fact that individuals with high socioeconomic opportunities can benefit from educational opportunities more and thus are exposed to more stimuli. Therefore, it can be argued that the middle socioeconomic status of the students in the sample affected their metacognitive awareness level. However, the fact that the variable of metacognitive awareness had no mediating effect in the direct relationship between self-efficacy belief and foreign language learning anxiety did not affect the presence of direct relationships between the variables. As stated earlier, a significant and negative correlation was detected between metacognitive awareness and foreign language learning anxiety in the study. In other words, as the individual's control over his or her learning process increases, his or her anxiety about learning a foreign language decreases. A variety of researchers have reported that they have reached findings supporting this interpretation (Dobson, 2012; Doğan, 2016; Everson et al., 1994; Kacar and Sarçam, 2015). In addition, a significant and positive correlation was found between metacognitive awareness and self-efficacy belief, which are the other two variables of the study. As reported in other studies obtaining the same result (Bektaş Bedir and Dursun, 2019; Cera et al, 2013; Doğan, 2016; Lindsay, 2010; Nosratinia et al, 2014; Oğuz and Kutlu Kalender, 2018; Rahimi and Abedi, 2014; Sapanç, 2010; Tunca and Alkın Şahin, 2014), individuals with high self-efficacy beliefs are more successful than those with low self-efficacy beliefs in the fields that can be explained by metacognitive awareness skills such as regulating their own learning processes, setting goals for themselves, and making efforts to correct their mistakes.

In a study conducted with preparatory class students at university, the relationships between the variables of foreign language learning anxiety, self-efficacy beliefs and metacognitive awareness have been examined through structural equation modelling (Tuncer and Doğan, 2016). As a result of that study, a significant and positive relationship is found between self-efficacy beliefs and foreign language learning anxiety, and it is suggested that this may result from the characteristics of the students making up the sample. Also, a significant and negative correlation is observed between self-efficacy beliefs and metacognitive awareness of the students, and it is put forward that this could be caused by the lack of motivation in the students. In addition, a significant and positive relationship is revealed between foreign language learning anxiety and metacognitive awareness, and it is reported that this might result from the fact that the study includes the general metacognitive awareness of the students rather than their metacognitive awareness in foreign language learning. Moreover, self-efficacy belief is concluded to have no mediating effect.

Doğan (2016) have reported that metacognitive awareness and self-efficacy belief have a mediating effect on the relationship between achievement and attitude in foreign language learning. Clause, Delbridge, Schmitt, Chan, and Jennings (2001) have examined the relationship between self-efficacy belief, metacognitive awareness and success of job applicants through structural equation modelling and concluded that metacognitive awareness has a mediating effect on the relationship between self-efficacy belief and success. In the study conducted by Lindsay (2010), it has been concluded that self-efficacy belief has a partial mediating effect on the relationship between test anxiety and metacognitive awareness. On the other hand, Coutinho (2008) has reported that metacognitive awareness does not have a mediating effect on the relationship between self-efficacy belief and performance.

Conclusion and Recommendations

The hypothesis that individual differences have a major impact on the problems experienced in foreign language education in Turkey was the starting point in the study, and as a result of the research, this hypothesis was confirmed from relational perspective. According to the results obtained from the study and presented based on the literature, metacognitive awareness, self-efficacy beliefs and foreign language learning anxiety are individual differences that interact with each other and are of great importance in foreign language education. In addition, one's metacognitive awareness and self-efficacy beliefs have the power to influence foreign language learning anxiety. People who know their individual differences and characteristics in the learning process will be life-long learners by moving away from the anxiety that they cannot learn and taking responsibility for their own learning process. Problems in foreign language education can be solved by those who are aware of the dynamic relationships between the individual differences, which have been revealed both in the study and the literature and affect the learning and teaching process. Therefore, the obstacles to the success of the individual should be eliminated by focusing on the individual characteristics of the individuals in the teaching-learning process together in addition to the efforts to improve the curriculum in foreign language education.

Based on the results obtained from the research, recommendations for research and implementation are presented below.

1. Considering that foreign language learning anxiety negatively affects self-efficacy beliefs and metacognitive awareness, which are of great importance in the learning process, it is recommended that the negative effects of foreign language learning anxiety are eliminated by teachers by creating a classroom environment that is free from competition, encourages students and focuses on interaction and communication.
2. Considering the impact of self-efficacy belief in foreign language education, it can be suggested that students are raised as individuals who believe in their own capacities and that especially lesson plans that support self-efficacy are implemented in classrooms.
3. Considering the importance of metacognitive awareness in becoming lifelong learners, it may be recommended that students are assigned in-class tasks or appropriate extensive tasks that can direct them to take more responsibility in order to raise individuals who take responsibility for their own learning.

In the study, the participants were not sampled randomly. They were from only one school and the number of them was 285. This situation creates a limitation regarding the generalizability of the findings.

References

- Adal, A. A. & Yavuz, İ. (2017). Ortaokul öğrencilerinin matematik öz yeterlik algıları ile matematik kaygı düzeyleri arasındaki ilişki [The relationship between mathematics self-efficacy and mathematics anxiety levels of middle school students]. *Uluslararası Alan Eğitimi Dergisi*, 3(1), 20-41.
- Ahmed, W., Minnaert, A., Kuyper, H. & van der Werf, G. (2011). Reciprocal relationships between math self-concept and math anxiety. *Learning and Individual Differences*, 22, 385-389.
- Aktan, S. (2012). *Öğrencilerin akademik başarısı, öz düzenleme becerisi, motivasyonu ve öğretmenlerin öğretim stilleri arasındaki ilişki [The relationship between the academic success, self-regulating learning skills, and motivations of students and the teaching styles of teachers]*. (Unpublished doctoral dissertation). Balıkesir Üniversitesi, Balıkesir.
- Aktaş, T. (2014). Yabancı dil öğretmenlerinin erken yaşta yabancı dil öğretimine ilişkin öz yeterlik algı düzeylerinin değerlendirilmesi [Examining the self-efficacy belief level in early foreign language teaching of foreign language teachers]. *International Journal of Languages' Education and Teaching*, 26-38.
- Alcı, B. & Yüksel, G. (2012). An examination into self-efficacy, metacognition and academic performance of pre-service ELT students: Prediction and difference. *Kalem Eğitim ve İnsan Bilimleri Dergisi*, 2(1), 143-165.
- Anyadubalu, C. (2010). Self-efficacy, anxiety, and performance in the English language among middle school students in English language program in Satri Si Suriyothai School, Bangkok. *International Journal of Human and Social Sciences*, 193-198.
- Ateş, S. (2013). *Foreign language writing anxiety of prospective EFL teachers: How to reduce their anxiety levels*. (Unpublished master's thesis). Başkent Üniversitesi, Ankara.

- Aydemir, Ö. (2007). *İlköğretim II. kademe öğrencilerinin İngilizce dersinde kullandıkları öğrenme stratejileri ve başarı başarısızlık yüklemeleri [The learning strategies and success – failure attributions of primary school 2nd level students that they use in English lesson]*. (Unpublished master's thesis). Trakya Üniversitesi, Edirne.
- Aydın, S. & Zengin, B. (2008). Yabancı dil öğreniminde kaygı: Bir literatür özeti [Anxiety in foreign language learning]. *Journal of Language and Linguistic Studies*, 4(1), 81-94.
- Aydiner, B. B. (2011). *Üniversite öğrencilerinin yaşam amaçlarının alt boyutlarının genel öz-yeterlik yaşam doyumu ve çeşitli değişkenlere göre incelenmesi [The relationship between sub-dimensions of the life goals with general self-efficacy, life-satisfaction and some variables]*. (Unpublished master's thesis). Sakarya Üniversitesi, Sakarya.
- Balay, R. (2004). Küreselleşme, bilgi toplumu ve eğitim [Globalization, information society and education]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 37(2), 61-82.
- Balcı, G. (2007). *İlköğretim 5. sınıf öğrencilerinin sözel matematik problemlerini çözme düzeylerine göre bilişsel farkındalık becerilerinin incelenmesi [The examination of metacognitive skills of fifth grade students in terms of their levels of solving verbal math problems]*. (Unpublished master's thesis). Çukurova Üniversitesi, Adana.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: WH Freeman/Times Books/Henry Holt & Co.
- Barron, K. & Harackiewicz, J. M. (2000). *Achievement goals and optimal motivation: A multiple goals approach*. In C. Sansone & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance*, 231- 255. San Diego, CA: Academic Press.
- Baş, G. (2013). Yabancı dil öğrenme kaygısı ölçeği: Geçerlik ve güvenilirlik çalışması [Foreign language learning anxiety scale: validity and reliability study]. *Türkiye Sosyal Araştırmalar Dergisi*, 17(2), 49-68.
- Başbay, M. (2013). Epistemolojik İnancın Eleştirel Düşünme ve Üstbiliş ile İlişkisinin Yapısal Eşitlik Modeli ile İncelenmesi [Analysing the relationship of critical thinking and metacognition with epistemological beliefs through structural equation modeling]. *Eğitim ve Bilim*, 38, 169, 249-262.
- Başbay, A. & Gözüm, E. (2019). Dil öğrenme stratejilerine göre İngilizce öz yeterlik inancı ve İngilizce akademik başarı [English self-efficacy beliefs and English academic achievement based on language learning strategies]. *Dil Eğitimi ve Araştırmaları Dergisi*, 5(1), 12-29.
- Baykara, K. (2011). Öğretmen adaylarının bilişötesi öğrenme stratejileri ile öğretmen yeterlik algıları üzerine bir çalışma [A study on teacher efficacy perceptions and metacognitive learning strategies of prospective teachers]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 40, 80-92.
- Baysal, Z. N., Ayvaz, A., Çekirdekçi, S. & Malbeleş, F. (2013). Sınıf öğretmeni adaylarının üstbilişsel farkındalıklarının farklı değişkenler açısından incelenmesi [An analysis of metacognitive awareness of preservice elementary classroom teachers in terms of various variables]. *M.Ü. Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi* 37, 68-81.
- Bektaş Bedir, S. & Dursun, F. (2019). Üstbilişsel okuma stratejileri öğretiminin öğrencilerin üstbilişsel farkındalığı, İngilizce okuma başarıları ve öz yeterliklerine etkisi [The effect of metacognitive reading strategies instruction on students' metacognitive awareness, reading achievement and self efficacy in English]. *Milli Eğitim Dergisi*, 48(222), 185-211.
- Berkant, H. G. & Ekici, G. (2007). Sınıf öğretmeni adaylarının fen öğretiminde öğretmen öz yeterlik inanç düzeyleri ile zekâ türleri arasındaki ilişkinin değerlendirilmesi [The evaluation of the relationship between primary school teacher candidates' teacher self-efficacy belief levels in science teaching and their intelligence types]. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 16(1), 113-132.
- Boydak, A. (2008). *Öğrenme stilleri [Learning styles]*. İstanbul: Beyaz Yayınları.
- Brown, D. (1994). *Principles of language learning and teaching*. Englewood Cliffs: Prentice Hall Regent.
- Büyüköztürk, Ş. (2016). *Sosyal bilimler için el kitabı. İstatistik, araştırma deseni SPSS uygulamaları ve yorum [Data analysis handbook for social sciences: Statistic, research design, SPSS applications and comment]*. Ankara: Pegem Akademi.
- Cera, R., Mancini, M., & Antonietti, A. (2013). Relationships between metacognition, self-efficacy and self-regulation in learning. *ECPS Journal*, 7, 115-141.
- Cesur, M. O. (2008). *Üniversite hazırlık sınıfı öğrencilerinin yabancı dil öğrenme stratejileri, öğrenme stili tercihi ve yabancı dil akademik başarıları arasındaki açıklayıcı ve yordayıcı ilişkiler örüntüsü [A model explaining and predicting the relationship between university prep class students' language learning strategies, learning styles and academic success in foreign language]*. (Unpublished doctoral dissertation). Yıldız Teknik Üniversitesi, İstanbul.
- Chastain, K. (1988). *Developing second language skills: Theory to practice*. San Diego: Harcourt Brace Jovanovich.
- Cheng, Y. S. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. *Journal of Second Language Writing*, 13, 317- 331.

- Cheng, Y. S., Horwitz, E. K. & Shallert, D. L. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning*, 49, 417-446.
- Chomsky, N. (2006). *Language and mind*. New York: Cambridge University Press.
- Clause, C. S., Delbridge, K., Schmitt, N., Chan, D. & Jennings, D. (2001). Test preparation activities and employment test performance. *Human Performance*, 14(2), 149-167.
- Coutinho, S. (2008). Self-efficacy, metacognition and performance. *North American Journal of Psychology*, 10(1), 165-172.
- Çıkrıkçı, Ö. & Odacı, H. (2013). Fen lisesi öğrencilerinin bilişötesi farkındalıkları ile öz yeterlik algılarının bazı kişisel ve akademik değişkenlere göre incelenmesi [Investigating science high school students' metacognitive awareness and self-efficacy perceptions with respect to the some individual and academic variables]. *International Journal of Human Sciences*, 10(2), 246-259.
- Çimen, S. (2011). *Eğitim fakültesi öğrencilerinin ingilizceye yönelik tutum, ingilizce kaygısı ve öz yeterlik düzeylerinin incelenmesi [Research on the attitudes towards English, English anxiety and self-efficacy levels of students of faculty of education]*. (Unpublished master's thesis). Zonguldak Karaelmas Üniversitesi, Zonguldak.
- Çubukçu, F. (2008). A Study on the correlation between self-efficacy and foreign language learning anxiety, *Eğitimde Kuram ve Uygulama*, 4 (1), 148-158.
- Çuhadar, C., Gündüz, Ş. & Tanyeri, T. (2013). Bilgisayar ve öğretim teknolojileri bölümü öğrencilerinin ders çalışma yaklaşımlarının ve akademik öz-yeterlik algılarının incelenmesi [Investigation of relationship between studying approach and academic self-efficacy of computer education and instructional technologies department students]. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 9(1), 251-259.
- Demirdaş, O. & Bozdoğan, D. (2013). Hazırlık sınıflarında öğrenim gören yabancı dil öğrencilerinin yabancı dil endişeleri ve başarıları [Foreign language anxiety and performance of language learners in preparatory classes]. *Turkish Journal of Education*, 2(3), 4-13.
- Demirel, Ö. (1999). *İlköğretim okullarında yabancı dil öğretimi [Foreign language teaching in primary schools]*. İstanbul: M.E.B. Yayınevi.
- Dobson, C. (2012). *Effects of academic anxiety on the performance of students with and without learning disabilities and how students can cope with anxiety at school*. (Unpublished master's thesis). Northern Michigan University, USA.
- Doğan, Y. (2016). *Hazırlık sınıfı öğrencilerinin bilişüstü farkındalıkları, özyeterlik algıları, yabancı dile yönelik kaygıları, tutumları ve akademik başarılarının incelenmesi [Examination of prep-class students' metacognitive awareness, self-efficacy beliefs, foreign language anxiety levels, foreign language attitudes and academic achievement in foreign language]*. (Unpublished doctoral dissertation). Fırat Üniversitesi, Elâzığ.
- Ekici, G. (2006). Meslek lisesi öğretmenlerinin öğretmen öz-yeterlik inançları üzerine bir araştırma [A study on vocational high school teachers' sense of self-efficacy belief]. *Eurasian Journal of Educational Research (EJER)*, (24).
- Erkan, Y. D., & Saban, A. I. (2011). Writing performance relative to writing apprehension, self-efficacy in, writing and attitudes towards writing: A correlational study in Turkish tertiary-level EFL. *The Asian EFL Journal Quarterly*, 13(1), 163-191.
- Everson, H. T., Smodlaka, I. & Tobias, S. (1994). Exploring the relationship of test anxiety and metacognition on reading test performance: A cognitive analysis. *Anxiety, Stress and Coping*, 7(1), 85-96.
- Forero, C. G., Maydeu-Olivares, A., & Gallardo-Pujol, D. (2009). Factor analysis with ordinal indicators: A Monte Carlo study comparing DWLS and ULS estimation. *Structural Equation Modeling*, 16, 625-641.
- Finney, S. J., & DiStefano, C. (2006). *Non-normal and categorical data in structural equation modeling*. In Hancock, G.R. & Mueller R. O. (Eds.), *Structural equation modeling: A second course*, (pp. 269-314). Information Age Publishing, U.S.A.
- Flavell, J. H. (1979). Metacognition and cognitive monitoring a new area of cognitive- developmental inquiry. *American Psychologist*, 34(10), 906-911.
- Flavell, J. H. (1987). *Speculations about nature and development of metacognition*. F.E. Weinert ve R.H. Kluwe, (Ed.). *Metacognition, motivation and understanding* (21-29), Hillsdale, NJ: Lawrence Erlbaum Associates.
- Göktürk, A. (1982). *Çağdaş bilginin kazanılmasında yabancı dil. Yabancı dil: Öğretim sorunları, gözlemler, öneriler [Foreign language in gaining modern knowledge]*. İstanbul: İstanbul Üniversitesi Yabancı Diller Okulu Yayınları.
- Hair J.F., Black, W.C., Babin, B.J., Anderson R.E. (2010). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hancı Yanar, B. (2008). *Yabancı dil hazırlık eğitimi alan ve almayan Anadolu Lisesi öğrencilerinin yabancı dil özyeterlik algılarının ve İngilizce dersine yönelik tutumlarının incelenmesi [Investigation of the*

- attitudes toward english lesson and perceptions of foreign language self-efficacy of anatolian high school students who have taken preparatory class and those who have not*. (Unpublished master's thesis). Ege Üniversitesi, İzmir.
- Horwitz, E. K. (1986). Preliminary evidence for the reliability and validity of a foreign language anxiety scale. *TESOL Quarterly*, 20(10), 559-562.
- Horwitz, E. K. & Young, D. J. (Eds.). (1991). *Language anxiety: From theory and research to classroom implications*. Englewood Cliffs, New Jersey: Prentice Hall.
- Horwitz, E. K., Horwitz, M. B. & Cope, J. A. (1986). Foreign language classroom anxiety. *Modern Language Journal*, 70, 125-132.
- Işık, A. (2008). Yabancı dil eğitimimizdeki yanlışlar nereden kaynaklanıyor? [What are the mistakes in foreign language teaching?]. *Journal of Language and Linguistic Studies*, 4(2), 15-26.
- İlhan, M. & Çetin, B. (2014). LISREL ve AMOS programları kullanılarak gerçekleştirilen yapısal eşitlik modeli (yem) analizlerine ilişkin sonuçların karşılaştırılması [Comparing the analysis results of the structural equation models (SEM) conducted using LISREL and AMOS]. *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, 5(2), 26-42.
- Jenkins, J. (2009). English as a Lingua Franca: interpretations and attitudes. *World Englishes*, 28(2), 2000-2007.
- Jöreskog, K. G. & Sörbom, D. (1993). *Lisrel 8: Structural equation modeling with the SIMPLIS command language*. USA: Scientific Software International.
- Kacar, M. & Sarıçam, H. (2015). Sınıf öğretmen adaylarının üstbilgi farkındalıkları ile matematik kaygı düzeyleri üzerine bir çalışma [The examination of the relationship between metacognitive awareness and math anxiety levels in pre-service primary school teachers]. *Trakya Üniversitesi Eğitim Fakültesi Dergisi*, 5(2), 137-152.
- Kafkas, M. E., Açak, M., Çoban, B. & Karademir, T. (2010). Beden eğitimi öğretmen adaylarının öz yeterlik algıları ile mesleki kaygıları arasındaki ilişki [Investigation of the Relationship between Preservice Physical Education Teachers' Sense of Self-Efficacy and Professional Concerns]. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 11(2).
- Karakelle, S., & Saraç, S. (2007). Çocuklar için üst bilişsel farkındalık ölçeği (ÜBFÖ-Ç) A ve B formları: Geçerlik ve güvenirlik çalışması [Validity and factor structure of Turkish versions of the metacognitive awareness inventory for children (Jr. MAI) - A and B forms]. *Türk Psikoloji Yazıları*, 10(20), 87-103.
- Karasar, N. (2008). *Bilimsel araştırma yöntemi [Scientific research method]*. Nobel Yayın Dağıtım: Ankara.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. USA: The Guilford Press.
- Kocakülah, M. S., Özdemir, E., Çoramık, M. & Işıldak, R. S. (2016). Üstbilgi, özyeterlilik ve öğrenme süreçleri ölçeğinin Türkçeye uyarlanma çalışması: doğrulayıcı faktör analizi sonuçları [The adaptation study of the metacognition, self-efficacy and learning processes scale into Turkish: results of confirmatory factor analysis]. *Necatibey Eğitim Fakültesi Elektronik Fen ve Matematik Eğitimi Dergisi (EFMED)*, 10(2), 447-468.
- Koç, C. & Arslan, A. (2017). Ortaokul öğrencilerinin akademik öz yeterlik algıları ve okuma stratejileri bilişüstü farkındalıkları [Academic self-efficacy perceptions and metacognitive awareness of reading strategies of secondary school students]. *YYÜ Eğitim Fakültesi Dergisi*, 14(1), 745-778.
- Krashen, S. D. (1985). *Applications of psycholinguistic research to the classroom*. James, C. (Ed.), Practical applications of research in foreign language teaching. Lincolnwood, IL: National Textbook Co.
- Krashen, S. D. (1987). *Principles and practice in second language acquisition*. Prentice-Hall International.
- Kuyumcu Vardar, A. & Arsal Z. (2014). Öz-düzenleme stratejileri öğretiminin öğrencilerin İngilizce başarılarına ve tutumlarına etkisi [The effect of self-regulated learning strategies instruction on students' English achievement and attitude]. *Ana Dili Eğitimi Dergisi*, 2(3), 32-52.
- Lee, J. (2009). Universals and specifics of math self-concept, math self-efficacy, and math anxiety across 41 PISA 2003 participating countries. *Learning and Individual Differences*, 19, 355-365.
- Lindsay, P. C. (2010). *Assessing the relationships among achievement goal orientation, test anxiety, self-efficacy, metacognition, and academic performance*. (Unpublished doctoral dissertation). Northern Illinois University, USA.
- MacIntyre, P. D. & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning*, 44, 283-305.
- MacIntyre, P.D. & Gardner, R. (1989). Anxiety and second language learning: Toward a theoretical clarification. *Language Learning*, 39, 251-275.
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. New York: Erlbaum.
- Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological bulletin*, 103(3), 391.
- Memiş, A. & Arıcan, H. (2013). Beşinci sınıf öğrencilerinin matematiksel üstbilgi düzeylerinin cinsiyet ve başarı değişkenleri açısından incelenmesi [The analysis of 5th grade students' mathematical

- metacognition levels between the variables gender and achievement]. *Karaelmas Journal of Educational Sciences*, 1, 76-93.
- Muris, P. (2001). A brief questionnaire for measuring self-efficacy in youths. *Journal of Psychopathology and Behavioral Assessment*, 23, 145–149.
- Müthen, B. Ö. (1993). *Goodness of fit with categorical and other non-normal variables*. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 205–243). Newbury Park, CA: Sage.
- Nosratinia, M., Saveiy, M. & Zaker, A. (2014). EFL learners' self-efficacy, metacognitive awareness, and use of language learning strategies: How are they associated? *Theory and Practice in Language Studies*, 4(5), 1080-1092.
- Noushad, P.P. (2008). *Cognition about cognitions: The theory of metacognition*. Retrieved from <https://eric.ed.gov/?id=ED502151>.
- Oğuz, A. & Baysal, E. (2015). Ortaöğretim öğrencilerinin İngilizce öğrenme kaygıları ile İngilizce öz yeterlik inançlarının incelenmesi [The investigation of high-school students' English language learning anxiety and self-efficacy beliefs]. *Eğitim ve Öğretim Araştırmaları Dergisi*, 4(3), 14.
- Oğuz, A. & Kutlu-Kalender, M.D. (2018). Ortaokul öğrencilerinin üst bilişsel farkındalıkları ile özyeterlik algıları arasındaki ilişki [Relationship between metacognitive awareness and self-efficacy of secondary school students]. *Eğitimde Kuram ve Uygulama*, 14(2), 170-186.
- Öner, G. (2008). *Orta öğretim öğrencilerinin yabancı dil öğrenimlerini etkileyen etmenler [Factors affecting foreign language learning of secondary school students]*. (Unpublished doctoral dissertation). Gaziantep Üniversitesi, Gaziantep.
- Öner, G. & Gedikoğlu, T. (2007). Ortaöğretim öğrencilerinin İngilizce öğrenimlerini etkileyen yabancı dil kaygısı [Foreign language anxiety affecting learning English of secondary school students]. *Gaziantep Üniversitesi Sosyal Bilimler Dergisi*, 6(2), 144-155.
- Özsoy, G. & Günindi, Y. (2011). Okulöncesi öğretmen adaylarının üstbilişsel farkındalık düzeyleri [Prospective preschool teachers' metacognitive awareness]. *İlköğretim Online*, 10(2), 430-440.
- Öztürk, B. & Kurtuluş, A. (2017). Ortaokul öğrencilerinin üstbilişsel farkındalık düzeyi ile matematik öz yeterlik algısının matematik başarısına etkisi [The analysis of the effect of metacognitive awareness and mathematics self-efficacy perceptions on mathematics achievement of middle school students]. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 31, 762-778.
- Öztürk, G. & Saydam, D. (2014). Yabancı dilde yazmada özyeterlik ve kaygı: Türkiye'de bir durum çalışması [Anxiety and self-efficacy in foreign language writing: The case in Turkey]. *Başkent Üniversitesi Eğitim Dergisi*, 1(2), 10-21.
- Pajares, F. (1997). Current directions in self-efficacy research. *Advances in motivation and achievement*, 10(149), 1-49.
- Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy*. Retrieved from <http://www.emory.edu/EDUCATION/mfp/eff.html>.
- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading & Writing Quarterly*, 19 (2), 139-158.
- Peers, I. (1996). *Statistical analysis for education and psychology researchers: Tools for researchers in education and psychology*. London: Falmer Press.
- Pintrich P.R. & De Groot, E.V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 83(1), 33-40.
- Pintrich, P. R. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Education Research*, 31, 459-470.
- Pintrich, P., Smith, D., Garcia, T., & McKeachie, W. (1993). Reliability and predictive validity of the motivated strategies for learning questionnaire (MSLQ). *Educational and Psychological Measurement*, 801-813.
- Pintrich, P.R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385-407.
- Pishghadam, R. & Khajavy, G.H. (2013). Intelligence and metacognition as predictors of foreign language achievement: A structural equation modeling approach. *Learning and Individual Differences*, 24, 176-181.
- Powers, K., Echevarria, J., & Short, D. (2006). School reform and standards-based education: A model for English-language learners. *Journal of Educational Research*, 195-210.
- Rahimi, M., & Abedi, S. (2014). The relationship between listening self-efficacy and metacognitive awareness of listening strategies. *Procedia- Social and Behavioral Sciences*, 98, 1454 – 1460.
- Raoofi, S., Tan, B.H. & Chan, S.H. (2012). Self-efficacy in second/ foreign language learning context. *English Language Teaching*, 5 (11), 60-73.
- Raykow, T., & Marcoulides, G. A. (2006). *A first course in structural equation modeling*. London: Lvrance Erlbaum Associates. Publishers.

- Roberts, L. & Meyer, A. (2012). Individual differences in second language learning: Introduction. *Language Learning*, 62 (2), 1-4.
- Sapancı, M. (2010). Güzel sanatlar eğitimi öğrencilerinin bilişüstü farkındalık düzeyleri ve öğretmenlik mesleğine yönelik öz-yeterlik inançlarının incelenmesi [The investigation of fine arts education students' metacognitive awareness level and self-efficacy beliefs towards teaching]. (Unpublished master's thesis). Abant İzzet Baysal Üniversitesi, Bolu.
- Schermelleh-Engel, K., Moosbrugger, H. & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 23-74.
- Seçkin, A. & Başbay, M. (2013). Beden eğitimi ve spor öğretmeni adaylarının öğretmenlik mesleğine ilişkin öz-yeterlik inançlarının incelenmesi [Investigate of teacher's self efficacy beliefs of physical education and sport teacher candidate's]. *Electronic Turkish Studies*, 8(8).
- Senemoğlu, N. (2015). *Gelişim, öğrenme ve öğretim [Development, learning and teaching]*. Ankara: Yargı Yayınevi
- Sezer, A. (1987). Türkiye'de İngilizce öğretiminin yönlendirilmesinde eğitim fakültelerinin yeri [The role of educational faculties in English language teaching]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 2(2).
- Slavin, R. E. (2012). *Eğitim psikolojisi [Education psychology]*. (Edit. G. Yüksel). Ankara: Nobel Yayıncılık.
- Soruç, A. (2015). Non-native teachers' attitudes towards English as a Lingua Franca. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 30(1), 239-251.
- Sperling, R. A., Howard, B. C. Miller, L. A., & Murphy, C. (2002). Measures of children's knowledge and regulation of cognition. *Contemporary Educational Psychology*, 27, 51-79.
- Şimşek, Ö. F. (2007). *Yapısal eşitlik modellemesine giriş: (Temel ilkeler ve LISREL uygulamaları)* [Structural equation modeling: Basic principles and LISREL]. İstanbul: Ekinoks.
- Telef, B. B. & Karaca, R. (2012). Çocuklar için öz-yeterlik ölçeği; Geçerlik ve güvenilirlik çalışması [The self-efficacy scale for children; a validity and reliability study]. *Buca Eğitim Fakültesi Dergisi*, 32, 169-187.
- Tezcan, M. (2002). Küreselleşmenin eğitim boyutu [The educational aspect of globalization]. *Eğitim Araştırmaları* 6, 56-60.
- Tsai, C.C. (2013). The impact of foreign language anxiety, test anxiety, and self-efficacy among senior high school students in Taiwan. *International Journal of English Language and Linguistics Research*, 1(3), 1-17.
- Tseng, W, Dörnyei, Z & Schmitt, N. (2006). A new approach to assessing strategic learning: the case of self-regulation in vocabulary acquisition. *Applied Linguistics*, 27 (1), 78-102.
- Tunca, N. & Alkın Şahin, S. (2014). Öğretmen adaylarının bilişötesi (üst biliş) öğrenme stratejileri ile akademik öz yeterlik inançları arasındaki ilişki [The relationship between pre-service teachers' metacognitive learning strategies and academic self-efficacy]. *Anadolu Journal of Educational Sciences International*, 4(1), 47-56.
- Tuncer, M. & Doğan, Y. (2015). Hazırlık sınıfı öğrencilerinin yabancı dil ders kaygıları ve akademik öz-yeterlikleri arasındaki ilişki [The relationship between prep-class students' foreign language anxiety and academic self-efficacy]. *Dil ve Edebiyat Eğitimi Dergisi*, (14), 153-157.
- Tuncer, M. & Doğan, Y. (2016). Relationships among foreign language anxiety, academic self-efficacy beliefs and metacognitive awareness: A structural equation modelling. *International Journal of Learning and Development*, 6(2), 31-41.
- Üredi, I. (2005). *Algılanan anne baba tutumlarının ilköğretim 8. sınıf öğrencilerinin öz-düzenleyici öğrenme stratejileri ve motivasyonel inançları üzerindeki etkisi [The contributions of perceived parenting styles to 8th class primary school students' self-regulated learning strategies and motivational beliefs]*. (Unpublished doctoral dissertation). Yıldız Teknik Üniversitesi, İstanbul.
- Vardarlı, G. (2005). *İlköğretim ikinci kademe öğrencilerinin öz-yeterlik düzeylerinin yordanması [Self efficacy levels of middle school students]*. (Unpublished master's thesis). Ege Üniversitesi, İzmir.
- Varol, S. (2014). *Hazır yazılımlarla yapısal eşitlik modellemesi [Structural equation modeling with software packages]*. (Unpublished master's thesis). Eskişehir Osmangazi Üniversitesi, Eskişehir.
- Veenman, M. V., Van Hout-Wolters, B. H. & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. *Metacognition and Learning*, 1(1), 3-14.
- Victori, M., & Lockhart, W. (1995). Enhancing metacognition in self-directed language learning. *System*, 23 (2), 223-234.
- Wenden, A.L. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, 19(4), 515-537.
- Woodrow, L. (2011). College English writing affect: Self-efficacy and anxiety. *System*, 39(4), 510-522.
- Yalçın, K. & Karakaş S. (2008). Çocuklarda bilgi işlemdeki üst işlemlerin yaşa bağlı değişimi [Change with age of information processing meta-operations in children]. *Türk Psikiyatri Dergisi*, 19(3), 257-265.

- Yang-Wallentin, F., Jöreskog, K. G., & Lüo, H. (2010). Confirmatory factor analysis of ordinal variables with misspecified models. *Structural Equation Modeling*, 17(3), 392-423.
- Yıldırım, S. (2011). Self-efficacy, intrinsic motivation, anxiety and mathematics achievement: Findings from Turkey, Japan and Finland. *Necatibey Eğitim Fakültesi Elektronik Fen ve Matematik Eğitimi Dergisi (EFMED)*, 5(1), 277-291.
- Yıldırım, H., Saraç, M. & Büyüköztürk, Ş. (2018). Farklı örneklem büyüklüğü ve dağılımı koşullarında WLS ve Robust WLS yöntemlerinin karşılaştırılması [The comparison of WLS and robust WLS methods in different sample size and distribution conditions]. *İlköğretim Online*, 17, 1, 431-439.
- Zengin, D. Ö. T. & Radmard, S. (2019). İlköğretim kurumlarında görev yapan İngilizce öğretmenlerinin mesleki ve iletişim yeterliliklerine yönelik algılarının analizi [An analysis of the perceptions of the English language teachers' in public primary education intended their professional and communication competencies]. *Academy Journal of Educational Sciences*, 3(1), 42-63.
- Zimmerman, B. J. (2002). Becoming A self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, 29, 663-676.
- Zimmerman, B.J. (1990). Self-regulated learning and academic achievement: An overview, *Educational Psychologist*, 25 (1), 3-17.