

Predictive roles of self-regulatory learning strategies and self-efficacy beliefs on English language learning achievement

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ABSTRACT The self-regulation and self-efficacy beliefs have a major effect on English language learning achievement. This study examines if self-regulatory learning strategies and English self-efficacy beliefs significantly predicted learning achievement in learning English. 542 ninth grade students studying at ten different Vocational and Technical Anatolian High Schools formed the sample. Data were gathered through the Self-Regulatory Learning Strategies Scale, the English Self-Efficacy Beliefs Scale and the ninth grade English Achievement Test. Pearson Correlation Analysis was applied to describe the relation between English self-efficacy beliefs and self-regulatory learning strategies and the students' learning achievement in English. Simple and Multiple Linear Regression Analysis was used to analyze the predictive role of self-regulatory learning strategies and English self-efficacy beliefs on learning achievement in learning English. Self-regulatory learning strategies and English self-efficacy were determined to be significant predictive variables in explaining English achievement. But also students' English self-efficacy beliefs ($R^2 = .24$) was found to be a more powerful predictor of explaining English achievement than self-regulatory strategies ($R^2 = .04$). Therefore, studies can be carried out to improve students' self-efficacy perceptions and self-regulation skills towards English in order to increase their success in English lessons. This research can be replicated regionally or nationally with a wider study population.

Keywords: *English self-efficacy belief, Learning achievement in English, Self-regulatory learning strategies, Vocational education.*

Öz düzenleyici öğrenme stratejileri ve öz yeterlik inancının İngilizce öğrenme başarısını yordamadaki rolü

ÖZ Öz düzenlemenin ve öz yeterlik inancının İngilizce öğrenme edimimleri üzerinde büyük bir önemi vardır. Bu araştırmanın konusunu öz düzenleyici öğrenme stratejileri ve İngilizce öz yeterlik inancının İngilizce ders başarısını anlamlı düzeyde yordayıp yordamadığı oluşturmuştur. Mesleki ve Teknik Anadolu Liselerinde öğrenim gören 542 dokuzuncu sınıf öğrencisi araştırmanın örneklemini oluşturmuştur. Araştırmanın verileri Öz Düzenleyici Öğrenme Stratejileri Ölçeği, İngilizce ile ilgili Öz Yeterlik İnancı Ölçeği ve İngilizce Dersi Başarı Testi uygulanarak toplanmıştır. İngilizce öz yeterlik inancı ve öz düzenleyici öğrenme stratejileri ile İngilizce Dersi başarısı arasında anlamlı ilişki olup olmadığının tespiti için Pearson Korelasyon Analizi yapılmıştır. İngilizce öz yeterlik inançları ile öz düzenleyici öğrenme stratejilerinin İngilizce dersi başarısını yordama durumunu belirlemek için Basit ve Çoklu Doğrusal Regresyon Analizleri yapılmıştır. Öz düzenleyici öğrenme stratejilerinin ve İngilizce öz yeterlik inancının İngilizce başarısını açıklamada anlamlı birer yordayıcı değişken oldukları bulunmuştur. İngilizce öz yeterlik inancının ($R^2 = 0,24$) İngilizce başarısını yordama gücünün, öz düzenleyici öğrenme stratejilerine ($R^2 = 0,04$) göre daha yüksek olduğu saptanmıştır. Dolayısıyla öğrencilerin İngilizce dersindeki başarılarının yükselmesi için İngilizceye yönelik öz yeterlik algılarının ve öz düzenleme becerilerinin gelişmesi için çalışmalar yapılabilir. Bu araştırma, daha geniş bir çalışma evreni ile bölgesel veya ulusal çapta tekrarlanabilir.

Anahtar Sözcükler: *İngilizce dersi başarısı, İngilizce öz yeterlik inancı, Mesleki eğitim, Öz düzenleyici öğrenme stratejileri.*

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INTRODUCTION

In today's world, where international relations and cooperation have become more important, technology is developing at full speed and mass media dominate all areas of life so communication in a foreign language has become a global need. In this context, English has become the common language of today's world, where communication borders have disappeared and it is widely taught as a foreign language in most countries. Demirpolat (2015) stated that foreign language teaching has a strategic importance in the growth of human capital, for this reason language teaching has a valuable role in educational programs by using various techniques and methods. Also in Turkey it is given importance to teaching foreign languages -especially English- within the scope of internationalization. In Turkey, English is one of the languages that is beneficial for the vocational and technical high school graduates in order to find jobs at international companies.

Despite the personal and social dedication of language learners, the needed level of foreign language has not been achieved yet in Turkey. In accordance with English Proficiency Index (EPI) data, Turkey is the 26th of 27 European countries included in the index; in total, it ranks 62nd among 80 countries (EF English Proficiency Index, 2014). The average number of questions answered correctly in the English test at Undergraduate Placement Exams nationwide decreased gradually between 2010 and 2016 (Center for Measurement, Selection and Placement, 2010, 2012, 2015, 2016). Although there is a clear increase in the number of correctly answered English Exam questions in 2019, the ratio of correctly answered questions to total English questions' number is 40.48% (Center for Measurement, Selection and Placement, 2019). Studies show that individual differences as well as the variables of the learner have an important share in achievement as well as curriculum, educational materials, teaching methods and techniques (Acat & Demiral, 2002; Tosun, 2014). These results reveal a substantial need to investigate the factors that take part in the success of English.

One of the affective factors of language learners is self-regulation. Accordingly, in this research, one of the variables examined in relation to academic achievement is self-regulation. For example, self-regulatory students and those with high academic performance are attributed to similar characteristics (Zimmerman, 1998). Self-efficacy is also an important variable in English Language Education. Indeed, many studies revealed that belief in self-efficacy has a prominent role in academic achievement (Chemers et al., 2001; Golden, 2003; Linnenbrink & Pintrich, 2002; Margolis, 2005; Zimmerman, 2000).

Students with developed self-regulation skills consciously choose and apply learning strategies to achieve their learning goals so self-efficacy beliefs can also develop in a realistic and a positive way. In Turkey studies within the scope of self-efficacy and self-regulation variables in the English lessons have often been carried out with university students from preparatory classes (e.g., Adıgüzel & Orhan, 2017; Bademcioğlu et al. 2017; Güç, 2019) and different types of high schools (e.g., Bilican & Yeşilbursa, 2015; Duman, 2007; Kineş, 2018). It was observed that self-regulation and self-efficacy variables were examined not together but under separate titles with other variables (Altay, 2013; Bozkurt, 2017; Büyükduman, 2006; Kılıç, 2016; Necan, 2019; Sevimbay, 2016). The predictive variables of the study that the Vocational and Technical Anatolian High Schools are relatively unsuccessful in terms of foreign language achievement compared to other high school types, can be the basis for the curriculum studies of the vocational high schools in Turkey. On the other hand, studies that examine self-efficacy beliefs of learners at vocational high schools about English are very limited (e.g., Bozkurt, 2017; Gözüm & Başbay, 2019; Karakış, 2014). However, the vocational high school students need more self-regulation for academic success because they have less family support than students in other high schools in Turkey (Aktaş, 2016; Bozkurt, 2017; Gömleksiz & Kılınç, 2014). To support the students in this, the secondary education English curriculum for the Vocational and Technical Anatolian High Schools can be designed and developed in a way that supports the students' usage of self-regulatory learning strategies and the

development of their English self-efficacy beliefs. For instance; while building skills for vocabulary, grouping the words according to the types can encourage the students to use organizational strategies and in addition to facilitating the students' learning new words, it can also contribute to improving their English self-efficacy beliefs. To sum up, the relation between self-regulation, English self-efficacy beliefs and academic achievement needs to be analyzed in a holistic and vocational high school sample.

This research adds new information to the literature because it examines the effects of self-regulation strategies and English self-efficacy perception on success in a different sample. The findings of the study may also be noteworthy for the countries, vocational and technical education systems of which are similar to Turkey.

The objective of this research is to determine the learning environment and contribute to student achievement by determining the relation between the self-regulatory strategies of Vocational and Technical Anatolian High School students and the English self-efficacy beliefs and the English achievement. To this end, the research questions are:

- a) Do the self-regulatory learning strategies significantly predict the learning achievement in the English lesson?
- b) Do the self-efficacy beliefs about English significantly predict the learning achievement in the English lesson?
- c) Do the self-regulatory strategies and self-efficacy beliefs about English significantly predict the learning achievement in the English lesson?

As stated above, there are few studies that examine the interrelationship of these variables and provide data on vocational high school sampling. This research may help to fill that space in the literature. English teachers and administrators who work at Vocational and Technical Anatolian High Schools and other high school types can design and develop their English lesson curricula to support students' self-regulation and English self-efficacy beliefs by using the results of the study. The results may provide some hints for the curriculum studies across the country in order to increase the level of English learning achievement with the help of self-regulation and self-efficacy beliefs.

LITERATURE REVIEW

Self-Regulatory Learning Strategies

Self-regulation definitions include all motivational, metacognitive and environmental processes that result in rapid academic achievement. Learning through regulation means that students think about themselves and their abilities as well as how to deal with the tasks expected of them (Zimmerman, 1998). Zimmerman (1986) sees self-regulatory learning as a type of learning that individuals initiate and guide their knowledge and skills without being dependent on their teachers or anyone else. Students can be qualified as self-regulatory learners according to their rate of being active in metacognitive, behavioural and motivational aspects (Zimmerman, 1986, 1989). In other words, based on this theory, students learn how to manage their own learning processes and how to choose appropriate cognitive, metacognitive and behavioural strategies that provide sufficient effort to achieve the goals they have set (Sardareh et al., 2012). From the point of academic achievement, the main components in these definitions are planning, monitoring and metacognitive strategies (Pintrich & De Groot, 1990). It is an expected result that the students who apply these components effectively increase their learning and achievement levels.

Self-regulatory learners actively involve in learning process (Zimmerman, 2002). Using their knowledge and beliefs at first place, they can make an assessment of the qualifications and tools required for these activities; in the light of these evaluations, they set their goals. According to Effenev, Effenev, Carroll, and Bahr (2013), self-regulatory students set goals actively for themselves, decide favorable

strategies, manage their time, organize materials and information and set priorities, change approaches flexibly, learn and make felicitous arrangements for the next learning activities by following feedback on their performance. Self-regulatory students also have the characteristics of being internally motivated to learn at the beginning of learning, maintaining their motivation in the process and being satisfied with their performance (Zimmerman, 2002). In summary, theoretically, self-regulation requires using cognitive, affective and behavioral strategies at the right time and effectively. However, there is still a need for a detailed examination of students' experiences during the implementation of these strategies. How the educational programs should be designed for the teaching of these strategies is still an issue that needs to be studied.

There are some researchers who point to the social aspect of self-regulation (Bandura, 1986; Schunk & Zimmerman, 1997; Wang, 2004; Zimmerman, 1986; Zimmerman & Risemberg, 1997). For instance, from the viewpoint of Schunk and Zimmerman (1997), the academic self-regulation process includes using social resources effectively in addition to cognitive strategies. Zimmerman and Risemberg (1997) explain self-regulation with the individual's affective strategies and sensitivity to social environments. In this context, concepts and actions such as self-reaction, self-judgement, self-observation (Bandura, 1986), modeling and seeking help (Zimmerman & Risemberg, 1997) of social cognitive learning theory are components of the self-regulation process. Therefore, effective self-observation and environmental observation of the social learning process, choosing the right model and behaviour, transferring the behavior of the model to one's own learning performance and living with one's self-reflection cycle can increase the academic achievement. However, the modeling process may vary in different developmental and cultural contexts. For example, students' model choices and attitudes towards models in adolescence may be more emotional than other developmental periods. It can be observed that individuals in the Eastern culture imitate the model's behaviors rather than comparing and questioning their own internal standards. It is thought that studies on these subjects are needed in terms of both literature and educational practices.

The socio-cultural approach to self-regulation is very important for language learning as an element of culture. In the context of target language acquisition, Wang (2004) defines self-regulation as a continuous arrangement of language learning strategies to reach the objectives that the individual has set through communication with adults and peers within the cultural and social framework. According to Vygotsky (1978), language is one of the signs that children use actively to direct the environment while performing self-regulation. By this way language and self-regulation are skills that support each other. For this reason, examining the relationship between foreign language learning and self-regulation in different cultures can contribute to the literature.

Research reveals that self-regulatory strategies significantly affect the language learning process (Lenes et al., 2020) and academic achievement in the English lessons (Amini, 2020; Cadima et al., 2015; Finders et al., 2021; Kılıç, 2016; Kuyumcu Vardar & Arsal, 2014). For instance, for preschoolers, self-regulation was a significantly mediating predictor between the socio-economic risks and achievement in letter (Cadima et al., 2015). Amini et al.'s (2020) study with university students showed that self-regulation has a mediating role between the three types of the metacognitive strategy awareness – global reading, problem solving and support reading – and English reading proficiency. Sun and Wang (2020) found that self-regulatory strategies significantly correlated with Chinese students' English writing proficiency. Alagöz (2016) pointed to the existence of a positive correlation between the motivational orientations of vocational high school students in foreign language learning with their usage of self-regulatory strategies and between all motivational orientations with self-regulatory learning strategies. However, Ömür and Çubukçu (2017) stated that the usage levels of self-regulatory strategies did not significantly predict the academic achievement scores of English lessons. On the other hand, Sripan and Sujivorakul (2020) found that intention to persist in school of vocational education students was negatively related to self-regulation strategies but self-regulation strategies did not predict significantly to persist in school. In sum, there are different findings in the studies examining the relationship of self-regulation and achievement in the English lessons. However, the studies examined the relationship between the using self-regulatory strategies and achievement in English in the context of vocational high

schools are very limited (e.g., Alagöz, 2016; Sripan & Sujivorakul, 2020). The students at vocational and technical high schools in Turkey mostly grow in low socio-economic environment (Bozkurt, 2017). As research figured out the significant effect of the socio-economic and family-related factors on self-regulation (e.g., Cadima et al., 2020; Iwaniec, 2020), limited number of researches in vocational and technical high schools is a more critical problem.

Self-Efficacy Beliefs

People should have a robust sense of personal efficacy to sustain the persevering effort needed to succeed (Bandura, 1994). Bandura (1982) pointed that the ones with high self-efficacy perception can reflect on their capacities of their learning performance more than others with low self-efficacy beliefs. Individuals with high self-efficacy beliefs become competent in cognitive, motivational, affective and selection processes in learning. For example, they are able to set objectives for their own, plan actions to reach the objectives, they are able to manage their negative feelings such as stress, etc. and make appropriate choices for the learning environment (Bandura, 1977). In short, high self-efficacy beliefs ensure that individuals can start the learning process and do not leave the process until they completely learn.

Bandura (1997) portrayed that the self-efficacy beliefs are an individual's ability to regulate and apply the type of behavior required to achieve certain goals. This definition shows the importance of self-efficacy beliefs for academic achievement. Indeed, there are many studies showing that self-efficacy beliefs have a significant and positive relation with academic achievement (Lane & Lane, 2001; Maddux, Norton, & Stoltenberg, 1986; Multon, Brown, & Lent, 1991; Schunk, 1981, 1982; Wood & Locke, 1987). There are findings in this direction for the English lesson as well (Duman, 2007; Huang & Chang, 1996; Kitikanan, 2017; Mikulecky, 1996; Rahemi, 2007; Templin, Guile, & Okuma, 2001). Nevertheless, studies examining the predictive power of self-efficacy beliefs of individuals learning English as a foreign language on their level of learning English are limited.

Zimmerman (2000) emphasized that self-efficacy beliefs are motivating factors for learning. Similarly, Robih, Suratman, and Soesatyo (2017) stated that self-efficacy beliefs significantly affect learning motivation in a sample of vocational high schools. In Turkey, secondary school students with low achievement levels generally attend vocational and technical high schools (Ministry of National Education [MoNE], 2008). Therefore, finding and using ways to increase the self-efficacy perceptions of these students is important in terms of increasing their learning motivation and academic success.

According to Bandura (1997), self-efficacy beliefs have four basic sources; vicarious experience, enactive mastery experience, social persuasion and emotional or physiological state. In terms of enactive mastery experience, the successful outcome of individuals' previous learning experiences strengthens their self-efficacy beliefs, while their failure may lower their self-efficacy beliefs (Bandura, 1997). Individuals can acquire vicarious experience and shape their self-efficacy beliefs by observing the processes and results they get for the same or similar learning tasks (Bandura, 1997; Keyser & Barling, 1981; Schunk & Hanson, 1985). Individuals can continue their learning efforts through social persuasion when they meet with difficulties and failures in the learning process (Bandura, 1997; Schunk, 1981). Finally, positive physiological or emotional states related to the learning unit can increase self-efficacy beliefs (Bandura, 1997). It can be said that the literature is satisfactory in terms of the sources of self-efficacy beliefs.

There are studies examining the effects of self-efficacy belief resources described above on learning English (Akyol, 2017; Huang & Chang, 1996; Taşdemir, 2018). Taşdemir (2018) determined that there exists a significant relation between self-efficacy beliefs with willingness to communicate in English. On the other hand, Akyol (2017) found that the high school students' stereotypical thoughts on English did not correlate with English self-efficacy. In addition, there are studies that have found a significant relation between the attitude towards the English lessons and self-efficacy beliefs (Hancı Yanar & Bümen, 2012; Sevimbay, 2016). Therefore, it is important to form educational frames that will

strengthen the self-efficacy beliefs in terms of learning English. In this regard, some researchers found a significant difference between the self-efficacy beliefs of the students from the vocational high schools and other high schools in Turkey (Berberoğlu & Kalender 2005; Oral & McGivney, 2014). As a reflection of this, Bozkurt (2017) found that Industrial Vocational High School students' self-efficacy beliefs in relation with listening, speaking, reading and writing skills were significantly lower than Anatolian High School students. In the literature, the number of studies examining the self-efficacy beliefs for learning English in vocational and technical high school samples is very few. As a result, the development of resources that build self-efficacy in English is a basic requirement, especially for vocational high schools.

METHODOLOGY

Research Model

This research was conducted with a quantitative paradigm. Quantitative researchers aim to establish general laws of behavior and phenomenon across different settings/contexts (McLeod, 2017). Relational Screening Model enables to determine the presence and the rate of interactive change within two or more variables. The data was collected in one go by using the Cross-Sectional Scan feature of the model. Although it is not possible to examine the relations reached in terms of cause and effect; however, it can be beneficial to predict another within the scope of knowing any variable by pointing to some clues in that direction (Karasar, 2012). In this research, a total of 10 Vocational and Technical Anatolian High Schools from the five districts of İzmir were taken in the 2018-2019 academic year.

Population and Sample

9th grade students ($N = 57179$) who studied in vocational high schools in İzmir during the 2018 - 2019 academic year were the population of the study. There are four years in the Vocational High Schools in Turkey and 9th grade is the first year of high school education. The English lesson period is equal in all 9th grades and it is five hours per week. As the secondary education English curriculum prepared within the framework of the progressivity principle and the 9th grade English curriculum is the basis for English subjects to be covered in years to come, it was considered appropriate to conduct the research with 9th grade students. The cluster sampling method was chosen because of the difficulties of reaching the research population. In cluster sampling, the probability of being selected equally in the population or sub-population does not belong to the individuals, but to the clusters with all their individuals (Karasar, 2012). Robson (1993) claimed that the cluster sampling method is very useful when a population is large and widely dispersed, requiring a huge effort and travel to get the survey data and in order to generalize the data collected from clusters to the universe, and he recommended that the sample needs to be created randomly, especially when every element in the universe is not certain. In the framework of this method; 15% (10 schools) of 69 Vocational and Technical Anatolian High Schools, which continue their education and training in the central districts of İzmir, have been randomly selected. Achievement test and related scales were applied to 600 volunteer students from the schools included in the sample. The number of completely filled out scales was 542, including the districts of Bayraklı ($n = 44$), Bornova ($n = 86$), Buca ($n = 50$), Karşıyaka ($n = 76$) and Konak ($n = 286$). As a result, the sample of the research includes 542 students.

Data Collection Instruments

One of the data collection tools of the study was the Self-Regulatory Learning Strategies Scale (SLSS) developed with the study of Kadioğlu, Uzuntiryaki, and Çapa Aydın (2011). There are 5 items for motivation regulation, 3 for effort regulation, 4 for planning, 5 for attention gathering, 3 for summarizing, 3 for highlighting, 3 for self-direction, 3 for use of additional resources and in total 29 items in SLSS. Each item in the six-grade Likert type SLSS is scored between the ends of "Never (1)"

and “Always (6)”. Some sample items from the scale are shown here; “*I persuade myself to work hard in order to learn the topic.*” (Motivation Regulation), “*I decide on what to learn before I start studying a task.*” (Planning), “*While studying for a task, I give a break if I do not understand the topic.*” (Effort Regulation), “*Before starting to study, I organize my study environment.*” (Attention Focusing), “*I list the concepts that I cannot understand.*” (Summary Strategies), “*I study the topic from different resources.*” (Using Additional Resources), “*While solving a problem, I explain to myself how to solve the problem.*” (Self-Instruction) (Kadioğlu et al., 2011). In consequence of the Exploratory Factor Analysis (EFA) done after the pilot scheme of the scale with 422 tenth grade students, it was determined that eight factors explained 62% of the common variance. Confirmatory Factor Analysis (CFA) conducted on the data of 616 students concluded the factor load values of the items ranged between .53 and .90. Fit indices were calculated as AGFI = .84, RMSEA = .064, NNFI = .89, CFI = .91, RMR = .060 and SRMR = .060. The Cronbach Alpha reliability coefficients of the scale’s sub-dimensions named as effort regulation ($\alpha = .68$), motivation regulation ($\alpha = .77$), use of additional resources ($\alpha = .78$), attention focusing ($\alpha = .76$), self-instruction ($\alpha = .77$), planning ($\alpha = .82$), highlighting strategies ($\alpha = .79$) and summarizing strategies ($\alpha = .74$). The results vary between .68 and .82 mean that results are qualified as reliable according to Cohen et al. (2018) and > 0.90 means very highly reliable, 0.80-0.90 is highly reliable, 0.70-0.79 is reliable and 0.60-0.69 means marginally-minimally reliable.

Another data collection tool was the English Self-Efficacy Scale developed with the study of Hancı Yanar and Bümen (2012). Turkish form of the scale sent by the researchers was used for this study. Each item in this five-grade Likert type scale is scored between the points “It doesn’t suit me at all (1)” and “It suits me completely (5)”. As a result of EFA performed on 296 scales filled in by 11th grade students (Due to the comparison of the English self-efficacy levels of the students who took preparatory education and those who did not, the participants were selected from Anatolian high schools providing preparatory education and 11th grade students who received preparatory education from these high schools and were the only non-graduates.) in the pilot scheme, the trial application form includes 47 items reduced to 34 items. Some sample items from the scale; “*I can speak English in a way that a native speaker can understand*”, “*I can understand the main idea of a conversation in English*”. These dimensions explain 61.41% of total variation. CFA, which was conducted to test a four-dimensional scale model, confirmed the model of four sub-dimensions related to the scale’s fit indexes (RMSEA = 0.044 and SRMR = 0.046). When other fit indices are analyzed, it is seen that NFI = .98, NNFI = .99, PNFI = .89, CFI = .99, IFI = .99, RFI = .98. Finally, Cronbach Alpha coefficient -used for determining the reliability of the scale- is .97 for the whole scale; it was found to be .92 for Reading, .88 for Writing, .93 for Listening and .92 for Speaking dimension.

Finally, the researchers’ 9th grade English Achievement Test was used. The English Achievement Test measures 13 objectives (such as; being able to recognize the irrelevant sentence that disrupts the meaning integrity, being able to ask and tell the time and date, being able to compare people’s physical and personality traits, ... etc.) in the first semester of the 9th grade annual plan of the English Lesson Curriculum, which was updated in the 2017-2018 academic year. A 30-question trial form was prepared by taking the advantage of the reading comprehension and grammar skills focused Acquisition Comprehension Tests prepared by the General Directorate of Turkish Ministry of Education Measurement, Evaluation and Examination Services. The trial form of the English Achievement Test applied to 192 tenth grade vocational high school students in Konak district. All these students were in the same school that is easily accessible and could be defined as a typical vocational high school for İzmir city. Test grades of the students were in order from the highest score to the lowest score; by creating 27% upper and lower groups, difficulty and discrimination coefficients were calculated for each item. The average item difficulty value of the English Achievement Test trial form ($p = .41$) was suitable for the instructed students in this study as Haladyna (2004) stated that educated or uneducated sample may cause the p value. The maximum index of difficulty is 100%. Items falling below 33% and above 67% are likely to be too difficult and too easy respectively (Cohen, 2018). Discriminability index (D) of the test is .55 (D varies between .40-.73). The item of which discriminability index is .40 and above can be evaluated as a very discriminating item (Hopkins et al, 1990). The Cronbach Alpha reliability coefficient of the as .83. That result means that the value is highly reliable (Cohen et al., 2018). Since

there is more than one item for some objectives in the trial form, average difficulty items with high discrimination power were selected and the 20-question final test was created. The average difficulty of the final test ($p = .43$) applied to 542 ninth graders was also acceptable for the sample of the study (Haladyna, 2004). Then, internal consistency of the test was examined with Kuder and Richardson's (1937) formula (20) because the difficulties of the items varied greatly between .28 and .64, and the result ($\rho_{KR20} = .81$) was high.

Procedure

The English Self-Regulatory Strategies Scale, the Self-Efficacy Beliefs Scale and the English Achievement Test were administered respectively in all schools in the sample during the spring semester of the 2018-2019 Academic Year. Since it was thought that students would answer the achievement test more carefully under the supervision of their English language teachers so that the English class hours were chosen for the application as far as possible. Turgut and Baykul (2014) suggest increasing the number of questions that students answer in the test and preventing the incidental correct answers in order to increase the reliability of the test scores. In order to make them read and answer the questions carefully, the students were encouraged to do the achievement test by explaining that they could evaluate their first semester English learning performance internally while answering the test. In addition, it was stated that they could sincerely participate in the practice as they would not be evaluated individually. After the students' questions about the process were answered, the application was started. The application of three data collection tools took an average of 40 minutes.

Data Analysis

The descriptive statistics of the students' English Achievement Test scores, the Self-Regulatory Learning Strategies Scale scores and the English Self-Efficacy Beliefs Scale scores were calculated. To specify whether there existed a relation between the independent variables (self-regulatory learning strategies and English related self-efficacy beliefs) and the dependent variable (English learning achievement), the Pearson correlation coefficient was calculated. The predictive status of self-regulatory strategies with self-efficacy beliefs in relation with the English learning achievement, Multiple Regression Analysis was performed. This study tried to show how dependent variable, achievement in learning English, is explained by English self-efficacy beliefs and self-regulatory learning strategies.

Before the actual analysis, the accuracy of the data entry was checked as a preliminary analysis. Results of the preliminary analysis can be seen in Table 1.

Table 1.
Preliminary Analysis

	<i>N</i>	Mean	Std. Deviation	Tolerance	VIF
Exam Grades	542	33.47	19.74		
Self-Efficacy Total	542	89.17	26.86	.75	1.33
Self-Regulation Total	542	99.48	27.05	.75	1.33

Then, to predict the English learning achievement of 9th grade Vocational and Technical Anatolian High School students, the results of Simple and Multiple Linear Regression Analysis conducted to investigate the possible relation between English self-efficacy beliefs and self-regulatory strategies and the English learning achievement level were reported. The descriptive statistics of the model show that the English Achievement Test average was 33.47 and the standard deviation was 19.74. The average of self-regulatory strategies with a standard deviation of 27.04 was 99.48. All necessary regression analysis assumptions such as normality, multi-dependency, co-variance (homogeneous variances), linearity suggested by Tabachnick and Fidell (2007) were checked before performing the main analyzes to determine the accuracy of the data set and evaluate its suitability for regression analysis. To check the assumption of multiple linearity, which is an indicator of high correlation between the independent variables, the variability inflation factor (VIF), tolerance and bivariate correlations (Pearson) between

the independent variables were analyzed. In regards to Field (2005), VIF valuations need to be less than .10 and tolerance valuations need to be greater than .20. In the study, tolerance value for the variables of English self-efficacy beliefs and self-regulatory strategy was found to be .75 and the VIF value as 1.33 so the assumption proposed by Field (2005) was met. In accordance with Tabachnick and Fidell (2007), the correlation between independent variables need to be less than .90 and it shows that the correlation level is appropriate for the required limits. Therefore, it can be concluded that the multi-dependency assumption is not violated.

Another assumption of multiple regression analysis is covariance and it was checked by scatter plot. According to Field (2005), if the spread on the vertical axis is large, the fixed variance assumption is less valid. Thus, it can be concluded that this assumption is not violated as the scores are randomly distributed and there is no score pattern.

The residual independence assumption is controlled by the Durbin-Watson valuation and this value needs to be between 1 and 3 (Tabachnick & Fidell, 2007). This value is important in terms of showing whether residuals follow any pattern from variable to variable. Since the Durbin-Watson value calculated as 1.47 in this study, the residual independence assumption is provided for regression analysis.

Ethical Issues

Permission was obtained from Ege University Social and Humanities Sciences Research Ethics Committee and Ministry of Education in order to apply the data collection tools of the study to the students in the sample. In addition, permission was granted from the people who developed the scales.

RESULTS

Regarding the first question “Do the self-regulatory learning strategies significantly predict the learning achievement in the English lesson?”, Simple Linear Regression Analysis was conducted. Results of the analysis carried out to determine students’ self-regulatory strategies to predict English achievement scores are stated in Table 2.

Table 2.
Results of Simple Linear Regression Analysis for Predicting English Learning Achievement Scores for Students’ Self-Regulatory Strategies

Variables	Standard Points		Standardized Points	
	B	S _x	β	T
Constant	18.93	3.17		5.96
Self-Regulatory Strategies and English Learning Achievement	.14	.03	.20	4.75**
$R = .20$ $R^2 = .04$ $F = 22.57^{**}$ ($df = 2, 539$) $^{**}p < .01$				

As stated in Table 2, there exists a positive and significant relation with self-regulatory strategies scores and the English achievement scores ($r = .20$; $p < .01$) of the 9th grade students at Vocational and Technical Anatolian High Schools. The parameters of the regression model show that self-regulatory strategy is a significant predictor of the English learning achievement ($df = 2, 539$; $t = 4.75$; $p < .01$). Self-regulatory strategy explains 4% of the variability in English learning achievement.

For the second question “Do the self-efficacy beliefs about English significantly predict the learning achievement in the English lesson?”, also Simple Linear Regression Analysis was performed. Results of the analysis made regarding the prediction of students’ self-efficacy beliefs on the English learning achievement are stated in Table 3.

Table 3.

Simple Linear Regression Analysis Results for The Prediction of The English Learning Achievement Scores for Students' Self-Efficacy Beliefs

Variables	Standard Points		Standardized Points	
	<i>B</i>	<i>S_x</i>	β	<i>T</i>
Constant	.78	2.55		.307
Self-Efficacy and English Learning Achievement	.36	.02	.49	13.37**
<i>R</i> = .49	<i>R</i> ² = .24	<i>F</i> = 178.93** (<i>df</i> = 2, 539)		** <i>p</i> < .01

Table 3 reveals that there exists a significant and positive relation with the self-efficacy beliefs scores and the English learning achievement scores ($r = .49$; $p < .01$) of the students. So, self-efficacy beliefs are meaningful predictors of English learning achievement ($df = 2, 539$; $t = 13.37$; $p < .01$). Self-efficacy beliefs explain 24% of the variability in English learning achievement.

Multiple Linear Regression Analysis was conducted for the third research question, “Do the self-regulatory strategies and self-efficacy beliefs about English significantly predict the learning achievement in the English lesson?”. Results showing that the students’ self-regulation strategies and self-efficacy beliefs about English significantly predicted the English learning achievement presented in Table 4.

Table 4.

The Results of Multiple Linear Regression Analysis for Predicting The English Learning Achievement Scores for Students' Self-Efficacy Beliefs and Self-Regulatory Strategies

Variables	Standard Points		Standardized Points		Sig.	Binary <i>r</i>	Partial <i>R</i>
	<i>B</i>	<i>S_x</i>	β	<i>t</i>			
Constant	3.34	3.07		1.08	.27		
Self-Regulation	-0.47	.03	-.06	-1.49	.13	.200	-.06
Self-Efficacy	.39	.03	.53	12.35	.00	.499	.47
<i>R</i> = .50	<i>R</i> ² = .25	<i>F</i> = 90.78**	** <i>p</i> < .01				

As stated in Table 4 there exists a positive but low level relation between self-regulation and English learning achievement ($r = .20$), but it was clearly visible that the correlation between the variables was calculated as -.06 when the other variable was controlled. There exists a positive and medium level relation with students’ English self-efficacy beliefs and their English learning achievement ($r = .50$). However, when the other variable was controlled, this correlation was calculated as .47.

In company with, the self-regulatory strategies and the self-efficacy about English give a significant and moderate relation with the students’ English learning achievement scores ($R = .50$; $R^2 = .25$; $p < .01$). These two predictor variables explain 25% of total variance in the English learning achievement.

DISCUSSION AND CONCLUSION

In this research, the relation between self-regulatory strategies used by the Vocational and Technical Anatolian High School 9th grade students in English Lessons and their English self-efficacy beliefs and the English learning achievement was examined. First of all, the scores of the learners on the use of self-regulation strategies were a significant predictor, albeit weak ($R^2 = .04$), in explaining the English learning achievement. The findings are consistent with the results of Alfian (2016), Pintrich and De Groot (1990) and Üredi and Üredi (2005) who suggest that there exists a significant relation between self-regulation and academic success. For instance, Alfian (2016), researched the high school students’ language learning strategies in Indonesia, revealed that high-achievers benefit more from the self-regulatory strategies. However, Ömür and Çubukçu (2017) found that the level of self-regulatory strategies usage of students studying English as a foreign language did not significantly predict their year-end academic achievement scores. The reason for that difference in the findings may be the sample

characteristics, the measurement tools used, the differentiation of psychometric properties of the measurements between the groups, educational status and different measurement methods and techniques used in determining the achievement scores.

In accordance with the secondary education institution regulations effective from the 2018-2019 academic year, the reduction in the number of ninth grades' English lesson period from 6 hours to 5 hours per week makes it both difficult to reach the gains of the curriculum and the implementation of it. All these reasons may negatively affect the creation of self-regulation education situations in educational institutions. This situation may explain why self-regulatory learning strategies remain weak in predicting English learning achievement, although there is a significant relation between the English learning achievement and self-regulation. In fact, the English lesson, which is quite suitable for the usage of self-regulatory strategies and to make it intertwined with everyday life and fun, is one of the most unpopular lessons so it can be said that the preferred teaching methods and techniques have an important role in teaching the lesson. In fact, according to Ifenthaler (2012), the metacognitive and self-regulatory strategies of learners cannot be expected to develop in learning environments that focus only on memorizing the knowledge, without taking into account the learning processes. For this reason, it is considered very important for English education to organize learning environments in a way that improves the skills of using self-regulatory strategies.

Another reason for the weak prediction of self-regulation strategies for English learning achievement may be general exams in the final year of secondary schools. Considering that exam-oriented English teaching and students who are preparing for exams tend to answer more questions in less time, it is thought that this peculiarity may negatively affect students' self-regulatory and metacognitive strategies such as planning for fulfilling academic tasks, following the process, and asking themselves questions. In a different way, Sungur and Senler (2009) stated that the standardized exams in Turkey positively affect students' metaconitive activities. However, not all students take the English test in the general exam. Therefore, general exams may not have encouraged students to engage in metacognitive behaviors within the scope of the English lesson. When the ninth-grade curriculum is examined in terms of outcomes -although it is stated by the relevant authorities that the simplification is made- it is striking that it is quite intense. Because of covering so many language items such as verb tenses, grammar rules and new vocabulary as parts of the English curriculum, some of the students noticed that they had difficulties in remembering some subjects while answering these English Achievement Test questions during the research application.

Secondly, it was questioned whether learners' English self-efficacy beliefs have a significant role in estimating the achievement in learning English. Regression analysis results showed that students' self-efficacy beliefs about English was a significant predictor variable in clarifying the course success. This finding supports the findings of previous studies (Huang & Chang, 1996; Mikulecky, 1996; Templin et al., 2001). Self-efficacy beliefs are shapeable phenomena (Klassen, 2004) and there are effective external and internal factors in this shaping stage (Bandura, 1977, 1997). Huang and Chang (1996) indicated that the students' self-efficacy beliefs about learning English were positive depending on variables such as their interest in subjects, the teacher factor, giving appropriate activities comparing their skills with someone else; they found that the academic task was negatively affected by variables such as complexity and excessive effort. The self-efficacy beliefs of vocational high school students who constitute the sample of this study may also be affected by the variables determined by Huang and Chang (1996). For instance, the inadequacy of students' English learning levels before vocational high school may cause them to find the high school curriculum complex. For this reason, teachers who apply the English curriculum in high schools should be sensitive to determine the students' level of readiness, apply the appropriate teaching activities and emotional reactions.

The low self-regulation and the low English learning achievement of the sample with whom this research was conducted may also be due to a variety of reasons such as the students with relatively poor success in the High School Entrance Exam choosing the vocational high schools, the families paying inadequate attention to the students for different reasons and the teachers' belief that only a few of the students

coming to these schools will achieve the desired success. In fact, Gömleksiz and Kılınc (2014) found that students with highly educated parents also have high self-efficacy beliefs about English. Self-regulation is significantly related with the maternal education, family income and mother's job status of the preschoolers. Children with family sociodemographic risk tended to have lower levels of behavioral regulation (Cadima et al., 2015). Also there are some studies which found that students' self-regulation levels significantly differ according to their father's educational status (Iwaniec, 2020). Aktaş (2016) determined that the level of using external motivation resources of Anatolian Vocational High School students is lower than the students in other types of high schools.

Bozkurt (2017) attributed the low self-efficacy beliefs to English to the low socio-economic level. In Turkey, children of families with low socio-economic status generally attend Vocational and Technical Anatolian High Schools. These families with low socio-economic levels cannot provide the opportunity of taking English education for their children at early ages. The lack of English proficiency is increasing between them and their peers who have the chance to get qualified English education at an early age. Correspondingly, English proficiency beliefs are decreasing. In this disadvantaged educational environment and opportunities, it does not seem appropriate to leave students' self-regulation to their individual abilities.

The correlational results of this study indicate that there exists an interaction between the self-efficacy beliefs in academic achievement and usage of self-regulated learning strategies. This study has proven -particularly in academic learning- that learners' self-efficacy beliefs are closely relevant to their usage of self-regulated learning strategies (Perry & Vandekamp, 2000; Pintrich, 2000; Zimmerman, 1998). This finding is consistent with Perry and Vandekamp's (2000) finding that learners who think they can fulfill academic tasks by using metacognitive and cognitive strategies more and longer to achieve academic goals compared to those who do not have such positive perception. This research also shows that learners' self-efficacy beliefs about English are in association with the usage of self-regulatory strategies, which is alike previous findings showing that students' self-efficacy is significantly in relation with the use of self-regulatory strategies in traditional classrooms (Pintrich, 2000; Zimmerman, 1998). Therefore, it can be said that the effect of program applications to improve self-regulatory strategies or English self-efficacy beliefs in vocational high schools increased due to the relationship of both variables.

Implications and Contributions

This study augments the literature on self-efficacy and self-regulation because it examines the effect of self-regulatory strategies and English self-efficacy beliefs on a different sample. The predictive variables of the study show that the Vocational and Technical Anatolian High Schools are relatively unsuccessful in the sense of English achievement compared to other high school types may form a basis for the program studies of vocational high schools in Turkey. It can contribute to the development of vocational high school programs so that their graduates learn English at a level where they can participate in international projects and work abroad. A program that can increase students' self-regulation and English self-efficacy perceptions should be prepared in line with their readiness levels and changing needs according to their profession. The findings of this study may encourage curriculum specialists to consider the elements that help students use self-regulatory strategies and increase their perceptions of English proficiency in the process of preparing their English curriculum. Teachers who implement the programs can also encourage students to use self-regulation strategies in English teaching and to exhibit behaviors to increase their self-efficacy perceptions.

Limitations and Future Work

Based on the finding of the research that shows self-regulatory strategies significantly predicted English learning achievement, it can be suggested that students should be given responsibility in their English lesson curriculum and educational contexts to use self-regulatory strategies. Because of the predictive role of English self-efficacy perception on success to positively improve English self-efficacy beliefs of

students, it may be helpful to start with low level goals appropriate to vocational high school students' English proficiency levels and to make learning tasks more difficult as students understand that they can learn. English language teacher education programs should include course components that instruct pre-service teachers on how to implement activities to foster learners' self-regulatory strategies and self-efficacy. Qualitative research findings on how the self-regulatory strategies and students' English self-efficacy beliefs affect their achievement in learning English may support the development of such curricula. For this reason, qualitative research should be conducted to examine the formation and change process of self-regulation and English self-efficacy beliefs. In order to develop the vocational high school students in regards to the variables of this research, studies in which curricula are tested should also be carried out.

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TÜRKÇE GENİŞLETİLMİŞ ÖZET

Türkiye, İngilizce Yeterlik İndeksinde 80 ülke arasında 62. sırada yer almaktadır (EF English Proficiency Index, 2014). Ulusal ölçekte 2019 yılında yapılan Lisans Yerleştirme Sınavında doğru cevaplanan soru sayısının toplam İngilizce sorularına oranı %40,48'dir (ÖSYM, 2019). Araştırmalar, akademik başarıyı öğretim programı, eğitim materyalleri, öğretim yöntem ve teknikleri kadar öğrenene ait değişkenlerin de etkilediğini göstermektedir (Acat & Demiral, 2002; Tosun, 2014). Bu bulgular, İngilizce başarısında rol oynayan etmenlerin belirlenmesi gerektiğini ortaya koymaktadır.

İngilizce dersindeki başarıyı etkileme olasılığı olan değişkenlerden biri öz düzenleyici öğrenme stratejileridir. Öz düzenleyici öğrenciler ile akademik performansı yüksek öğrencilere benzer özellikler atfedilmektedir (Zimmerman, 1998). Alanyazındaki öz düzenleme tanımlarındaki temel bileşenler planlama, izleme ve üstbilişsel stratejilerdir (Pintrich & De Groot, 1990). Bu stratejiler akademik başarı açısından da önemli aşamalara işaret etmektedir.

Öz düzenleme becerilerinin İngilizce dersindeki akademik başarıyı anlamlı düzeyde etkilediğini ortaya koyan araştırmalar vardır (Kılıç, 2016; Kuyumcu Vardar & Arsal, 2014). Alfian (2016) üstbilişsel, bilişsel ve sosyal stratejilerin kullanımının diğer stratejilerin kullanımından daha fazla olduğunu bulmuştur. Öğrencilerin üstbiliş stratejilerini kullanma düzeyleri ile İngilizce dersi akademik başarıları arasında anlamlı ilişki yoktur (Adıgüzel & Orhan, 2017). Ömür ve Çubukçu (2017) da öz düzenleme stratejileri kullanım düzeylerinin İngilizce dersi akademik başarı puanlarını anlamlı düzeyde yordamadığını saptamıştır. Alagöz (2016), meslek lisesi öğrencilerinin dil öğrenimindeki güdüleyici oryantasyonları ile öz düzenleme stratejilerini kullanımları arasında ve bütün güdüleyici oryantasyonları ile öz düzenleyici öğrenme stratejileri arasında pozitif yönlü bir ilişki olduğunu belirlemiştir. Öz düzenleyici öğrenme stratejileri ile İngilizce dersindeki başarı arasındaki ilişkiyi inceleyen araştırmalarda farklı bulgular ortaya çıkmasına rağmen meslek liseleri için anlamlı ilişki bulunması, bu araştırma açısından önemli bir temel oluşturmuştur.

İngilizce dersindeki başarıyı yordamada incelenebilecek diğer bir değişken İngilizce öz yeterlik inancıdır. Bandura (1997), öz yeterlik algısını, genel anlamda, bireyin, belirli kazanımları edinmesi için gerekli davranışlarını düzenleme ve uygulama becerilerine ilişkin inancı olarak tanımlamıştır. Bu tanımlama, öz yeterlik algısının akademik başarı için önemini göstermektedir. Nitekim araştırma sonuçlarına göre, bu iki değişken birbirleriyle anlamlı ilişki göstermektedir olduğu ortaya konulmuştur (ör., Lane & Lane, 2001; Multon, Brown, & Lent, 1991; Schunk, 1981). İngilizce dersi için de bu yönde bulgular mevcuttur (Duman, 2007; Huang & Chang, 1996; Kitikanan, 2017; Mikulecky, 1996; Rahemi, 2007; Templin, Guile, & Okuma, 2001). Ayrıca, Zimmerman (2000) öz yeterlik algısının öğrenmeye güdülemede etkili olduğunu vurgulamıştır. Benzer şekilde, Robih, Suratman ve Soesatyo (2017) da meslek liselerinde öğrenim gören öğrencilerin öz yeterlik algılarının, öğrenme motivasyonlarını anlamlı düzeyde etkilediğini bulmuştur.

Öz düzenleme becerileri gelişmiş öğrenciler, öğrenme hedeflerine ulaşmak için stratejilerini bilinçli olarak seçerler ve uygularlar. Böylece öğrenme sürecindeki güçlü ve zayıf yönlerini fark edebilirler (Zimmerman, 2002). Dolayısıyla, öz yeterlik inançları da gerçekçi ve olumlu yönde gelişebilir. Türkiye'deki İngilizce Dersinde öz düzenleme ve öz yeterlik değişkenleri kapsamındaki araştırmalar genellikle üniversitelerin hazırlık sınıfları (ör., Adıgüzel & Orhan, 2017; Bademcioğlu, Karataş, & Ergin, 2017; Güç, 2019) ve farklı lise türlerindeki (ör., Bilican & Yeşilbursa, 2015; Duman, 2007; Kineş, 2018) öğrencilerle yürütülmüştür. Bu araştırmalarda öz düzenleyici öğrenme stratejileri ile öz yeterlik değişkenlerinin ayrı başlıklar altında ve başka değişkenler açısından incelendiği tespit edilmiştir (Altay, 2013; Bozkurt, 2017; Büyükduman, 2006; Kılıç, 2016; Necan, 2019; Sevimbay, 2016). Bunun yanında, İngilizce öz yeterlik inancını, Türkiye'de, meslek lisesi örneğinde inceleyen araştırmalar oldukça sınırlıdır (ör., Bozkurt, 2017; Gözüm & Başbay, 2019; Karakış, 2014). Oysa başarılı meslek liselerinde yabancı dil eğitimine büyük önem verilmektedir (Oral, 2012). Özetle, öz düzenleyici öğrenme

stratejileri, İngilizce öz yeterlik inancı ve akademik başarının birbirleriyle ilişkilerinin bütüncül olarak ve meslek lisesi örnekleminde incelenmesine ihtiyaç duyulmuştur.

Bu araştırmanın temel sorusu “Mesleki ve Teknik Anadolu Lisesi 9. sınıf öğrencilerinin öz düzenleme stratejileri ve İngilizce öz yeterlik inançları İngilizce Dersi başarılarını anlamlı düzeyde yordamakta mıdır?” şeklinde oluşturulmuştur. Araştırmanın sonuçlarından yararlanarak, öncelikle meslek liselerinde ve diğer lise türlerinde görev yapmakta olan İngilizce öğretmenleri ve idarecileri, İngilizce dersi öğretim programlarını öğrencilerin öz düzenlemelerini ve İngilizce öğrenme konusunda kendilerini daha yeterli algılamalarını destekleyecek biçimde tasarlayabilir ve geliştirebilirler. Sonuçlar, ülke genelinde yapılacak program çalışmaları için, İngilizce başarı düzeyini yükseltmek amacıyla öz düzenleme ve öz yeterlik inancına yönelik ipuçları sunabilir.

Araştırma ilişkisel tarama modelinde gerçekleştirilmiştir. Araştırmanın örneklemini, İzmir ili merkez ilçelerindeki 69 Mesleki ve Teknik Anadolu Lisesinden küme örnekleme yoluyla belirlenen 10 okulda öğrenim gören 542 dokuzuncu sınıf öğrencisini kapsamaktadır. Araştırmanın veri toplama araçlarından biri Öz Düzenleyici Öğrenme Stratejileri Ölçeğidir (Kadıoğlu, Uzuntiryaki, & Çapa Aydın, 2011). Bu ölçek için yapılan Açıklayıcı Faktör Analizi (AFA) sonucunda, sekiz faktörün ortak varyansın %62’sini açıkladığı belirlenmiştir. Doğrulayıcı Faktör Analizi (DFA) sonuçlarından uyum indekslerinin kabul edilir düzeyde olduğu anlaşılmıştır. Araştırmanın diğer bir veri toplama aracı İngilizce ile İlgili Öz Yeterlik İnancı Ölçeğidir (Hancı Yanar & Bümen, 2012). Bu ölçeğin AFA sonucu, tanımlanan dört boyutun toplam varyansın %61,41’ini açıkladığını ortaya koymuştur. Ölçeğin DFA ile hesaplanan uyum indeksleri çok iyi düzeyde bulunmuştur. Son veri toplama aracı, araştırmacılar tarafından geliştirilen dokuzuncu sınıf İngilizce Dersi Başarı Testidir. Testin 30 soruluk deneme formu 192 öğrenciye uygulanmıştır. 20 soruluk nihai testin ortalama madde güçlük indeksi 0,43, ortalama madde ayırıcılık gücü indeksi 0,55 ve Kuder Richardson-20 güvenirlik katsayısı 0,81 olarak hesaplanmıştır.

Araştırmanın veri toplama araçları, örneklemdaki tüm okullarda 2018 - 2019 Eğitim ve Öğretim Yılı ikinci dönem ortasında uygulanmıştır. Öğrencilere, araştırma ve ölçeklerle ilgili açıklama yapılmıştır. Veri toplama araçlarının bir sınıfta uygulanması ortalama 40 dakika sürmüştür. Veri analizi sürecinde, araştırmanın değişkenleri arasında anlamlı ilişki bulunup bulunmadığı Pearson Korelasyon Analizi ile belirlenmiştir. Öğrencilerin İngilizce’ye yönelik öz yeterlik inançları ile öz düzenleyici öğrenme stratejilerinin İngilizce dersindeki başarılarını yordama gücünün belirlenmesi için Basit ve Çoklu Doğrusal Regresyon Analizi kullanılmıştır. Veri setinin, Tabachnick ve Fidell (2007) tarafından önerilen normallik, çoklu bağımlılık, eş varyanslık (homojen varyanslar), doğrusallık gibi gerekli tüm regresyon analizi varsayımlarını karşıladığı saptanmıştır.

Araştırmada, öğrencilerin öz düzenleme stratejileri ile İngilizce başarıları arasındaki ($r = 0,20; p < 0,01$) ve öz yeterlik inancı ile İngilizce başarıları arasındaki ($r = 0,49; p < 0,01$) ilişkinin anlamlı olduğu görülmüştür. Öz düzenleyici öğrenme stratejilerini kullanmanın ($t(2,539) = 4,75; p < 0,01$) ve İngilizce yeterlik inançlarının İngilizce başarısını anlamlı düzeyde yordadığı belirlenmiştir ($t(2,539) = 13,37; p < 0,01$). Ayrıca İngilizce başarısını açıklamada öğrencilerin İngilizce öz yeterlik inançlarının ($R^2 = 0,24$), öz düzenleme stratejilerini kullanım düzeylerine ($R^2 = 0,04$) göre daha güçlü yordadığı saptanmıştır.

Araştırmanın bulguları doğrultusunda, öğrencilerin öz düzenleme stratejilerini kullanmaları için İngilizce dersi öğretim programlarında ve eğitim durumlarında öğrencilere sorumluluk verilmesi önerilebilir. Öğrencilerin İngilizce öz yeterlik inançlarının olumlu yönde ilerlemesi için öğrencilerin İngilizce yeterlik düzeylerine uygun hedeflerle başlanması ve öğrenme görevlerinin öğrenciler öğrenebildiklerini anladıkça daha zor hale getirilmesi yararlı olabilir. Öğrencilerin öz düzenleme becerilerinin ve öz yeterlik inançlarının gelişiminde önemli bir rolü olan öğretmenlerin hizmet öncesi ve hizmet içi eğitim programlarında da bu değişkenlere yönelik hedeflere ve etkinliklere yer verilmelidir. Bu tür eğitim programlarının geliştirilmesi amacıyla, öz düzenleme ve İngilizce öz yeterlik inancının oluşum ve değişim sürecinin irdelendiği nitel araştırmalar yapılabilir. Meslek lisesi öğrencilerini bu araştırmanın değişkenleri açısından geliştirmek için hazırlanmış eğitim programlarının denendiği araştırmalar da gerçekleştirilebilir.