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FACTORS AFFECTING ACADEMIC PERFORMANCE IN EFL CONTEXT: A MODELING STUDY

(Yabancı Dil Olarak İngilizce Öğrenme Bağlamında Akademik Başarıyı Etkileyen Faktörler: Bir
Modelleme Çalışması)

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Abstract

The increasing demands to learn a foreign language, especially English, encourages researchers to analyze the dynamics of foreign language learning. The purpose of this research is to determine whether the relationship between motivational orientations, basic psychological needs, and academic performance in English class can be modeled. The research group consists of 603 students, attending various grades in a state high school. As data collection tools, Attitude Motivation Test Battery (AMTB) and Basic Needs Satisfaction in General (BNSG) were administered. Data were analyzed via SPSS 17.0 and AMOS 21.0 software program through Structural Equation Model. Results indicate that academic performance in the English course is merely affected by autonomy and attitude, which are among the components of motivational orientation and basic psychological needs. In addition, competence and interest in foreign languages are the remote determiners of academic performance.

Keywords: motivational orientations, basic psychological needs, academic achievement.

Özet

Dil öğrenme ve özellikle İngilizce öğrenme konusundaki talep, araştırmacıları yabancı dil öğrenmeyi etkileyen dinamikleri araştırmaya teşvik etmektedir. Bu araştırmanın amacı motivasyonel eğilimler, temel psikolojik ihtiyaçlar ve İngilizce dersindeki akademik başarı arasındaki ilişkinin modellenip modellenemeyeceğini araştırmaktır. Araştırmanın örneklemini bir devlet okulunda okuyan 603 lise öğrencisi oluşturmaktadır. Araştırmada veri toplama aracı olarak Tutum Motivasyon Test Havuzu (AMTB) ve Genel Temel İhtiyaç Doyumu (BNSG) ölçekleri kullanılmıştır. Toplanan verilerin analizi SPSS 17.0 paket programı ve AMOS 21.0 yazılım programında Yapısal Eşitlik Modeli ile gerçekleştirilmiştir. Araştırmanın sonuçları İngilizce dersindeki akademik başarının temel olarak, motivasyonel eğilim ve temel psikolojik ihtiyaçların unsurları olan özerklik ve tutumdan etkilendiğini göstermektedir. Ayrıca, yeterlik ve ilginin de dil öğrenme başarısının uzak belirleyicileri olduğu ortaya çıkmıştır.

Anahtar Kelimeler: motivasyonel eğilimler, temel psikolojik ihtiyaçlar, akademik başarı.

Introduction

It is an undeniable fact that knowing a foreign language, especially English is a prerequisite for any kind of communication throughout the world. The transmission of the knowledge can only be enhanced through speaking a common language, which in turn helps shareholders find a common way to think, to produce, and to share. English, as a global means of communication, has become widely accepted within the last decades, and efforts to learn this language has increased accordingly. For this very reason, it has become nearly impossible to survive in the global arena, in the professional life, and in the fields of interest without having adequate knowledge of English.

Because of being a part of information era, knowing a foreign language is crucial to one's personal development. It has become a fundamental device to know and use a foreign language to follow economic, social, cultural, and technological developments. Furthermore, it has become impossible to sustain communication through using solely the mother tongue. Although it is a stubborn fact that English is of vital importance because of the reasons stated previously, it not acceptable and easy to learn a foreign language for every individual.

In Turkey's educational settings, English is considered to be the first foreign language and the educators pay utmost attention to make it widely known. English is taught both in state and private institutions ranging from kindergartens to universities at the undergraduate level. Moreover, it is regarded as a medium for many conferences, business associates, and job descriptions. This situation increases the demand for learning English across the country, which necessitates the careful planning and implementation of English language learning strategies to help students achieve their goals. There are certain factors to bear in mind during the planning of English instruction. These factors determine the will and tendency owned by the learner to learn a foreign language, internally and externally. Motivational orientations and basic psychological needs are among the internal factors affecting the desire and achievement level in learning English.

Many studies (Anthoney, 2011; Asan, Nair, & Iyyapan, 2008; Betoret & Artiga, 2011; Engin, 2009; Hoa, 2013; Jurisevic & Pizorn, 2013; Kato, Asumoto, & Aacken, 2007; Niemiec & Ryan, 2009) indicate that the desire and academic performance in learning a foreign language is usually associated with motivational factors and basic psychological needs. However, there is little or no research about the predictive power of motivational orientations and basic psychological needs on academic performance during learning English. The scarcity in the literature about the mentioned subject encouraged the researchers to conduct a survey about factors affecting academic performance about learning English. The purpose of this study is to determine the predictive power of motivational orientations and basic psychological needs on academic performance and to model the interrelated dynamics.

LITERATURE REVIEW

Language motivation has a complicated definition. It has a crucial role in language learning and it is an important determiner of the learner's role to participate in the learning process in an active and positive way (Oxford & Shearin, 1994). Second language acquisition, similar to first language acquisition, has a multifaceted structure, which has both general and situation-specific expansions (Csizer & Dörnyei, 2005).

Motivation to learn a foreign language is substantially related with the individuals' inborn active personality, and the attitude of social environment, which can be either supportive or inhibitive for them.

Motivational orientations

Motivational orientations are among the important determiners of language achievement. According to Gardner (2006), language achievement is based on one's ability and motivation to learn a foreign language. Although motivation and ability have a dual effect on language achievement, they are different concepts each of which contains different dynamics. As an important part of the current study, motivation is about the perception of the learner towards learning a language and the type of this motivation. Although there are various language learning motivation models, socio-educational model of language learning is an important presenter of the ongoing process while learning a foreign language.

Socio-educational model of language learning defines the language motivation within the framework of certain notions such as integrative motivation, instrumental motivation, attitude and interest towards learning English. Integrative motivation can be described as a personal and emotional positive attitude toward the language and the community in which it is spoken. When the learner has a high level of integrative motivation, s/he sometimes shows a tendency to become a part of that community by abandoning his/her origins (Gardner, 2006; Dörnyei, 2003). Instrumental motivation is another concept in socio-educational model of English. Unlike integrative motivation, when the learner has a high level of instrumental motivation, the learner regards the language as an instrument, which in turn helps him/her as a useful device of communication (Gardner, 2006). Attitude and interest are other concepts in language motivation. Gardner and Lambert (1972) claim that attitude towards learning a foreign language can facilitate the language learning process as well as influencing the learners' behaviors towards the target language, its culture, and the community. In addition, there is a mutual relationship between attitudes and achievement. When the learner experiences achievement in language learning, h/she can develop positive attitudes towards the language and the negative attitudes foster failure in the language learning process. Similarly, the interest in foreign language determines the extent to which the learner is concerned with the language and the related things.

Self-determination theory (SDT) and basic psychological needs

Self-determination theory (SDT) is based on the view that individuals has an innate motivation, which directs them towards being curious, interested and ready to achieve. However, they might become alienated and turn into passive and unhappy people. SDT associates this change with different types of motivation (Deci & Ryan, 2000).

Individuals have three basic psychological needs that are called autonomy, competence, and relatedness within the framework of SDT. Social settings satisfying these three basic psychological needs support individuals' innate activeness, help them to have an ideal level of motivation, and make it possible to gain positive psychological, developmental, and behavioral outcomes (Deci & Ryan, 2000). Autonomy refers to the individual's need to behave in parallel with his/her feelings and to conduct a task on one's own. Competence is based on the satisfaction h/she has after the completion of tasks in an efficient way. Relatedness is associated with the individual's need to establish relationships with the social environment. The individual

prefers to have relationships supportive of his /her desires and he/she would like to feel secure and satisfied in the process. Furthermore, h/she desires to feel independent and most importantly, he/she prefers to have the control over things when a relationship has started (Deci & Ryan, 1985; Deci & Ryan, 1995; Deci & Ryan, 2000; Krapp, 2005; Lundberg, 2007; Ryan, 1995; Ryan & Deci, 2000; Ryan & Deci, 2006).

METHOD

Research Design

This study was carried out in 2012-2013 academic year, between March and May with the purpose of examining the predictive power of motivational orientations, basic psychological needs and self-regulation on the academic achievements of secondary school students. The survey model was administered to collect the quantitative data.

The research question is as follows:

- Is it possible to create a SEM-based model among the variables of academic performance, competence, interest, autonomy, and attitude?

Participants and Setting

The study was conducted at a state high school by administering the purposive sampling technique (Creswell, 2012). The participants consist of 603 ($N=603$) secondary school students attending preparatory class, ninth, tenth or eleventh grades. 257 of the participants constituted the female group while 346 of them were male. The students were either local students or they were the students coming from different parts of Turkey and living in the dormitory. The participants answered the questions voluntarily.

Data Collection Instruments

Attitude Motivation Test Battery (AMTB)

For the motivational orientations dimension of the study, a questionnaire adapted from Gardner's (1985) Attitude Motivation Test Battery (AMTB) was used. AMTB is a 104 items questionnaire based on 6-point Likert scale format. The researchers prepared a 28 items questionnaire by taking the dimensions of Interest in Foreign Languages, Attitudes towards learning English, Integrative Orientation, and Instrumental Orientation of AMTB. AMTB is reported to have high reliability (.85) and validity (Gardner, 1985).

Basic Need Satisfaction in General (BNSG)

For the basic psychological needs dimension, Basic Need Satisfaction in General, developed by Deci and Ryan (2000) was used. The questionnaire has 21 items, representing three dimensions of autonomy, competence, and relatedness. It has a 5-point Likert scale format, ranging from 1 (not true at all) to 5 (definitely true). The questionnaire is reported to have high level of reliability (internal consistency), .89 for the total scale (Gagné, 2003). As for the academic achievement, English course grades averages of the students were used.

Procedure

The administration of the school where the data was collected provided an ethical approval for the research with human participants. The data were collected at the beginning of the 2012-2013 second term. During the data collection, the participants were provided with the information that they should respond to the questions as honestly as possible without leaving any of them unanswered and that there were no right or wrong answer. They completed the questionnaires within 15 minutes approximately. The collection of the data through the data collection tools mentioned above provided the researchers with the information about motivational orientations and basic psychological needs of the participants. Afterwards, the English course academic performance grades of the participants were demanded from the school administration, which helped to analyze all the collected data. The model was constructed according to the regression analyses of the data.

Analysis of Data

The predictive power of motivational orientations and basic psychological needs on English academic performance were initially analyzed through regression with SPSS 17.0 software program. After the regression analysis, the analysis of the research was carried out via structural equation modeling (SEM) to test the hypothesized model. The data were statistically analyzed through AMOS 21.0 software program. The strength of SEM is that it can be used to analyze models, identify and remove weaknesses and reveal complex relationships in a hypothesized model. It has an aim to summarize the relationships among the variables optimally (Weston & Gore, 2006; Kline, 1998). Another important strength of SEM is that it can analyze both direct and indirect relationships. While a dependant variable is the predictive one in equation, it can be the predicted one in another. SEM indicates the effect of independent variable on the dependant variable via intervening variable or variables (Hoyle, 1995). The process consists of stages like the determination of the model, the collection of the data, the evaluation of the coherence, and interpretation (Hoyle, 1995; Weston & Gore, 2006). In the current study, similarly, a model was constructed in accordance with SEM and was tested accordingly. The tested model can be seen in Figure 1 below:

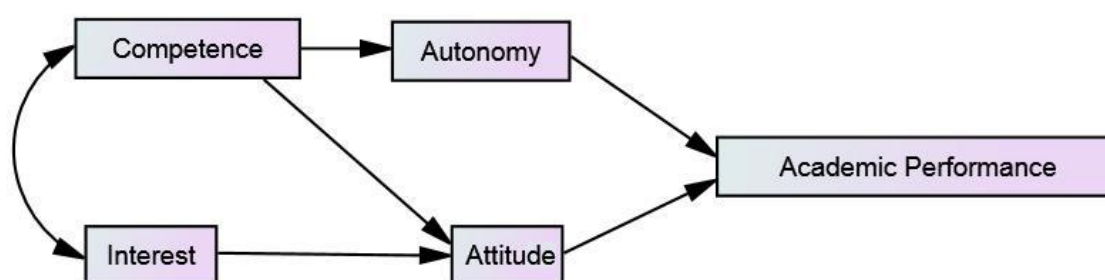


Figure 1. The tested model

The study is limited to the students of a well-known and successful state high school and they voluntarily accepted participating in the research.

RESULTS

As the study was conducted with the variables like interest in foreign languages, attitudes towards learning English, autonomy, and competence, the predictive power of these variables were first tested through regression analyses. Table 1 indicates the regression weights, values of standard error, critical ratio, and *p* values of these variables:

Table 1. *Regression weights and values of standard error, critical ratio and p of the variables in the model*

			Estimate	S.E.	C.R.	P
Attitude	<---	Interest	.62	.03	17.48	.00
Attitude	<---	Competence	.18	.05	3.65	.00
Autonomy	<---	Competence	.61	.03	16.27	.00
AcademicPerformance	<---	Autonomy	.23	.07	3.26	.00
AcademicPerformance	<---	Attitude	.15	.05	3.02	.00

p<0.01

As it is seen in Table 1, interest and competence has a predictive power on attitude at *p*<0.01 level; competence has a predictive power on autonomy at *p*<0.01 level; and autonomy and attitude has a predictive power on academic performance at *p*<0.01 level. Standardized regression weights of variables are illustrated in Table 2:

Table 2. *Standardized Regression Weights*

			Estimate
Attitude	<---	Interest	.59
Attitude	<---	Competence	.12
Autonomy	<---	Competence	.56
AcademicPerformance	<---	Autonomy	.13
AcademicPerformance	<---	Attitude	.12

Table 2 demonstrates the standardized regression weights. According to the table, the regression weight of interest on attitude is .59; the regression weight of competence on attitude is .12; the regression weight of competence on autonomy is .56; the regression weight of autonomy on academic performance is .13; and the regression weight of attitude on academic performance is .12. The correlation between interest and

competence is demonstrated in Table 3:

Table 3. *The correlation between interest and competence*

		Estimate
Interest <-->	Competence	.34

As it is seen in Table 3, the correlation value between interest and competence is .34 and this value is significant at $p < 0.01$ level. After the regression and correlation values were examined, a theoretically convenient model was drawn between these variables and it was tested in accordance with SEM. The model given in Figure 2 was tested in parallel with the model fit indices given below.

The model adequacy tests were first conducted via chi-square test. When the chi-square tests give positive results, other fit test are carried out (Weston, 2006). Although it is difficult to say that there is a consensus about the acceptable ratio of this test, it is recommended that the ideal value can range from 5.0 to 2.0 (Arbuckle, 2012; Hooper, Coughlan, & Mullen, 2008). In addition, some further additional goodness-of-fit indices can be calculated. These are the Robust Comparative Fit Index (R-CFI), the Robust Non-Normed Fit Index (RNNFI), the Robust Root Mean Square Error of Approximation (R-RMSEA), and Relative Fit Index (RFI). A good-fitting model can be indicated when the CFI and NNFI values are above 0.90 and RMSEA values are below 0.08 (Arbuckle, 2012; Bryne, 2001; Hooper et al., 2008; Hu & Bentler, 1999). The result of the test of the model is illustrated in Figure 2:

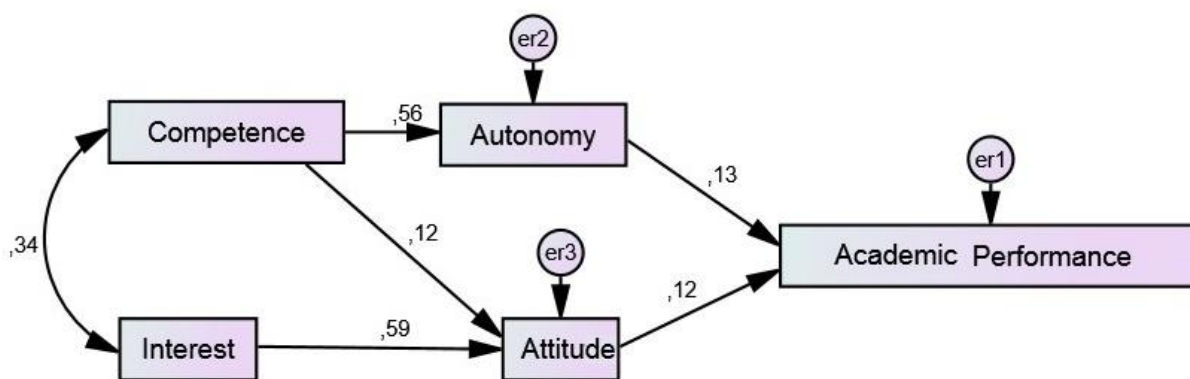


Figure 2. The Model

As it is seen in Figure 2, the results revealed support for the hypothesized model and they indicated that English academic performance is highly related with competence, autonomy, interest, and attitude. Although autonomy and attitude is directly related with academic performance, competence and interest have an indirect relationship. Furthermore, competence and interest have a mutual relationship whereas competence has a one-way relationship with autonomy and attitude. Finally, attitude is determined by the degree of competence and interest while autonomy is affected by competence on a large scale.

Table 4. *The Results of Fit Indices*

	CMIN/DF	R-CFI	RNNFI	RMSEA	RFI
MODEL	3.91	.98	.97	.07	.91

As it is seen in Table 1, CMIN/DF is $3.91 < 5$, which represented an adequate fit to the model. The results of the chi-square test indicated that all the parameters were significant (3.91). In addition, R-CFI is $.98 > .90$; RNNFI is $.97 > .90$; RMSEA is $.07 < .08$, and RFI is $.91 > .90$. These values indicated that the fit indices were adequate for the testing of the model.

DISCUSSION

This study was carried out in order to determine whether it was possible to model the relationship between the variables of interest in foreign languages, attitudes towards learning English, competence, autonomy and English course academic performance. The result of the study indicates that all the mentioned variables have a predictive power on academic performance. In other words, interest in foreign languages, attitudes towards learning English, competence, and autonomy is an important determiner of academic performance in English classes. Within this scope, the model drawn in the study supports the common view that academic performance is affected by motivational factors and basic psychological needs.

When the literature is reviewed, it is seen that there are several studies claiming that academic performance is affected by motivational factors like interest in foreign languages, attitudes towards learning English or components of basic psychological needs such as autonomy and competence. Betoret and Artiga (2011) conducted a study with the purpose of examining the relationship between student psychological need satisfaction, their approaches to learning, their strategies of avoidance, and their achievement in certain domains. The results of the study indicated that the satisfaction of basic psychological needs have a positive contribution to achievement and the use of deep learning approaches rather than surface. Asan et al. (2008) carried out a study in order to find out the effects of certain motivational factors like motivation, attitude, and language anxiety. The results of the study demonstrated that attitude has a great impact on students' English learning performance. Tella (2007) examined the effect of motivation on academic performance and found out that attitude and interest were important predictors of academic performance.

Furthermore, competence has a relationship with interest, autonomy, and attitude while interest is linked to competence and attitude. In other words, it can be argued that attitude towards learning English can be predicted by the level of competence and interest. Moreover, autonomy is mostly determined by the level of competence. When the literature was reviewed, a similar study was noticed. Matsumoto (2009) conducted a study in order to reveal how English learning motivation is influenced by teacher care and help which are perceived by the student. At the end of the study it was concluded that the level of the motivation increased

when the level of English increased. Within this respect, it can be assumed that the level of competence is a good predictor of autonomy, attitude, and academic achievement.

Although there are numerous other factors affecting the academic performance of the students in English courses, the proposed model in the current study depicted the interrelated links between academic performance, motivational factors like interest in foreign languages, attitudes towards learning English and basic psychological needs such as autonomy and competence.

Conclusion and Suggestions

Learning a foreign language has become an inevitably important determiner of being a qualified citizen, employee, and individual. In addition, it is crucial for the individual to follow the developments in any field of expertise as well as the current issues occurring throughout the world. Financial, social, cultural and technological advancements in the global sense can only be pursued with the help of a foreign language, especially English. The extent to which the learner knows the language is determined by the academic performance at educational settings. Within this scope, motivational factors like interest in foreign languages and attitudes towards learning English have a predictive power on academic performance in English courses. In addition, basic psychological needs such as autonomy and competence can be good predictors of the English academic performance inside the classroom settings.

This study is critical in the sense that the predictive power of interest in foreign languages, attitudes towards learning English, competence, and autonomy on academic performance is illustrated through a model that was hypothesized and tested during the study. In this respect, the underlying factors behind the academic performance were depicted elaborately and instructively within the framework of the research.

For future studies, it can be suggested that:

1. Further studies are carried out with a larger sample group.
2. Further studies examine the predictive power of other motivational variables like intrinsic or extrinsic motivation on academic performance.
3. The model is supported by qualitative data taken from the participants.

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