The Relationship Pattern Between English Prep School Students' Academic Performance and Their Motivation, Anxiety and Attitudes

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Abstract

The aim of this study was to determine the predictive and explanatory relationship model between the academic performance of university prep school students and the level for their motivation, anxiety and attitudes. A total of 631 university students formed the study group. To determine the students' motivation, 'Academic Motivation Scale'; to find out their anxiety level 'Foreign Language Classroom Anxiety Scale' and for their attitudes 'Questionnaire on Attitudes towards English' were applied. The students' grades in the autumn term were taken into account as indicators for the academic performance. The data gained through the research were

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analyzed by using SPSS 21.0 and AMOS 22.0 software program through Structural Equation Model (SEM). At the end of the research, the model which was first suggested for the test was analyzed, tested and verified after some modifications suitable with indexes. The results indicated that there was a negative and significant relationship between attitudes towards English and foreign language classroom anxiety; extrinsic motivation and foreign language classroom anxiety; and intrinsic motivation and foreign language classroom anxiety levels. However, it was found out that, there was a positive and significant relationship between students' attitudes towards English and intrinsic motivation; their extrinsic motivation and attitudes towards English and their intrinsic motivation and extrinsic motivation levels. In addition, unlike anxiety levels, students' attitudes towards English, intrinsic and extrinsic motivation levels had a significant power to predict academic performance. In the light of the findings, the relationship pattern between English prep school students' academic performance and their motivation, anxiety and attitudes was suggested as a model.

Keywords: Second language learning; Extrinsic motivation; Intrinsic motivation; Attitude; Anxiety.

Üniversite Hazırlık Programı Öğrencilerinin Motivasyon, Kaygı ve Tutumları ile Akademik Başarıları Arasındaki İlişkiler Örüntüsü

Özet

Bu çalışmanın amacı, üniversite hazırlık programına devam eden öğrencilerin motivasyon, kaygı ve tutum düzeyleri ile akademik performansları arasındaki açıklayıcı ve yordayıcı modeli belirlemektir. Araştırmanın çalışma grubunu, 631 üniversite öğrencisi oluşturmuştur. Katılımcıların motivasyon düzeylerini belirlemek için 'Akademik Motivasyon Ölçeği'; kaygı düzeylerini belirlemek için 'Yabancı Dil Sınıf Kaygısı Ölçeği' ve tutumlarını belirlemek amacıyla da 'İngilizceye Yönelik Tutum Anketi' kullanılmıştır. Öğrencilerin, Güz Yarıyılı boyunca hazırlık sınıflarında aldıkları notlar da akademik performans göstergesi olarak alınmıştır. Elde edilen veriler SPSS 21.0 ile AMOS 22.0 programları yardımıyla analiz edilmiş ve değerlendirilmiştir. Araştırma sonucunda denenmek üzere öne sürülen ilk modelin testi yapılmış ve uyum indekslerine göre yapılan değişikliklerden sonra

model doğrulanmıştır. Elde edilen bulgular, öğrencilerin İngilizceye yönelik tutumları ile yabancı dil sınıf kaygıları arasında; dışsal motivasyon düzeyleri ile yabancı dil sınıf kaygı düzeyleri arasında ve içsel motivasyon düzeyleri ile yabancı dil sınıf kaygı düzeyleri arasında anlamlı ve olumsuz bir ilişki olduğunu ortaya koymuştur. Buna karşın, öğrencilerin İngilizceye yönelik tutumları ile içsel motivasyon düzeyleri arasında; dışsal motivasyon düzeyleri ile İngilizceye yönelik tutumları arasında ve içsel motivasyon düzeyleri ile dışsal motivasyon düzeyleri arasında anlamlı ve olumlu bir ilişki olduğu görülmüştür. Ayrıca, yabancı dil sınıf kaygı düzeylerinin aksine, öğrencilerin İngilizceye yönelik tutum, içsel motivasyon ve dışsal motivasyon düzeylerinin, akademik performansı yordamada anlamlı bir güce sahip olduğu anlaşılmıştır. Elde edilen bulgular ışığında İngilizce Hazırlık Programı öğrencilerinin İngilizceye yönelik tutum, yabancı dil sınıf kaygısı, içsel motivasyon, dışsal motivasyon düzeyleri ile akademik performans arasındaki açıklayıcı ve yordayıcı ilişkiler örüntüsü model olarak önerilmiştir.

Anahtar Kelimeler: Yabancı dil öğrenimi; Dışsal motivasyon; İçsel motivasyon; Tutum; Kaygı.

Introduction

An increasing quantity of students loses their interests in schools as well as in learning process. Authorities and teachers are aware of the fact that most students come to classes only for the sake of attendance and points (Mo, 2011; Lin, 2012). Thus, it is of educators' responsibility to deal with the fact that academic performance is not only the result of cognitive factors; affective factors such as motivation, attitude and anxiety play also crucial roles in learning as well as cognitive factors do (Tasnimi, 2009; Djigunović, 2006; Gardner, 1985). Therefore, affective variables such as motivation, anxiety and attitudes have to be considered in the process of teaching and learning since they signify critical importance.

Motivation

Historically, the term motivation was generally perceived as a natural result of 'reinforcement, instincts, expectancy, needs and drive' (Gardner, 2006; Schunk, 2011; Moreno, 2010) and naturally, it was described within a frame of 'unidimensional concept' (Areepattaman-nil, Freeman, Klinger, 2011; Ryan and Deci, 2000; Deci and Ryan, 2008). However, lately, it has been considered more 'process-oriented' (Gardner, 2006) and has also been suggested that numerous factors determine people's behaviors and reactions (Ryan and Deci, 2000). Deci and Ryan (1985), in their Self Determination Theory (STD), argue that motivation in general consists of 'three global types: intrinsic, extrinsic and amotivation'. Unlike the traditional consensus, the theory basically focuses on the types of motivation, rather than just the amount (Deci and Ryan, 2008).

Ryan and Deci (2000) argue that intrinsic motivation is 'the doing of an activity for its inherent satisfactions rather than some separable consequences'. According to the theory, when a student is intrinsically motivated, he or she does an activity because of the pleasure and satisfaction gained through the activity itself (Ryan and Deci, 2000; Vallerand, Pelletier, Blais, Biere, Senecal and Valleries, 1992; Gagne and Deci, 2005; Lepper, Green and Nisbett, 1973). In other words, a student is said to be intrinsically motivated when he or she participates in an activity because the activity itself is somehow enjoyable, satisfying and interesting (Afzal, Imran, Muhammad and Kashif, 2010; Kaufman, Soylu and Duke, 2011).

On the other hand, Ryan and Deci (2000) put forward the idea that many of the activities of people are not intrinsically motivated especially after childhood, as well. As they grow up, children come across with the social pressures and lose their intrinsic motivation. In this case extrinsic motivation, which is defined as 'a construct that pertains whenever an activity is done to attain some separable outcome' (Ryan and Deci, 2000) becomes important. People with extrinsic motivation deal with actions which offer 'rewards such as money, prestige or journal publications' (Abuhamdeh and Csikszentmihalyi, 2009).

Similarly, in the field of Second Language Learning, there have been many endeavors to determine the role of motivation in the learning process (Wang, 2008; Moskovsky and Fakieh, 2009). Gardner (1985) argues that the 'term motivation in language learning is generally used with respect', because it expresses a simple explanation of success, as in the statement, 'If the students are motivated to learn the language, they will'. Since language learning is generally considered to be different from learning other subjects because of its nature (Dörnyei, 2003), there are various motivation theories of language learning. Among them The Socio-Educational Model, which includes the elements of motivation, attitude and anxiety, is the most prominent one (Gardner and Lambert, 1972; Wang, 2008). In this theory, Gardner and Lambert (1972) considered two types of motivation: 'integrative' and 'instrumental' motivation. Individuals with integrative motivation learn a foreign language because they have a desire to get to know the communities who speak that language. In this sense, they want to be a

part of the community in which the target language is spoken (Gardner, 2010; Tremblay and Gardner, 1995; Gardner and Lambert, 1972; Rifai, 2010; Root, 1999).

In contrast, individuals with instrumental motivation learn a foreign language because of a practical or utilitarian reason, such as getting a well-paid job or being promoted in their jobs (Atay, 2004; Rifai, 2010; Oxford and Shearin, 1994). In other words, practicality and usefulness of a foreign language are taken into consideration (Morreale, 2011).

Attitude

Another important concept in affective domain is the notion of attitude. Although attitude and its processes have long been searched and discussed, there is not a clear definition of the term (Gardner, 1985). In generall, it is described as an element of evaluation (Gardner, 1985; Chaiken, 2001; Petty, 2001). In this sense, it can be considered as the individual's reaction to an object, event or a situation and therefore it is said to consist of experiences, beliefs and emotions (Basadur and Basadur, 2011).

Djigunović (2006) asserts that the relationship between motivation and attitudes in foreign language learning is a well-known fact and he also claims that 'attitudes are taken as a basis on which motivation for learning is formed or established'. Therefore, determining students' attitudes towards learning will be useful both for students and for educators (Tasnimi, 2009). In other words, students with positive atti-

tudes about a subject will be willing to join the activities of the subject and will get the satisfaction. For example, Gardner and Lambert (1972) claim that students who have negative attitudes towards a foreign language will find it difficult to learn the language. The same assumption is also hold by Lin (2012) who also claims that until Krashen's theory, affective variables including motivation, beliefs, attitudes and anxiety were not considered to be the variables that affect academic performance.

Gardner (2010) even states that attitude affects motivation in language learning and naturally has important effects on academic performance. In this sense, he mentions two kinds of attitude variables: 'attitudes toward learning the language and attitudes toward the other language community' (Gardner, 1985; Morreale, 2011); the former of which is about education and the latter is social. According to Morreale (2011), Gardner advocates the idea that in terms of success in language learning 'attitudes toward learning a second language' which are about education, are more important than 'the attitudes towards the second language population' which are concerned with social issues.

Anxiety

In the field of language learning, the term anxiety is also one of the most significant variables which affect academic performance. All the shareholders in the process of language teaching and learning agree with the idea that anxiety obstructs language learning to some extent (Horwitz, 2001; MacIntyre, 1995).

Historically, psychologists and educators put the term anxiety into different groups such as trait anxiety which refers to a sort of stress that is peculiar to an individual and state anxiety which refers to a sort of stress developed in reaction to a fear or danger of a particular situation (Horwitz, 2001; Tovilović, Novović, Mihić and Jovanović, 2009; Andrade and Kenneth, 2009).

However, Horwitz, Horwitz and Cope (1986) took a step further in literature and claimed that in language learning process, another kind of anxiety, which they call 'foreign language anxiety', occurs. According to them this kind of anxiety 'may be a factor in student objections to foreign language requirements' (Horwitz, Horwitz and Cope, 1986).

Likewise, MacIntyre (1995) asserts that language learning is related to cognitive domain and includes 'encoding, storage, and retrieval processes, and anxiety can interfere with each of these by creating a divided attention scenario for anxious students'. Therefore while speaking or giving an answer to the teacher's question in a classroom, a student concentrates both on the question and evaluation by others. In the same way, Horwitz, Horwitz and Cope (1986) share the same idea and emphasize the significant relationship between foreign language anxiety and 'three related performance anxieties: 1) communication apprehension; 2) test anxiety; and 3) fear of negative evaluation'.

Taken the outline into consideration, the goal of this study was intended to determine the predictive and explanatory relationship between the academic performance of university students and their

motivation, anxiety and attitudes.

As it can be inferred from the theoretical framework above, it is of highly importance to take affective variables into consideration as far as the academic performance is concerned.

Method

Within the framework mentioned above, the purpose of this study emerged as to determine a predictive and explanatory model between preparatory school students' academic performance at university and some affective variables such as motivation, attitude and anxiety. In this sense, the following research question formed the starting point of the present study:

What is the predictive and explanatory model between preparatory school students' academic performance at university and some affective variables such as motivation, attitude and anxiety?
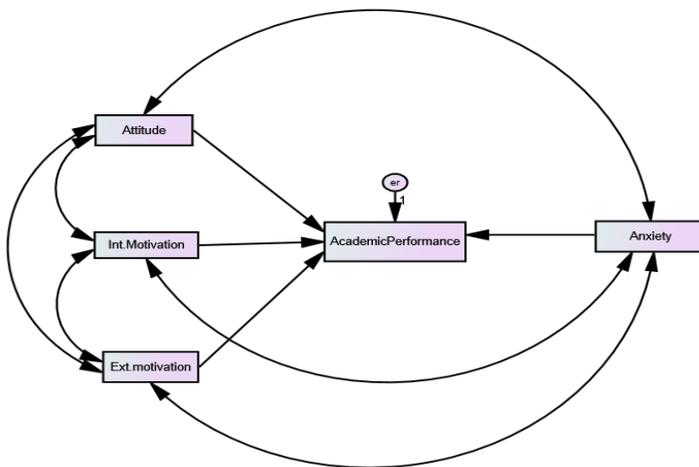
Figure 1. The Tested Model

In the figure 1 the model to be tested was formed within the theoretical theories affective variables and academic performance.

Participants

The study group of this research consisted of 654 university students attending to preparatory classes at Yıldız Technical University. 23 questionnaire sheets were ignored due to the poor feedback. In the end, 631 students formed the study group. 167 of the students were 'A' level students who started the academic year at Pre-Intermediate level; 259 of them were 'B' level and 205 were 'C' level students, both of whom started at Elementary level.

Table 1. Frequency and Percentage Distribution by Gender

Gender	f	%
Female	224	35.5
Male	407	64.5
Total	631	100

Table 1 showed the distribution of students based on their gender. As it can be seen, there were 234 (35.4 %) girls and 427 (64.6 %) boys participated in this research.

Instruments

Academic Motivation Scale

In order to determine the students' motivational levels towards English, Academic Motivation Scale which was developed by Vallerand et al. (1992) and translated into Turkish by Karataş and Erden (2012) was used. The scale consists of 27 items and three sub-scales

which assess three types of intrinsic motivation (intrinsic motivation to know, to accomplish things and to experience stimulation), three types of extrinsic motivation (external, introjected and identified regulation) and amotivation (Vallerand et. al. 1992).

The Turkish form of the scale was conducted on 246 university students and factor analysis showed that internal consistency coefficient was .97 Cronbach Alpha. The factor analysis results also showed that there were seven factors explaining 68.59 % of the total variance in the scale (Karataş and Erden, 2012).

Foreign Language Classroom Anxiety Scale

Foreign Language Classroom Anxiety Scale (FLCAS) was originally developed by Horwitz, Horwitz and Cope (1986) to define the anxiety levels of students in foreign language classes and was adapted to Turkish by Aydın (2001). The scale is composed of 33 items. It is a 5 point Likert scale survey which tries to find out the participants' negative performance expectation, social comparisons, psycho-physiological symptoms, and fear of negative evaluation and avoidance behaviors (Aydın, 2001).

The scale was conducted on 300 university students who were studying in the foreign language department and factor analysis demonstrated that internal consistency coefficient was .93 Cronbach Alpha. Test-retest process was applied for eight weeks and test-retest reliability coefficient was found to be .83 (p=.001) (Aydın, 2001).

Questionnaire on Attitudes towards English

The original form of the questionnaire was developed by Aiken (1979; as sited in Tunç, 2003) as 'The Attitudes towards Maths and Science Scale'. The questionnaire was translated in to Turkish and adapted as 'The Questionnaire on Attitudes towards English' by Tunç (2003). The questionnaire is composed of 24 items assessing the participants' general ideas about English as a subject studied at school. It is a Likert type scale which is answered as 'strongly agree', 'disagree', 'undecided', 'agree' or 'strongly agree'.

The reliability of the scale in Aiken's (1979; as sited in Tunç, 2003) original search was found to be .81 (Cronbach's Alpha). The same scale was utilized by Aksu (1985; as sited in Tunç, 2003) and in her study and the reliability of the scale was found to be .77 (Cronbach's Alpha). The reliability of the Turkish form of the scale was calculated with the use of Cronbach's Alpha and the result was .77 (Tunç, 2003).

Students' Grades

In this study, to evaluate the relationship between academic performance and affective variables, the students' grades in the autumn term were taken into account. The grades which the students got during the term were the total grades of the following:

Table 2. The Assessment of Grades

|	
3 Quizzes	10 %
2 Progress tests	10 %
2 Mid-terms	40 %
Portfolio Work (Writing)	10 %
Graded reader-Reader Quizzes	10 %
Speaking Presentation + Oral Exam	10 %
Class Participation + Homework	10 %
Total	**100**

Data Analysis

In order to test the analysis of the data, Structural Equation Modeling (SEM) was applied. To do this, the data were statistically evaluated through AMOS 22.0 software program. Structural Equation Modeling can briefly be described as a group of statistical methods which let us understand 'the relationship between one or more than one independent variables and one or more than one dependent variables' (Ullman and Bentler, 2013). What is more, SEM can also be used to test a model, analyze it and to understand multidimensional structure of the model.

It can also be stated that SEM 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 and Gore, 2006; Kline, 1998). Another important strength of SEM is that it can analyze both direct and indirect relationships. While a dependent variable is the predictive one

in equation, it can be the predicted one in another. SEM indicates the effect of independent variable on the dependent variable via intervening variable or variables. The process consists of stages like the determination of the model, the collection of the data, the evaluation of the coherence, and interpretation (Weston and Gore, 2006).

Results and Discussion
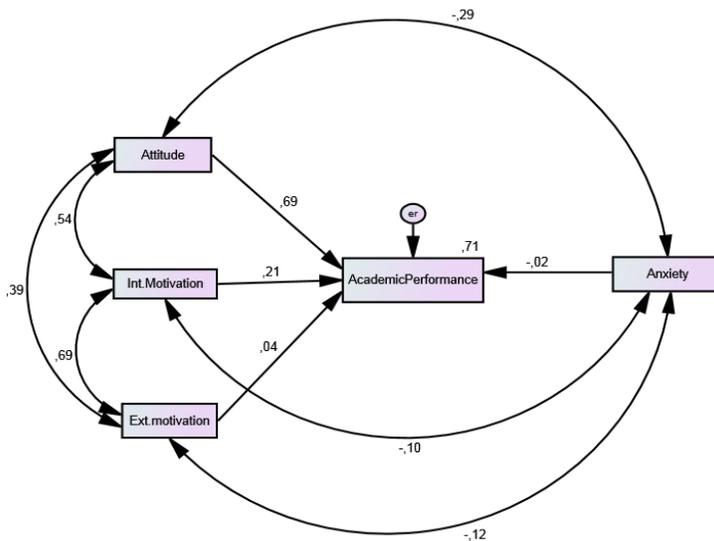
Figure 2. The Initial Model

The model above was tested through maximum likelihood in the Amos program. One of the ways to test a model is using some goodness-of-fit indexes. According to Schermelleh-Engel, Moosbrugger and Müller, (2003) an evaluation of a model should be compatible with these figures.
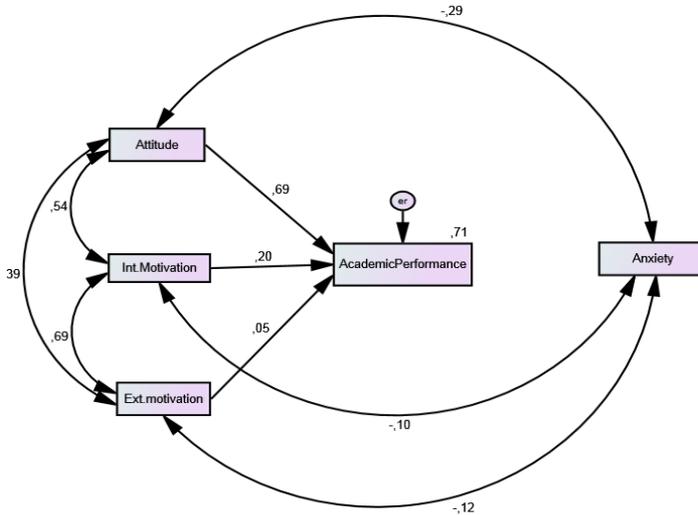
Table 3. Recommendations for Model Evaluation

Fit Measure	Good Fit	Acceptable Fit	The Tested Model
$\chi2/df$	$.0 \leq \chi2/df \leq 2$	$2 \leq \chi2/df \leq 3$	.0
RMSEA	$0 \leq RMSEA \leq .05$	$0 \leq RMSEA \leq .08$	.25
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.1
CFI	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI \leq .97$	.1
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq AGFI \leq .95$	.1
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	.1

RMSEA=Root Mean Square Error of Approximation, NFI=Normed Fit Index, CFI=Comparative Fit Index, GFI=Goodness-of-Fit Index, AGFI=Adjusted Goodness-of-Fit-Index (Schermelleh-Engel, Moosbrugger and Müller, 2003).

According to the goodness-of-fit indexes, the value of chi-square that is divided by the degree of freedom should be less than three (Kline, 1998, as cited in Alcı, 2006). In the tested model, it can be seen that, the value of chi-square that is divided by the degree of freedom is '0'. This shows that the value of chi-square is less than three and the model has a suitable index value.

What is more, the results of the research also revealed that the goodness-of-fit indexes of the initial model were as follows: NFI=.1(>.90); CFI=.1(>.95); GFI=.1(>.90); AGFI=.1(>.90) which meant that the model's fitness was acceptable and the values were within the limits. However, the value of RMSEA was found .25 which was more than the recommended value (<.05). Thus, the model was revised again as follows.

In order to provide the suitability of the model as a whole, the single headed row between anxiety and academic performance was skipped and after this modification, the model was re-evaluated as in the table 4.

Figure 3. The Last Model

In the Figure 3 the last model was modified and evaluated again.

Table 4. Values of the Last Model

Fit Measure	Good Fit	Acceptable Fit	The Tested Model
$\chi2/df$	$.0 \leq \chi2/df \leq 2$	$2 \leq \chi2/df \leq 3$	.62
RMSEA	$0 \leq RMSEA \leq .05$	$0 \leq RMSEA \leq .08$	.00
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	.99
CFI	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI \leq .97$	.1
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq AGFI \leq .95$	.1
AGFI	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI \leq .90$	.99

The figures shown in table 4 indicated that the last model in which the single headed row between anxiety and academic performance was skipped is compatible with the goodness-of-fit indexes. Divided by the degree of freedom, the value of chi-square was found less than three (.62).

Likewise, the values of NFI=.99(>.90); CFI=.1(>.90); GFI=1(>.90); AGFI=.99(>.90) indicated that the model is compatible and its goodness-of-fitness values are within the limits. Unlike in the initial model, in the last model, the value of RMSEA was found .00 which is within the limits of the recommended value (<.05).

In table 5, regression weights, standard errors, critical ratios and 'p' values of the variables of the tested model are listed up.

Table 5. Regression Weights, Standard Errors, Critical Ratios and 'p' Values of the Variables of the Tested Model

VARIABLE	Estimate	St. Err.	Critical Ratio	p
Attitude → Acad. Perf.	.53	.022	7.85	.00*
Int. Mot. → Acad. Perf.	.14	.02	6.46	.00*
Ext. Mot. → Acad. Perf.	.04	.03	1.61	**.**10*
Total Effect Value: .71 *p <.01				

Table 5 indicates that the power of attitude towards English to predict academic performance is .53; the power of intrinsic motivation to predict academic performance is .14 and the predictive power of extrinsic motivation over academic performance is .04. The level of total effect value of attitude towards English, intrinsic motivation and

extrinsic motivation is .71.

Data from the table 5 also reveal that there is a significant relationship between attitude towards English and academic performance (Critical Ratio-CR=7.85; p<.01). Likewise it can be seen that the relationship between intrinsic motivation and academic performance is significant, as well (CR=6.46; p<.01). On the other hand, the data indicate that the relationship between extrinsic motivation and academic performance is not significant (CR=1.61; p<.05)

In table 6, correlations, standard errors, critical ratios and 'p' values of the variables of the tested model are itemized.

Table 6. Correlations, Standard Errors, Critical Ratios and 'p' Values of the Variables of the Tested Model

VARIABLE	Estimate	St. Err.	Critical Ratio	p Value
Int. Mot. ◄►Ext. Mot.	.69	8.54	14.57	.00*
Int. Mot. ◄► Attitude	.54	10.68	12.20	.00*
Ext. Mot. ◄► Attitude	.39	6.68	9.30	.00*
Int. Mot. ◄► Anxiety	.-10	12.36	-2.48	.01**
Ext. Mot. ◄►Anxiety	-.12	8.21	-3.13	.00*
Attitude ◄► Anxiety	-.28	11.34	-7.06	.00*
Total Effect Value: .71	*p: <.01, **p.05			

We can see from the table 6 that there is a positive and significant relationship between intrinsic motivation and extrinsic motivation (CR=14.57; p=<.01); between intrinsic motivation and attitude towards English (CR=12.20; p<.01), and between extrinsic motivation and

attitude towards English (CR=9.30; p<.01). On the other hand, the results display that the relationship between intrinsic motivation and foreign language anxiety is negative and significant (CR=-2.48; p<.05). Similarly, there is a negative and significant relationship between extrinsic motivation and foreign language anxiety (CR=-3.13; p<.01), and between attitude towards English and foreign language anxiety (CR=-7.06; p<.01).

Conclusion

Considered the theoretical frame and empirical researches on the relationship between academic performance and motivation, anxiety and attitude, in this study it was hypothesized that motivation was a significant predictor of academic performance. As expected, the findings of the study revealed that intrinsic motivation was a significant predictor of academic performance and affected it in a positive way. The results are also compatible with most of the studies which are carried out in different countries and different samples, from which it can be generally infers that motivation has an important effect on academic performance in a positive way (Goodman, Jaffer, Keresztesi, Mamdani, Mokgatle, Musariri, Pires, Schlechter, 2011; Mo, 2011; Cheng, Lin and Su, 2011; Ming, Ling and Jaafar, 2011; Nishitani and Matsuda, 2011). As Ryan and Deci (2000) argue, 'to be motivated means to be moved to do something'. Then, when students are motivated, they will do any activities because of the pleasure and satisfaction. That is to say, they will find the activity itself interesting and they will likely be more successful. Therefore, it is of crucial importance for

learners as well as for educators that internalization of experiences enhances the interest and success, as well.

As for the notion of attitude, in this study it was hypothesized that attitude towards a foreign language could predict academic performance of the students and it is a significant predictor of the performance. As hypothesized, the findings displayed the fact that attitudes can predict academic achievement. In other words, students who have positive attitudes about English are enthusiastic to participate in the process of learning (Gardner and Lambert, 1972; Lin, 2012; Gardner, 2010; Morreale, 2011).

Lastly, with regard to anxiety, it was hypothesized that there was a negative relationship with foreign language anxiety and academic performance. That is to say, as hypothesized, anxiety is not a predictor of academic performance (Kitano, 2001; Nishitani and Matsuda, 2011; Yaylı, 2012). In other words, anxiety obstructs learning to some extent and therefore reduces academic performance.

All in all, theories and empirical results of affective variables such as motivation, attitude and anxiety convey the view that they have important roles in teaching and learning a foreign language. It is therefore important to determine the roles and levels of these variables in the process of learning a foreign language and consider them in planning of the process. What is more, in order to attract students' attention and interest in schools as well as in learning process, decision makers, planners and educators need to be aware of the fact that affective va-

riables are at least as important as cognitive factors. Hence, in developing curriculum, they have to be treated in such a way that students can obtain more favourable and satisfactory academic outcomes.

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