Simple and multiple correlations of motivational strategies with academic performance of English language

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Abstract

Introduction: The present study aimed to investigate the simple and multiple correlations of motivational strategies (self-efficacy, achievement goals and test anxiety) with the academic performance of English language.
Method: To do this, 296 pre university students (139 girls and 157 boys) were selected by clustery random sampling and motivational strategies and achievement goals questionnaires were answered by the selected sample. In order to analyze the data, Pearson correlation and multiple regression analysis were run.
Results: The results showed that variables such as self-efficacy and mastery-oriented achievement goals were positively correlated with English language scores and variables like test anxiety, and performance avoidance were negatively correlated with English language scores. Also there wasn't any significant correlation between mastery avoidance and English language academic performance. The result of multiple regression analysis indicated that 26% of English language score variance was explained by self-efficacy, mastery achievement goals and test anxiety.
Conclusion: It can be finally said that self-efficacy, mastery achievement goals and test anxiety are more effective variables on English language academic performance and they can improve English language scores.

Keywords: Motivational Strategies, Achievement Goals, Academic Performance, English Language

Introduction

Psychologists have sought to identify the factors which predict the academic performance for about one century. Some of them have addressed this subject such as Binet and Simon, Thorndike, Harris, Elshout and Hamaker, etc [1]. Academic performance is one of the subjects which is of great importance in educational environments especially in schools [2]. This is why it is considered as one of the indices to predict promotion in each job and occupation [3] and as an achievement indices in scientific activities [4]. Chen has also defined academic performance as "student's success in school" [5]. In order to determine how cognitive and motivational factors have relationship with academic performance, social-cognitive approaches which study action determinants have been paid attention motivationally and cognitively [6]. Motivational strategies are among these factors. Motivation is driven to move towards the target goal and allows controlling, guiding and maintaining some goal behaviors [7]. It also is the main reason to a behavior, whether this behavior has been inferred of behavioral pretenses and physiology or personal report [8].

In fact it can be defined as a factor for strengthening and guiding behaviors [9]. According to Pintrich and D.Groat's theoretical model, Self-regulated learning is classified into two constructs including motivational strategies and learning strategies [10]. Motivational strategies contain three components such as valuation (achievement goals), self-efficacy and affectability (test anxiety).

Achievement goals are one of the motivational components which determine the importance of different kinds of goals in order to do a task [11]. Researchers have extensively focused on the goal's role in shaping attitudes and behaviors intensity and quality [12]. In the achievement goals theory it has been assumed that student's goals are important predictors for processes and the results associated with the achievement [6]. According to Elliot and McGregor, achievement goals have four dimensions including approach proficiency orientation, proficiency avoidance orientation, approach performance orientation and performance avoidance orientation [13].

Mastery goals refer to task mastering, overcoming the challenge or increasing the competence level and improving people's ability [14]. People with approach performance goals focus on showing merit and desirable judgments, while people with performance avoidance goals focus on showing lack of merit avoidance and undesirable judgments [12]. According to Matos, Lens and Vansteenklste there is a significant relationship between achievement goals and academic performance [15].

Another goal of educational system in all societies is making an effort for people's self-efficacy. If an adult wants to have self-efficacy, he/she must develop this characteristic in his/her childhood and pupilage (studentship) period. The self-efficacy theory originates from the social cognition theory and includes self-efficacy. Is also said that hope on the result is introduced as the main construct [16]. Bandura has defined self-efficacy as the person's judgments on his/her abilities, competences, capacities and capabilities to do a specific task [17]. Self-efficacy has also been defined as measuring our merit to complete duties and reaching the goals [18]. According to Green, Miller, Crowson, Duke and Akey's point of view [19], self-efficacy is a very important factor to predict academic performance in different academic levels. Self-efficacy and academic performance interact. This means that the students with high self-efficacy have a better academic performance compared to the students with low self-efficacy [11]. Also, people with high self-efficacy select proficiency and performance goals, while people with low self-efficacy select the performance avoidance goals [11, 13]. Various researches have referred to the significant role of self-efficacy on academic performance such as [2, 5, 6, 16, 17, 20].

In addition to what has been mentioned, test anxiety is one of the cases which threatens students' mental health and affects their efficacy, aptitude fostering, personality formation and social identity [21]. Test anxiety as an important and common educational phenomenon has a close relationship with academic achievement and performance [22] and includes a combination of physiological over arousal, worry and dread about conducting the test and often interferes with natural learning and performance test and decreases its score. Test anxiety is a physiological state in which people are affected by severe stress, anxiety and sadness during a test or before taking it [23]. Test anxiety is a set of phenomenological, physiological and behavioral responses which is accompanied by worries about negative social outcomes or failing the test or similar evaluative positions [24]. Researches which are about the negative effect of test anxiety on academic performance have shown that more test anxiety, results in less academic performance [21, 25, 26].

In general, regarding the mentioned researches and literature, and also the great importance of self-efficacy, achievement goals and test anxiety on academic performance of the learner's studying, the present research aims to study the simple and multiple correlations of motivational strategies with the students' academic performance in English lessons and also tries to determine their share.

Methods

The type of the present research is correlation. The society of this research is all the male and female pre-university students of Semnan city who have been studying in the academic year of 2012-13 (1027 people). Therefore, 296 students (139 girls and 157 boys) were selected by multi-stage random cluster sampling method and answered the research instruments. Two schools were selected among each geographical area (north, center and south) and two classes were selected among each school. Totally 12 classes were selected by this sampling method. Pearson correlation and multiple regressions were used to analyze the data by using the SPSS software version 22.

Motivated Strategies for Learning Questionnaire (MSLQ): This questionnaire has been developed by *Pintrich et al.* which have 27 items and two chapters including motivational strategies and cognitive learning strategies. The motivational strategies chapter includes self-efficacy and test anxiety and the learning strategies chapter includes rehearsal, elaboration and organization. This questionnaire is scored in the form of Likert spectrum from 1 (it's not true about me at all) to 7 (it's completely true about me). The scales score was obtained by adding the score of each scale's items and averaging them. *Pintrich et al.* reported this scale's reliability as follows: self-efficacy 0.93, test anxiety 0.80, rehearsal strategies 0.69, and elaborating strategies 0.76 and organization strategies 0.64. *Mousavi*, *Jabal Ameli* and *Bakhshi* studied this test's reliability using factor analysis method. The obtained results of Cranbach Alpha were 0.89, 0.75 and 0.83 [27].

Achievement Goals Questionnaire (AGQ): This questionnaire was prepared by Elliot and McGregor which includes four dimensions. Each dimension has three items (questions). The dimensions are proficiency-oriented, proficiency avoidance, performance-oriented and performance avoidance goals. The questionnaire's items

were placed on a Likert seven-choice spectrum (from 1 (I completely disagree) to 7 (I completely agree). The scales score were obtained by adding the score of each scale's items and averaging them [13]. *Khormaei* and *Khayer* reported this questionnaire's reliability using Cronbach Alpha coefficient as follows: proficiency-oriented orientation 0.84, proficiency avoidance 0.81, performance-oriented 0.78 and performance avoidance 0.66. These coefficients have been coordinated with Elliot and McGregor's reports [28].

Results

The present research aimed to study simple and multiple correlations of motivational strategies (self-efficacy, achievement goals and test anxiety) with the students' academic performance in English lessons and to determine their share. Multiple regressions were used to determine simple relationship of predictor variables with criterion variable of Pearson correlation and multiple relationships of predictor variables with criterion variable and their share. The results have been presented in the table below.

Table1. Correlations coefficients for research variables

Variables	Academic Performance
Self-efficacy	0.45*
Test anxiety	-0.22*
Proficiency-oriented	0.38*
Proficiency avoidance	0.08
Performance-oriented	0.23*
Performance avoidance	-0.19*

*$p \leq 0.01$

The above table shows that among the motivational strategies, self-efficacy variable, proficiency-oriented achievement goals and performance- oriented achievement goals have a positive and significant relationship with academic performance of English lessons. It can also be said that there is a negative and significant relationship between test anxiety and achievement goals of performance avoidance with the English lesson's performance.

In order to determine multiple relationships of predictor variables (Self-efficacy, Achievement goals and Test anxiety) with academic performance of English lessons and determine the share of each of them, multiple regressions was used. Before using regression analysis, the existence of univariate deviated data was first studied by the last nearest datum. The similarity in the distribution form of the variables was also studied by a box plot. The results showed that there are four deviated data which were replaced by the nearest last datum.

Furthermore, the similarity in the distribution form of variables was also studied by a box plot. The results showed that distributions have almost the same form. Moreover, the cumulative distribution variance diagram showed the expected and observed values of a 45 degree slope. All points were placed on the line which implied the normality of the remainders distribution. The results of the Kolmogorov-Smirnov Test also showed that the remainders distribution is normal ($P > 0.05$). The assumption of the variance similarity was studied by showing the standardized remainders of regression against the predicted standard values of regression. The points had been scattered randomly which implied the similarity of the variances. The Durbin Watson statistic was used to study the errors independence. The results showed that there is an independence assumption (DW=1.49). Multiple assumptions were studied by Tolerance statistic and also Variance Inflation (VIF). Results showed that the minimum, tolerance is 0.57 and the maximum variance inflation value is 1.76 which shows there isn't any multiple liner among the independent variables. After studying the multiple regression assumptions and making sure of the assumptions establishment, multiple regressions were used to determine the share of predictor variables in explaining the criterion variable's variance. The results have been presented in Table 2

The results of the above table show that the self-efficacy variable has been inserted in the analysis on the first model and has explained 23% of the academic performance variance in English lessons. In the second step, by adding the proficiency-oriented achievement goals variable, the explained variance rate has increased from 23% to 25%. On the final step, the test anxiety variable has been inserted in the equation and totally 26% of the academic performance variance has been explained by self-efficacy, proficiency-oriented achievement goals and test anxiety variables. Standard and non-standard coefficients of regression have been presented in Table 3.

Table2. A summary of the regression model and variance analysis statistics

Model	Variable	Sources	Sum of squares	Degrees of freedom	Mean Squares	F	P<	R	R²
1	Self-efficacy	Regression	568.69	1	568.69	69.584	0.005	0.483	0.23
		Error	1871.55	229	8.17				
		Whole	2440.24	230					
2	Self-efficacy Proficiency-oriented	Regression	608.42	2	304.21	37.864	0.005	0.499	0.25
		Error	1831.83	228	8.03				
		Whole	2440.24	230					
3	Self-efficacy Proficiency-oriented Test anxiety	Regression	645.24	3	215.08	27.200	0.005	0.514	0.26
		Error	1795.00	227	7.91				
		Whole	2440.24	230					

Table3. Standard and non-standard coefficients of final regression model for predicting academic performance English lesson by the predictor variables

Variable	B	Error B	Beta	T	P	Tolerance	Variance inflation
Constant	10.87	0.97	--	11.23	0.0005	--	--
Self-efficacy	0.10	0.02	0.34	4.47	0.0005	0.57	1.76
Proficiency-oriented	0.13	0.05	0.19	2.50	0.007	0.61	1.64
Test anxiety	-0.05	0.02	-0.13	-2.16	0.030	0.92	1.09

Nonstandard B coefficients and also standard Beta coefficients have been presented in the table above based on independent variables to predict academic performance in English lessons. As it can be seen, Beta coefficients are positive for self-efficacy. The proficiency-oriented achievement goal variables show that academic performance in English lessons increases by increasing self-efficacy and proficiency-oriented achievement goals. While Beta coefficient is negative for the test anxiety variable which shows that there is an inverse relationship between test anxiety and academic performance in English lesson, it means that academic performance in English lessons decreases by increasing test anxiety. Beta coefficients imply that the self-efficacy variable with Beta coefficient 0/337 has played the most important role in increasing the academic performance of English lessons.

Discussion

Academic performance in each society shows the educational system success in goal findings and meeting individual needs. So, we can consider an educational system as an efficient one when its learner's academic achievement is in a good condition. Many factors affect students' academic performance. The present research aims to study simple and multiple correlations of motivational strategies (Self-efficacy, Achievement goals and Test anxiety) with the students' academic performance in English lesson. Results show that there is a positive and significant relationship between self-efficacy variables, proficiency-oriented and performance-oriented goals with academic performance in English lesson. It can be also mentioned that performance avoidance goal is the negative predictor of academic performance. This finding was coordinate with the last findings [5, 17, 20, 29]. Among the variables studied, self-efficacy was the strongest in predicting academic performance which this finding was coordinate with many findings [2, 30-33]. The researches show that the students with high self-efficacy have a better academic performance compared to those with a low level of self-efficacy [19]; [11]. Therefore, self-efficacy is an important factor to predict learning and success.

Church, Elliot and Gable believe that performance-oriented goals are positive predictors of academic performance [34]. While *Pintrich*, *Mc Whaw* and *Abrami* didn't find a clear and certain relationship between performance-oriented goals with academic performance [35, 36]. Other researchers have also shown that performance goal has a positive relationship with academic performance [13, 34, 37]. These results are coordinate with the mentioned findings. There was a positive and significant relationship between proficiency-oriented achievement goals and academic performance in

English lessons. Those who have proficiency goals, focus on learning and understanding, acquiring new skills, task mastering (dominating over task) and developing and try to reach understanding and insight. Therefore, this finding is coordinate with theoretical basics [3, 38, 39] and also the results of previous researches. For example, the results of researches in relation to achievement goals show that proficiency goals have a positive and significant relationship with academic achievement and are considered as one of its strong predictors [40-42]. The student whose goal is acquiring new skills and developing learning, greatly value the tasks as English has become student's daily need, they try to acquire proficiency in that and not to consider it just as a course unit. But a negative relationship obtained between performance avoidance goals and academic performance. People with performance avoidance goals, focus on avoiding misunderstanding, lack of task mastering (lack of dominating over the task) and use the standards of not making a mistake. Therefore, this finding is coordinate with theoretical basics [13] and the results of the last researches [11, 35]. A negative relationship has also been confirmed between performance avoidance and academic performance in other researches [13, 34, 37].

Test anxiety is among the other variables of motivational strategies which showed a negative significant relationship with academic performance of English lessons in this research. It also implies that higher test anxiety results in lower academic performance (by increasing test anxiety, academic performance decreases). This result is coordinate with the results of the last researches [9, 25, 27, 43]. The first limitation of current study relates to research nature, meaning that the current research is a correlation type and we can't explain it as cause and effect. Another limitation of this research is related to the time and place in which the study was conducted. Actually, the results of this study cannot be generalized it other societies (teacher, hospital personnel, etc) and cities. Finally, regarding the above mentioned limitations, it is suggested that planning for reinforcing and promoting self-efficacy, proficiency-oriented achievement goals and test anxiety variables is of great importance in order to save facilities, sources and time. Among the studied variables (achievement goals, self-efficacy and teat anxiety) the English lesson scores need to get improved. Also, we should have in mind that no improvement program is needed in the other variables.

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