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On the Relationship between Locus of Control and Iranian Students' English Score in the University Entrance Exam

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Abstract

This study is concerned with examining the differences in General English (GE) achievement in the university entrance exam among students of humanities, sciences, and engineering. It also explores the effect of locus of control (LOC) on GE achievement in the entrance exam among these three groups of students. One hundred and forty four students of Ferdowsi University of Mashhad participated in this study. Self-report questionnaires and students' English scores in the university entrance exam are used in this study. The results indicate that: 1) There is a significantly positive relationship between student's LOC and their GE achievement in the entrance exam and 2) There are significant differences in GE achievement in the university entrance exam across the three groups of students, The findings of this study indicate that encouraging students to improve their self-efficacy can be quite helpful for them to achieve higher scores in the GE section of the entrance exam.

Keywords: Locus of control, Religious orientation, L2 achievement, Internalizers, Externalizers.

1. Introduction

The study of individual differences has been a featured research area in second/foreign language learning studies. Individuals differ in both the way they learn the second langue and the outcome they achieve through this process (Williams, & Burden, 1997). Language teachers should identify and pay special attention to these individual differences among their students in order to maximize the efficiency of their instruction (Oxford, & Ehrman, 1993). Williams and Burden (1997) held that individual differences exist in both first and second language acquisition. In the case of first language acquisition, it is important to note that children differ in their rate of acquisition, but all children, except in the case of extreme environmental deprivation, master their mother tongue. However, in the case of learning a second language, individuals differ not only in the speed of acquisition, but also in their ultimate level of mastery of the second language. These differences fall into three groups: cognitive, social, and affective (Ellis, 1994). Age, gender, personality, aptitude, motivation, intelligence, cognitive styles and learning strategies are examples of these individual differences (Williams & Burden, 1997).

One of these individual differences, which is cognitive by nature, is locus of control (LOC), both influence and is influenced by linguistic cognitive factors. During the past two decades the construct of locus of control has grabbed considerable attention. According to Jarvis (2005) LOC refers to a person's beliefs about control over what happens to him or her. This concept has been extensively researched in the areas of psychology (Basgall & Snyder, 1988, Phares, 1979, Anderman & Mindgly, 1997, and Carden, Bryant, & Moss, 2004). There is also a large body of literature regarding the relationship between LOC and academic achievement (Galjes & D'Silva, 1981, Gifford, Mianzo, & Briceno-Perriott, 2006, Wood, Saylor, Cohen, 2009, and Hadsell, 2009). Nevertheless, LOC has not been widely explored in the EFL context of Iran. Ghonsooly and Elahi (2010) have examined its association with General English achievement. Hosseini and Elahi (2010) have investigated the relationship between LOC and L2 reading achievement and use of language learning strategies. Another factor, whose relationship with LOC is rather unexplored, is religious orientation. The alleged relation between religious orientation and LOC can help us have a deeper understanding of LOC. It is of special importance among Iranian language learners who have some amount of religiosity.

For the first time this study tries to explore the relationship between students' LOC and their General English score in the university entrance exam. It has also examined the difference in GE scores in the entrance exam among students of humanities, sciences, and engineering.

2. Literature Review

Psychologists have long been interested in various psychological detriments of human behavior. A concept that has attracted great attention is locus of control (LOC). It stems from Rotter's (1954) Social Learning Theory stating that a person's expectancy of an outcome will predict behavior in a particular situation. According to Rotter (1966) internal versus external

LOC refers to the degree individuals expect a reinforcement or an outcome of their behavior is dependent on their own behavior or personal characteristics versus the degree to which people expect that the reinforcement or outcome is a function of fate, chance, or luck, influenced by powerful others or simply unpredictable. Similarly, Bothma and Schepers (1997) mentioned that LOC refers to the beliefs regarding the sources of control over reinforcement. Individuals with internal LOC believe that their behavior can affect the outcome, while individuals with external LOC think that external factors, such as other people or factors beyond their control, determine the outcome of their behavior (Rotter, 1966). Levenson (1981) questioned unidirectional conceptualization of LOC. Levenson asserted that external beliefs can be divided into beliefs about powerful others and beliefs about factors like luck, chance, or fate. As a result, Levenson expanded the concept of LOC into a multidimensional one by proposing three independent dimensions: a) internal influences, b) influence of powerful others, and c) effects of factors like chance, fate, or luck.

Locus of control (LOC) stems from Rotter's (1954) Social Learning Theory postulating that a person's expectancy of an outcome will predict behavior in a particular situation. Based on Rotter (1966), internal LOC refers to the degree a person expects a reinforcement or an outcome of his behavior is dependent on his own behavior or personal characteristics, whereas external LOC refers to the degree to which an individual expects that the reinforcement or outcome is a function of fate, chance, or luck, influenced by powerful others or simply unpredictable. In a similar vein, Bothma and Schepers (1997) held that LOC refers to the beliefs about the sources of control over reinforcement. People who have internal LOC believe that their behavior can affect the outcome, while individuals with external LOC hold the view that external factors, such as other people or factors beyond their control, determine the outcome of their behavior (Rotter, 1966). Levenson (1974) called the unidirectional conceptualization of LOC into question. Levenson asserted that external beliefs can be divided into beliefs about powerful others and beliefs about factors like luck, chance, or fate.

There is a huge body of literature on the relationship between LOC and academic success; however the relationship between LOC and L2 achievement has not been widely investigated. Gifford, Prieceno-Perriott, and Miamzo (2006) found that students' GPA is correlated with internal LOC. Galajs and D'Silva (1981) reported that students who obtained higher grades consider themselves as internally oriented. Similarly Wood, Saylor, and Cohen (2009) concluded that external control orientation can have a negative effect on academic achievement in nursing students. The concept of LOC has not been fully explored in EFL context of Iran. Ghonsooly and Elahi (2010) found that there is a high correlation between university students' LOC and their scores in their General English scores in their ESP courses. Hosseeini and Elahi also found that LOC is a predictor of L2 reading achievement.

3. Purpose of the Study

The present study aims at answering the following questions:

1) Is there a significant relationship between university students' LOC and their GE score in the entrance exam?
2) Is there a significant difference in GE score in the entrance exam across students of humanities, sciences, and engineering?

4. Method

4.1 Participants

The participants of this study were three groups of undergraduate students. The first group includes fifty-two students of humanities who were studying history (seventeen students) and sociology (thirty-five students). The second group consisted of 50 students of engineering who are studying civil engineering. The third group consists of forty four students of sciences who were studying chemistry. Most of the participants were first-year students. On the whole, the sample of the study comprises 144 students all of whom are studying at Ferdowsi University of Mashhad. The participants are both males and females. All the students are native speakers of Persian. The sample may be considered representative of Iranian EFL students with almost the same age.

4.2 Instruments

4.2.1 Internal Control Index

The Persian version of the *Internal Control Index* (Ghonsooly & Elahi, 2010) was used in this study to measure the participants' locus of control. The English version of the *Internal Control Index* (Duttwieler, 1984) was developed to measure where a person expects to gain reinforcement. This scale has twenty eight five-pint Likert-type items that produce a possible range of scores from twenty eight to 140. Higher scores represent internal LOC and lower scores represent external LOC. Ghonsooly and Elahi (2010) calculated Cronbach's alpha to check the reliability of the translated questionnaire. The result was a coefficient of 0.83. In order to ensure the construct validity of the instrument, they used a principle component analysis which yielded eight factors with eight values greater than one. The factors include the need to be encouraged, reliance on one's attitude, interest in administrative jobs, effort to reach desirable goals, undecidedness, the need to consult for making decisions, being responsible for desirable events, and self-expression (Hosseini & Elahi, 2010). It should be noted that these eight factors are named by Ghonsooly and Elahi (2010) who have developed and validated the Persian version of the LOC questionnaire. Investigating the effect of these factors on GE performance call for further studies.

4.3 Data Collection and Analysis

After seeking permission from the instructors, the researcher visited the classes in order to administer the questionnaires. The students were made certain that the results remain confidential and their instructors would not see the results of the questionnaires. The questionnaires were administered in one session under standard conditions. The directions of the questionnaires were Persian; however, the researcher explained them once more so that

participants would have a clear understanding of what they were supposed to do. The guideline for scoring the *Internal Control Index* is available in Hosseini and Elahi (2010). The students were also asked to write down their General English score in the entrance exam on top of the LOC questionnaire. The data collected were put into Statistical Package for Social Sciences (SPSS) to be analyzed. The Pearson correlation formula was used to answer the two research questions.

5. Results

The results of this study are presented in quantitative form. In order to investigate the relationship between LOC and students General English score in the entrance exam Pearson correlation coefficient was calculated. To explore the difference in the three groups of students' English score in the entrance exam, one-way ANOVA was measured.

The first question pertains to the relationship between language learners' locus of control and their GE score in the entrance exam. Pearson correlation coefficient was calculated to measure the relationship between the two variables. Table1 illustrates the association between the two variables.

Table 1. The relationship between LOC and General English score in the entrance exam

General English score in the entrance exam (GE score)	LOC		
0.744(**) 0.000 144	1	Pearson Correlation Sig.(two-tailed) N	LOC
1	0.744(**) 0.000 144	Pearson Correlation Sig. (two-tailed) N	GE score

** Correlation is significant at the 0.01 level (2-tailed).

Table 1 demonstrates that the correlation coefficient is significant ($r= 0.74$ $p<0.05$). Therefore, there is a significant positive relationship between students' locus of control and their GE score in the entrance exam. The higher the LOC orientation of L2 learners is, the higher their General English score in the entrance exam is. By squaring r, we can get the variance overlap between the two measures ($r^2= 0.54$). This means that 54% of variance in General English score in the entrance exam is accounted for by variance in LOC (or vice versa).

In order to answer the second research question concerning the difference between GE score in the university entrance exam among students of humanities, sciences, and engineering, one-way ANOVA was calculated. Table 2 shows that the difference between the three groups of students is statistically meaningful.

Table 2. The analysis of variance of GE score of the three groups of students

score	Sum of	df	Mean Square	F	Sig.
Between Groups	1785.310	2	892.655	15.471	0.000
Within Groups	8135.245	141	57.697		
Total	9920.556	143			

The analysis of variance demonstrated only the difference between groups. In order to find out which pairs were significantly better the Scheffe test was run.

Table 3. A comparison of GE means scores of the three groups of students

Fields	N	Subset for alpha= 0.05		
		1	2	3
Humanities	52	64.84		
Sciences	42		68.47	
Engineering	50			73.20
Sig.		1.000	1.000	1.000
Means for groups in homogeneous subsets are displayed.				

Table 3. exhibits that the mean score of engineering students is 73.20, that of students of sciences is 68.47, and that of humanities students is 64.84. Table 4 shows that the difference in mean scores among the three groups is significant at $p<0.05$. Thus, students of engineering obtained higher scores in the English part of the entrance exam than students of sciences and humanities, and students of sciences also got better scores in the English section of the entrance exam than the students of humanities.

Table 4. Scheffe test of differences in GE mean scores across three groups of students

(I) group	(J) group	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower	Upper Bound
humanities	engineering	-8.35385*	1.50449	0.000	-12.0759	-4.6318
	sciences	-3.63004	1.57584	0.074	-7.5286	0.2686
engineering	humanities	8.35385*	1.50449	0.000	4.6318	12.0759
	sciences	4.72381*	1.58986	0.014	0.7905	8.6571
sciences	humanities	3.63004	1.57584	0.074	-.2686	7.5286
	engineering	-4.72381*	1.58986	0.014	-8.6571	-0.7905

* The mean difference is significant at the 0.05 level.

6. Discussion

The first finding of this study is the strong link between students' LOC and their academic achievement in general, and L2 achievement in particular. This is in agreement with Galjas and D'Silva (1981), Gifford, Mianzo, and Briceno-Perriott (2006), Wood, Saylor, Cohen (2009), Hadsell (2009), and Ghonsooly and Elahi (2010). Ducette and Wolk (1972) concluded that those with internal locus of control show more persistence. Morris and Messer (1978) also found that internalizers have more academic task persistence. Kernis (1989) similarly found that individuals, who are internally controlled, are more task oriented. This may explain the fact that students with internal locus of control devote more effort to and spend more time on their academic tasks that leads to more academic success Learners with internal locus of control hold the belief that they have control over what happens to them. In the area of education, students who are externalizers, attribute their success or failure to external causes such as task difficulty or luck. Basgall and Snyder (1988) held that these students believe that there is no use in trying because their efforts are fruitless and they are doomed to failure. Hence, they are not motivated to work hard to achieve academic success. Similarly, frequent use of external attributions makes them lose their motivation to progress (Basgall & Snyder, 1988). On the other hand, students with internal locus of control hold that they can control their learning, so they have more motivation to cope with the problems they face in the process of their learning (Dornyei, 2005). Since internalizers believe they can control their learning, they accept the responsibility of their learning, and this makes them more motivated to work hard which leads to success.

The fact that students with internal locus of control are more successful in academic settings can also be explained by attribution theory. According to Jarvis (2005) the most effective kind of attribution is when people ascribe their past success and failure to internal factors such as effort. Thus, in light of attribution theory students, who are internally controlled, have more motivation to be successful in their academic tasks.

The results of this study also showed that there is a significant difference in GE scores in the entrance exam among the three groups of students. Students of engineering performed better in the English section of the entrance exam than students of humanities and students of sciences, and students of sciences performed better than students of humanities. One reason for this can be the fact that students of engineering are more internally controlled than students of sciences and humanities. Similarly, students of sciences have higher internal control orientation than students of humanities (Ghonsooly & Elahi, 2010). Another reason for the superiority of students of engineering and sciences in the English section of the university entrance exam may be the fact that these students, who have higher locus of control, are better in using language learning strategies. Hosseini and Elahi (2010) conducted a study to investigate language learning strategies used by EFL learners with different degrees of LOC. They showed that students who are internally controlled are better in language learning strategies. In order to do this, they used the Persian version of the Strategy Inventory for Language Learning (Tahmasebi, 1999). . In addition, the most frequent

strategies applied by these students are metacognitive strategies, while the most frequent strategies used by students with external LOC are memory strategies. This shows that students of engineering who have relatively internal LOC are more inclined to take over the responsibility of their language learning (Hosseini & Elahi, 2010). This finding is in line with Ghonsooly and Elahi's (2010) study in which students of engineering scored higher in their ESP courses than students of sciences and humanities, and students of sciences obtained higher scores than students of humanities. Generally, there is a dearth of research on the association between LOC and language proficiency, which calls for further studies in this domain.

7. Conclusion

The results of this study showed that there is a positive relationship between students' LOC and their General English score in the entrance exam. Students with an internal locus of control are better achievers in the English section of the university entrance exam. There was also a significant difference in GE scores in the entrance exam across students of humanities, sciences, and engineering. Thus, these findings can draw the attention of EFL teachers, especially pre-university English teachers, to the role of LOC in their students' performance.

Locus of control is a dynamic construct rather than a fixed one. Noer et al. (1987) held that externalizers can be taught to develop internal LOC. English teachers, particularly pre-university English teachers, can instill a sense of responsibility in their students to take control of their own learning and become independent and self-directed learners (Hosseini, & Elahi, 2010). This is particularly important about students of humanities who have relatively external LOC. The most effective way to apply attribution theory is reattribution training (Hastings, 1994, cited in Hosseini & Elahi, 2010). Therefore, L2 teachers should help their students change their attributions. Students should learn to ascribe their failures in English exams to factors such as their effort and ability that are controllable. They ought to be taught not to attribute their failures to factors like chance or test difficulty which is not controllable. Reattribution training should pay special attention to these students. According to Neurolinguistic programming, the behavior and strategies used by successful people can be duplicated (Richards, & Rogers, 2001). Hence, suggestions and strategies employed by internalizers can be introduced to externalizers. They can be encouraged to model the suggestions and strategies employed by internalizers. Furthermore, increased awareness of LOC orientations can help students recognize what is within their ability to change and how to deal with factors they consider as beyond their control (Wood, Saylor, & Cohen, 2009). Knowledge of the influence of internal and external orientations on students' attitudes, perceptions, and performance can be a great help for curriculum planning and the selection of teaching methods and materials.

In order to carry out any kind of research, one may confront problems and limitations. Almost different findings could be obtained in this study if it did not have the following limitations. First, this study was carried out with a relatively small sample. Studies with larger samples can be done to ensure the external validity of the findings. The second limitation of the

research was that only university students participated in it. Other research projects can be conducted with students studding at guidance schools and high schools. Researchers interested in LOC can investigate the relationship between LOC and emotion control strategies, environment control strategies, and commitment control strategies. Also teacher's LOC and its relationship with their motivation and the performance of students can be explored. Further research projects can explore the interplay between LOC and language ideologies. Moreover, the effect of L2 development on LOC, and the relationship between LOC and L1 skills may be the subject of future investigations. In addition, the effect of the three components of LOC, namely internal influence, influence of powerful others, and factors like chance , fate, or luck, on L2 performance can also be explored in future projects.

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