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Validating Locus of Control Questionnaire and Examining its Relation to General English (GE) Achievement

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Abstract

Locus of control is said to affect learners' academic achievement. This effect has scarcely been examined within general English context. This study is concerned with examining the differences in General English (GE) course achievement among university students of humanities, sciences, and engineering. It also explores the effect of locus of control (LOC) in GE course achievement among these three groups of university students. The results of the study indicate that: 1. There is a significantly positive relationship between the university students' LOC and their GE achievement course, 2. There are significant differences in GE course achievement among the three groups of students, and 3. There are significant differences in LOC among the three groups of university students. The results of the participants' interviews were also in agreement with those of the questionnaires. The findings of this study postulate that encouraging students to seek ways to improve their self-efficacy can be really helpful for them to achieve higher scores in GE course.

Keyword: 1. Locus of Control 2. Internal 3. External 4. General English 5. Validity.

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1. Introduction

Any thorough study of L2 acquisition entails investigating factors leading to individual differences (IDs) in learners (Ellis, 2008) which differ from one individual to another (Dörnyei, 2005) and concern anything which marks a person as distinct human being (De Road, 2000). Research conducted in this field has highlighted IDs to be dependable predictors of L2 success (Dörnyei, 2005: 6). Early studies of IDs tried to classify learners as good and bad, intelligent and dull, motivated and unmotivated (Horwitz, 2000). Recently more research has focused on explaining why some learners are more successful than others. Robinson (2002) and Dörnyei (2005), in line with the previous research done by Skehan (1989), both included language aptitude, motivation, personality, and anxiety in their list as the main factors. Oxford and Ehrman (1993) mentioned that teachers should identify IDs among their learners and take them into consideration in order to create the most effective instructions. Instead of indicating some useful ways to help learners explain how learners differ, how to assist them to take control of their own learning, and how to mediate their learning, the research has mainly covered the selection of particular learners' characteristics and their measurement (Williams & Burden, 1997: 89).

In general, major points regarding IDs research can be summarized this way:

1. Research in the IDs area is based on a theory of learning which considers' individuals' behaviors as being affected by a set of traits or attributes which are fixed.

2. The practical value of the findings have been limited because they do not give us information on how teachers can help learners to become effective learners. (Williams & Burden, 1997: 95)

Therefore, Williams and Burden (1997: 95) maintained a constructivist approach including the individuals' main contributions to the learning situation is needed because:

1. Such a theory enables us to highlight the uniqueness of individuals and help teachers to see what they have in common.

2. It helps us to see how individuals change rather than how they stay

the same.

3. It enables teachers how to help learners take control of their own learning.

4. It concerns individuals' perceptions of themselves as learners.

In the constructivist approach, an individual's understanding of the world is gradually reshaped as they adapt their knowledge to new information. The way in which individuals perceive the world and themselves plays an important role in their learning. Thus, rather than focusing on how learners are different from each other or measuring their differences, it would be really useful to concentrate on how learners perceive themselves as language learners, what influences their personal views have on their learning processes, and how teachers can assist them in making sense of their learning that is personal to them. One important area which is related to the way in which learners perceive themselves is Locus of Control (LOC). In this study we aim at examining the relation of this affective variable and GE course achievement among three groups of university students.

2. Literature Review

In many countries of the world where English is learned as a foreign language, university students are obliged to pass certain number of English courses as academic requirements. General English is prerequisite for special English courses offered throughout academic years of study for university students. In Iran, GE is characterized by a commitment to pass three credits in a domain-specific fashion in which reading skill is the sole skill which is taught. In essence, GE courses consist of semi-specific texts designed for students studying for achieving expertise in different academic fields from sciences to engineering and humanities. However, the extent to which these courses result in optimal learning output has been partially examined by several researchers (e.g., Ghonsooly and Pishghadam, 2008). Most of the studies done have criticized the textual and instructional goals of GE courses and have remained oblivious to learner characteristics as a relevant and indispensable factor in GE achievement. Locus of control is a

recent psychological construct which has been treated as influential and important in achieving learning goals as instructional and textual factors.

There has been a substantial body of research concerning LOC in studies focusing on psychological differences (Lefcourt, 1976; Phares, 1976). It has been divided into two types: internal and external. People who attribute their achievements and failures to internal influences such as their attempts and abilities and feel really responsible for the things happening to them are called internals. Individuals who attribute their success and failures to external forces out of their control like fate and luck are labeled externals (Findley & Cooper, 1983).

The concept of LOC is closely related to attribution theory, which is the process through which the causes of the events can be explained (Jarvis, 2005). Weiner (1979), who developed this theory, first referred to four important sets of attribution for the individuals' perceived success and failure in their life: a) ability b) effort c) success and d) the level of difficulty of the tasks they are involved in.

Later Weiner (1992) identified that the nature of the attributions concerning learners' success or failure has three dimensions:

1. Locus of control: the extent to which individuals believe they can control events.
2. Stability: success or failure may have stable causes of success (effort or task difficulty) or unstable ones (luck, mood).
3. Controllability: the extent to which elements or events are within the individuals' control or not.

Table 1: Examples about causal inferences about success and failure (Jarvis, 2005: 125)

Ability	I am clever	I am not clever enough
Effort	I tried hard	I didn't try enough
Level of difficulty	It was easy	It was too hard
Luck	I had good luck	I had bad luck

Generally, learners with an internal LOC are likely to attribute results to their own actions or efforts when they are controllable; otherwise, they are

attributed to ability and mood which are not controllable. On the other hand, externalizers attribute their success or failure to features of the situation or external stable cases like task difficulty in case they are uncontrollable; otherwise, they may be attributed to unstable causes like teacher bias.

Table 2: Factors affecting causal attributions of success and failure (Jarvis, 2005: 125)

	Stable control	Unstable control
Internal locus Controllable uncontrollable	 Typical effort Ability	 Atypical effort Mood
External locus Controllable Uncontrollable	 Teacher bias Task difficulty	 Atypical help Luck

Several researchers have shown that internal locus of control is linked to higher levels of academic achievement. For instance, Bender (1995) maintained that failures followed by persistent attempts may lead to external locus of control and this may consequently lead to lower degrees of motivation for study. Externals may think that their efforts are fruitless and that it is not important to work hard since they see failures as their fate (Bender, 1995). Basgall and Snyder (1988) maintained that externals do not mind their poor performance and this does not hurt their self-esteem since they avoid the possible damage caused by their lack of abilities through attributing their failures to chance, destiny, or other peoples' fault. This dismisses the belief that they are inadequate but the point is that such a view lowers their motivation (Basgall & Snyder, 1988). Phares (1979) noted that individuals who attribute their failure to internal factors accept their faults as personal and relate them to lack of skills. However, those with an external locus of control escape personal inadequacy (Phares, 1979), hence reducing negative feelings of failure and are unlikely to see a promising future (Anderman and Midgley, 1997). However, those with an internal locus of control are likely to see a bright future for themselves by trying harder and making more attempts which may lead to a raise in their grades (Noel, et al.,

1987). Examining the behavior of internals and externals in performing tasks, Kernis (1984) found that internals were interested in continuing the tasks they performed successfully whereas externals avoided working on particular learning task and preferred to work on other tasks. This finding was partially in line with Lonky and Reiman's (1980) research in which their internal students spent more time on performing tasks than externals.

Research has also examined the relationship between locus of control and anxiety which shows that internals experience more state-anxiety than externals in situations related to "luck" whereas externals showed to have more state-anxiety in "ability" situations (Biaggio, 2004). In a more related investigation, the relationship between locus of control, procrastination and anxiety (Carden et.al., 2004) were examined in which internals experienced higher academic procrastination and test anxiety than externals (see Table 1 for a summary of research findings on locus of control).

Table 3: Capsule description comparing findings of research on internal/external locus of control

Researcher	Internals	Externals
Bender (1995)	1. see their efforts fruitful 2. enjoy working hard. 3. see failures as their own faults.	1. see their efforts fruitless. 2. do not mind working hard. 3. see their failures as fate.
Basgall and Snyder (1988)	1. mind their poor performance. 2. attribute their failures to their efforts and attempts. 3. think that their poor performance hurt their self-esteem.	1. do not mind their poor performance. 2. attribute their failures to chance, destiny or other peoples' faults. 3. think that their poor performance does not hurt their self-esteem.
Phares (1979)	1. accept their individual inadequacy.	1. escape their individual inadequacy.
Anderman and Midgly (1997)	1. are likely to see a bright future.	1. are unlikely to see a bright future.
Kernis (1984)	1. are persistent in performing learning tasks.	1. are not persistent in performing learning tasks.

Researcher	Internals	Externals
Lonkey and Reiman (1980)	1. spend much time on performing learning tasks.	1. do not spend much time on performing leaning tasks.
Biaggio (2004)	1. experience state-anxiety in "ability" situations.	1. experience state-anxiety in "luck" situations.
Carden, Bryant, and Moss (2004)	1. experience higher academic procrastination. 2. experience higher anxiety.	1. experience lower academic procrastination. 2. experience lower anxiety.

Based on the findings mentioned above, the role of locus of control in educational settings should be studied more thoroughly (Findley and Cooper, 1983). Since to the best of the researchers' knowledge there has been no research on the effect of locus of control on General English Course achievement of university students of Engineering, Sciences, and Humanities in Iran, the present study aims at addressing this effect. Thus, the following questions are to be answered in this study:

1. Is there any significant relationship between university students' LOC and their GE achievement?

2. Are there any significant differences in GE achievement of university students of Humanities, Sciences, and Engineering?

3. Are there any significant differences in LOC of university students of Humanities, Sciences, and Engineering?

3. Methodology

3.1 Participants

240 university students at the faculties of engineering, sciences, and Humanities at Ferdowsi University of Mashhad participated in this study. 80 students who were attending their General English Course at each of these three faculties were selected through stratified random sampling. It should also be noted that their participation was quite voluntary. The participants ranged between 19 and 24. They were both male and female.

3.2 Instruments

For the purposes of this study, the Internal Control Index (Duttweiler, 1984) was used to measure the participants' locus of control. This scale contains 28 five-point Likert-type items which produce a possible range of scores from 28 to 140 with higher scores reflecting higher internal LOC and lower scores reflecting higher external LOC. For the sake of clarity and simplicity the scale was translated into Persian. Three experts commented on sequencing format, formulations of questions and the language. Thus, the questionnaire was edited to ensure that the content and the physical appearance of the questionnaire were appropriate. Cronbach's alpha was used to check the reliability of the translated version and resulted in a coefficient of 0.82. The participants' Grand Point Averages (GPA) of their General English Course exams also served as the instrument to measure their General English achievement.

3.2.1 Interview: An *unstructured* interview with 10 students of each group was conducted about the amount of time and effort they spent on GE homework and tasks. Their attitudes towards GE course, their attempts and efforts to gain higher scores in this course were also examined. Each interview took about half an hour.

3.3 Data collection

Before distributing the questionnaire to the participants, they were informed briefly about the purposes of the study and the possible implications its results may have for GE teachers and university students. They were told that all the collected information would be kept confidential. They answered the questionnaire in about 20 minutes. Ten days after the final exam of GE courses, the participants' GPA of all their GE exams during the semester was provided by their teachers.

4. Data Analysis

The collected data were put into Statistical Package for Social Sciences (SPSS) to be analyzed. The Pearson product moment formula was used to answer the first question. One Way Analysis of Variance (ANOVA) and

independent t-tests were used to answer the second and third questions of the study.

5. Results

This section begins with the result of factor analysis for the LOC questionnaire and answers the already mentioned research questions. A principle component analysis with varimax rotation produced 8 factors with eigenvalues greater than 1.00. The first factor accounted for 9.86 of the total variance. It consisted of items related to individuals' need for other peoples' encouragement, influence, praise, and feelings; thus, it was labeled "The need to be encouraged". The second factor, which accounted for 9.70 of the total variance, was related to individuals' responsibility, persistence, and reliance on their own perceptions. So it was labeled "Reliance on one's attitude". The third factor, which accounted for 7.88 of the total variance, included items related to individuals' effort to learn and gain what they aim; therefore, it was named "Effort to reach desirable goals". The fourth factor, which accounted for 7.34 of the total variance, included items related to individuals' opportunities to express their own opinions and influence others, so it was labeled "Self-expression". The fifth factor, accounting for 6.84 of the total variance, involved items concerning individuals' preference for managing, administrative, and supervising jobs; therefore, it was labeled "Interest in administrative jobs". The sixth factor, which accounted for 6.50, was concerned with individuals' hesitation in doing things, postponing their works to the later times. Therefore, it was labeled "Undecidedness". The seventh factor accounted for 6.70 of the total variance and included items regarding individuals 'consultation with the experienced ones to consider different aspects of their decisions. As a result, it was labeled "The need to consult for making decisions". Finally, the eighth factor, accounting for 5.34 of the total variance, was related to individuals' responsibility for the pleasant events happening in their life, so it was labeled "Being responsible for desirable events".

Table 5: Results of factor analysis for Persian version of Internal Control Index
F represents Factor.

Item	Questionnaire Item	F1	F2	F3	F4	F5	F6	F7	F8
2	I need frequent encouragement from others for me to keep working at a difficult task.	.691							
4	I change my opinion when someone I admire disagrees with me.	.653							
6	I prefer to learn the facts about something from someone else rather than having to dig them out for myself.	.740							
8	I have a hard time saying "no" when someone tries to sell me something.	.850							
11	What other people think has a great influence on my behavior.	.465							
14	I need someone else to praise my work before I am satisfied with what I've done.	.845							
19	I let other peoples' demands keep me from doing things I want to do.	.417							
23	When part of a group I prefer to let other people make all the decisions.	.564							
26	I prefer situations where I can depend on someone else's ability rather than just my own.	.760							
27	Having someone important tell me I did a good job is more important to me than feeling I've done a good job.	.554							
28	When I'm involved in something I try to find out all I can about what is going on even when someone else is in charge.		.795						
18	For me, knowing I've done something well is more important than being praised by some else.		.574						
21	I do what I feel like doing not what other people think I ought to do.		.698						

Item	Questionnaire Item	F1	F2	F3	F4	F5	F6	F7	F8
20	I stick to my opinions when someone disagrees with me.		.645						
25	I enjoy trying to do difficult tasks more than I enjoy trying to do easy tasks.		.640						
5	If I want something I work hard to get it.			.834					
16	When something is going to affect me I learn as much about it as I can.			.855					
9	I like to have a say in any decisions made by any group I'm in.				.549				
15	I am sure enough of my opinions to try and influence others.				.501				
3	I like jobs where I can make decisions and be responsible for my own work.					.406			
7	I will accept jobs that require me to supervise others.					.902			
13	I enjoy being in a position of leadership					.775			
1	When faced with a problem I try to forget.						-.738		
17	I decide to do things on the spur of the moment.						.753		
22	I get discouraged when doing something that takes a long time to achieve results.						.462		
10	I consider the different sides of an issue before making any decisions.							.464	
24	When I have a problem I follow the advice of friends or relatives.							-.653	
12	Whenever something good happens to me I feel it is because I've earned it.								.829
	Eigenvalues	5.83	2.88	1.78	1.69	1.42	1.38	1.25	1.18
	Percentage of Variance	9.86	9.70	7.88	7.34	6.84	6.70	6.50	5.34
	Cumulative Percentage of Total Variance	9.86	19.56	27.44	34.79	41.63	48.34	54.85	60.19

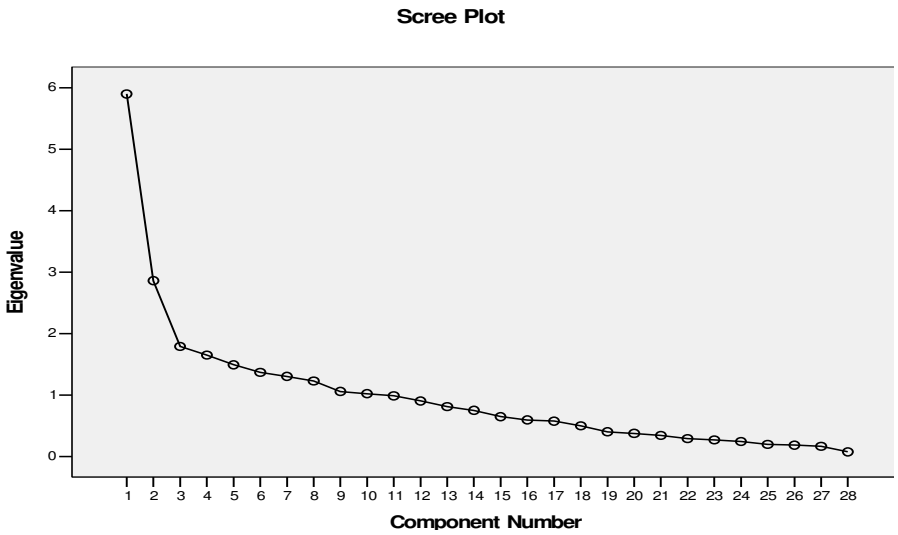

Figure 1: Scree plot of factors derived from the principle component analysis of Persian version of Internal Control Index

Figure 1 demonstrates the scree plot of the 8 factors. As is shown, the 8 factors are greater than one supporting the information measured through factor analysis.

To answer the first question concerning the relationship between the students' LOC and GE achievement, the Pearson product moment formula was used. As Table 6 shows the correlation coefficient of the relationship between the two variables is 0.78 ($p<0.01$).

Table 6: The relationship between university students' LOC and GE achievement

		loc	Score
Loc	Pearson Correlation	1	.789
	Sig. (2-tailed)		.002
	N		240
Score	Pearson Correlation	.789	1
	Sig. (2-tailed)	.002	
	N	240	

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

To answer the second question concerning the differences in GE achievement of university students of Humanities, Sciences, and Engineering, first we analyzed the difference in GE achievement among the university students of Humanities, Sciences, and Engineering. Table 7 shows that the difference among mean scores of the three groups of university students in GE course is significant (F= 68.93 p<0.001).

Table 7: Analysis of variance of GE mean scores of the three groups of university students

ANOVA

GE	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	216.50	2	108.25	68.93	.000
Within Groups	370.63	23	1.57		
Total	587.14	23			

The analysis of variance showed just the difference among the three groups, but in order to understand which pairs were significantly better the Scheffe test was run.

Table 8: A comparison of GE mean scores of the three groups of university students.

Fields	N	Subset for alpha = 0.05		
		1	2	3
Humanities	80	14.75		
Science	80		16.32	
Engineering	80			17.03
Sig.		1.000	1.000	1.000
Means for groups in homogeneous subsets are displayed.				

As Table 8 shows, the mean score of Engineering students is 17.03, that of Sciences students is 16.32, and that of Humanities students is 14.75. Table 9 demonstrates that the difference in mean scores among the three groups is significant at p<0.05 and students of Engineering have obtained

higher scores in GE than students of Sciences and Humanities. Students of science also obtained higher scores in GE than students of Humanities.

Table 9: Scheffe test of differences in GE mean scores across three fields of study

Multiple Comparisons

(I) Fields	(J) Fields	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Engineering	Science	.710*	.199	.002	.22	1.20
	Humanities	2.279*	.199	.000	1.79	2.77
Science	Engineering	-.710*	.199	.002	-1.20	-.22
	Humanities	1.569*	.198	.000	1.08	2.06
Humanities	Engineering	-2.279*	.199	.000	-2.77	-1.79
	Science	-1.569*	.198	.000	-2.06	-1.08

*. The mean difference is significant at the 0.001 level.

In order to answer the third research question, the mean score difference in LOC among the three groups of students was analyzed through ANOVA. Table 10 demonstrates that the difference in LOC mean scores of the three groups of students is significant ($F= 21.89$, $p<0.001$). Generally, Engineering students have the highest mean score in LOC and Humanities students have the lowest mean score in LOC. In other words, it can be concluded that students of Engineering were internalizers while students of Humanities were externalizers.

Table 10: Analysis of variance of LOC mean scores of the three groups of university students

ANOVA

LOC	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	71429.884	2	35714.942	21.895	.000
Within Groups	384956.861	236	1631.173		
Total	456386.745	238			

In order to understand which pairs were significantly different the

follow-up Scheffe test was run.

Table 11: A comparison the LOC mean score of the three groups of university students.

Fields	N	Subset for alpha = 0.05		
		1	2	3
Humanities	80	58.61		
Sciences	80		65.96	
Engineering	80			99.61
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

As Table 11shows, the mean score of Engineering students is 99.61, that of Sciences students is 65.96, and that of Humanities students is 58.61. Table 12 demonstrates that the difference in mean scores of Engineering students and the other two groups is significant at $p<0.05$ and students of Engineering have obtained higher scores in LOC than students of Sciences and Humanities. However, the difference of mean scores between Science and Humanities is not significant.

Table 12: Scheffe test of differences in LOC mean scores across three fields of study

Multiple Comparisons

(I) Fields	(J) Fields	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Science	Humanities	7.350	6.406	.706	-10.43	21.13
	Engineering	-33.650*	6.406	.000	-49.43	-17.87
Humanities	Science	-7.350	6.406	.706	-21.13	10.43
	Engineering	-41.000*	6.386	.000	-54.73	-23.27
Engineering	Science	33.650*	6.406	.000	17.87	49.43
	Humanities	41.000*	6.386	.000	23.27	54.73

*. The mean difference is significant at the 0.05 level.

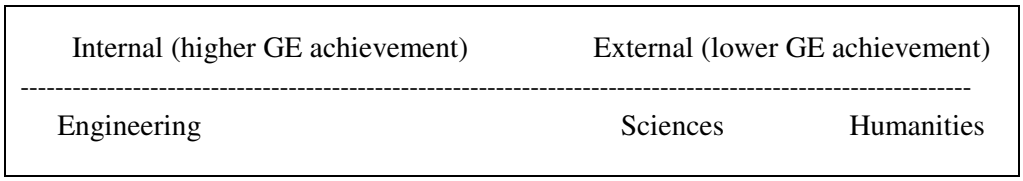

Figure 2: The schematic representation of LOC and GE achievement of students of different disciplines

On the qualitative side, the findings of the interviews were almost in agreement with those of the questionnaire. Most Engineering students explained that they were so optimistic about future because they have more job opportunities than students of other majors. 80% believed that learning English is really needed for their future job, so they felt they should try hard to achieve good grades in GE course. For example, an engineering student said "I am highly motivated to learn English. I make all my attempts to have good grades and gain an adequate level of competence in English." In general, more than 80% of Engineering students spent more time on homework, worked harder to gain better scores in GE course and had higher levels of motivation to learn English. They believed that English had an important role in their future.

Interviews with students of Sciences showed that more than 55% of them were fond of learning English, because of its important role in their future. For instance, one of them said "I really need to have a good knowledge of English for writing scientific articles." Another one said "I try to spend more time on doing English tasks both in class and at home." One the whole, university students of sciences like students of engineering emphasized the important role of English for their future.

Although both students of Engineering and Sciences highlighted their own efforts in having good GE grades, university students of Humanities showed the opposite. About 70% of these students were not motivated to learn English. 67% of them mentioned that there are fewer job opportunities for them in society; they thought that learning English has nothing to do with their future jobs. One of them said "I am afraid of learning English, and I think it originates from high school in high school." About 30% of these

students believed that teachers' attitudes towards university students of Humanities are different from other university students. More than 74% did not care having high scores in GE course. Thus, they did not spend much time on GE homework and didn't take GE tasks seriously. More than 60% preferred to study other courses than GE. Generally, more than 70% of university students of Humanities stated that they did not like their majors. They explained that they had to study Humanities at high school due to their poor performance at junior high school and the first year of high school, and as a consequence, they had to study in one of the majors related to Humanities at University. So this low motivation affects their scores in GE course.

6. Discussion

The findings of this study are in agreement with those of Findley and Coopers' (1983). Students of Humanities were demotivated in achieving high scores in GE due to their frequent failures and lack of interest in their own majors. This is clearly shown in both the statistical findings and the result of the interviews. The findings of the questionnaire were also in agreement with those of Basgall and Snyder (1988) and Anderman and Midgly (1977). University students of Humanities were reported to have external LOC, so they did not mind their poor performance. It might be the case that they were not motivated enough to gain higher scores in GE. As Anderman and Migley (1997) pointed out, externals see the future gloomy and give up to chance and fate. Our study partially supports this view through the information we obtained while interviewing the students of Humanities. Obviously this needs to be studied in full so that we will be able to state this relationship more clearly.

More than 60% of the Humanities students maintained that they did not mind what GE teachers had thought of their abilities in GE course. This clearly corroborates what Basgall and Snyder (1988) explained about externals. They pointed out that externals do not accept the responsibility of their failure without hurting their self-esteem. Ducette and Wolk (1972) found that externals show less persistence than internals. University students

of Engineering performed better at tasks than students of Sciences and Humanities. As Kernis (1984) maintained, internalizers are more task-oriented than externals. Noel et al. (1987) asserted that externals can be taught to develop an internal LOC. Taking this as pedagogically applicable, teachers can help students of Humanities to gain internal LOC orientations. Phares (1976) pointed out that internalizers take pride in positive outcomes while externalizers do not show much intense emotions. As Engineering majors in the Iranian society are highly valued, we may infer that the university students of engineering, who feel capable of controlling outcomes, have higher motivation to gain higher GE scores. On the other hand, university students of Humanities, who have external LOC, did not try hard in the GE course resulting in poor achievement. Engineering students considered learning English very important for their majors, while students of Humanities did not take it seriously. Most of them thought that when their majors are not positively valued in the society, having higher GE scores does not change the situation.

The findings of this study can also be interpreted through the eye of the attribution theory. As this study showed university students of Engineering, who have internal LOC, are better achievers of GE than the other university students. Internalizers due to their beliefs in controlling their own learning are more motivated than externalizers to tackle their confronted problems well (Jarvis, 2005; Dörnyei, 2005). Furthermore, as was mentioned in the literature review, the most effective type of attribution is when individuals attribute their past success and failure in doing particular tasks to internal influences like effort (Jarvis, 2005) which is also supported by the research done by Basgall and Snyder (1988). Therefore, it can be speculated that based on the attribution theory, which is a cognitive approach to motivation, engineering students due to their internal LOC orientation were probably more motivated than the other university students to gain higher GE scores.

The engineering students' high interest in doing homework can also be interpreted from the viewpoint of Williams and Burden's model of motivation (Figure 4). For them motivation is something more than arousal of interest. It also involves spending energy and time to achieve specific

goals. While, the first two strategies of their model focus on initiating motivation, the last stage emphasizes "sustaining motivation" (Williams and Burden, 1997:121). This is in line with what was mentioned by the engineering students in the interviews. Engineering students sustained their motivation by spending more time and energy in achieving higher scores in GE than the other university students.

Reasons for doing something → Deciding to do Something → Sustaining the effort

Figure 4: A three-stage model of motivation (Williams and Burden, 1997)

The high GE achievement of Engineering students can also be interpreted through the first dimension of L2 Motivational Self System proposed by Dornyei (2005) as it is supported by the results of the interviews. This model includes the three dimensions of 1) ideal L2 self 2) ought-to self and 3) L2 learning experience. Ideal L2 self refers to 'the L2 specific-facet of one's ideal self. If the person we would like to become speaks an L2, the Ideal L2 Self is a powerful motivator to learn the L2 because of the desire to reduce the discrepancy between our actual and ideal selves (Dornyei, 2005: 105). As it was observed in the interview results, 60% of the Engineeing students had a good self-image of themselves; they wanted to become good university teachers and researchers and this dream motivated them to try harder than the other university student. Therefore, Engineering students' ideal selves provoked them to make more efforts than the other university students.

It is also important to interpret the data obtained in this undertaking with reference to factors affecting learning. While in the interpretation and identification of factors influencing EFL learning we generally refer to certain types of psychological traits such as extroversion/introversion and field dependent/independent cognitive styles, we need to give proper weight to the effect of LOC in GE achievement.

7. Conclusion

This study began with the main question of examining the relation of Locus of control and general English course achievement of university students of humanities, sciences, and engineering. In addition to validating the Persian version of the LOC instrument resulting in the identification of eight factors, the results of the study played a dual function. Firstly, we observed the difference in LOC only between engineering students and the other two groups i.,e., Science and Humanities. Secondly, we found that locus of control as an affective factor plays a role in EFL learning. LOC can differentiate good language learners from those with poor performance. We need to encourage those favoring external LOC to find effective ways of gaining higher internal LOC and help them take control of their own learning. Since LOC is not a fixed or static character but a dynamic one, EFL teachers can inculcate a sense of responsibility in their learners to take control of their own learning. Hastings (1994) considered reattribution training as the main application of attribution theory. So GE teachers can help their learners especially those in Humanities change their attributions so that they view their failures not due to stable or uncontrollable factors but owing to controllable and unstable ones. In other words, teachers should scaffold their learners to take control of their own learning and encourage those who favor external LOC to find effective ways to improve their LOC orientation. In the present study, we have tried to address the LOC construct which is of significant importance to GE teachers.

Obviously, there appear to be some sociological concerns in addition to the psychological ones. Indeed, the sole teacher-made explanation may not always prove to be fruitful. To discharge responsibility, authorities should work out better job opportunities for the graduates of the Humanities. By extension, one may postulate that the external locus of control of humanities students may be extended to other areas of their life affairs making their future gloomy. Further research is needed to fully examine the extent to which LOC is related to EFL learners' gender, language learning strategies, motivation, and anxiety. This study had its own limitations. We recommend future research to examine the extent to which each of the factors identified

and labeled in this study is related to the GE achievement. By so doing, we are in a better position to provide proper feedback to EFL learners with both internal and external LOC.

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Appendix A

Internal Control Index (ICI)

Please read each statement. Where there is a blank, decide what your normal or usual attitude, feeling, or behavior would be:

A = Rarely (less than 10%) of the time)
B = Occasionally (about 30% of the time)
C = Sometimes (about half the time)
D = Frequently (about 70% of the time)
E = Usually (more than 90% of the time)

Of course, there are always unusual situations, in which this would not be the case, but think of what you would do or feel in most normal situations.

Write the letter that describes your usual attitude or behavior in the space provided on the response sheet.

1. When faced with a problem I _____ try to forget.

2. I _____ need frequent encouragement from others for me to keep working at a difficult task.

3. I _____ like jobs where I can make decisions and be responsible for my own work.

4. I _____ change my opinion when someone I admire disagrees with me.

5. If I want something I_____ work hard to get it.

6. I _____prefer to learn the facts about something from someone else rather than having to dig them out for myself.

7. I _____will accept jobs that require me to supervise others.

8. I _____have a hard time saying "no" when someone tries to sell me something.

9. I _____ like to have a say in any decisions made by any group I'm in.

10. I _____consider the different sides of an issue before making any decisions.

11. What other people think _____has a great influence on my behavior.

12. Whenever something good happens to me I _____ feel it is because I've earned it.

13. I _____ enjoy being in a position of leadership.

14. I _____ need someone else to praise my work before I am satisfied with what I've done.

15. I _____ am sure enough of my opinions to try and influence others.

16. When something is going to affect me I _____learn as much about it as I can.

17. I _____ decide to do things on the spur of the moment.

18. For me, knowing I've done something well is _____ more important than being praised by some else.

19. I _____ let other peoples' demands keep me from doing things I want to do.

20. I _____ stick to my opinions when someone disagrees with me.

21. I _____ do what I feel like doing not what other people think I ought to do.

22. I _____ get discouraged when doing something that takes a long time to achieve results.

23. When part of a group I _____ prefer to let other people make all the decisions.

24. When I have a problem I _____follow the advice of friends or relatives.

25. I _____ enjoy trying to do difficult tasks more than I enjoy trying to do easy tasks.

26. I _____ prefer situations where I can depend on someone else's ability rather than just my own.

27. Having someone important tell me I did a good job is _____ more important to me than feeling I've done a good job.

28. When I'm involved in something I _____ try to find out all I can about what is going on even when someone else is in charge.

Appendix B

The Persian Translation of Locus of Control Index

جنسیت : سطح آموزشی : سن: سابقه یادگیری زبان:

_____

هر یک از جملات زیر را بخوانید و جاهای خالی را با توجه به نگرش، احساس و رفتار خود پر نمایید.

الف- به ندرت (کمتر از ۱۰٪ مواقع)

ب- گهگاه (حدود ۳۰ ٪ مواقع)

ج- گاهی اوقات (حدود ۵۰ ٪ مواقع)

د- مکرراً (حدود ۷۰ ٪ مواقع)

ه- معمولاً (بیش از ۹۰ ٪ مواقع)

حرف مربوط به گزینه‌ای که نگرش یا رفتار معمول شما را توصیف می‌کند در جای خالی قرار دهید.

۱- هنگامی با مشکلی روبرو می‌شوم .....سعی می‌کنم آن را فراموش کنم.

۲- برای اینکه بتوانم کار سختی را به پایان برسانم ، .....به تشویق مکرر دیگران نیاز دارم.

۳- .....شغل‌هایی را دوست دارم که تصمیم‌گیری و مسئولیت آن بر عهده خودم باشد.

۴- وقتی کسی که مورد تحسین من است با نظر من مخالفت می‌کند، .....نظر خود را تغییر می‌دهم.

۵- اگر چیزی را بخواهم ..... برای بدست آوردنش سخت تلاش می‌کنم.

۶- ..... ترجیح می‌دهم اطلاعات مورد نیازم را از شخص دیگری بگیرم تا اینکه خود به جستجوی آنها بپردازم.

۷- من ..... شغلهایی را قبول می کنم که ناظر دیگران باشم.

۸- ..... برایم سخت است که به کسی که سعی دارد به من چیزی بفروشد "نه" بگویم.

۹- ..... دوست دارم در مورد هر تصمیمی که گروهم می‌گیرد حق اظهار نظر داشته باشم.

۱۰-هنگامیکه می‌خواهم تصمیمی بگیرم ..... جوانب مختلف آن را در نظر می‌گیرم.

۱۱-آنچه که دیگران فکر می‌کنند ..... تأثیر زیادی در رفتار من دارد.

۱۲-هر وقت اتفاق خوشایندی برایم می‌افتد ..... احساس می‌کنم که خود باعث آن شده ام.

۱۳-..... پست های مدیریتی را دوست دارم.

۱۴-..... قبل از اینکه از کارهای خود احساس رضایت کنم نیاز دارم که دیگران تشویقم کنند.

۱۵-..... آنقدر به نظرات خود اطمینان دارم که می دانم دیگران را تحت تاثیر قرار می دهم.

۱۶-وقتی از چیزی خوشم می آید ..... سعی می کنم تا جایی که می‌توانم آن را یاد بگیرم.

۱۷-..... تصمیم می‌گیرم که کارها را در لحظه آخر انجام دهم.

۱۸-..... انجام درست کار برایم مهمتر از تحسین دیگران است.

۱۹-..... خواسته‌های دیگران مرا از کاری که انجام می‌دهم باز می‌دارد.

۲۰-..... وقتی کسی با نظرم مخالفت می‌کند روی نظرم پافشاری می‌کنم.

۲۱-..... کاری را انجام می‌دهم که خودم فکر می‌کنم درست است نه آنچه را که دیگران

فکر می‌کنند باید انجام دهم.

۲۲-.....از انجام کارهایی که نتیجه آن دیر مشخص می‌شود مأیوس می‌شوم.

۲۳-..... هنگامی که عضو گروهی هستم ، ترجیح می‌دهم که همه تصمیم ها را دیگران بگیرند.

۲۴- وقتی که مشکلی دارم ..... به نصیحت دوستان و اقوام عمل می کنم.

۲۵- ..... انجام کارهای سخت برایم خوشایندتر از انجام کارهای ساده است.

۲۶- ..... موقعیت هایی را ترجیح می دهم که بیش از توانایی‌های خود به توانایی‌های دیگران اتکا کنم.

۲۷- اگر کسی به من بگوید که کارم را خوب انجام داده‌ام، برایم مهمتر مهمتر است از اینکه خودم احساس کنم کارم را خوب انجام داده ام.

۲۸- هنگامیکه به انجام کاری مشغول هستم ..... سعی میکنم تا حد امکان از آن کار سردر بیاورم حتی اگر کس دیگری مسوولیت آن کار را به عهده داشته باشد.