

On the Relation of Locus of Control and L2 Reading and Writing Achievement

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Received: June 27, 2011

Accepted: July 19, 2011

Published: December 1, 2011

doi:10.5539/elt.v4n4p234

URL: <http://dx.doi.org/10.5539/elt.v4n4p234>

Abstract

Locus of control, a psychological construct, has been the focus of attention in recent decades. Psychologists have discussed the effect of locus of control on achieving life goals in social/psychological interactions. While learning a foreign language involves both social interactions and psychological processes, the role and relation of locus of control in foreign language achievement is seemingly overlooked. This study is, therefore, concerned with examining the relationship between EFL learners' locus of control (LOC) and their L2 reading and writing achievement. Using Internal Control Index as the main instrument of the study and measuring L2 reading and writing achievements of 136 undergraduate students studying English as their major in two universities followed by an interview, the researchers examined the relation of their locus of control and their writing and reading comprehension achievements. The results of the study indicated that locus of control had a positive correlation with their L2 reading and writing achievement. Also the results of the interviews supported the information obtained from the questionnaires. The researchers have pinpointed to the importance of inculcating a sense of responsibility in EFL learners to improve their LOC orientation which might result in higher achievements in L2 reading and writing.

Keywords: Locus of control, L2 writing achievement, L2 reading achievement, Internal control index, Sense of responsibility

1. Introduction

Research in second language acquisition has confirmed the importance of individual difference in identifying good and poor language learners (Horwitz, 2000; Ellis, 2008; Macaro, 2009). The traditional approach to individual difference has used tests such as Modern Language Aptitude Battery (Carroll & Sapon, 1959) to test learners' potentiality in learning L2. This trend has recently changed by focusing on why some L2 learners are more successful than others. In this regard, Robinson (2002) and Dornyei (2005) have pointed out to some factors such as personality, motivation, anxiety and language learning strategies as the influencing factors on L2 learners' success. However, the extent to which locus of control (LOC) which is derived from attribution theory may impinge on L2 learners' success has not received due attention in L2 investigations. This study aims at testing this effect. But what is locus of control?

1.1 Locus of control

The concept of locus of control, arising from the Social Learning Theory of Rotter (1954) refers to the extent to which individuals believe that they are in control of their life events or whether events in their life are the product of external factors such as luck and fate (Elliot, 1997). It is also in the heart of attribution theory (AT), a cognitive approach to motivation, which was developed by Weiner (1979) and explains how individuals process the causes of their life events (Jarvis, 2005). Generally, individuals may attribute their life events to four main influences: 1. internal or external; 2. stable or unstable. The table 1 derived from Jarvis, 2005, p. 125) illustrates such influences.

Based on the Table 1, learners with an internal LOC (i.e., internalizers) are likely to attribute results to their own actions. Results can be attributed to efforts when they are controllable; otherwise, they are attributed to ability and mood which are not controllable. On the other hand, learners with an external LOC (i.e., externalizers) attribute their

success or failure to features of the situation. If the results are uncontrollable they are attributed to external stable cases like task difficulty; otherwise, they may be attributed to teacher bias. Under unstable situations both controllable and uncontrollable results are attributed to atypical help and luck respectively. Jarvis (2005, p. 125) demonstrates some examples related to such attributions (see Table 2).

Accordingly, the most adaptive type of influence is when individuals attribute their success or failure to their ability and efforts (Jarvis, 2005, p.126). In other words, when individuals attribute their success or failure to their efforts to continue the tasks, they become highly motivated. We can give two types of explanations in explaining why things happened. We can make an external or an internal attribution. An external attribution assigns an outside agent or force as the cause. According to external attribution, some outside force motivates the event. By contrast, an internal attribution finds the cause in factors within a person. Based on internal attribution, individuals themselves are the direct cause of the event (Bem, 1972). As you can see, the relationship between the AT and LOC is so close that they are often considered to be the same concept.

A load of research has recently been conducted on the concept of LOC (see Table 3). One such example is the examination of the effect of LOC on anxiety and procrastination. Biaggio (2004) examined how both internalizers and externalizers experience state-anxiety under different situations. Externalizers were reported to experience state-anxiety in "ability" situation while internalizers experienced such anxiety in "luck" situations. Carden, Bryant, and Moss (2004) investigated the effect of LOC on academic procrastination. They postulated that internalizers experience lower academic procrastination, but externalizers experience higher level of academic procrastination. In an exploratory study on the effect of LOC on General English achievement, the present authors (forthcoming) found that Engineering and Basic Sciences university students were internalizers and better General English (GE) learners due to their better GE scores. On the other hand, Humanities students were found to be externalizers and were therefore identified to be poor GE achievers. Table 3 is a capsule description of research done on LOC.

Most research on LOC has been conducted in the field of psychology and as the literature on second language acquisition is concerned little research has been done to examine the role and relation of LOC and L2 reading and writing achievement. Thus, the main research questions of this study are put in the following way:

1. Is there any relationship between EFL learners' LOC and their L2 reading achievement?
2. Are there any differences in L2 reading achievement between internalizers and externalizers?
3. Is there any relationship between EFL learners' LOC and their L2 writing achievement?
4. Are there any differences in L2 writing achievement between internalizers and externalizers?

2. Method

2.1 Participants

The sample chosen for this study consisted of 136 sophomores majoring in English literature during the second semester of the academic year 1387-88. The participants included both males and females. They were selected from Ferdowsi University of Mashhad and Teacher Training University of Sabzevar.

2.2 Instruments

The instrument selected and utilized in this study was The Internal Control Index (ICI) by Duttweiler (1984). The Internal Locus of Control Index (ICI) was designed to measure where a person looks for, or expects to obtain reinforcement. An individual with an external locus of control believes that reinforcement is based on luck or chance, while an individual with an internal locus of control believes that reinforcement is based on his or her own behavior. The participants' Grand Point Averages (GPA) of their L2 Reading and Writing course exams also served to measure their reading and writing achievement.

2.2.1 Internal Control Index

This scale contains 28 five-point Likert-type items with responses of rarely, occasionally, sometimes, frequently, and usually which produce a possible range of scores from 28 to 140 with higher scores reflecting higher internal LOC and lower scores indicating higher external LOC.

2.2 Interview

An *unstructured* interview with 10 internalizers and 10 externalizers was conducted about the amount of time and effort they spent on their homework and doing language learning tasks. Their attributions regarding their failures and achievement in language learning, their attempts and efforts to gain higher scores in English learning courses especially writing and reading courses were also examined. Each interview took about half an hour. The unstructured format for interview was used in this study because as Dörnyei (2007) words, it

allows maximum flexibility to follow the interview in unpredictable directions, with only minimal interference from the research agenda. The intention is to create a relaxed atmosphere in which the respondent may reveal more than he/she would in informal contexts, with the interviewer assuming a listening role [...]. This kind of interview is most appropriate when a study focuses on the deep meaning of particular phenomena (p.136).

2.3 Data collection

In the first step, after obtaining permissions from the instructors, the second researcher visited the classes to administer the LOC questionnaire. Students were assured that the results would be confidential and their teachers would not see the results of the questionnaires. They were asked to write the GPA of their previous reading and writing courses. Then they were introduced to the Internal Index questionnaire. Meanwhile, they were given cookies and juice to help them fully concentrate on the questionnaire items. They were also asked to sign the first page of their answer sheets by marking "YES" in case they were enthusiastic to participate in the interview.

2.4 Data analysis

For scoring the Internal Control Index each item was scored on a 5-point Likert scale from A ("rarely") to E ("usually"). Half of the items are worded so that high internally oriented respondents are expected to answer half at the "usually" end of the scale and the other half at the "rarely" end of the scale. The "rarely" response is scored as 5 points on items 1, 2, 4, 6, 11, 14, 17, 19, 22, 23, 24, 26, and 27; for the remainder of the items, the response "usually" is scored as 5 points. This produces a possible range of scores from 28 to 140 with higher scores reflecting higher internal locus of control. In order to answer the research questions mentioned in this study, the Pearson product-moment correlation formula was used.

3. Results

To answer the first research question regarding the relationship of LOC and L2 reading achievement, the Pearson formula was used. Table 4 illustrates the correlation between the two variables. As can be seen, the correlation coefficient is 0.78 and significant at $P < 0.05$. This correlation is moderately high and positive. Therefore, it can be concluded that the more internally orientated the subjects are, the higher their achievement in L2 reading.

The second research question was proposed to see whether there are any significant differences between internalizers and externalizers in L2 reading achievement. Table 5 shows the mean scores of internalizers and externalizers in L2 reading achievement. As shown in Table 5, the internalizers' mean score in reading comprehension is 17.20 and that of externalizers 14.50.

Table 6 demonstrates whether this difference in mean scores is significant or not. It indicates that the difference between the two mean scores is significant at $p < 0.05$ and internalizers have higher scores in L2 reading than externalizers.

The third research question dealt with the relationship between LOC and L2 writing achievement among the L2 learners. Therefore, the Pearson product moment formula was used to investigate the correlation between the two variables. Table 7 illustrates the correlation coefficient between the two variables. As table 7 shows the correlation coefficient is 0.75, which is significant at $p < 0.05$. It can be concluded that the more internalizer L2 learners are, the better their L2 writing.

The fourth research question concerned the possible difference between the externalizers' mean score in L2 writing with that of internalizers. Table 8 shows the two group's mean scores in L2 writing. As it is demonstrated in table 8, the internalizers' mean score is 16.18 and the externalizers' mean score is 13.50. A glance at the Table 9 helps to understand whether the difference in the mean scores is significant or not. Table 9 shows that the difference in mean scores is significant. So internalizers have higher scores than externalizers in L2 writing.

3.1 Interview results

Twenty participants took part in the interview. The language of interview was the first language of the participants, i.e., Farsi. Based on the interview results, 6 of the internalizers had a good self-image of themselves. They had a high preference to have higher education, become university teachers, and good researchers. One of them said "I am so eager to become a university teacher in future. This dream motivates me all the time and helps me study hard." On the other hand, 7 of the externalizers believed that there are few job opportunities for them in the society except some language learning institutes and this discouraged them to study for higher scores (see Table 10).

6 of the externalizers preferred to study just for the final examinations. For them passing the exams was more important than having higher scores. 3 of the externalizers also thought about how to cheat during the exam. However, 8 of the internalizers said that quizzes besides midterm and final examinations can help them see their

progress, monitor their improvements, and know their strength and weakness better.

7 of the internalizers set their teachers and friends as role models. They benefited from their guidelines, and suggestions. They were inclined to discuss their problems in learning mainly with their teachers. Ninety percent of the internalizers quoted that they were highly motivated before doing English learning tasks and out of them seventy percent said that they could keep themselves motivated during the whole process of task performance by trying to draw the attention of their teachers, competing with their classmates, and avoiding the mistakes they did in the past. However, 6 of the externalizers asserted that although they were motivated at the beginning of doing language skills task, they lost their motivation while performing the tasks.

7 of the externalizers pointed out that what their teachers think about them and their abilities were not really important for them. However, 6 of the internalizers remarked that they were so sensitive to their teachers' reactions and feedbacks. This really encouraged them to try hard and make all their efforts to sound successful in their teachers' eyes. Seventy percent of the internalizers also expressed that their competitive spirit gave them incentives to surpass others in achieving higher scores in language learning courses. One of them said " I want to be a head and shoulder above the others in achieving better scores, so I try to do best, use better strategies, plan and make all my efforts to have the highest scores."

7 of the internalizers attributed their achievements to their effort; they generally did not consider "luck" as an important factor in their education. One of them said " I believe through efforts we can reach our desirable goals, it is easier said than done, but we should be really patient and hardworking."

4. Discussion

The results of the four research questions illustrated that learners who believe they can influence their own learning are more likely to succeed in L2 writing and reading. This can be interpreted with regard to the previous research findings mentioned in the literature (Anderman & Midgley, 1997; Bender, 1995; Phares, 1979; Kernis, 1984; Lonky & Reihman, 1980; Wang, 1983). Internalizers' high L2 achievements in reading and writing may be due to their higher persistence, assertion, attempt, and exploration than externalizers as this is supported by the results of the interviews. Figure 1 illustrates the relationship between LOC and L2 reading and L2 writing achievement. Accordingly, the attribution of success and failure to internal causes is related to higher achievement in L2 reading and writing. As learners try to attribute their failures to external sources, the desire to learn and improve learning may decrease which in turn might lead to lower achievement.

The findings of this study can also be interpreted through the eye of motivation theory. Williams and Burden (1997, p.27) discuss that sense of agency is an important factor which is related to raising motivation. Individuals who control their own language learning will have higher motivation (Williams and Burden, 1997, pp.127-128). Indeed, this is reflected in the internalizers' comments in their interview in which they attributed their achievements to their effort and their high motivation for English learning tasks. It can therefore, be concluded that students who are internally LOC-oriented are expected to have higher sense of agency. So it is not unexpected to see that the internalizers of this study had a better L2 writing and L2 reading achievement than the externalizers due to higher motivation and higher sense of agency.

As the results of this study showed, internalizers showed better achievement in L2 reading and L2 writing than externalizers. In their interviews, traces of attributing their success to internal factors are clearly shown when internalizers aired their views. As it was mentioned in the literature, 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).

As the results of the interviews showed, the higher achievement of internalizers in L2 reading and L2 writing can also be interpreted through the first dimension of L2 Motivational Self System proposed by Dornyei (2005). His model includes 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' (p.105). As was observed in the interview results, 6 of the internalizers had a good self-image of themselves i.e., they revealed an ideal self. In fact, they wanted to become good university teachers and researchers and this dream motivated them to try hard. Therefore, the internalizers' ideal selves provoked them to make more efforts than the externalizers.

5. Conclusion

This study began with the prime aim of examining whether locus of control is related to L2 reading and writing achievement of the EFL participants. The results demonstrated a positive relationship between LOC and both L2

reading and L2 writing achievement (See Figure 1). The dynamic nature of LOC enables EFL teachers to empower students with a sense of control over their learning. Hastings (1994) considered reattribution training as the main application of attribution theory. So teachers can help their learners change their attributions so that they view their failures not due to stable or uncontrollable factors but attribute them to unstable or controllable factors like **effort**. In other words, L2 teachers should orchestrate a move in their students from external to internal LOC so that they can take charge of their own learning, enabling them to become autonomous L2 readers or L2 writers.

Every research illuminates new directions for further investigations. Researchers interested in the concept of LOC can extend this domain by examining the relationship between LOC and other variables like self-regulatory strategies, motivational self-regulation or anxiety. Second, investigating how L2 learners with different levels of LOC perceive their teachers, and learners, and their learning through metaphor analysis is appreciable. Finally, switching on the L2 teachers LOC and examining the ways in which teachers LOC orientation influence their learners' achievement can postulate facts which are still shaky.

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Table 1. The four main elements of AT (Jarvis, 2005, p. 125)

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

Table 2. Examples of the four main attributions based on Jarvis (2005)

	Ability	Effort	Level of difficulty	Luck
Success	I am clever	I tried hard	It was easy	I was lucky
Failure	I am not clever enough	I did not try enough	It was too hard	I was not lucky

Table 3. A comparison of the findings of research done on LOC

Researcher	Internalizers	Externalizers
Bender (1995)	<ol style="list-style-type: none"> 1. see their efforts fruitful 2. enjoy working hard. 3. see failures as their own faults. 	<ol style="list-style-type: none"> 1. see their efforts fruitless. 2. do not mind working hard. 3. see their failures as fate.
Basgall and Snyder (1988)	<ol style="list-style-type: none"> 1. mind their poor performance. 2. attribute their failures to their efforts and attempts. 3. Their poor performance hurt their self-esteem. 	<ol style="list-style-type: none"> 1. do not mind their poor performance. 2. attribute their failures to chance, destiny or other peoples' faults. 3. Their poor performance does not hurt their self-esteem.
Wang (1983)	<ol style="list-style-type: none"> 1. Seek information and use it appropriately in problem –solving tasks 2. Are active 3. Assertive 4. Show a high degree of exploratory behavior and excitement about learning. 5. Show a great deal of persistence 6. Exhibit a willingness to delay rewards to maximize them 	<ol style="list-style-type: none"> 1. are passive 2. are compliant 3. are non-exploratory 4. are inattentive
Phares (1979)	<ol style="list-style-type: none"> 1. accept their individual inadequacy. 	<ol style="list-style-type: none"> 1. escape their individual inadequacy.
Anderman and Midgley (1997)	<ol style="list-style-type: none"> 1. are likely to see a bright future. 	<ol style="list-style-type: none"> 1. are unlikely to see a bright future.
Kernis (1984)	<ol style="list-style-type: none"> 1. are persistent in performing learning tasks. 	<ol style="list-style-type: none"> 1. are not persistent in performing learning tasks.
Lonky and Reihman (1980)	<ol style="list-style-type: none"> 1. spend much time on performing learning tasks. 	<ol style="list-style-type: none"> 1. do not spend much time on performing leaning tasks.
Biaggio (2004)	<ol style="list-style-type: none"> 1. experience state-anxiety in "luck" situations. 	<ol style="list-style-type: none"> 1. experience state-anxiety in "ability" situations.
Carden, Bryant, and Moss (2004)	<ol style="list-style-type: none"> 1. experience lower academic procrastination. 2. experience lower anxiety. 	<ol style="list-style-type: none"> 1. experience higher academic procrastination. 2. experience higher anxiety.
Ghonsooly and Elahi (2010)	<ol style="list-style-type: none"> 1. better achievement in General English 	<ol style="list-style-type: none"> 1. lower achievement in General English

Table 4. Correlation between LOC and L2 reading achievement

		Loc	Score
Loc	Pearson Correlation	1	.789*
	Sig. (2-tailed)		.002
	N		136
Reading score	Pearson Correlation	.789*	1
	Sig. (2-tailed)	.002	
	N	136	

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

Table 5. A comparison of internalizers' mean score in L2 reading with that of externalizers

	Loc	N	Mean	Std. Deviation	Std. Error Mean
Reading	Internalizers	68	17.2043	1.94330	.21460
	Externalizers	68	14.5000	1.76486	.20516

Table 6. Determining the significance of the mean scores difference in L2 reading

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
GE	Equal variances assumed	.166	.002	9.064	134	.000	2.70	.29837	2.1148	3.2936
	Equal variances not assumed			9.109	131.9	.000	2.70	.29689	2.1177	3.2907

Table 7. Correlation between LOC and L2 writing achievement

		Loc	Score
Loc	Pearson Correlation	1	.751*
	Sig. (2-tailed)		.000
	N		136
Writing score	Pearson Correlation	.751*	1
	Sig. (2-tailed)	.002	
	N	136	

*. Correlation is significant at 0.05 (2-tailed)

Table 8. A comparison of externalizers' and internalizers' mean scores in L2 writing

Group Statistics					
	Loc	N	Mean	Std. Deviation	Std. Error Mean
Writing	Internalizers	68	16.18	2.24	.24494
	Externalizers				
		68	13.50	1.76	.20516

Table 9. Determining the significance of the mean scores difference in L2 writing

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
GE	Equal variances assumed	.000	.003	5.184	134	.000	1.68	.32435	1.04086	2.32223
	Equal variances not assumed			5.263	132.084	.000	1.68	.31951	1.05036	2.31273

Table 10. A capsule description of internalizers and externalizers of this study based on their interview

Internalizers	<ul style="list-style-type: none"> • Had good self-image • Had high preference to have higher education, become university teachers, and good researchers • Emphasized quizzes besides midterm and final examinations for progress • Expressed high motivation for English learning tasks • Competed with their classmates, and avoided mistakes of the past • Set their teachers and friends as role models • Were so sensitive to their teachers' reactions and feedbacks • Said their competitive spirit gave them incentives to surpass others in achieving higher scores in language learning courses • Attributed their achievements to their effort
Externalizers	<ul style="list-style-type: none"> • Had dark image about future job possibility • Prepared to study for final examinations • Lost their motivation while performing the tasks • Were not concerned about what their teachers thought about them and their abilities

(Lower L2 reading and writing)

(Higher L2 reading and writing)

External LOC

Internal LOC

Figure 1. The schematic representation of LOC and its relation to L2 reading and writing achievement

Appendix

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.