

A Study of Causal Relationship between Attitude, Self-Esteem, Ambiguity Tolerance, Locus of Control, and Language Proficiency of Iranian learners of the English as a Foreign Language

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This study investigated the causal relationship between Attitude (Att), Self-esteem (S-e), Ambiguity tolerance (At), Locus of control (Loc) and Language Proficiency (LP) among Iranian EFL learners. It was hypothesized that there are some causal relationships between FL learners' mentioned variables and their LP. Participants were 172 senior English major university students who filled out the questionnaires for each trait. The statistical procedure of path analysis was utilized to examine the adequacy of the proposed causal models which linked Att, S-e, At, Loc, and LP. Results revealed that, firstly, the total effects in causal models calculated through path analysis were all greater than the direct effect estimated through correlational analysis. This finding is, in fact, the essence of this research in support of utilizing path analysis rather than simple correlation in studies about learners' variables. Secondly, the highest total positive effect was related to Model 2 in which Att affected LP through all other variables. Moreover, S-e had a significant total effect and At had a non-significant total effect and Loc (external) showed a negative total effect on LP. From the findings of this study, it can be concluded that attitude has a determining role in language learning process. The findings clearly demonstrated that causal modeling path analysis can serve as a versatile tool in research in applied linguistics, because it reveals the more complicated interplay of the learners' variables.

Keywords: attitude, self-esteem, ambiguity tolerance, locus of control, personality variables, causal modeling, path analysis

Since the 1970s, research interest in EFL has shifted from teacher's teaching to learner's learning and an increasing number of studies have

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been undertaken to account for learners' variables. Concerning learners' factors, there is a basic question that why all individuals with normal faculties successfully acquire their first language but meet with different degree of success when they attempt to master a second language. To explain differential success in L2 learning, researchers have for a long time investigated a multitude of factors that may affect language learning in a foreign context. According to Larsen-Freeman (1991), various personality traits have been thought to facilitate or inhibit L2 learning. Among these factors, language learners' variables which are generally divided into three variable categories--cognitive, personality, and affective- have been studied by a number of researchers (see Rastegar, 2003).

Considering the L2 learners' variable categorization, this study that is concerned with Attitude (Att) and three major personality factors--Self-esteem (S-e), Ambiguity tolerance (At), Locus of control (Loc) examines the causal relationship between these variables and Language Proficiency (LP) of Iranian EFL learners.

The present study

The goal of this study is to empirically investigate the general hypothesis of the causal interrelationship between Attitude, Self-esteem, Ambiguity tolerance, Locus of control, and success in language learning among Iranian EFL learners. To this end, the following alternative hypothesis is posed. *There are some causal relationships between Attitude, Self-esteem, Ambiguity tolerance, and Locus of control of Iranian EFL students and their FL proficiency.* To test the interrelationship and causal relationship between these variables statistical procedure of path analysis is utilized.

Literature Review

Attitude

Attitudes seem to be the central features of social psychological life of people. Attitude has been the focus of much research in the fields of educational psychology as well as language education. According to Gardner (2005), it is generally acknowledged that factors such as attitude

and motivation can be important variables in second language acquisition. Gardner and Lambert's (1959, 1972) extensive studies were the first systematic attempts to examine the effect of attitude on language learning. They found that students with "positive attitude" toward the target language and language-learning context and "motivation" to learn were more successful than the ones with contrary predisposition.

Oller and his colleagues (see Chihara & Oller, 1978; Oller, 1977, 1981; Oller, Hudson, & Liu, 1977) conducted several large-scale studies on the relationship between attitudes and language success. The results revealed that positive attitudes toward self, the native language group (the peers), and the target language group enhanced proficiency. Gardner (1985) presented empirical evidence that clearly demonstrated a relationship between attitude and language proficiency. Oxford and Ehrman (1993) claimed that attitude and beliefs about the target language directly affect learning behaviors and learning outcomes. MacIntyre and Charos (1996) asserted that positive attitudes toward L2 have consistently been associated with FL achievement. Anderson (2000) argued that attitudes shaped by the social context are the most important factors in determining the success of formal classroom language instruction. Spolsky (2000) contended that attitude is directly related to motivation, which in turn accounts for success in L2 learning.

Literature on attitude and language learning is vast. However, concerning the causative role of attitude literature is very scarce (e.g., Ely, 1986; Lalonde & Pierson 1983; Rastegar 2003, 2008). In two separate studies Rastegar (2003, 2008) using path analysis included attitudes among a number of other L2 learners' variables such as motivation, FL classroom anxiety, and self esteem concluded that the causal relationship between Att and other L2 learners' variables is considerable.

To sum up the literature on attitude, studies reviewed have generally considered a linear relationship between attitude and language proficiency. Moreover, they all have found a positive significant relationship between positive attitudes towards language learning and FL proficiency. However, there seems to be an absence of research in this area to account for the causal relationship between attitude and other FL learners' variables.

Self-esteem

The most broad and frequently cited definition of self-esteem is that by Rosenberg (1965) who described it as a favorable or unfavorable attitude toward the self. According to Blascovich and Tomaka (1991), self-esteem refers to an individual's sense of value or worth, or the extent to which a person values, approves of, appreciates, prizes, or likes him or herself. Self-esteem is generally considered the evaluative component of the self-concept, a broader representation of the self that includes cognitive and behavioral aspects as well as evaluative or affective ones (Blascovich & Tomaka, 1991).

Self-esteem and language learning seem to be interrelated. According to Brown (2000), at the heart of all learning is a person's belief in his or her ability to accomplish the task. Self-esteem of the FL learners can enhance the belief that they are fully capable of accomplishing the task, and this will be a positive factor in their eventual success in FL learning.

Generally speaking, in studies related to the relationship between self-esteem and FL success, self-esteem has been categorized into three levels, as general (trait), specific (situational), and task self-esteem (Brown, 1994). Some researchers believe that the three levels of self-esteem may indeed work simultaneously but separately within an individual. For instance, Scarcella and Oxford (1992) asserted that a person could feel good about himself or herself globally, yet at the same time experience low self-esteem in a particular situation or environment. Performance, however, as they put it, often improves when the learners make a globally positive self-assessment of themselves.

Heyde (1979) investigated the effect of the three levels of self-esteem-- i.e., trait, situation specific, and task self-esteem-- on performance of American college students learning French as a foreign language. She found that all three levels of self-esteem, correlated positively with performance on the oral production measure. The highest correlation, however, occurred between "task" self-esteem and performance on oral production measures. Oxford and Ehrman (1993) asserted that unsuccessful FL learners have lower self-esteem than successful ones.

According to Oxford and Ehrman (1995) positive beliefs about oneself and one's learning ability would make a definite contribution to learning success. Rastegar (2002, 2003) in two separate studies on Iranian EFL students found a substantial relationship between global or trait self-esteem and FL achievement. Moreover, several studies (Broadkey & Shore, 1976; Gardner & Lambert, 1972; Watkins, et al., 1991) found some relationship between self-esteem and success in FL learning.

Although literature on self-esteem and L2 achievement confirms the relationship and contribution of the personality trait self-esteem to L2 learning task, there is no consensus about this relationship. According to Baumeister, Campbell, Kreuger & Vohs (2003) the modest correlations between self-esteem and school performance do not indicate that high self-esteem leads to good performance. Instead, high self-esteem could be partly the result of good school performance. Baumeister et al., in fact, call attention to the causality issue in respect to self-esteem and academic performance.

The literature, however, does not seem to provide answer to a basic question. The question relates to the very nature of self-esteem and FL success. Brown (1994, P.138) confided that what we do not know is the answer to the classic chicken-or-egg question: "does high self-esteem cause language success or does language success cause high self-esteem?" The question in fact relates to the matter of causality--the causal relationship between self-esteem and some other L2 learners' variables in the task of L2 learning.

In this study the causal effect of self-esteem along with attitude, ambiguity tolerance, locus of control, on FL achievement of Iranian language learners, a research question that has not been addressed so far, will be investigated.

Ambiguity tolerance

The concept Ambiguity tolerance has been variously referred to as "tolerance of ambiguity", "inhibition", "ego boundaries", etc, in different studies. However, as Ehrman (1993) puts it, no matter how it is defined, the works in this area refer to the same underlying construct.

According to Ely (1989), tolerance of ambiguity is the acceptance of confusing situations and lack of clear lines of demarcation. Brown (2000) referred to tolerance of ambiguity, as the degree one is willing to tolerate ideas and propositions that run counter to his/her belief system or structure of knowledge. As noted by Ely (1989), FL learning is fraught with uncertainty, so a degree of ambiguity tolerance is essential for language learners.

A number of researchers have addressed ambiguity tolerance of FL learners. Students who can tolerate moderate levels of ambiguity are more likely to persist in language learning (Chapelle, 1983; Naiman, et al., 1978) and to achieve more (Chapelle & Roberts, 1986; Reiss, 1985) than students who cannot. Oxford and Ehrman (1993) reported low but significant correlations between tolerance of ambiguity and language performance. Too much tolerance of ambiguity, as noted by them, might, however, lead to unquestioning acceptance and cognitive passivity.

Human ego encompasses what Guiora (1972) and Ehrman (1996) refer to as “Ambiguity tolerance” or the very personal, egoistic nature of L2 learning. The L2 theorist most associated with the concept of ego-boundary factor in FL learning is Alexander Guiora whose studies address the inhibitory effects of what he terms Ambiguity tolerance. Guiora, et al. (1972, cited in Brown, 2000) who have conducted one of the few studies on ambiguity tolerance in relation to FL learning, claim that the notion of ego boundaries is relevant to language learning. Guiora et al. (1972) suggested that ambiguity tolerance might account for the difficulties that adults have in learning a second language. Guiora et al. (1980) also found that a direct relationship existed between inhibition and pronunciation ability in a second language, see also (Guiora, 1981, 1984). Oxford and Ehrman (1995) asserted that tolerance of ambiguity and risk-taking are linked. Those who can tolerate ambiguity, are more likely to take some risks in L2 learning, and risk-taking is essential for progress (Beebe, 1983; Brown, 2000; Ely, 1986; Stevick, 1976). FL students who fear ambiguity or have low self-esteem often allow their inhibitions to take over (Beebe, 1983; Stevick, 1976).

Ehrman (1993) provided further support for the importance of

ambiguity tolerance in a study of language learners with “thin” (permeable) and “thick” (not as permeable) ego boundaries. She further, maintained that “ego boundaries” are influential in learning and affect a person’s behavior across a large number of learning situations, particularly FL learning settings. The concepts of ego boundary and permeability to new learning are found throughout literature of learning psychology as well as language learning. The concept of affective filter of Krashen’s input hypothesis (Krashen, 1985) and the integrative motivation (Gardner, 1985) and assimilative motivation (Graham, 1984) are related to the concept of ego-boundaries.

To conclude the literature review on ambiguity tolerance, as Brown (1994) remarked, findings of studies related to tolerance of ambiguity have an intuitive appeal. He then continued, “it is hard to imagine a compartmentalizer --a person who sees everything in black and white with no shades of gray-- ever being successful in the overwhelmingly ambiguous process of learning a second language” (p. 120).

Locus of control

Locus of control refers to each person’s view of the source of his outcomes (Rotter, 1966). Locus of control is defined by Tomlinson (1987) as a polar personality construct in which individuals attribute their successes and failures either to their own behaviors or to external factors that they cannot control. As Rotter (1990) puts it, locus of control is the degree to which persons expect that they are in control of outcomes of their behavior or that those outcomes are controlled by factors such as fate, luck, or chance.

Clearly, people are different in terms of whether they believe outcomes are controlled by internal or external factors. This has been shown in diverse cultures (Liebert & Spiegler, 1994). Individual differences in locus of control appear to be related to a variety of behaviors, including information-seeking, achievement, and dealing with others. Concerning information seeking, internals are more likely to seek information than externals (Phares, 1978). Because internals consider themselves responsible for their outcomes, they want information that improves their

chances of obtaining desirable outcomes and helps them avoid undesirable ones (Liebert & Spiegler, 1994). With respect to achievement, internals are, generally, higher achievers, especially on intellectual and performance tasks (Ashkanasy & Gallois, 1987; Bigoness, et al., 1988; Wildstein & Thompson, 1988, 1989). Internal locus of control is also associated with higher achievement motivation (Volkmer & Feather, 1991), as well as more daydreaming about achievement and less daydreaming about fear of failure (Brannigan, et al., 1991). Regarding dealing with others, internals tend to be independent but cooperative. They resist undue social pressures more than externals (Phares, 1978), but generally they are less hostile and have more favorable attitudes toward authority figures (Heaven, 1988). Internals' coping skills in social situations tend to be highly adaptive and this may in fact be a determining factor in learning an FL (Liebert & Spiegler, 1994).

Locus of control is considered to be a primary factor in determining level of academic achievement among college students (Linder & Janus, 1997), high school students (Sterbin & Rakow, 1996), and even at risk students (Whilhite, 1990). Studies consistently show that an internal locus of control is associated with better academic achievement (Findley & Cooper, 1983). Why do internals do better in school? One reason may be that they see themselves as responsible for their achievements. Another reason may be the way internals and externals respond to feedback (Glimmer & Reid, 1978, 1979 cited in Burger, 1993).

Locus of control and self-esteem seem to be interrelated. According to Oxford and Ehrman (1993), if a person's locus of control is totally external as opposed to at least partially internal, then self-esteem often becomes a problem. That is, externals seem to have lower self-esteem whereas, the internals enjoy a higher level of self-esteem.

To summarize the literature from a methodological viewpoint, it must be acknowledged that almost all of the researches reviewed used the simple correlational statistics or multiple regression. Very rarely multivariate path analyses procedure is utilized to really appreciate the interrelationship between the language learners' variables.

Method

Participants

A total number of 172 (female n= 103 and male=69 aged 20-25) senior English major students of Kerman University participated in this study. The probability sampling procedure was utilized to select the participants.

Instruments

The following instruments were used to measure the variables of the study:

1. Attitude scale: (Rastegar, 2003)
2. Self-esteem Scale: (Rosenberg, 2000)
3. Ambiguity Tolerance Scale: (Ely, 1989)
4. Locus of Control Scale: (Shrink, 2000)
5. Michigan Test (ECPE preliminary test 2, 1997)

The four personality variable questionnaires were in likert scale format. The language of all scales was English. Participants' LP was assessed by means of the University of Michigan Examination for the Certificate of Proficiency in English (ECPE) preliminary test 2. The reliability indexes for the scales were estimated by the researcher, in a pilot study conducted with 42 subjects randomly selected from the same population, by means of Cronbach's alpha for the scales and KR-21 for the LP test.

Attitude was measured by means of a twenty-item attitude scale constructed by the researcher (for her PhD dissertation) to measure attitudes toward L2 learning of Iranian EFL learners. The range of the scores was from 20 to 100. High scores were indicative of more favorable and positive attitudes toward L2 learning. The reliability index of the scale is $\alpha = 0.80$.

Self-esteem was measured by means of Rosenberg's (2000) ten-item self-esteem scale. The range of scores was from 10 to 40. High scores imply more self-esteem on the part of participants. The reliability index of the scale is $\alpha = 0.79$.

Ambiguity tolerance was measured by means of Ely's (1989) twelve-item Tolerance of Ambiguity Scale. The range of scores is from 12 to 60.

Higher scores reflect more tolerance of ambiguity. The reliability index of the scale is $\alpha = 0.87$.

Locus of control was measured by means of Shrink's (2000) ten-item Locus of Control Scale. The range of scores was from 10 to 50. Higher scores reflect an external locus of control and lower scores imply internal locus of control. The reliability index of the scale is $\alpha = 0.76$. The participants' LP was assessed by means of (ECPE) preliminary test 2. This test consisted of 35 items in four parts --cloze, grammar, vocabulary, and reading comprehension. KR-20 formula was used to measure the reliability of the scores ($r = 0.91$).

Data collection

The required data for the study were collected over the academic semester of spring 2007. Participants were tested in class groups during the regular class hours by the researcher (subjects were all enrolled in the researcher's own classes). The four personality scales, with appropriate instruction, were given to the participants in one session and LP test was administered in the next session. This procedure was carried out for all groups systematically. Participants were assured that the results will remain confidential and they can obtain their results on their request.

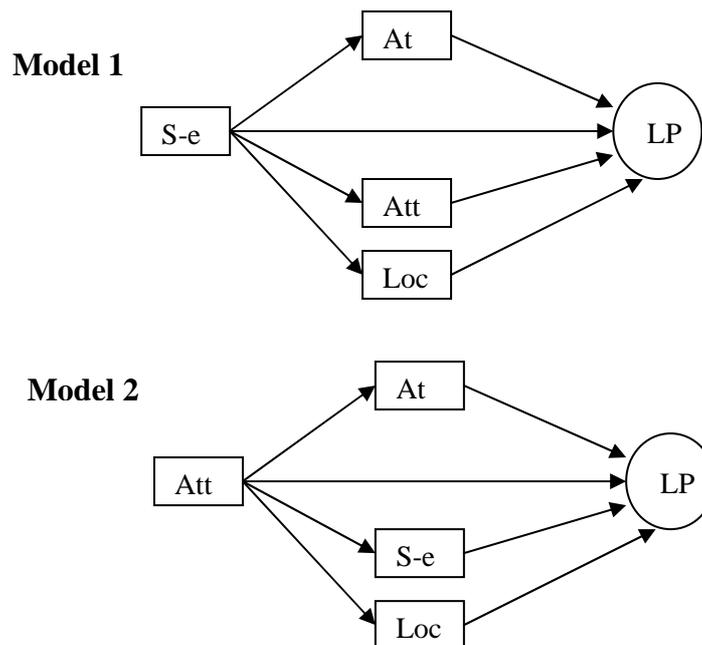
To carry out the statistical procedures of this research project two sets of scores were utilized. The first set was related to the four learners' variable scales and the other set to the participants' LP scores.

Design of the study

This study attempted to determine the causal relationship between the variables of the study. Therefore, path analysis, which tests theoretical relationships among independent (learners' variables) and dependent measured variable (LP) and the direct and indirect effects of the independent variables on the dependent variable was utilized. As far as path analysis is concerned, first few prototype path models that relate learners' variables to one another and to language proficiency were suggested as a primary design for the study. Then, the tentative models were put into statistical test using SPSS to come up with the most suitable

design. In this study, eight tentative models were suggested, however, for parsimony, just two of the tentative models-- those that appeared to manifest the best causal relationship--are presented in the following.

Tentative Path Models



Data analysis procedures

To come up with a proper causal model of the interrelationship between the L2 learners' variables and LP, the statistical procedure of path analysis was utilized. The tentative path models were put into statistical test to confirm or reject the causal relationship between the variables. After confirmation of some of the path relations within a model, the most appropriate model for the relationship between the learners' variables and LP was specified. The results of the data analysis are presented as the follows.

Results

As the first step in data analysis, the descriptive statistics of the data was calculated and they are summarized in Table 1 below.

Table 1
Descriptive statistics of the variables

Variables	Mean	SD	S.E Mean	Max	Min	Range
Attitude	73.79	6.85	.53	86.00	55.00	31.00
Self esteem	28.22	3.66	.28	38.00	21.00	17.00
Ambiguity tolerance	32.33	6.17	.48	49.00	17.00	32.00
Locus of control	27.11	4.81	.37	39.00	14.00	25.00
Language Proficiency	25.48	2.44	.19	31.00	17.00	14.00

In order to assess the linear relationship between the learners' variables and LP, the correlations among the variables were computed. The correlation matrix with significance levels in bold face is presented in Table 2.

Table 2
Correlation matrix

Variables	Att	S-e	At	Loc	LP
Att	1.000	.436**	.362*	.405**	.354*
S-e	.436**	1.000	.126	-.174*	.400**
At	.362*	.126	1.000	-.329**	.153
Loc	.405**	-.174*	-.329**	1.000	-.068
LP	.354*	.400**	.153	-.068	1.000

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Since the intent of this study was to focus on the causal relationships assumed to underlie these relationships, the correlations are not discussed in any details at this point. Though, it is worth mentioning that Pearson's product moment correlation coefficient is equal to standardized regression coefficient *beta* (β) calculated by Linear Regression and in path analysis considered as the direct effect. As the statistical procedure of path analysis is carried out, and by comparing the simple linear correlations with the relationships manifested as the results of this statistical test, one can appreciate how such linear relationships would underestimate the actual

interrelationship between the variables. And how the intervening factors that may, in fact, influence the dependent variable to a great extent, are ignored by such simple linear procedures.

Investigation of the causal models

The aim of path analysis is to provide quantitative estimates of the causal relations between sets of variables. This idea can best be explained with reference to the central feature of path analysis --the path diagrams. The path diagrams make explicit the likely causal connections between the variables. A path diagram requires a set of equations that allow the estimation of each of the path coefficients. The model moves from left to right implying causal priority to those variables closer to the left. Direct effect occurs when a variable has an effect on another variable without other variables intervening between them. An indirect effect occurs when there are some intervening variables through which two variables are connected.

The tentative causal models of this study involved five concepts. As initially formulated, four learners' variables believed to underscore each other and LP. In each causal model one variable such as Att, S-e, etc is taken as the headvariable having direct as well as indirect effect—through other variables-- on LP. Therefore, all four independent variables were investigated as being the head or intervening variable to underscore each other and LP.

Considering the basic features of path analysis, the proposed models were put into statistical test of path analysis one by one. In order to provide estimates of each of the postulated paths, path coefficients (*p values*) were calculated. The *p values* were then written on the corresponding arrows in the models. A path coefficient, as mentioned, is a standardized regression coefficient beta (β). Since the path coefficients are standardized, it is possible to compare them directly (Bryman & Cramer, 1997). Through setting up a series of equations for each model and performing statistical calculations, a total effect for each model was calculated.

Path analysis procedures

Since path analysis requires lengthy statistical calculations which are

beyond the scope of this paper, calculations for the models will not be mentioned. However, the results of the calculations will be discussed. In each model Att, S-e, At, and Loc have a direct effect on LP. A number of indirect effects on LP for each are also proposed and calculated. The indirect effects are gleaned by multiplying the coefficients for each path from independent variable to LP.

Having calculated the path coefficients for a model, the model goes through a procedure called “theory trimming”. Theory trimming according to Pedhazur (1982) is deleting non-significant paths from the causal models and retaining the model with meaningful causal relations. When the “theory trimming” is done, it is time to estimate the total effects of the independent variables on dependent variable LP. To calculate the total effects of each of the personality variables on LP, after lengthy statistical calculations, the direct effect is added to the sum of the indirect effects. Table 3 lists the direct effects and the total effects of the learners’ variables on LP.

Table 3
Direct effects and Total effects of variables on LP

Direct effect		Total effects	
Att	.354 → LP	Att	.496 → LP
S-e	.400 → LP	S-e	.416 → LP
At	.153 → LP	At	.175 → LP
Loc	-.068 → LP	Loc	-.128 → LP

Interpretation of the findings

As can be seen in Table 3 above, the total effects of Att on LP (0.496) is greater than the direct effect of Att on LP (0.354). That is, when Att is considered as just an entity to have some relationships with LP, that relationship is estimated to be (0.354). However, when Att is considered to have some causal effects on some other L2 learner’s variables and these variables, in turn, affect LP, then, some new information about the nature

of the causal relationship between the L2 learners' variables is attained. The case for S-e and LP is different. S-e in the interplay of the variables does not affect LP as Att does. Thus, Model 2 (p. 18) manifests the total effect (0.496) of Att on LP. In this model S-e, At, and Loc are considered as intervening variables. This model manifests the highest total effects among personality variables on LP.

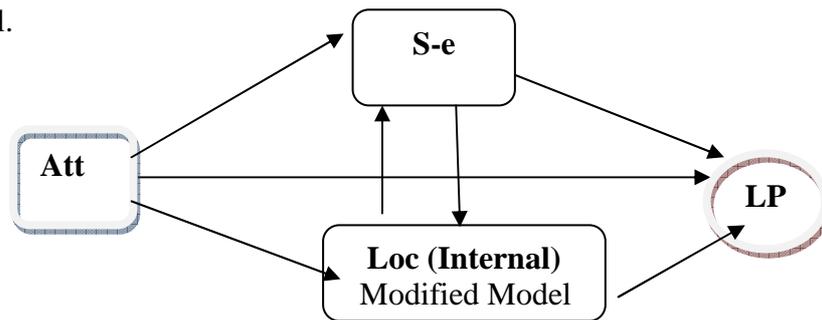
While the direct effect of S-e on LP (0.400) is greater than the direct effect of Att on LP (0.354), the case for total effects is different and reversed. Att gains more significance in the causal model than S-e. The same type of interpretation can be done for other models, though it is beyond the scop of this paper to discuss all those interpretations.

Comparison of the direct effects and the total effects, calculated for the variables of the study (Table 3), indicates that the total effects on LP in all cases are greater than their direct effects on LP. There are some plausible interpretations for the difference or benefit of the total effects. First, in studies related to L2 learners' variables, there are some other factors, rather than the independent variable/s under study, that may affect the dependent variable. In other words, the direct effect does not account for the intervening factors that are present in any L2 learning task. Second, L2 learners' specific attributes (like FL anxiety, motivation, inhibition, extroversion, etc. to name a few) have obvious relation to language learning (see Brown, 2000). Thus, inevitably they interact with and consequently have some effects on each other in the task of L2 learning that should be accounted for in any study related to language learners' variables and L2 achievement.

All in all, if attaining a more realistic picture of the whole phenomenon of learners' variables and L2 achievement is the objective, then, the mentioned factors should be accounted for in the research in this area. Since, There are always some intervening factors that influence the assumed linear relationship between the two variables to depend on simple linear correlation or even the multivariate correlation to account for the complex relationship between the L2 learners' variables in the complicated task of L2 learning is, in fact, underestimating the complexity of the phenomenon. The alternative to the correlational analysis would be causal

modeling and path analysis technique.

Having done the statistical procedures of path analysis on different causal models, the following modified path model can be presented as a causal model for learners' personality variables and LP. The reason for deleting Att from the modified model is that in theory trimming, total effect of Att was found to be non significant and hence it is not included in the modified model.



Modified Model

The reason for selecting Loc (internal) in the modified causal models is the fact that higher scores on all the variables except Loc, reflect more of that trait. For Loc in this study higher score means external Loc while lower scores means internal Loc (see instruments). The findings of this study would not provide enough information to come to some conclusive conclusion on locus of control and its relation to L2 learning. Locus of control and L2 learning, of course, requires further investigation in a separate study. For the purpose of the modified causal model, Loc (internal) was included because it was assumed that if external locus of control has no contribution perhaps internal locus of control would have. This modified model could also be considered hypothetical because it can also be put into more investigation in different context.

Discussion

Comparing the total effects and the direct effects of the L2 learners' variables on LP, one can notice how causal modeling will manifest a more realistic relation among the variables. Concerning Att, the highest total effect on LP relates to Model 1. As was proposed, the attitude of the L2

learners affects other variables and these variables in turn affect LP. Therefore, positive attitudes toward L2 learning could have a determinant role in language learning processes. This finding is in line with the findings of the following correlation studies (Chihara & Oller, 1978; Gardner & Lambert, 1972; MacIntyre & Charos, 1996; Oller, 1977, 1981; Oller, Hudson, & Liu, 1977; Oller, et al., 1978; Oxford & Ehrman, 1993). Language learners as Brown (2000) asserted, benefit from positive attitude toward L2 learning because negative attitude towards the target language and context of learning may lead to decreased motivation and that in turn will affect success in L2 learning.

The finding on self-esteem is in line with the results of several studies in this area (Broadkey & Shore, 1976; Gardner & Lambert, 1972; Heyde, 1979; Oxford & Ehrman 1993, 1995; Rastegar, 2002, 2003; Watkins, et al., 1991). Of course, causal modeling path analysis, manifested more plausible relations between S-e and LP.

The non-significant correlation between Loc and LP are in line with the results of several studies in this area. Most studies considered At to interfere with and hinder language learning (Chapelle, 1983; Naiman, et al., 1978; Chapelle & Roberts, 1986; Reiss, 1985; Guiora, 1981, 1984; Guiora, et al., 1980). Oxford and Ehrman (1993), on the other hand, reported a low but significant correlation between tolerance of ambiguity and language performance.

All in all, the findings of this study demonstrated that path analysis is a versatile option to use when the effects of a number of L2 learners' variables on language achievement are investigated in one study. Causal modeling procedure will reasonably manifest the causal relationship that naturally exists between the L2 learners' variables and are otherwise overlooked with simple correlational procedures.

Conclusion

The findings of this research can be summarized as follows. First, the highest total positive effect was related to Model 2 in which Att affected LP through all other variables. Secondly, S-e had a significant total effect on LP. Moreover, At had a non-significant total effect and Loc (external)

showed a negative total effect on LP. From the findings of this study, it can be concluded that attitude has a determining role in language learning process. The findings of this clearly demonstrated that causal modeling path analysis can serve as a versatile tool in research in applied linguistics, because it reveals the more complicated interplay of the learners' variables.

Therefore, the tendency of researchers to consider a number of learners' variables simultaneously in one study and the research trend of causal modeling path analysis needs to be seriously considered in psycholinguistic research because it would make great contribution to the field of ELT. From a methodological viewpoint, when conducting multivariate analyses, path analysis has demonstrated to be a valuable tool for testing theoretical models. Future research on L2 learners' differences should give serious attention to the process of model construction involving more L2 learners' variables from the different variable domains (L2 learner's personality, affective, and cognitive factors) in one study. The results of this study clearly demonstrate that causal modeling procedures can serve some essential purposes, particularly, in EFL contexts.

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