



## The influence of personality traits on the use of Memory English Language Learning Strategies

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### Abstract

The present study aims to find out the influence of personality traits on the choice and use of Memory English Language Learning Strategies (MELLs) for learners of English as a foreign language, and the role of personality traits in the prediction of use of such Strategies. Four instruments were used, which were Adapted Inventory for Memory English Language Learning Strategies based on Memory category of Strategy Inventory for Language Learning (SILL) of Rebecca L. Oxford (1990), A Background Questionnaire, NEO-Five Factors Inventory (NEO-FFI), and Test of English as a Foreign Language (TOEFL). Two hundred and thirteen Iranian female university level learners of English language as a university major in Iran, were volunteer to participate in this research work. The intact classes were chosen. The results show that however, there is a significant relationship between four traits of personality and the choice and use of MELLs, but personality traits cannot be as a strong predictor with high percent of contribution to predict the choice and use of the MELLs.

**Keywords:** Memory language learning strategies, English learning, Personality traits

### Introduction

Since individual differences have been identified as variables influencing language learning outcome (Skehan, 1989; Larsen-Freeman & Long, 1991); and as it was shown by the study of Marttinen (2008), the high percent of source of learners' knowledge comes from teachers; Horwitz (1988) encourages teachers to discover the prescriptive belief of their own students. Moreover, in order to provide successful instruction, teachers need to learn to identify and understand their students' individual difference, and even they need become more aware that their teaching styles are appropriate to their learners' strategies (Oxford & Cohen, 1992).

Recently some studies tend to concentrate more on individual differences in strategy performance (e.g. Oxford, 1992, 1993). In such related studies, it was showed for strategy instruction to be affected; it should take all the variables into account (Oxford & Crookball, 1989).

Since 1990s, there has been a growing interest on how personality correlates to the academic performance. Personality has been conceptualized at different levels of breadth (McAdams, 1992), and each of these levels include our understanding of individual understanding. Moreover, individuals are characterized by a unique pattern of traits, and some study shows that successful language learners choose strategies suit to their personalities (Oxford & Nyikos, 1989). In addition, since LLSs are not innate but learnable (Oxford, 1994), there are broad justifications have been offered for the evaluation of personality traits as a predictor of Memory English Language Learning Strategies (MELLs). In such way, the premise underlying line of this research is that success in MELLs plays an important role in affecting learners' English language learning process.

The study on individual and personality differences is a central theme in psychology as well as the other areas

of social and behavior sciences (Saklofske & Eysneck, 1998). The examination of variation in human behavior is referred to as the study of individual differences (Ehrman & Dornyei, 1998). Such study of individual differences includes many subsets of studies such as the study of personality differences (Hampson & Colman, 1995), and personality factors that are important in development of linguistic abilities (Ellis, 1985). Psychologically, it is a truism that people are different in many fundamental ways, and learners are individuals, and there are infinitely variables (Skehan, 1989). In this manner, Horwitz (1999) points out "language learners are individuals approaching language learning in their own unique way" (p.558). In addition, individuals who are characterized as a particular psychological type, adopt different learning strategies (Brown, 2001). In such situation, the teachers must make the students aware of the range of the strategies they can adopt (Cook, 2008); and they must aware of the relationship between personality and academic performance (Eysenck, 1967; Cattell & Butcher, 1968).

Foregoing has highlighted the main goal of the current study was to document how personality traits related to the MELLs. In such situation, there are some possible ways looking at MELLs and their relationship with personality traits. The first is to see the use of MELLs as an outcome of personality traits. The second is to see them as having uni-directional causal role increasing personality traits. The third one is to see the relationship between the two as mutual, and causality is bi-directional.

### Methodology

#### Participants

The descriptive statistics are such type of numerical representation of participants (Brown, 1996). The sample drawn from the population must be representative so as to allow the researchers to make inferences or generalization from sample statistics to population (Maleske, 1995). As Riazi (1999) presents "A question that often plagues the novice the researcher is just how



large his sample should be order to conduct an adequate survey or study. There is, of course, no clear-cut answer". If sample size is too small, it is difficult to have reliable answer to the research questions. If sample is too large, it is difficulty of doing research. To leave a margin of about 20% for ineffectual questionnaires slightly bigger numbers were chosen. In this way, initially a total of two hundred fifty Iranian female university level learners of English language as a university major at the Islamic Azad University Branches of three cities which named Abadan, Dezful, and Masjed-Solyman in Khuzestan province in south of Iran, were asked to participate in this research work. It must bear in mind that number of participants may affect the appropriateness of particular tool (Cohen & Scott, 1996). The intact classes were chosen.

The chosen participants for this study were female students studying in third grade (year) of English major of B. A. degree, ranging age from 19 to 28 (Mean= 23.4, SD= 2). Their mother tongue was Persian (Farsi) which is the official language of Iran, according to Act 15 of the Iranian constitution.

The socio-economic status of participants, such as the participants' social background, and parents' level education was controlled as well by a questionnaire. Based on some indicators such as the parents' socio-educational background and occupation, the participants were matched as closely as possible for socio-economic background to minimize the effect of social class. Accordingly, the participants were classified as a middle class.

Because of the nature of this work (regarding the use of MELLSSs), a general English proficiency test for determining the proficiency level of participants in English was applied in order to minimize the effect of English language proficiency. As Jafarpour (2001) defines "the percent classification of subjects by the experimental test that corresponds to those by the criterion" (pp.32-33) (as cited in Golkar & Yamini, 2007), top of subjects are 27% and bottom of subjects are 27% (Golkar & Yamini, 2007), the participant whom were classified as intermediate subjects, were asked to participate in the current study.

#### *Instrumentation in the current study*

Four instruments were used to gather data in the current study. They were:

*Adapted Inventory for Memory English Language Learning Strategies:* The Strategy Inventory for Language Learning (SILL) of Rebecca L. Oxford (1990) is a kind of self-report questionnaire that has been used extensively by researchers in many countries, and its reliability has been checked in multiple ways, and has been reported as high validity, reliability and utility (Oxford, 1996). In addition, factor analysis of SILL is confirmed by many studies (Oxford & Burry-Stock, 1995; Oxford, 1996; Hsiao & Oxford, 2002). In this way, as Ellis (1994) believes Oxford's taxonomy is possibly the most comprehensive currently available. Several empirical studies have been

found moderate intercorrelation between the items of six categories in SILL (Oxford & Ehrman, 1995).

Based on the Memory category of SILL, the investigator adapted a questionnaire. In adaptation of each instrument from one language to another in research works, some problems occur, such as the problem of translation one questionnaire to another language (Perera & Eysenck, 1984). As same as the other two questionnaires (NEO-FFI and Background Questionnaire), adapted MELLSSs inventory was checked through back translation into English by three English teachers, and three psychologists who were fully proficient in both languages (English and Persian), in order to check the consistency with English version, and based on the pilot study was performed. Secondly, since both the psychologists and English teachers were professional in related study of the questionnaire, they were asked to check the psychometrics of the questionnaire. The items were corrected until full agreement among the translators was achieved, and the pilot study confirmed such translated items. In addition, the balance between spoken and written Persian was checked.

*Test of English as a Foreign Language (TOEFL): A Background Questionnaire*

*NEO-Five Factors Inventory (NEO-FFI):* The questionnaire of the Big five factors is one of the most widely used personality assessment in the world. In addition, evidences indicate that Big Five is fairly stable over time (Costa & McCare, 1988; Digman, 1989). Moreover, factor structure resembling the Big Five Factors was identified in numerous sets of variables (Digman & Inouye, 1986; Goldberg, 1981, 1990; John, 1990; McCare & Costa, 1985; Saucier & Goldberg, 1996).

The idea of major dimensions include much of personality is long standing (Norman, 1963). In addition, Digman and Inouye (1986) state "the domain of personality of personality descriptors is almost completely accounted for by five robust factors" (p.116). In this way, the Big Five Factors personality questionnaire can be as a satisfactory tool to assess the relationship between personality and a number of academic variables (Chamorro & Lewis, 2007).

#### *Sample of the pilot study*

Thirty-nine female student's university level learners of English language as a university major at Islamic Azad University Branches of three cities which named Abadan, Dezful, and Masjed-Solyman were volunteer to participate in the pilot study.

#### *Reliability of the instruments*

Since Cronbach's alpha is one of the standard ways of expressing a test's reliability (Foster, 1998); the reliability of our experimental measures were assessed by calculating Cronbach's alpha over the items of the three instruments across all the participants in the current study which were found 0.73 for Adapted Inventory for Memory English Language Learning Strategies, 0.82 for NEO-FFI,



Table 1. Mean and standard deviations (SD) of the five traits of personality in the current study

Personality Trait	N	Mean	SD
Neuroticism	213	23.0	8.3
Extraversion	213	27.4	5.5
Openness to Experiences	213	27.9	4.7
Agreeableness	213	32.4	5.4
Conscientiousness	213	34.7	6.3

and 0.80 for TOEFL. The reliability coefficient indicated the degree to which the results on a scale can be considered internally consistent, or reliable (Nunnally & Bernstein, 1994; De Vellis, 2003; Moemeni, 2007). Such finding of reliabilities for the three instruments confirms the finding of reliabilities in the pilot study.

*Data collection procedures in the main study*

Table 2. The summary of correlations among the overall Memory strategy use and the five traits of personality

		Extra- version	Openness to Experiences	Agree- ability	Conscie- ntiousness	Neuro- ticism
Memory Strategies	Pearson Correlation	.261**	.182**	-.019	.304**	-.198**
	Sig. (2- tailed)	.000	.008	.784	.000	.004
	N	213	213	213	213	213

All of the instruments were administrated during class time and based on the availability of the participants of third grade (year) at three stages. The researcher, himself, administrated all the instruments. All the participants participated in the main study, were explained the goals of the current study by the researcher. Also for each stage of administration, the researcher explained the instructions for answering the test and questionnaires before each of the instruments was administrated. All the explanation of the materials was performed through Persian language (which is the mother tongue of the participants).

*Stage one:* At this stage, the participants were asked to answer TOEFL test. Approximately 80 minutes were taken to answer the test. Such duration of time is as the duration of time was calculated in the pilot study (The first week).

*Stage two:* The respondents were asked to fill the Adapted Inventory for Memory English Language Learning Strategies. The respondents were asked to respond to the questions within 5-10 minutes. The time that assigned for participants was determined according to the results obtained from the pilot study. Alongside

Table 3. The model summary of the equation

Model	Variables Entered	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	....	.304 <sup>a</sup>	.092	.088	.55918
2	Extraversion	.351 <sup>b</sup>	.123	.115	.55083

*Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100) Dependent Variable: Memory Strategies a. Predictors: (Constant), Conscientiousness b. Predictors: (Constant), Conscientiousness, Extraversion*

Adapted Inventory for Memory English Language Learning Strategies, Background Questionnaire was administrated (The second week).

*Stage three:* At this Stage, NEO-FFI was administrated. The time that assigned for the participants in order to complete NEO-FFI was determined according to the results obtained from the pilot study. 10 - 15 minutes was enough to complete NEO-FFI (The third week).

#### Data Analysis

After data collection, the data was entered onto databases (Excel and SPSS) to enable data analysis to be carried out.

#### Results, discussion, and conclusion

In the entire sample, the strategies in the Memory category were the categorized as Medium frequently used strategies, with a mean of 3.0 (SD=.59) (Based on the Oxford' key, 1990). The means were calculated in order to determine the mean of the each of five traits of personality among the total group of the respondents (N=213) (Table 1).

Table 1 showed that the mean of the Conscientiousness trait (Mean=34.7, SD =6.3) was more than each of the means of the other four traits, and the mean of the Neuroticism trait

(Mean=23.0, SD=8.3) was less than each of the means of the other four traits. The Pearson Correlation was performed to examine whether there is relationship between the overall Memory strategy use and the five traits of personality (Table 2).

According to Table 2 the students' overall Memory strategy use was significant positively correlated with each one of the Extraversion trait, the Openness to Experiences trait, and the Conscientiousness trait at the  $p < .01$  level (2-tailed). The levels of correlations were found low for the Extraversion trait, for the Openness to Experiences trait, and medium for the Conscientiousness trait. For the Neuroticism trait, the students' overall Memory strategy use was significant negatively correlated with it at the  $p < .01$  level (2-tailed).

The level of correlation was found low. There was not found a correlation between the students' overall Memory strategy use and the Agreeableness trait ( $p > .05$ ). In Table 2, presences of both types of positive and negative correlations were observed, but in both types of correlations, the level of correlation was found low (except the case of the Conscientiousness trait that its correlation level was found medium).

Moreover, except the case of the Agreeableness trait, all types of correlations were significant at the  $p < .01$  level (2-tailed). In such way, it could be concluded that there was a meaningful significant relationship between each of the personality traits and the overall Memory strategy use (except the case of the Agreeableness trait which was  $p > .05$ ).



Table 4. The results of regression ANOVA<sup>c</sup> of the equation

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.714	1	6.714	21.474	.000 <sup>a</sup>
Residual	65.975	211	.313		
Total	72.690	212			
Regression	8.973	2	4.486	14.786	.000 <sup>b</sup>
Residual	63.717	210	.303		
Total	72.690	212			

a) Predictors: (Constant), Conscientiousness, b) Predictors: (Constant), Conscientiousness, Extraversion, c) Dependent Variable: Memory Strategies

Table 2 indicated that based on increasing of the Extraversion trait level of the students, higher average of Memory Strategies would be used, and based on decreasing of the Extraversion trait level, lower average of Memory Strategies would be used. In such way, Table 2 showed that there was a meaningful significant positive relationship between the overall Memory strategy use and the Extraversion trait ( $r=.261$ ,  $p<.01$ ). The positive relationship implies that the more extraverted students use Memory Strategies more.

Table 2 indicated that based on increasing of the Openness to Experiences level of the students, higher average of Memory Strategies would be used, and based on decreasing of the Openness to Experiences level, lower average of Memory Strategies would be used. In such way, Table 2 showed that there was a meaningful significant positive relationship between the overall Memory strategy use and the Openness to Experiences trait ( $r=.182$ ,  $p<.01$ ). The positive relationship implies that the students with higher level of Openness to Experiences trait use Memory Strategies more.

According to Table 2, the students' overall Memory strategy use was not significant correlated with the agreeableness trait ( $p>.05$ ). In such way, Table 2 indicated that there was not a meaningful significant relationship between the overall Memory strategy use and the agreeableness trait.

Table 2 indicated that based on increasing of the Conscientiousness level of the students, higher average of Memory Strategies would be used, and based on decreasing of the Openness to Experiences level, lower average of Memory Strategies would be used. In such way, Table 2 showed that there was a meaningful

Table 5. The unstandardised coefficients<sup>a</sup>, t tests and significances for different models predicted of the equation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.036	0.216		9.432	.000
Conscientiousness	0.340	0.073	0.304	4.634	.000
(Constant)	1.686	0.248		6.792	.000
Conscientiousness	0.276	0.076	0.247	3.632	.000
Extraversion	0.234	0.086	0.185	2.728	.007

a. Dependent Variable: Memory Strategies

significant positive relationship between the overall Memory strategy use and the Conscientiousness trait ( $r=.304$ ,  $p<.01$ ). The positive relationship implies that the more Conscious students use Memory Strategies more.

Table 2 indicated that based on increasing of the Neuroticism level of the students, lower average of Memory Strategies would be used. Table 2 showed that there was a meaningful significant negative relationship between the overall Memory strategy use and the Neuroticism trait ( $r=-.198$ ,  $p<.01$ ). The negative relationship implies that the more Neurotic students use Memory Strategies less.

The multiple regression analysis, for all the five traits of personality (as independent variables) and the overall use of Memory strategies (as a dependent variable) were analyzed through the stepwise method. Out of the five traits of personality, only two variables entered the equation (Table 3).

According to Table 3, regression analysis has run up to two steps. Table 3 showed that in the first step, the Conscientiousness trait entered the equation that the Adjusted R-Square became .088. In the second step, when the Extraversion trait entered the equation, the Adjusted R-Square increased up to.115. In other words, based on the Adjusted R-Square, the emerged model for the two independent variables with the Adjusted R-Square of .115, accounted for explaining about 11.5% of the variance of the students' overall Memory strategy use.

Further, Table 4 (regression ANOVA) showed that the effect was significant, and all the models had high F values ( $F=21.474$ ,  $F=14.786$ ,  $P<.01$ ). Therefore, it could be concluded that about 11.5% of changes in the students' overall Memory strategy use was accounted for by the conscientiousness and extraversion traits.

As stated, Table 4 indicated that the effect of the Conscientiousness and extraversion traits was significant at the  $p<0.01$  level. Remaining the three traits of personality did not enter into the equation because of level of their errors were greater than 0.05, and they had very weak effect in the prediction of the overall Memory strategy use. In such way, rest of the contribution for the overall Memory strategy use was unaccounted.

According to Table 5, the effect of the Conscientiousness trait was greater than the effect of the extraversion trait to change the overall Memory strategy use, because of the obtained Beta for the Conscientiousness trait showed that for each of one unit of value of change in the Standard deviation of the Conscientiousness trait, the amount of change 0.247 occurred in the Standard Deviation of the overall Memory strategy use. However, for the extraversion trait, for each of one unit of value of change in its Standard Deviation, the amount of change .185 occurred in the Standard deviation of the overall Memory strategy use. From the

above table, it is further evident that for all the predicted models and constants, the t values ranged from 2.728 to 9.432, which were all found to be significant, and significance levels ranged from .007 to .000 level.

In summary, one can conclude that the traits like the Conscientiousness trait, and the Extraversion trait best predicted the overall use of Memory Strategies of the students.

#### Limitations of the current study

Generally speaking, there are some difficulties inherent in endeavor to conduct any research work on the learners of second/foreign language. Such difficulties are as the results of methods (e.g. measurement issues, sampling issues), type of instrumentations (e.g. exclusive reliance on self-report responses to the questionnaires, ambiguity in the questionnaire item wording, response style bias), and the other variables used in conducting this type of research (Ellis, 1985). Similarly, the present study due to using Ex Post facto type of research has certain limitations that must be taken in mind when interpretation of the results.

Moreover, since all the education quasi-research deals with living human beings occur out of laboratory conditions have limitations (Gall *et al.*, 2003). Like any study, the current study has a number of limitations. The limitations in this study include limitations that are related to questionnaires, English proficiency test, statistical methods, large of sample, type of research, comprehensive operational definitions, environment, and culture.

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