The Relationship between Linguistic Intelligence and L2 Learning Strategies among EFL Learners with Intermediate Level of Proficiency

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Abstract
The present study attempts to investigate any possible relationship between Linguistic intelligence and L2 learning strategies and different categories of learning strategy. Twenty participants were selected among EFL students with intermediate level of proficiency from Safir Danesh foreign language institute. Two types of questionnaire were used to evaluate the learners' linguistic intelligence and their use of learning strategies. The first questionnaire was a combination of two questionnaires, Gardner's MI model (1993) and a questionnaire devised by Chislett MSc and Chapman (2005); and the second one was Strategy Inventory for Language Learning (SILL), developed by Oxford (2003). The result of the study indicated that learners who have high Linguistic intelligence, mostly use compensation, metacognitive and affective strategies. Also it has been understood that the participants of the current study were likely to use cognitive, social and memory strategies.
Key words: Linguistic Intelligence, L2 learning Strategies, MI intelligences.

1. Introduction

Language teaching and learning received considerable attention in developing countries, especially with the increasing need for communication. Looking back to the history of education shows that in the early years of the twentieth century, *one-way* education was the essential part of language instruction which mainly focused on teaching grammar. In the 1970s, grammatical syllabuses were superseded by communicative ones, based on functions or tasks rather than grammar itself. Some changes have been occurred over time and such new concepts as social science, applied linguistics, and psychology emerged. Due to the development of the realm of education, some scholars such as William James, John Dewey, B.F. Skinner, Gardner, and others found psychology and education related to each other and through their integration established the *educational psychology*.

One of the most important issues in psychology is *multiple intelligences*, which affects learners' achievement as well as their learning strategies. According to Gardner (1983), each individual has a multitude of intelligences that are quite independent of each other. He defined *intelligence* as "the ability to solve the problems or to fashion products that are valued in one or more cultural settings" (1993, p.15; 2006a, p.48; Hajhashemi, 2011). Gardner's early work in psychology and later in human cognition and human potential led to the development of the initial six intelligences. Today there are nine intelligences and the possibility of others may eventually expand the list. These intelligences (or competencies) relate to a person's unique aptitude set of capabilities and ways they might prefer to demonstrate intellectual abilities. The theory of *Multiple Intelligences* argues that everybody possesses at least seven intelligences - ranging from Verbal intelligence to Existential intelligence - most of which have been overlooked in our testing society. In the following comes the list of nine intelligences proposed by Gardner (1993).

1.1 *Linguistic intelligence: (Word smart)*
Involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. This intelligence includes the ability to effectively use language to express oneself rhetorically or poetically; and language as a means to remember information. Writers, poets, lawyers and speakers are among those that Gardner sees as having high linguistic intelligence.

1.2 *Logical-mathematical intelligence: (Number/reasoning smart)*
Consists of the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. In Gardner's words, it entails the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking.

1.3 *Musical intelligence: (Musical smart)*
Involves skill in the performance, composition, and appreciation of musical patterns. It encompasses the capacity to recognize and compose musical pitches, tones, and rhythms. According to Gardner, musical intelligence runs in an almost structural parallel to linguistic intelligence.

1.4 *Bodily-kinesthetic intelligence: (Body smart)*
Entails the potential of using one's whole body or parts of the body to solve problems. It is the ability to use mental abilities to coordinate bodily movements. Gardner sees mental and physical activity as related.

1.5 *Spatial intelligence: (picture smart)*
Involves the potential to recognize and use the patterns of wide space and more confined areas.

1.6 *Interpersonal intelligence: (People smart)*
Is concerned with the capacity to understand the intentions, motivations and desires of other people. It allows people to work effectively with others. Educators, salespeople, religious and political leaders and counselors all need a well-developed interpersonal intelligence.

1.7 *Intrapersonal intelligence: (Self smart)*
Entails the capacity to understand oneself, to appreciate one's feelings, fears and motivations. In Howard Gardner's view it involves having an effective working model of ourselves, and to be able to use such information to regulate our lives.

1.8 *Naturalistic Intelligence: (Nature smart)*
Designates the human ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations). This ability was clearly of value in our evolutionary past as hunters, gatherers, and farmers; it continues to be central in such roles as botanist or chef. It is also speculated that much of our consumer society exploits the naturalist intelligences, which can be mobilized in the discrimination among cars, sneakers, kinds of makeup, and the like.

1.9 *Existential Intelligence:*
Sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

1.10 Learning Strategies:
All these can be tied correlated with one's preferences to learning and help to select some particular learning strategies. According to Oxford, learning strategies are defined as "specific actions, behaviors , steps or techniques such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task used by students to enhance their own learning" (Scarcella & Oxford,1992,p.63). A strategy is useful if the following conditions are present: A) The strategy relates well to the second language at hand. B) The strategy fits the particular student's learning style preferences to one degree or another. C) The student employs the strategy effectively and links it with other relevant strategies. Strategies that fulfill these conditions make learning easier , faster, more enjoyable, more self-directed, more effective, and more transferable to new situation"(Oxford,1990,p.8). A learning strategy should be selected to match the activity in order to gain maximum success. Oxford (1990, p.17) stated the learning strategies into two classifications – direct and indirect learning strategies- each of which includes three subcategories. The direct strategies include: 1) Memory Strategy; 2) Cognitive Strategy; 3) Compensation Strategy; The indirect strategies are: 1) Metacognitive Strategy; 2) Affective Strategy; 3) Social Strategy;

The present study focuses on the relationship between one of the above mentioned intelligences, that is, linguistic intelligence and l2 learning strategies. Linguistic intelligence, following Hampton (2008), is the ability to learn languages and use languages to express what is in one's mind and to understand people. Those who have high linguistic intelligence are well developed in verbal skills and have sensitivity to sounds, meaning and rhythms of words. L2 learning strategies**,** related to linguistic intelligence, are specific behaviors or thought processes that students use to enhance their own L2 learning. The word *strategy* comes from the ancient Greek word *strategi* which means steps or actions taken for the purpose of winning a war. The warlike meaning has fortunately fallen away, but the control and goal directness remain in the modern version of the world (Oxford, 1990).

Section 2 deals with various studies which have been conducted to investigate the correlation between different types of intelligences and l2 learning strategies.

3. Methodology
3.1. *Participants*
The research was done in Safir Danesh[1] Foreign Languages Institute[1]. The participants were 20 intermediate students with the same gender (girls). They were chosen from between two classes with intermediate level of proficiency.

3.2. *Instruments*
In the current study, two instruments were used. A) The famous Strategy Inventory for Language Learning (SILL) questionnaire developed by Oxford (2003). This questionnaire is a Likert type including 50 items measuring the participants' level of agreement or disagreement in a quantifiable way. In each item learners have chance to choose from among 5 options. Such as:
1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me

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5. Always or almost always true of me

The students were asked to answer 50 questions in terms of how well the statements describe them, not how they think they should be. There are no wrong or right answers to these statements. The total time allowed to fill in the questionnaire was 15 minutes.

 B) A Likert type Linguistic Intelligence questionnaire derived from Gardner's MI model (1993) and a questionnaire devised by Chislett MSc and Chapman (2005). It contained 25 related questions, for each of which 4 options are considered. The learners were asked to score the statements ranging from 1 to 4 alternatively for speed during 15 minutes. The options quantify the degree of agreement of the learners, as follow:

 1. Mostly disagree
 2. Slightly disagree
 3. Slightly agree
 4. Mostly agree

Since the main goal of this study was evaluating the learners' linguistic intelligence, the above mentioned questionnaires were administered in original language, that is, English rather than the learners' native language, but they were clearly elaborated in English while the learners were filling them.

3.3. Procedure

The questionnaires were administered separately in two sessions, one session for linguistic intelligence questionnaire and the second one for learning strategy questionnaire, in order to prevent the subjects' being bored or disappointed. They had 15 minutes for filling each of the questionnaires. They were also allowed to ask for clarification whenever they faced any problem.

4. Results and Discussions
Reliability

In order to see if questionnaires were valid and reliable Cronbach's alpha coefficient reliability statistics was run as shown in the table below:

Reliability Statistics

Cronbach's Alpha	N of Items
.810	7

The alpha-coefficient reliability for questionnaires was 0.81 which shows the questionnaire used was valid and reliable.

Hence the data was not Normal, it was not suggested using Pearson correlation to determine the relationship between Linguistic Intelligence and L2 Learning Strategies.

Nonparametric Correlations:

Correlations

		Linguistic intelligence	memory	cognitive	compensation	metacognitive	social	affective
Spearman's rho	Linguistic intelligence Correlation Coefficient	1.000	.217	.434	.673[**]	.518[*]	.265	.512[*]
	Sig. (2-tailed)	.	.358	.056	.001	.019	.260	.021
	N	20	20	20	20	20	20	20

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed)

So the Non-Parametric correlation is used, according which Linguistic Intelligence, compensation, metacognitive and affective strategies were found to be significant (N=20, correlation coefficient >0.5 and p<0.01). Although it is not a strong relationship, it is more than would be expected merely by chance. The following table represents that relationship between LI and the other strategies is not sig.

The result of One Way Post Hoc Scheffe table showed that cognitive, Metacognitive and Memory strategies were used more common respectively.

Case Summaries[a]

		memory	cognitive	compensation	metacognitive	social	affective
1		35	42	18	34	16	22
2		24	41	16	35	12	21
3		22	45	26	43	20	25
4		26	46	24	43	26	25
5		33	51	26	42	25	24
6		37	56	26	43	29	23
7		34	53	16	31	20	23
8		30	40	20	39	19	20
9		32	42	23	42	19	27
10		34	41	14	32	16	26
11		35	58	26	38	22	20
12		26	40	13	43	26	12
13		29	37	15	23	18	18
14		28	45	15	25	22	18
15		32	42	25	42	22	17
16		22	40	22	41	24	25
17		39	50	18	41	16	19
18		39	58	21	42	18	24
19		28	38	14	18	17	8
20		30	35	15	21	18	12
Total	N	20	20	20	20	20	20
	Mean	30.75	45.00	19.65	35.90	20.25	20.45
	Std. Deviation	5.149	7.004	4.771	8.233	4.229	5.135

Limited to first 100 cases.

By having a glance on means, we get that the higher the mean is, the more the usage of that strategy will be. So, according to the table the most frequently used strategy is Cognitive with mean 45.00, followed by Metacognitive and Memory with means 35.90 and 30.75 respectively.

5. Conclusion
This study were conducted to investigate two variables (LI and L2 Learning Strategies), and intended to examine their correlation in foreign language learning context. The first research question attempted to explore whether or not there was a significant relationship between above mentioned variables. Based on the findings of the current research, the relationship between Linguistic Intelligence, Compensation, Metacognitive and Affective strategies was found to be significant, while there wasn't any correlation between Linguistic Intelligence and the other three strategies. The second research question tried to find that which strategies were used more frequently among Intermediate EFL students. According to the results of this study, three strategies have been used more frequently than the others. Compared with other strategies, Cognitive was the most frequently used strategy with the mean 45.00. The second and the third frequently used strategies were Metacognitive and Memory with the means 35.90 and 30.75 respectively. Therefore we can conclude that the Iranian intermediate EFL learners with high Linguistic Intelligence are more likely to use Compensation, Metacognitive and Affective strategies, rather than Cognitive, Social and Memory. Therefore, considering that most of the participants have used Cognitive, Metacognitive and Memory strategies more frequently, it can be concluded that the participants of the current research have not high Linguistic Intelligence. Actually, it doesn't mean that they are not successful in language learning, because they use the appropriate strategies to their Linguistic Intelligence. In other words, they may be intelligent in other intelligences such as logical, interpersonal, intrapersonal, etc, and benefit from the strategies for language learning which are quiet appropriate to their intelligences.

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