The Relationship Between Language Learning Strategy Use and Reading Comprehension Achievement Among Iranian Undergraduate EFL Learners

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Abstract: The present study focuses on determining the relationship between language learning strategy use and reading comprehension achievement among Iranian undergraduate EFL learners. In addition, it explores the category of strategies which is more predictive of reading comprehension success. One hundred and forty-eight students were selected through cluster random sampling to participate in the study. The Strategy Inventory for Language Learning (SILL) was used to elicit information on the use of language learning strategies. Pearson coefficient correlation was used to find out the association between language learning strategy use and reading comprehension achievement. Multiple regression analysis was run to investigate the category of strategies which was more predictive of reading comprehension achievement. The results demonstrated that the overall use of language learning strategies had a strong positive correlation with reading comprehension achievement. Furthermore, the category of metacognitive strategies was found to be the best predictor of reading comprehension achievement.

Key words: Language learning strategies • Language learning • Reading comprehension • Iranian EFL learners

INTRODUCTION

Fundamental changes in second language acquisition and cognitive psychology during past decades have given a prominent place to language learners. The research which had focused mostly on teachers and teaching methods moved towards learners and learning techniques [1-4]. While language learners received more attention and a more prominent place in research studies, so did the engaged strategies and techniques they employed to overcome the obstacles and learn the language. Language learning strategies are the ones which have received a particular attention since the late 1970s.

It has been stated [5] that language learning strategies are “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations” (p. 8). It has also been illustrated that second language learners can acquire to employ learning strategies more effectively [2-4, 6, 7]. Based on the findings of these studies among others, it can be concluded that the appropriate and frequent use of learning strategies will lead to better achievement in learning the target language and assist the learner to gain more independence and autonomy in the process of language learning.

Although language learning strategies have been the focus of many studies around the world since 1970s, this issue is still a new research area in Iran, especially among undergraduate EFL learners. A few studies have been conducted regarding the use of language learning strategies among undergraduate EFL learners [8-10]. Language learners might develop their own learning procedures and employ different strategies. However, they are rarely asked to discuss the learning techniques and strategies. The instructors value the results more than the learning methods and techniques and spend little time talking to learners about the learning procedure [11]. However, teachers as well as students need to take these issues into consideration and spend more time to reflect on the employed techniques and strategies. On the teachers’ part, exploring and getting to know the strategies the students employ would provide a better
understanding of students’ learning process and help them make the learning process more effective and fruitful. Finally, the findings of this study is expected to bring this significant issue into a better and clearer phase and help language learners and instructors improve teaching and learning process and achieve their goals.

**Objectives of the Study:** This study aims to explore the relationship between the use of language learning strategies and reading comprehension achievement. Moreover, it focuses on determining the categories of learning strategies which are more predictive of achievement in reading comprehension. To this end, this study seeks answer to the following questions:

- What is the relationship between language learning strategy use and reading comprehension achievement?
- Which categories of strategies are more predictive of reading comprehension achievement?

**Review of Literature**

**The Good Language Learner:** Many of the initial studies on language learning strategies were aimed at defining the “Good” language learner. As the knowledge of second language acquisition increased during the 1970s, teachers and researchers concluded that no single method of language teaching and research findings would mark the start of universal success in teaching a second language [12]. It was realized that certain learners seemed to be successful regardless of methods or teaching techniques. Observations and research studies led researchers [13-15] to describe “good” language learners in terms of personal characteristics, styles and strategies. They believe that good language learners:

- Find their own way, taking responsibility for their own learning,
- Organize information about language,
- Are creative and try to feel the language by experimenting its grammar and words,
- Create opportunities for practice in using the language inside and outside the classroom,
- Learn to live with uncertainty by not getting confused and by continuing to talk or listen without understanding every word,
- Use memory strategies to bring back what has been learned,
- Make errors work for them and not against them,
- Use linguistic knowledge, including knowledge of the first language, in learning,
- Use contextual cues to help them in comprehension,
- Learn to make intelligent guesses,
- Learn chunks of language as wholes and formalized routines,
- Learn to use certain tricks to keep conversations going,
- Learn certain production strategies to fill in the gaps in their own competence and
- Learn different styles of speech and writing and learn to vary their language regarding the formality of the situation (pp: 132-133).

While the results of the above-mentioned studies are not based on empirical findings, they provide characteristics of good language learners who are actively involved in language learning and are able to solve problems regarding their own learning. It has been consistently reported [16] that all language learners report or have been observed using some type of strategies in learning a foreign or second language. Differences across learners are in the relative efficiency of strategy application; that is, the appropriate implementation of the right strategies at the right times. These studies provided a basis for our understanding of what good language learners do. Once the strategies of successful language learners are identified, these strategies can be taught to less successful learners.

**Definitions of Language Learning Strategies:** Many researchers have managed to provide definitions for language learning strategies so far. In studies of good language learners, researchers mentioned lots of various behaviors that they referred to globally as strategies; some managed to describe strategies more specifically. Learning strategies has been described [16] as “any sets of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval and use of information” (p.19). Moreover, it has been argued [17] that “learning strategies are intentional behavior and thoughts that learners make use of during learning in order to better help them understand, learn, or remember new information” (p.209). Learning strategies has also been defined [18] as “operations used by a learner to facilitate the acquisition, retention, or retrieval of information” (p.165).

Whereas prior descriptions of learning strategies paid more attention to products of learning and behaviors reflecting unobservable cognitive processes, definitions eventually provided clearer understanding of what learners think and do during language learning. In this regard, learning strategies have been defined [19] as “

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processes which are consciously selected by learners and may result in actions taken to enhance the learning or use of a second or foreign language through the storage, retention, recall and application of information about that language" (p. 4).

One of the most applicable definitions which have been cited most frequently in the literature was provided by [5]. She defines language learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations" (p. 8). It is, indeed, a reflection of what the learner intends to do and the specific actions he can take. She also, prominently, includes how context plays a crucial role in the language learning process.

Classification of Language Learning Strategies:
Language learning strategies that language learners employ in the process of learning a new language have been identified and described by researchers. Consequently, these strategies have been classified by many professional experts in the area of language learning [20-24]. This progress not only helped categorize strategies and link them to a variety of cognitive processing phases during language learning, but also assisted in creating instructional frameworks.

Nonetheless, most of these attempts to categorize language learning strategies reflect relatively the same categorizations of language learning strategies without any fundamental changes. They developed their own taxonomies of strategies according to their research findings by applying different methods of data collection. For that reason, it might not be appropriate to compare them and assess their influence on teaching and learning process. But, studying them may help both language teachers and language learners to understand language learning strategies and different methods which are involved in strategy use. In what follows taxonomies of language learning strategies which has been proposed by [5] will be demonstrated:

Classification of Language Learning Strategies: By referring to the literature it seems that the most inclusive taxonomy of language learning strategies is provided by [5] who sees the purpose of language learning strategies as being oriented towards the improvement of communicative competence. Oxford divided language learning strategies into two main categories, direct and indirect strategies which are also subdivided into six classes.

Direct strategies, which involve the new language directly, are divided into Memory, cognitive and compensation strategies. As [5] says, “All direct strategies require mental processing of the language” (p.37). Memory strategies entail the mental processes for storing new information in the memory and for retrieving them when needed. These strategies consist of four sets that include: A. Creating mental linkages, B. Applying images and sounds, C. Reviewing well and D. Employing action. Cognitive strategies entail conscious ways of handling the target language and fall into four sets which include: A. Practicing, B. Receiving and sending messages, C. Analyzing and reasoning and D. Creating structure for input and output. Compensation strategies enable learners to use the language either in speaking or writing despite knowledge gaps. These strategies are divided into two sets: A. Guessing intelligently and B. Overcoming limitations in speaking and writing. According to [5], compensation strategies are employed by learners when facing a temporary breakdown in speaking or writing.

Indirect strategies include metacognitive, affective and social strategies. Indirect strategies provide indirect support for language learning by employing different strategies such as focusing, arranging, evaluating, seeking opportunities and lowering anxiety [5]. Metacognitive strategies enable learners to control their own cognition. They are strategies which entail overviewing and linking with material already known, paying attention, delaying speech production, organizing, setting goals and objectives, planning for a language task, looking for practice opportunities, self-monitoring and self-evaluating. Affective strategies assist students to manage their emotions, motivation and attitudes associated with learning. They can be achieved through lowering anxiety, encouraging oneself and taking emotional temperature. Social strategies facilitate language learning through interactions with others. Language is a form of social behavior and learning it involves other people and it is extremely important that learners employ appropriate social strategies in this process [5]. These strategies are divided into three sets, namely as asking questions, cooperating and empathizing with others.

Reading Comprehension: It is believed that reading plays a crucial role in English language teaching and learning. According to [25], there are a number of reasons why reading receives a special focus in many second or foreign language teaching situations. They argue that reading is one of the most important goals of many EFL/ESL students. They want to be able to read for
pleasure, information, career, study purposes, etc. Moreover, printed texts provide many educational purposes. By extensive reading students can improve the process of language acquisition. In addition reading provides good models for writing, introduces novel topics for discussion and it also introduces new vocabularies, expressions and new grammatical rules. It has been stated [25] that “Reading is a skill which is highly valued by students and teachers alike” (p. 273).

It is believed [26] that the primary purpose for reading is comprehension. To achieve this goal, he emphasizes that teachers should model reading skills and strategies clearly in order to assist students’ performances on these abilities in comprehending texts. He encourages teachers to provide students with opportunities to practice in a number of “comprehension-enhancing approaches such as reciprocal teaching, cooperative learning and reading recovery” (p. 277). He believes these methods often provide specific strategy instruction and change the students into strategic readers.

Learning strategies are generally considered as one of the features of the cognitive psychology and, on the other hand, reading is a cognitive process in which the reader takes part in a conversation with the author through the text. Therefore, reading strategies are necessary for a successful comprehension. Reading strategies have been defined [3] as “techniques and methods readers use to make their reading successful” (p. 302). [27] also defines reading strategies as plans and behaviors for solving problems when faced in constructing meaning. He states that these strategies range from bottom-up strategies to more comprehensive strategies like top-down strategies. Bottom-up is defined as making use of information, which is already present in the data, such as understanding a text by analyzing the words and sentences in the text itself, or looking up an unfamiliar word in the dictionary. Top-down strategies make use of previous knowledge such as connecting what is being read to reader’s background knowledge [27]. Some other reading strategies include evaluating, asking questions, checking for answers, making predictions, summarizing, paraphrasing and translating.

Language Learning Strategies and Reading Comprehension Achievement: Research studies in the field of language learning both in L1 and L2 has repeatedly shown that strategy use varies according to proficiency in all four main skills. Regarding reading comprehension, the frequency and type of strategies that are used by successful readers differ from that of less successful ones. In other words, more proficient readers use different types of strategies with higher frequencies and they use them in different ways [9, 28-31]. Furthermore, these studies suggest that students can be trained to use reading strategies and when trained, strategies help improve student performances on tests of comprehension and recall.

In her study, [32] investigated the relationship between learning strategies and reading comprehension with the emphasis on cognitive and metacognitive strategies. Specifically, the study was after finding out whether these two strategies affect reading comprehension and to what extent they influence. One hundred university student studying communication engineering participated in the study. The Strategy Inventory for Language learning (SILL) developed by [5] and a reading comprehension test were used to collect the data. According to the researcher, the reading comprehension test was randomly chosen from the CET series, whose validity and reliability are verified. In addition, based on the results of the reading comprehension test, the participants were divided into two groups of high-score and low-score students. Actually, the purpose was to find out whether there is a difference between these two groups in terms of strategy use. The results of the study revealed that the students were medium strategy users in general. Furthermore, it was found that cognitive and metacognitive strategies are closely related to reading comprehension. It was also found that students are different in using the cognitive and metacognitive strategies when reading. According to the findings, [32] concluded that the students who read proficiently have a better control of cognition through self-study. Therefore, cognition is closely related with reading comprehension and as a result should be paid subsequent attention to by the second language teachers as well as the learners.

An experimental study has been conducted [33] to find out the effect of metacognitive strategies on reading comprehension and vocabulary. One hundred and thirty students including fifteen males and one hundred and fifteen females voluntarily participated in the study. Sixty five subjects took metacognitive instruction for five weeks. The other sixty five subjects did not take any training. Two instruments were administered in the study. The first one was a multiple-choice vocabulary test including twenty items, which was developed by the researcher. According to what the researcher claims, the value for coefficient alpha was. 85 and the value of the split half coefficient was. 90. The second test was the reading comprehension test developed by TOEFL (Test of English as a Foreign Language).

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The findings of the study indicated that the experimental group achieved significantly better results compared to the control group. Accordingly, the researcher concluded that the influence of the metacognitive strategy instruction is significant in improving reading comprehension skills.

In another study, learning strategies employed by undergraduate students studying EAP (English for Academic Purposes) reading and writing courses was investigated [3]. Specifically, the study aimed to discover the most frequently used strategies and different strategy use between successful and less successful learners. One hundred and thirty-two undergraduate EFL learners were randomly selected to participate in the study.

The data analysis revealed that metacognitive, cognitive and compensation strategies were among the most frequently used strategies overall. Surprisingly, no significant difference of use for each strategy group between the high and low groups in terms of reading comprehension was found. In other words, the frequency of the strategy use for both groups was similar. The researchers explain that “students in the high group may be using strategies more appropriately than those in the low group” (p. 316). But, analysis of individual strategy use showed that students in high and low groups were significantly different. Some individual strategies were used more frequently by high group, which is believed to be the reason for reading comprehension success in the high group [3].

**MATERIALS AND METHODS**

One hundred forty-eight undergraduate Iranian EFL learners including 61 male and 87 female participated in the study. The sample was selected through cluster random sampling from two universities in Shiraz, Iran. The sample of the study included only the fourth-year (senior) undergraduate university students who have been studying TEFL (Teaching English as a Foreign Language) in Shiraz, Iran. The decision to include only the fourth-ear learners in the study was based on two reasons; 1) They have learned English longer, compared to the first, second and third year learners; accordingly, they were supposed to have more experience in the course of learning English as a foreign language and expected to have higher competence to report learning strategies they have used. 2) Since the original questionnaire is administered in this study, senior students were expected to possess enough proficiency to comprehend the items of the questionnaire properly.

The Strategy Inventory for Language Learning (SILL, version 7.0) developed by Oxford [5] was administered as the instrument to elicit information on the learners’ use of language learning strategies. The instrument has 50 items and the responses of the instrument are based on a five-point Likert scale ranging from 1 to 5 (1 = “never or almost never true of me”, 2= “usually not true of me”, 3= “somewhat true of me”, 4=usually true of me” and 5= “always or almost always true of me”). The scale for interpreting average scores of strategies on the SILL which has been established by Oxford [5] was followed in the study. This scale divided language learning strategy use into three levels and was specifically designed to inform students the frequency of their strategy use. In this scale the student whose mean score is above 3.5 (M=3.5) is considered to be a high strategy user, the one whose mean score is between 2.5 and 3.4 (2.5=M=3.4) is a medium strategy user and the one below 2.4 (M=2.4) is considered a low strategy user. Table 1 below shows the distribution of the SILL items by the six categories of strategies.

**RESULTS AND DISCUSSION**

The first purpose of the study was to investigate the relationship between language learning strategy use and reading comprehension achievement among Iranian EFL learners. Pearson product moment correlation coefficient was run in order to explore the relationship between these two variables. The result is presented below in Table 2.

<table>
<thead>
<tr>
<th>NO.</th>
<th>Categories of Strategies</th>
<th>Number of Items</th>
<th>Percentage</th>
<th>Min weight</th>
<th>Max weight</th>
<th>Min score</th>
<th>Max score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Memory</td>
<td>9</td>
<td>18</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>Cognitive</td>
<td>14</td>
<td>28</td>
<td>1</td>
<td>5</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>Compensation</td>
<td>6</td>
<td>12</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Metacognitive</td>
<td>9</td>
<td>18</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>5</td>
<td>Affective</td>
<td>6</td>
<td>12</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>Social</td>
<td>6</td>
<td>12</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
As Table 2 demonstrates, a strong positive correlation ($r = .82$) exists between language learning strategies and reading comprehension achievement. The correlation is significant at the level of .01. In other words, as the frequency of language learning strategy use increases, the reading comprehension scores increase as well. Based on the results, those language learners who have employed language learning strategies more frequently got better results in reading comprehension test. This finding is supported by the results of the previous research in the field of second or foreign language learning [32, 33].

Many other researchers who have conducted studies in different contexts have reached the same conclusion. The results of their research studies unanimously confirmed the positive relationship between the use of language learning strategies and reading comprehension achievement [3, 9, 28, 34].

The significant correlation between the use of language learning strategies and reading comprehension achievement highlights the importance of language learning strategy use in the process of language learning. It is of great importance to train the language learners to employ the appropriate strategies and use them as frequently as possible. Learning strategies can lead the reader towards a new understanding of reading and help him/her to comprehend the message of the written text and communicate with the author properly. Language learning strategies assist the reader not to pay much attention to details but to get the overall message which is in fact the main purpose of the reading comprehension. In addition, many research findings have already demonstrated that language learning strategy use will lead into improved language proficiency generally or in a specific skill area [2, 4, 24, 34, 35]. Therefore, it is of great importance for language educators to pay attention to their students and train them to employ learning strategies as frequently as possible.

**More Predictive Categories of Strategies**: As discussed previously, the second research question of the study sought the categories of strategies which best predict reading comprehension achievement among Iranian EFL learners. To this end, Multiple Regression Analysis was conducted on the data with six categories of strategies as predictor variables and the reading comprehension achievement as criterion variable. The general findings revealed that the variation (R Square = .91) in reading comprehension scores are explained by memory, cognitive, compensation, metacognitive and social strategies (R square = .91, F [6,141] = 232.34, p<.001).

Table 3 below demonstrates the results of regression analysis.

As Table 3 shows, five categories of strategies play significant roles in the variation of reading comprehension scores. However, the extent to which each category initiates the variation differs. Based on the results ($\beta = .30, p < .001$), the category of metacognitive strategies is the best predictor of reading comprehension achievement. In addition, the next category which has the greatest impact
on reading comprehension success is memory strategies ($\beta = .22$, $p < .001$). Findings also revealed that 19% of variation in the dependent variable is explained by compensation strategies and 18% of variation is caused by cognitive strategies. Finally it was discovered that social strategies ($\beta = .16$, $p < .001$) have initiated the least variation in the dependent variable. However, the category of affective strategies has not played any significant role in reading comprehension success. The findings of the present study are supported by the results of previous studies on the area of language learning strategies [9, 32, 33].

According to the result of this study the researcher can claim that the frequent use of language learning strategies can generally contribute to improved language proficiency and specifically the high use of metacognitive strategies can help the language learners to improve their reading comprehension scores. Moreover, the results indicate that the use of metacognitive strategies or controlling one's own cognition such as planning, overviewing, linking with materials already known, paying attention, self-monitoring and self-evaluating can assist the language learner to succeed in reading comprehension tasks. Similarly, the use of memory strategies which entail mental processes for storing new information and retrieving them when needed, creating mental linkage, applying images and sound, reviewing well and employing action can lead the learners to improve their proficiency in reading comprehension.

**Pedagogical Implications:** Based on the findings and conclusions of the study some pedagogical implications can be made which might shed light on the approaches of learning and teaching English as a foreign or second language. The language instructors should take their students learning strategies into considerations and try to recognize and identify them. These strategies can be identified through observations, language diaries, questionnaires and interviews. By doing so, teachers will be able to assist language learners to recognize and appreciate the power of language learning strategies in the process of second or foreign language learning.

Moreover, teachers should incorporate language learning strategies into their teaching methods and approaches and train the language learners to use the language learning strategies as frequently as possible and apply them for a specific purpose or specific skill area. Teachers should raise the language learners' awareness of these strategies. By doing so, the students autonomy in the process of language learning inside and outside of the classroom context will be increased which is in turn one of the most important goals of language learning pedagogy.

In addition, language instructors can assist their students to recognize the strength of language learning strategies and help the learners to understand that this power can be enhanced through conscious and appropriate use of learning strategies. Once the students recognize the value of learning strategies they will keep on trying to make use of them and learn the language inside and even outside the classroom context in an informal situation either individually or with peers. By doing so, language learning will be easier, quicker, more effective and more fun [5].

**REFERENCES**