Reading Strategies in L1 and L2 and Their Influence on L2 Reading Comprehension Ability

M. Rahim Bohlooli Niri, Ph.D.
Ministry of Education, Iran

Abstract: The purpose of the present study was to investigate the relationship between successful readers’ strategies in L1 and L2, and the impact of instruction of such strategies on L2 reading comprehension ability. Considering reading problem versus language problem, the results showed that reading ability and reading strategies instruction are related. At low levels of reading ability, this relationship is negative. On the contrary, at high levels of reading ability, the successful readers could use reading strategies and also transfer L1 reading ability to L2 situations. The study results corroborated the significance of instructing appropriate reading strategies to EAP learners with due regard to their level of proficiency.

Key words: reading strategies, second language, successful learners, unsuccessful learners.

INTRODUCTION

Reading is probably the most commonly needed skill in EAP (English for Academic Purposes) worldwide, not only to obtain information but also as an enjoyable activity. Of course, reading should lead to comprehension; otherwise, it will not result in obtaining information. To read with comprehension, the reader should gather information through certain processes. In other words, comprehension calls for deriving meaning from the printed materials. To derive meaning from the passage, the reader should first extract the meaning of words, expressions, phrases, and sentences. Furthermore, many people in multilingual settings need to read in an L2 at reasonably high levels of proficiency to achieve personal, occupational and professional goals. In modern life, learning depends largely on one’s ability to interpret the printed page precisely and fully. In such a scenario, knowledge of the language in which the material is written is imperative. Hence the ability to read for various purposes at different times in one’s life is paramount for every individual. Yet despite this significance, it is common experience that most students fail to learn to read adequately in a foreign language, and very frequently they seem to read with less understanding than we expect them to have.

Furthermore, Pressley and Dinary (1992) have suggested that teaching readers to use strategies should be a prime consideration in the reading classroom. The significance of strategy training is that it equips students with problem-solving abilities that they can apply whenever they encounter reading difficulties. Thus, the present study is an attempt to shed some light on the issue of “reading strategies in L1 and L2, and the impact of instruction of such strategies on L2 reading comprehension ability” and to show that teaching the reading strategies to EAP language learners will help them to assist their reading process. By teaching reading strategies, especially at university level, the EAP students would be familiar with the techniques for reading, and this familiarity would certainly increase their success in learning the material.

Background to the Study:

In this section, some of the key concepts and theories underlying the present study are presented based on the existing literature.

A. Reading Purposes:

When people read, they read for a purpose. How we read and the strategies we use while reading are also determined by the purpose of reading. Reading purposes can be classified as follows:

- **Reading for Survival:**
  Reading is necessary to perform daily tasks. For example, reading instructions in order to learn how an appliance works, or how to fill out a form; reading the dosage given on the label for medicines or signs on a road while driving.

- **Reading for Pleasure:**
  We read a novel, a short story, or a newspaper article for entertainment; we also often need to read in order to solve a puzzle, or carry out some other activity which is pleasant and amusing.
• **Reading for Learning:**
  Reading to learn typically occurs in academic and professional contexts in which a person needs to learn considerable amount of information from a text.
  The focus of this thesis was on reading for learning since EAP students usually read material for a learning purpose.
  The type of reading activity will vary in relation to the purpose of reading. According to Aebersold, and Field (2000, p. 18), there are three main reading models.
  1. **Bottom-up theory** states that the readers construct the text from the smallest units, for example from letters to words and from words to phrases and finally from phrases to sentences and so on. The process of constructing the text from these small units becomes so automatic that readers are not aware of how it operates. Decoding is an earlier term for this process.
  2. **Top-down theory** argues that readers bring a great deal of prior acquired knowledge, assumptions, beliefs, and questions to the text. They read the given text and continue to read until the text confirms their expectations. The top-down school of reading theory argues that readers fit the text knowledge (cultural, syntactic, linguistic, and historical) to the knowledge they already possess, and then check back when new or unexpected information appears. So, these models start with hypotheses and predictions and attempt to verify them by working down to the printed stimuli.
  3. **The interactive school of theorists:** These researchers believe that both bottom-up and top-down processes occur either alternately or at the same time. These theorists describe a process that moves both bottom-up and top-down, depending on the type of text as well as on the reader’s background knowledge, language proficiency level, motivation, strategy use, and culturally shaped beliefs about reading.

Reading teachers need to develop the ability to analyze bottom-up and top-down components of the reading process. The current study relies on Casanave’s (1988) expanded view of schema theory, the strategy schema. According to Longman Dictionary (1992) schema is the underlying structure which accounts for the organization of a text or discourse. According to Rumelhart (1984), schema is a unit of knowledge or data structure for expressing the generic concepts stored in memory. There are three kinds of schemata: content schema, formal schema, and strategy schema.

**B. Reading in EAP and L2 classroom:**
  According to Dudley-Evans et al. (1998) EAP refers to any English teaching that relates to a study purpose. Students whose first language is not English may need help with both the language of academic disciplines and the specific ‘study skills’ required of them during their academic course. EAP has some times been seen as one movement within ESP. There are four types of EAP situations:
  1. An English speaking country, such as UK or USA
  2. An ESL situation where English is the formal language of education and is widely spoken such as Singapore, Philippines
  3. A situation in which certain subjects such as medicine are formally taught in English, while for other subjects and at other levels of education the national language is used, such as Jordan in the Middle East.
  4. A situation where all subject courses are taught in the national language, but English may be important for ancillary reasons such as the case in Iran.

**C. Factors Affecting the Process of Reading:**
  While the various models try to explain and describe the reading process, the actual reading process may not exactly conform to any one reading model because reading is also influenced by several factors. Regarding the purpose of this study some of these factors are as follows:

  1. **Language Proficiency in the L1:**
     The level of reading proficiency that a reader has in the L1 also appears to be a factor in the development of L2/F reading skills. Regarding the relationship between L1 and L2 reading, Goodman (1971) raised the Linguistic Independence Hypothesis or Language Transfer Hypothesis which claims that L1 reading ability can be transferred to L2 reading situation. Royer and Carlo (1991) conclude that there is a transfer of reading skills from the L1 to an L2 and that teaching reading skills in the native language may facilitate the transfer.

  2. **Language Proficiency in an L2:**
     L2 language proficiency is another strong factor in L2 reading. Clarke argued that weakness in L2 language competence can “short-circuit” reading performance. He believed that there must be a basic level of L2 proficiency for the reading of any text.
D. Reading Strategies:
A strategy is the mental representation of actions and consequences of actions that guide a behavior toward a goal. In general, the reading strategies are operations or procedures performed by a reader to achieve the goal of comprehension (Kern, 1989). According to Richard (1992) strategies can make learning more efficient and effective.

According to different authors, there are many classifications for reading strategies. For example Carrell et al., (1989) divided reading strategies as follows:

- Global strategies
- Local strategies
- Cognitive strategies
- Metacognitive strategies

For the purposes of the current study, reading strategies instruction will be provided in three stages—before reading as pre-reading activity, during reading as while-reading activity and after reading as post reading activity.

Research Questions and Hypotheses:
The aim of the present study was to find out the causes of poor reading. The overall objective was to find out the answers to the following questions:

a. Is EAP learners' problem with the reading comprehension a reading problem or a language problem?
b. Should we develop students’ reading strategies?
c. Does a limited control over language short-circuit the ability to read better?
d. Can students transfer their L1 reading ability to L2 situation? In this regard what is the difference between good and poor readers?

To address the research questions, the selected reading strategies were taught to the experimental groups of successful and unsuccessful readers. Thus the following specific research questions were raised:

I. Is there a statistically significant difference between the reading comprehension ability of the EAP students who receive reading strategies instruction beforehand and those who do not?
II. Is there any relationship between reading strategies instruction and the improvement of general English reading ability of successful readers?
III. Is there any relationship between reading strategies instruction and the improvement of general English reading ability of unsuccessful readers?

Based on the research questions above the following three null hypotheses were presented.

I. Reading strategies instruction has no significant impact on improving the general English reading ability of Iranian EAP students.
II. Teaching reading strategies to successful readers has no significant impact on their reading comprehension ability.
III. Reading strategies instruction to unsuccessful readers has no significant impact on their reading comprehension ability.

The design of the study was pretest posttest equivalent groups design. The details of the methodological procedure are presented in the following section.

MATERIALS AND METHOD

A. Subjects:
The subjects were all Iranian female students at Ardebil Islamic Azad University. This study was conducted with 148 intermediate EAP students majoring in mathematics, science, and elementary education at teacher training centre of Ardebil Branch. The subjects had passed their introductory course and were ready for their general English course according to English curriculum programs for Iranian EAP students. The sample was randomly selected from among different classes and also the age, sex, and university level variables were kept constant (20-23 year old, female, and third semester students, respectively).

B. Instrumentation:
Three types of tests were used to carry out the purpose of the present study.

- Nelson Standard Test (version 200 B) for intermediate students (Appendix A)
- Eight reading comprehension passages as pre-test and post-test (Appendix B)
- A questionnaire comprising two parts: the first part consisted of reading strategies in English language with forty items and the second one was with 20 reading strategies in Persian (Appendix C)

C. Design:
The present study is within the framework of experimental design of research, namely, pretest-posttest equivalent groups design. The schematic presentation of the above mentioned design is as follows:
There were four groups in this study, two experimental groups and two control groups, the experimental groups, i.e., successful and unsuccessful reader groups received instruction on reading strategies while the control groups did not receive any instruction.

D. Procedure:
The following procedures were taken to carry out the present study.
1. The researcher extracted the reading strategies of successful readers both in L1 and L2 through a questionnaire. The students were asked to read the questionnaire very carefully and choose the best answers based on their experiences. The questionnaire consisted of two sections: English questionnaire with forty reading strategies and Persian questionnaire with twenty reading strategies in Persian language. Fourteen reading strategies were chosen from each, i.e., fourteen reading strategies from English questionnaire and fourteen reading strategies from Persian, with respect to the students obtained marks.
2. The Nelson Standard Test (version 200B) was administered to 306 students in order to homogenize the subjects in terms of their general knowledge of basic grammar and vocabulary. Then 239 students out of 306, whose scores fell within one standard deviation above and below the mean were selected, i.e., scores from 20 to 35 and extreme marks, namely, 67 students were excluded.
3. In order to have two successful reader groups and two unsuccessful reader groups, being homogeneous pair-wise in terms of their level of reading ability, eight reading comprehension passages with 45 multiple-choice items, were administered to 239 students as a pre-test in order to verify that they enjoyed the same level of reading comprehension ability. Here again 91 subjects were excluded because their scores fell within half standard deviation above and below the mean. These students were considered intermediate students in their reading comprehension ability and were excluded from the study. Finally, 148 subjects with respect to their obtained marks in reading comprehension test were selected. Seventy four subjects were considered successful readers because their scores were half standard deviation above the mean (26-43). The remainder namely 74 subjects were considered successful readers because their scores were half standard deviation below the mean (4-16). Considering odd numbers for one and even numbers for the other group, each of the good and poor reader groups were assigned into two equally-numbered groups, i.e., A and B & A1 and B1 each with 37 students. Groups A and A1 were called the experimental groups and groups B and B1 were called the control groups. Thus in this study the researcher had two experimental and two control groups.
4. The subjects in experimental groups (one good-readers group and one poor-readers group) attended one session (100 minutes) a week for 14 weeks, i.e., one semester. In this period they were taught the selected reading strategies both in L1 and L2 each with 14 reading strategies. As mentioned before, reading strategies were selected based on the number of students who indicated that they used them in the questionnaire of L1 and L2 as well (Appendix C). It should be mentioned that two reading strategies (one in L1 and one in L2) were taught to experimental groups but control groups did not receive any instruction.
5. Finally, the eight reading passages which were used in the pre-test, were administered as a post-test to the subjects in all four groups. These eight passages were administered after the end of treatment, that is, after fourteen sessions, in order to investigate the effect of treatment. The experimental groups used the knowledge of reading strategies during the treatment period, whereas the two control groups did not. Exactly like the pre-test, the subjects were asked to read the passages very carefully during the allocated time (55 minutes) and to answer to 45 multiple-choice questions.

Results:
The obtained results were subjected to a test of statistical significance, i.e. an analysis of variance (ANOVA), which indicates a significant difference among the four means to determine whether the reading comprehension ability of the subjects had been improved by strategies instruction or not. The assumption was that the mean of randomly assigned experimental and control groups from the same population would differ as a result of sampling error. If the difference between the means was too great to attribute to sampling error, the difference would be attributed to the treatment variable effect. Thus the obtained data were analyzed by performing an ANOVA, which indicated significant differences among the four means.

Then a Scheffe test was used used to find out where the difference lay. The results of ANOVA and Scheffe test are demonstrated in tables 1 and 2.
Table 1: Descriptive Statistics of ANOVA.

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>SS</th>
<th>D.F</th>
<th>M.S</th>
<th>F_{obs}</th>
<th>F_{critical}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Between groups</td>
<td>1124.88</td>
<td>3</td>
<td>7041.62</td>
<td>601.36</td>
<td>2.68</td>
</tr>
<tr>
<td>Within groups</td>
<td>1686.17</td>
<td>144</td>
<td>11.70</td>
<td></td>
<td>3.95</td>
</tr>
<tr>
<td>Total</td>
<td>22811.04</td>
<td>147</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P (0.01) < P (0.05)

SS = sum of square  
D.F = degree of freedom  
M.S = mean square  
F_{obs} = F-observed  

As the table 1 indicates, the observed F (601.36) was much greater than F-critical (2.68), so it was concluded that there was a statistically significant difference between the means.

As mentioned before the MSB (mean square between) and MSW (mean square within) are two estimates of population. The first one is an estimate biased for treatment and belongs to a distribution with 3 degrees of freedom. The second estimate which is unbiased for treatment belongs to a distribution of 144 degrees of freedom. The F distribution for the interaction of 3/144 is 2.68 at 0.05 alpha level of probability and a ratio of 3.95 at 0.01 level of significance. The F-observed, i.e., 601.36 was very much greater than the critical value of F, i.e., 2.68 at 0.05 alpha level of significance and 3.95 at 0.01 level of significance, so it could be concluded that there was a statistically significant difference between the performance of four groups on doing reading comprehension tasks and such different rating could not be due to chance. As a result the first null hypothesis was rejected by the researcher.

Table 2: The Scheffe Test for Comparing of Four Means.

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>t_{obs}</th>
<th>D.F</th>
<th>t_{crit}</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1 VS. G2</td>
<td>39.32</td>
<td>32.27</td>
<td>* 9.79</td>
<td>72</td>
<td>4</td>
</tr>
<tr>
<td>G3 VS. G4</td>
<td>39.32</td>
<td>12.70</td>
<td>* 33.27</td>
<td>72</td>
<td>4</td>
</tr>
<tr>
<td>G1 VS. G3</td>
<td>39.32</td>
<td>12.16</td>
<td>* 31.95</td>
<td>72</td>
<td>4</td>
</tr>
<tr>
<td>G2 VS. G4</td>
<td>12.70</td>
<td>12.16</td>
<td>65</td>
<td>72</td>
<td>4</td>
</tr>
</tbody>
</table>

G1 = Experimental group (successful readers)  
G2 = Control group (successful readers)  
G3 = Experimental group (unsuccessful readers)  
G4 = Control group (unsuccessful readers)  
* = Indicative of significant differences

The results of table 2 show that the t_{obs} for group 1 and 2 is 9.79. This amount of t exceeds 4 (t-critical), so the second null hypothesis was rejected at 0.05 level of significance and 72 degrees of freedom. Thus, it is concluded that teaching reading strategies to successful readers has significant impacts on their reading ability. Furthermore, the comparison of group 1 and 3 and also group 1 and 4 performance confirmed the rejection of second null hypothesis. The obtained t-observed from group 1 and 3 versus group 1 and 4, i.e. 33.27 and 31.95 exceeded the t-critical, so second null hypothesis was rejected.

The t-conserved value for the comparison of group 3 and 4 is .65. This amount of t is lower than the critical value, i.e. 4 at 72 degrees of freedom. Thus the third null hypothesis concerning poor reading and reading strategies instruction was not rejected. Therefore, it is concluded that strategies instruction to unsuccessful readers has no significant impact on their reading ability.

As mentioned before, the present study aimed at finding an answer to the question of reading problem versus language problem first raised by Alderson (1984) and then followed by Carrel (1991). Considering reading problem versus language problem, the results showed that reading ability and reading strategies instruction are related. At low levels of reading ability, this relationship is negative. On the contrary, at high levels of reading ability, the successful readers could use reading strategies and also transfer L1 reading ability to L2 situations. According to the Clarke (1980), good readers had passed the threshold level, and thus they could benefit from their reading strategies in L1 and L2 in order to read more efficiently.

Discussion:

As mentioned before, the present study aim at finding an answer to the question of reading problem versus language problem first raised by Alderson (1984) and then followed by Carrel (1991). Considering reading problem versus language problem, the results showed that reading ability and reading strategies instruction are closely related. At low levels of reading ability, this relationship was negative. On the contrary, at high levels of reading ability, the successful readers could use reading strategies and also transfer L1 reading ability to L2 situations. According to Clarke (1980), good readers have passed the threshold level, and thus they could benefit from their reading strategies in L1 and L2 in order to read more efficiently.
In order to make sure of the applicability of the research findings the researcher took the school and university facilities into consideration. As a result, the treatment in this research did not require highly sophisticated equipments. The setting in which the research was carried was that of real world- every school and university has facilities like those used in conducting the research.

One of the main problems that learners of English as a foreign language (EFL) confront is how to improve their reading comprehension proficiency. This is actually the concern of both EFL learners and teachers in Iran since it is the major classroom activity in the Iranian educational system. Reading skills is essential in the Iranian university entrance exam, which most high school and pre-university graduates need to pass and furthermore it is a basic need since EAP students usually read material for a learning purpose.

It should be pointed out that many studies have been done on the reading comprehension and the use of reading strategies in L1 and L2 and their influence on L2 reading comprehension ability of Iranian high school and pre-university students in general. Also in Iranian universities, the relationship between some of the reading strategies and reading comprehension ability has been investigated. In fact most researches have been done on the relationship between one single type of reading strategy and reading comprehension ability but the present study has been done according to the strategies selected by students through a questionnaire and then after instruction of those strategies to successful readers and also unsuccessful readers the relationships between them have been investigated.

Conclusion:

The findings lent support to already familiar question of reading problem versus language problem first raised by Alderson (1984) and followed by Carrell (1991). Both elements of language and reading are significant factors but the difference is that for lower level of language competence it is a matter of language problem. Conversely, at high levels of language competence it is a reading problem. The results will help the teachers to remove their students’ language and reading problems. If the good readers are taught reading strategies, they will be efficient and better readers. But according to Clarke’s short-circuit hypothesis (1980) the poor readers should pass a certain threshold level if they want to make use of readings strategies. Thus poor readers should be helped both with their L2, by increasing their language competence in L2, and then by teaching the reading skills.

Therefore according to the expected results the following points will be taken into account.
1. Poor readers should be helped with their L2 i.e. language competence, and then reading strategies
2. Able readers will be more familiar with reading strategies in order to become more efficient readers
3. Teachers’ duty is to enhance the students’ interests. Students will not learn well and will not activate their schemata if the reading materials are not to their interest.
4. The present study emphasized the complexity, and the importance of the reading process, urging the teachers and the students both, to look more critically at reading comprehension issue. Considering the importance of the reading process, the authors of general English books should remember to use authentic texts. The results suggested that teachers should make the students familiar with the reading process, and students also should understand the importance of EAP reading process if they want to improve in their studies and be more knowledgeable and successful in their life.

REFERENCES


