An Investigation into the Effect of L1 (Persian) Reading Product on the Product and Process of Reading in EGP and ESP

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Abstract
This study investigates the effect of reading product in L1 on EGP and ESP reading product and process. Thirty nine tertiary level students took part in this study. They were divided into two groups of high and low performers based on L1 reading test scores. Then they were given tests of reading in EGP and ESP, which were immediately followed by reading strategies questionnaire as well as an interview as retrospective measures of their reading behavior. Analysis of data evidenced that there was no significant difference between the two L1 reading ability groups in reading process in EGP and ESP as well as the reading product in ESP. But in EGP reading there was a significant difference in the reading product for high and low groups of L1 reading ability. Cook (2007) maintains the cognitive processing of information is slower and less efficient in a foreign language. As the L1 reading product is no good predictor for L2 reading success, it is recommended to get tertiary students more familiar with the L2 code so that they become independent in text processing of different general and specific genres.

Key words: reading, product, process, first language, EGP, ESP

INTRODUCTION
Specific actions are taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more active, and more transferable to new situations. Reading strategies are “ways of getting around difficulties encountered while reading” (Urquhardt & Weir, 1998, p. 95). In order to read a text, an effective reader employs a range of strategies based on the purpose for which he/she is reading. Because of the problem-solving nature of reading, the idea of strategic reading has become the matter of investigation in recent years. EFL learners at tertiary level have to read a large volume of academic texts in English. However, many students enter higher education underprepared for the reading demands placed on them (Dreyer & Nel, 2003), show low level of reading strategy knowledge to successfully comprehend expository texts, do not use reading strategies effectively to achieve their reading goals, and/or often select ineffective and inefficient strategies with little strategic intent (Wood, Motz & Willoughby, 1998). As Grabe (1991) mentions, fluent reading is flexible, that is, in order to read efficiently the reader employs a range of strategies including skimming ahead, considering titles, headings, pictures and text information, anticipating information to come, and so on. Therefore, reading teachers should teach and raise awareness and use of reading strategies among students so
that they can study authentic academic materials suitable for their studies independently (Grellet, 1981, p. 9) without the help of their teachers.

While reading in a second language, readers have access to their first language as well. There has been debates among theorists and researchers regarding the relationship between L1 reading, L2 reading and L2 proficiency. To Alderson (1984) there are two factors that might cause difficulties in L2 reading, namely L1 reading ability and L2 linguistic proficiency. This idea led to two hypotheses, namely, a) Clark’s (1979) ‘Linguistic Threshold Hypothesis’ (LTH), also known as “short-circuit hypothesis”, and b) Cummins’ (2000; 2003) ‘Linguistic Interdependence Hypothesis’ (LIH). The LIH argues that certain L1 knowledge can be positively transferred to L2 during the process of L2 acquisition. This hypothesis posits that every language contains surface features; however, underlying those surface manifestations of language are proficiencies that are common across languages. LTH maintains that L2 learners must first gain a certain amount of linguistic control over L2 so that they can apply their L1 reading skills to L2 reading. Clark (1979) and Cummins (1979) call this certain amount a language ceiling and a threshold level of linguistic competence, respectively. Below this level of linguistic competence, it is unlikely that L1 reading strategies can transfer to L2 reading tasks. Therefore, based on the interdependency between L1 and L2, the stronger the foundation in L1, the more the advances the students will make in L2, in both academics and the language itself. LTH states that a certain threshold of L2 linguistic ability is necessary before L1 reading ability can be transferred to L2, whereas the LIH allows for transfer of any L1 reading ability from L1 to L2 regardless of L2 linguistic proficiency.

However, researchers did not succumb to the claims that L2 reading problem might be limited only to L1 reading (or the reading process) and L2 proficiency. Thomas & Collier (1997) confirmed that first language (L1) schooling determines how long it may take to improve reading in L2. Students who arrived in the US between ages 8 and 11, and had received at least 2-5 years of schooling in L1 in their home country, were the lucky ones who took only 5-7 years to master academic proficiency. Those who arrived before age 8 and had had little or no schooling in their native language, required 7-10 years or more to improve reading in L2. Therefore, to Thomas & Collier, the strongest predictor of L2 achievement is the amount of formal L1 schooling. Cook (2007) has a different reason for L2 success. He maintains that the cognitive processing of information is slower and less efficient in a foreign language. This cognitive processing deficit is not caused by lack of language ability but by difficulties with processing information in L2 which hinders immediate retention of information.

In reading research, research design follows one of two approaches, namely product-view and process-view. Product-oriented studies employ reading comprehension tests. They are by nature quantitative in design in which scores on L1 and L2 reading comprehension tests and proficiency level might be correlated. Such studies show low to moderate correlations (Bernhardt & Kamil, 1995; Brisbois, 1995; Lee & Shallert, 1997). However, some studies have
shown that knowledge of the structure and function of L1 is an advantage for readers in comprehending L2 (See Clarke, 1979; Ailing, 2006). Clarke (1979) found that good Spanish readers performed better on English reading tasks than the poor ones in reading in English. In process-oriented studies, frequencies of corresponding L1 and L2 reading strategies are correlated. Contrary to findings in product-oriented studies, Zwaan & Brown (1996) and Yamashita (1999) found moderate to high correlations in the process of reading between languages. However, they have shown that readers with high L1 reading ability can transfer their L1 ability and facilitate their L2 reading comprehension at least to a certain extent.

In reading courses, it is a necessity to identify poor and effective readers’ awareness and use of strategies for comprehending a text. In order to help readers with their reading tasks, it is of significance to find out what specific problems they might encounter during the process of reading (Lau, 2006). Before taking the ESP course which is reading-based in the Iranian EFL context, Iranian ESP students have general and academic reading experiences in L1 (Persian), as well as the general English (EGP) reading experience at university. What is under-researched in the available literature is an attempt to study the effect of the product of reading in L1, as determined by reading comprehension test (Yamashita, 1999) on the process (as determined by reading strategies questionnaire in this study) and product of reading in EGP and ESP. The findings of this study are hoped to assist EFL learners/teachers to find out more about the contribution of L1 reading to L2 reading in texts of different general and specific genres. It is hoped that this study can add to the existing research about ideas provided above regarding LIT, Cook’s cognitive processing view, and the effect of L1 schooling on L2 reading. Therefore, this study attempts to answer the following three questions.

1- Do students of high and low reading performance in L1 differ in EGP and ESP reading process as determined by reading strategy questionnaire?

2- Do students of high and low reading performance in L1 differ in EGP and ESP reading product as determined by reading comprehension tests?

3- What similarities and/or differences do students of high and low L1 reading performance perceive in the process and product of reading in EGP and ESP?

The first two questions are answered quantitatively and the third question is answered qualitatively.

Method Participants

Thirty nine tertiary level students who were predominantly freshmen and sophomores at the University of Mazandaran participated in this study. They were enrolled in the English for General Purposes (EGP) course, spring 2011. They were mainly majoring in accounting, mathematics and computer Engineering. They had already graduated from high school in Math-Physics. The participants were divided into two groups based on reading in L1 (Persian). In other words, a reading comprehension test in L1 was employed to classify the participants into
low and high reading ability groups. Those who scored below the mean score were considered low group and those who scored above the mean score were considered high group. Table 1 presents the number of subjects in each category. Before getting admitted to the University of Mazandaran, they had already passed Persian language and literature course, general English as well as science courses through L1 medium of Instruction at high school with the passing score of 10 out of 20.

**Descriptive statistics**

Table 1: The mean and standard deviation of reading performance in L1

<table>
<thead>
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<th>Index</th>
<th>M</th>
<th>SD</th>
<th>N</th>
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</thead>
<tbody>
<tr>
<td>Persian Reading</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>22.24</td>
<td>1.95</td>
<td>21</td>
</tr>
<tr>
<td>Low</td>
<td>17.50</td>
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<td>14</td>
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<tr>
<td>Total</td>
<td>20.30</td>
<td>1.97</td>
<td>35</td>
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</table>

However, for an in-depth study of how the high and low performers perceive the similarities and differences in the process and product of reading in EGP and ESP reading tasks, a structured interview was conducted. Two students (one from the low group and another from the high group) out of the thirty-nine students who participated in the study and were volunteers to attend the qualitative phase of the study were randomly selected. What follows is a brief description of them:

**1- Student A from the low group:**

This student was a male, second-year student of computer engineering taking the general English course with me at the University of Mazandaran. He had an experience of attending private institutes for learning conversational English and was interested to succeed in his academic life. However, to him learning English was a dream as he believed English language would create good options for future job opportunities. He claimed he would read 3 hours in Persian and 1 hour in English on average per day. Most of his readings in English were from on-line academic materials. To him reading skill was very necessary and at the same time very difficult.

**2- Student B from the high group:**

This student was a male, second-year student of accounting taking the general English course with me at the University of Mazandaran. He had no experience of learning English at private institutes but was interested to attend conversational English courses and succeed in his academic life. However, to him learning to read English texts fluently was a necessity. He claimed he would read approximately 5 hours in Persian and 3 hours in English on average per
day. Most of his readings in English were from on-line academic materials. To him the reading skill was very necessary and at the same time very enjoyable.

**Instruments**

The following instruments were employed in this study:

**A: Reading strategies questionnaire**

Questionnaires are the most popular tool to establish what the students are like at the start of their language course (Robinson, 1991). In this study, the strategic approach was measured by means of a five-point Likert scale reading strategies questionnaire (Never/Seldom/Sometimes/ Usually/ and Always true of me) offering an immediate retrospective picture of the reading behavior. The instrument was in participants’ L1 (Persian) so that they felt more comfortable with the questionnaire while answering. The participants were informed of the purpose of the study and that there were no right or wrong answer for the items of the instrument. All the items of the questionnaire were adopted from some related questionnaires in research-validated studies (See Oxford, Cho, Leung, & Kim, 2004; Sheorey & Mokhtari, 2001; Taillefer & Pugh, 1998). The questionnaire items would elicit the following information from the respondents:

**Pre-reading activities**

I preview the text before reading. *(MetaCognitive)*; I read the topic or heading of the passage to help predict the contents. *(MC)*; I look at the pictures, graphs, maps, diagrams, etc., of the passage. *(MC)*; I think about the reasons why I am reading the text. *(To get the main idea, obtain specific information, understand most or all of the message, enjoy a story, etc.)* *(MC)*; I determine what to read. *(MC)*; I skim each paragraph for the main idea(s). *(MC)*; I adjust reading rate. *(MC)*; I read the questions before I read the passage carefully. *(MC)*; I use my background (world) knowledge to help me understand the passage. *(C)*

**While-reading**

I pay attention to the parts of the sentence such as phrases and clauses. *(C)*; I pay attention to the sentence structure, such as subjects and objects. *(C)*; I link information in one sentence with information from the preceding ones. *(MC)*; I pay attention to the beginning and end of each paragraph. *(C)*; If I don't understand something such as a word or phrase, I guess its meaning using clues from the text such as part of speech, surrounding words, verb tense, singular and plural, synonyms and antonyms, appositive, punctuation marks, contrasts, description, cause-effect, use of the, etc. *(C)*; If I don't understand some part of the text, I try to guess its meaning by activating my background knowledge. *(C)*; I propose some questions according to my thoughts about the article. *(C)*; I write comments or questions in the margins *(MC)*; I orchestrate various strategies. *(MC)*; I read aloud when text becomes hard. *(C)*; I re-read
for better understanding. (C); I take notes, highlight or underline the important points while I am reading the passage. (C); I scan (read quickly) for the answer to some questions and for details. (C); I check or evaluate my comprehension. (MC); I predict or guess text meaning. (MC); I check my predictions about the text while reading. (MC); I interpret the text (make inferences, draw conclusions, etc). (C); I visualize information read. (C); I do monitoring and clarifying. (MC); I try to understand text organization. (MC); I do questioning for clarification. (MC).

Post-reading

I make inferences after finishing reading the passage. (C); I evaluate what is read. (MC); I go back to read the details of the passage to find the answers of some questions. (C)

The internal consistency reliability coefficient of the instrument at the piloting stage was calculated to be 0.83 as it was piloted against 15 students taking part in the study. To ensure of the content validity of the questionnaire, the instrument was finally shown to two experts in the field for getting their opinion about strategy items. They were also asked to give opinions on the clarity of the translation. Cognitive strategies are about knowing what strategies to use and how to use them; on the other hand, metacognitive strategies are about understanding the rationale for applying a particular strategy in a particular context, and evaluating its usefulness in terms of appropriacy and effectiveness for that context. There are two reasons why students were tested about their knowledge of cognitive and metacognitive strategies (see Fogarty, 1994). First, through cognition, good readers construct their knowledge and through metacognition they identify when they no longer understand and what they can do about it. Therefore, constructing understanding requires both cognitive and metacognitive elements. Second, metacognitive strategies help students to successfully use and transfer these strategies cross-linguistically, and cross-curricularly (from one areas of knowledge to another, in this study from EGP to ESP) as the ultimate goal of strategy instruction is transfer. Strategic reading can only become efficient when metacognitive strategies are actively used. (Auerbach & Paxton, 1997).

B: Test of Reading Comprehension in Persian language

The reading comprehension test in Persian had two passages, each containing fifteen items (30 items in total) each carrying one point. The nature of the items for the two passages in terms of recognizing main ideas, vocabulary knowledge, and inferencing was the same. The two passages of the test were selected from the book ‘Bahar va Adab-e-Farsi’ (1971). After administering this test to a similar group of fifteen students, the reliability of the scores of this test according to the KR-21 formula at the piloting stage was calculated to be 0.75. Item characteristics were also taken care of at the piloting stage. This test was also shown to some experts in Persian language and literature teaching in order to have their comments on the suitability of the text as well as on the nature of the test items for the students. To construct L1 reading comprehension test, the following features were borne in mind:
a) Length of texts: The length of text influences the strategies that candidates use. Too short a text is not suitable for expeditious reading. The number of words in expeditious reading is around 2000 words. The two texts were nearly of the same length.
b) Content: Among many passages, those whose content was generally understandable to all students were chosen. In other words, the effects of background knowledge on understanding the text before reading were controlled.
c) Difficulty level: Since, to date, there has been no standard test of reading comprehension made in Persian language, and by implication, there exists no objective index for determining the difficulty level of Persian texts of reading, the researcher relied on the experience of Persian language teachers as colleagues, and his own experience in order to select suitable texts for the purpose of this study. In texts, the number of words was tried to be to some extent the same. In the piloting phase, in order to be sure of the clarity and appropriateness of the test, those items that were ambiguous or unclear to the students were revised or discarded.
d) Students’ interest: the piloting phase showed that the texts were interesting to students.
e) Form of the test items: A multiple-choice format was used to construct the items.
f) Time: The time allotted for the reading test in Persian was 30 minutes. This time limit was determined at the piloting stage. Too much time allowed changes rapid expeditious reading into slow careful reading. Therefore the time factor was carefully controlled.

C: Test of Reading Comprehension in English (for general purposes)

In developing the test of reading comprehension in English, five passages were selected from the reading section of books two and three of New Interchange series (Richards, 1997). The number of words in the selected five passages ranged from 257 to 295 words. Six items were developed for each passage and in all there were thirty items for all the five passages. Each item carried one point. The nature of the items in terms of recognizing main ideas, vocabulary knowledge, and inferring was the same for all the passages. These texts were selected for these reasons: a) having a general content; b) being of interest to students; c) having pictures and several paragraphs suitable for strategy instruction as specified in the strategy questionnaire; d) being nearly of the same length; and, e) being nearly of the same difficulty in terms of structure, unknown words and cognitive processing based on the researcher’s experience. Readability of the reading text is an objective, but not necessarily very valid, measure of the difficulty of a text. Readability formulae look at texts only as products. As Rigg (1986, p. 75) puts it, “the basic assumption underlying any readability formula is that meaning is in the print, in the text. There is no recognition that meaning is created by each reader as the reader engages with the text.” Even leaving aside issues of social context and individual motivation, and looking at texts as products, the criteria used by readability formulae are doubtful. Factors other than word and sentence length are not accounted for. For example,
reduced clauses, which tend to shorten sentences, can create greater difficulty for the reader than longer sentences which are easier to ‘unpack’. Where this is not used, intuition may be relied on. If materials are perceived as boring or as too easy or too difficult, learners will be unmotivated to do the task (Scarcella & Oxford, 1990). On the one hand, a text that is too easy to comprehend furnishes few opportunities for strategy use and in this case students will probably fail to grasp the value of strategy use. On the other hand, a text that is too difficult to understand may not be comprehensible even with the employment of a variety of strategies. “Metacognitive capabilities become operative only in reading task perceived as hard but attainable. Tasks that offer minimal challenge will not be incentive enough for readers to make extra efforts to manipulate their cognitive resources” (Koda, 2005, p. 211). The reliability of the test of reading in English was also taken care of at the piloting stage through the K-R21 formula which turned out to be 0.76. The time allowed was 30 minutes as determined at the piloting stage.

D: Test of Reading Comprehension in English (for specific purposes)

In developing the test of ESP reading comprehension in English two passages were selected. The first passage titled ‘What is information processing?’ from the reading section of English for Students of Computer, by Haghani (2001) and the second passage titled ‘The Need for Accounting’ from English for the Students of Accounting by Aghvami (1996). Each passage contained 10 items. The number of words in the selected two passages ranged from 610 to 560 words. These texts were selected for these reasons: a) having a specific content; b) being of interest to students; c) having pictures and several paragraphs suitable for strategy instruction as specified in the strategy questionnaire; d) being nearly of the same length; e) being related to students content schemata; and finally, e) being nearly of the same difficulty in terms of structure, unknown words and cognitive processing as it was approved by two experts in the field. The reliability of the test of reading in English was also taken care of at the piloting stage through the K-R21 formula which turned out to be 0.79. The time allowed was 30 minutes as determined at the piloting stage.

E: Retrospective structured interview

In addition to the above-mentioned instruments, a structured interview was designed as a qualitative description to find out if the process and product of reading of Iranian EFL learners in EGP and ESP reading tasks can be predicted by the product of reading in (L1) Persian. Therefore, this study took both a qualitative and a quantitative approach to the analysis of data. Data from interviews were recorded, transcribed and analyzed.

To ensure the validity of the collected data, an instrument must measure what it is supposed to measure. Therefore, a pilot interview was conducted so that guidelines for interview conduct could be clarified. For this purpose, two students from the original population
who attended the quantitative phase of the study were asked to take part in the pilot interview and answer the interview questions. The interview questions were reworded when there were ambiguous or unclear words. Enough care was taken to make sure the questions are in keeping with the purpose of the interview. The students participating in the pilot study were excluded from the final interview as their experience of seeing the earlier interview questions might make them answer the real questions differently. In the piloting of the instrument, the following issues were born in mind: how long does it take to be completed? Are the questions clear and understandable? The pilot interview lasted for 10 to 15 minutes, and showed that the questions were capable of eliciting the necessary data on the thinking and practice of the interviewees, serving the validity of the instrument. The pilot study showed all of the questions were clear except one of the probes for question 1 which needed to be explained in different words and at some length to clarify exactly what was being asked.

**Procedure**

The study was conducted in two phases. In phase one, the students were homogenized based on their reading ability in L1. They were given L1 reading comprehension test from the very beginning of the course and during the regular class time. The students were divided into two groups (low and high) based on their scores below and above the mean. After a brief explanation of the purpose of the study, participants were given instructions on how to answer the reading strategies questionnaires which determine their reading process, and the reading test batteries which determine the product of their reading activity in EGP and ESP reading tasks. In fact, immediately after taking reading test in EGP and ESP, the participants were given the strategies questionnaire as a retrospective measure of their strategic reading. The students were also advised there was time limitation for the reading tests but not for the reading strategies questionnaire. There was a two-week interval for taking the EGP and ESP reading tests. The questionnaires were delivered in Persian as it was thought to yield a more accurate picture of their reading strategies awareness and use. However, if students needed explanations about some items in the questionnaire the researcher would explain the item to the whole class.

In phase two, the respondents took the retrospective interview. Dörnyei (2003) points out:

> The problem with questionnaires from a qualitative perspective is that [...] they inherently involve a somewhat superficial and relatively brief engagement with the topic on the part of the respondent. Therefore, no matter how creatively we formulate the items, they are unlikely to yield the kind of rich and sensitive description of events and participant perspectives that qualitative interpretations are grounded in. [...] So, if we are after long and detailed personal accounts, other research methods such as personal interview are likely to be more suitable for our purpose. (p.14)
In retrospective interviews, the respondents are interviewed about past events. It is obvious that the quantitative strategy survey does not capture all the data needed for an in-depth study. In this study, retrospective interviews were conducted on two students from the original 39 students in the quantitative phase, after the quantitative phase was completed. The interviews were conducted to assess the students’ perceived similarities and differences in the process and product of reading in general and specific reading tasks. (see Appendix). More specifically, the first interview questions were directly related to the process of reading or reading strategies and the second interview questions were related to the product of reading. In fact, what mattered in the interview was both how the participant came to read the EGP and ESP texts (the process), and the correct or incorrect answers (the product). Before starting the recording, the researcher explained the purpose of the study to the respondents so that the interviewees would respond openly and in detail. The respondents were reassured of the confidentiality of the interview data, and, to make the respondents feel relaxed and to encourage them to open up the interview, the researcher started with easy personal questions. The interview was conducted one-on-one and in Persian so that the data could be collected more easily and in depth. The interviewees were informed that the interview might last about 12 minutes and they were allowed to stop answering questions at any time if they wished. The participants verbally confirmed that they understood the purpose and confidentiality of the research and they would be happy to take part in the research.

**Results and Discussion**

What follows attempts to answer the following three research questions:

1- Do students of high and low reading performance in L1 differ in EGP and ESP reading process as determined by reading strategy questionnaire?

Analysis using multivariate analysis of variance (Wilks' Lambda) for unrelated measures revealed a non-significant main effect of the L1 reading ability at an alpha of .05, Wilks' Lambda=.08, F (2, 36) =1.44, p =.250. This means that the process of reading in EGP and ESP is the same in both high and low levels of L1 reading ability. A measure of effect size, η²=.074, indicated a relatively low effect (Tables 1 & 2).

**Table1: Mean and standard deviation of EGP and ESP reading strategy use with respect to L1 reading ability groups**

<table>
<thead>
<tr>
<th>Source</th>
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<th>M</th>
<th>SD</th>
<th>N</th>
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<tr>
<td></td>
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<td>Low</td>
<td>168.68</td>
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<td>14</td>
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<td>ESPQ</td>
<td>High</td>
<td>119.20</td>
<td>23.20</td>
<td>13</td>
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<td></td>
<td></td>
<td>Low</td>
<td>133.38</td>
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Table 2: Multivariate test of reading ability groups (high or low) on EGP and ESP reading strategy awareness and use

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
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<tr>
<td>Reading ability</td>
<td>Wilks' Lambda</td>
<td>0.08</td>
<td>1.44</td>
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<td>36</td>
<td>0.250</td>
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2- Do students of high and low reading performance in L1 differ in EGP and ESP reading product as determined by reading comprehension tests?

Analysis using multivariate analysis of variance (Wilks' Lambda) for unrelated measures revealed a significant main effect of the L1 reading performance at an alpha of 0.05, Wilks' Lambda = 0.80, F (2, 36) = 4.47, p = 0.018. This means that the high group showed a higher EGP and ESP reading ability in contrast to low group. A measure of effect size, $\eta^2=0.19$, indicated a relatively average effect. (Table 3)

Table 3: Multivariate test of L1 reading performance groups (high or low) on EGP and ESP reading performance

<table>
<thead>
<tr>
<th>Effect</th>
<th>value</th>
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<th>Error df</th>
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<td>4.47</td>
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<td>36</td>
<td>0.018</td>
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To find out which of the variables differed, a test of between subject effects was used. This test indicated that only in EGP reading there is a significant difference in reading performance for L1 high and low groups, and in ESP reading there was no significant difference in reading performance for high and low groups. (Table, 4)

Table 4: Between subject test of reading performance groups (high or low) on EGP and ESP reading performance

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<tr>
<th>Source</th>
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<th>MS</th>
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<td>ESP</td>
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With respect to means differences, EGP reading ability is more for the high group in contrast to the low group. (Table 5)
Table 5: Mean and standard deviation of EGP and ESP reading ability with respect to L1 reading ability groups

<table>
<thead>
<tr>
<th>Reading ability group</th>
<th>Source</th>
<th>Dependent V</th>
<th>Index</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EGPR</td>
<td>High</td>
<td>١١٣٤</td>
<td>٣.٢٤</td>
<td>٣٢</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>ّ٨١٧</td>
<td>٤.٣١</td>
<td>٧٠</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESPR</td>
<td>High</td>
<td>١١٨٩</td>
<td>٣.١٩</td>
<td>١٣</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>٧.٣١</td>
<td>٣.٩١</td>
<td>١٤</td>
<td></td>
</tr>
</tbody>
</table>

3- What similarities and/or differences do students of high and low L1 reading performance perceive in the process and product of reading in EGP and ESP?

When asked about the process of reading EGP and ESP texts in the interview, the low level student mentioned he did not perceive any difference between the two as he had stress reading these texts. However, the way he treated the texts or the so-called strategic reading of texts of the two genres were the same. This student had a fear of difficult vocabularies and structural patterns both in EGP and ESP. It seems this student had negative attitudes toward reading itself. He also found strategies related to vocabulary and structure were more difficult to employ for better EGP reading comprehension as he was slow at using them and that he thought this problem transferred to ESP reading. When asked if it is good to have reading strategies in the EGP and ESP curriculum, he said yes but it was better to expand students’ vocabulary and grammar knowledge for a better reading in general and specific reading tasks.

Like the low level student, the high level student, when asked about his strategic reading behavior or the process of reading in ESP and EGP believed he perceived the process of reading in EGP and ESP to be the same. To him as ESP texts are content familiar, they cause less stress in comprehension of ESP texts. Unlike the low level student, he has more problems in many of the metacognitive strategies, than the cognitive strategies. He thinks metacognitive strategies are very important to be included in the curriculum.

On the reading product in EGP and ESP, the low level student believed there was no difference in performing in them because low knowledge of vocabulary and grammar still bother him in his reading comprehension of EGP and ESP tests. He thinks he is better in ESP reading than in EGP reading because of the content knowledge he has in ESP reading tasks. He had a negative attitude toward reading in both.

Regarding the reading product, the high level student claimed to be good at both and enjoyed reading in both of them. He believed his awareness of reading strategies would help him to confront the difficulties in reading making him at ease with both EGP and ESP readings tasks. He had a positive attitude toward reading in both.
Conclusion

In this study, triangulation was employed to complement the findings. Through triangulation the researcher obtains complementary quantitative and qualitative data on the same topic and brings together the different strong points of the two methods’ (Maree, 2008). McEwan and McEwan (2003) define triangulation as the use of various data-gathering methods. In this study, quantitative data were collected using a questionnaire survey and qualitative data were collected using the structured interview technique. Results of this study are classified and summarized as follows:

1- No significant difference found:

   A) There was no significant difference between L1 reading product, as determined by reading comprehension test, and L2 reading process, as determined by reading strategies questionnaire. Actually, reported awareness and use of reading strategies in EGP and ESP is the same for both high and low groups of L1 reading product;

   B) There was no significant difference in ESP reading product as determined by ESP reading comprehension test between high and low groups of L1 reading product.

These two findings support Cook (2007)’s idea that the cognitive processing of information is slower and less efficient in a foreign language. This cognitive deficit which is not caused by lack of language ability but by difficulties with processing information in L2 hinders immediate retention of information. Therefore, level of success in L1 reading performance cannot be a good predictor of, a) strategic reading competence in EGP and ESP, and b) reading performance in ESP. These two findings run counter to studies that have shown knowledge of the structure and function of L1 is an advantage for readers in comprehending L2 (See Clarke, 1979; Ailing, 2006; Clarke, 1979). In addition, studies show there are various factors effective for success in L2 reading beyond what was first claimed by Anderson (1984) as L1 reading ability and L2 linguistic proficiency. Some of these various factors are higher-level conceptual abilities, background knowledge, and process strategies (Coady, 1979), linguistic variables, literacy variables, and knowledge variables (Bernhardt 1991), the amount of schooling in L1 (Thomas & Collier, 1997), L1 and L2 reading attitude (Yamashita, 2004), and cognitive processing ability in L2 (Cook, 2007). Therefore, we should consider the effects of these intervening variables on reading success in EGP and ESP.

2- Significant difference was found: In EGP reading performance there is a significant difference between high and low groups of L1 reading performance. This finding, which is paradoxical with finding B above, is in line with LIH which supports interdependency between L1 and L2. Therefore, the stronger the foundation in L1, the more students will advance in L2. Some studies have shown that knowledge of the structure and function of L1 is an advantage for readers in comprehending L2 (See Clarke, 1979; Ailing 2006). Clarke (1979) found that good Spanish readers performed better on English reading tasks than the poor
ones in reading in English. Thomas & Collier (1997) confirmed that first language (L1) schooling determines how long it may take to improve reading in L2.

It is implied from the findings of this study that, although other studies show correlations between L1 and L2 reading, a) success in L2 reading performance depends less on successful L1 reading performance; and b) awareness and use of reading strategies in EGP and ESP does not depend on successful L1 reading performance. It seems reading proficiency in L2 depends more on factors other than L1 reading performance. Therefore, reading teachers at tertiary levels should get students more in contact with L2 reading tasks so that the product of reading is as much valued as the process of reading in L2. This increased awareness of L2 code will help learners to benefit more from L1 reading ability in their L2 reading. Therefore, teachers in EGP and ESP courses are not on the safe side to predict students’ success in L2 reading performance based on their L1 reading performance.

From the retrospective interview data, that shed light on the reading process and product of low and high L1 reading groups, it was found that both students from low and high groups were able to process the texts similarly. However, for the low group the same problems that exist in EGP can be observed in ESP reading, as in both EGP and ESP reading, vocabulary and grammar problems are challenging and difficult to solve. The low group student reported reading in ESP is easier for him because of his familiarity with the content of the text. This content familiarity is not much felt by him in EGP reading. The low group student drew on his background knowledge more in ESP reading than in GPE reading. He evaluated the ESP text to be much easier than the EGP text because of the background knowledge. Still, the high group student reported that he was good at both and enjoyed reading in both of them. He believed his awareness of reading strategies would help him to confront the difficulties in reading, making him feel at ease with both EGP and ESP readings tasks.

Awareness of one’s comprehension process is a critical aspect of skilled reading. Therefore, successful reading comprehension is “not simply a matter of knowing what strategy to use, but the reader must also know how to use it successfully” (Anderson, 1991, p. 19). By considering the results of the present study, it can be concluded that the level of success in L1 reading product cannot give a clear-cut picture of the EGP and ESP reading process. It also fails to give a good picture of ESP reading product as the performance of the high and low groups of students in their L1 reading was not significantly different in ESP reading. This might be because of the academic knowledge that the students had in their ESP reading test. Therefore, content knowledge can be a good equalizer between the two groups of L1 reading ability. However, this difference was significant in EGP reading. This might be because of the negative and positive attitudes that the low and high group students had toward reading, respectively. Therefore, predicting the EGP and ESP reading product and process based on just students’ L1 reading product is not recommended as there might be other intervening and moderator variables such as the higher-level conceptual abilities, and process strategies.
An Investigation into the Effect of L1 (Persian) Reading Product on the Product and Process of Reading in EGP and ESP

(Coady, 1979), linguistic variables, literacy variables, and knowledge variables (Bernhardt, 1991), the amount of schooling in L1 (Thomas & Collier, 1997), L1 and L2 reading attitude (Yamashita, 2004), and cognitive processing ability in L2 (Cook, 2007) that play important roles in this regard. This can be a good area for more in-depth research for predicting the variables affecting EGP and ESP reading process and product. As the L1 reading product is no good predictor for L2 reading success, it is also recommended to get tertiary students more familiar with the L2 code so that they become independent in text processing of different general and specific genres.
دراسه تأثير نتیجه قراءة وفهم النص في اللغة الأولى (الفارسی) على نتيجة وكذلك مسار قراءة وفهم النصوص العامة والتخصصية في اللغة الثانية (اللغة الانگلیزیة)

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جامعة مندنران، ایران

ملخص

نتبجح هذه الدراسة تأثير نتیجه قراءة باللغة الأولى على نتیجه ومعالجة القراءة في المنتج الانگلیزی العائم والخاص. شكل تسع وثلاثون طالب من مستوى السنة الثالثة عبده هذه الدراسة. فتموا الى مجموعتين من المؤدين اصحاب المستوى العالي والمنخفض مستندين على درجات اختيار القراءة باللغة الأولى. ثم أعطوا اختبارات القراءة في الانگلیزیة العامة والانجیزیة لأغراض خاصة الذي أتبع مباشرة باستدلالات الدراسات مقاربة وكاشینات استرجاعية لسلوك قراءاتهم. أظهر تحلیل البيانات عدم وجود اختلاف مهم بين المجموعتين في طريقة قراءة المنتج الانگلیزی العائم والخاص كما هو نتیج قراءة اللغة الانگلیزیة الخاص. لكن فيما يتعلق بتیج القراءة العائم للغة الانگلیزیة كان هناك اختلاف مهم في نتیجه القراءة من ذوي المستوى العائم ذوي المستوى المنخفض في قدرة القراءة باللغة الأولى. بقول Cook (2007) ان المعالجة الواعیة أو العقلية للمعلومات هي أيضاً وأقل كفاءة في اللغة الأجنبية. بما أن منتچ القراءة باللغة الأولى هو متمتنی غير جيد لنجاح القراءة باللغة الثانية، يفضل أن يحصل على طلبة جامعة أكثر معرفة برلم أورشفة اللغة الثانية لكي يصبحوا مستقیلین في معالجة النص المختلفة الأساليب العامة والخاصية.

الكلمات المفتاحیة:

القراءة، المنتج، الطريقة، اللغة الأولى، المنتج اللغة الانگلیزیة العامة، منتچ اللغة الانگلیزیة لأغراض خاصة.
References


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Appendix:

Interview protocol on reading process and product in EGP and ESP

Student 1

Interviewer: Hi, thank you for taking part in the interview. I would like to ask you about your reading activity in general and specific English texts. Please answer the questions of the interview.

Question 1: <<Explain how you read EGP and ESP texts? In other words, please elaborate on your strategic reading behavior in EGP and ESP. >> Low level student: <<I think reading in EGP and ESP is not different because I am week at both. Both cause stress. I have the same strategies in my mind for reading these texts. >> Interviewer: <<you mentioned two points. One is you use the same strategies in both and the second is both cause stress. Can you explain more? >> Low level student: <<yes. Actually I do not see any difference in reading ESP and EGP texts. They are the same in structural organization and difficult vocabularies and because of this I am full of stress when it comes to reading such difficult passages. I think I am not good at English no matter if it is in ESP or EGP. >> Interviewer: <<please look at the strategy items and say which are your main easy or difficult strategies. >> Low level student: <<in fact strategies that are related to vocabulary and grammar are more difficult to employ while reading. I am not very fluent in strategy use in EGP. I think the same weakness is transferred to ESP reading. In fact, the problem
Talibi

is that I do not use strategies very well. >> **Interviewer:** <<Once you find a language problem in a text both in EGP and ESP do you use any strategies in order to solve it? >> **Low level student:** <<Sure. I try to find a solution for my reading problems both in EGP and in ESP. actually, it happens automatically. >> **Interviewer:** <<Would you like to have the instruction of reading strategies in the EGP and ESP curriculum? What kind of strategies? >> **Low level student:** <<Yes. But if students expand their knowledge of vocabulary and grammar it is better. >>

**Question 2:**

**Interviewer:** << Do you think you will have the same performance in EGP and in ESP reading tasks? Your reasons? >> **Low level student:** << I think yes. To me there is no difference in reading performance in EGP and ESP. the same vocabulary and grammatical problems that I have in EGP exist in my ESP reading. >> **Interviewer:** <<Which part is easy or difficult? Grammar? Vocabulary? Or what? >> **Low level student:** << I think both EGP and ESP vocabulary and grammar problems are challenging and difficult to solve. I do not see any distinction. I do not know how to solve a problematic sentence in English mostly because of my limited vocabulary size and knowledge of English grammar. However, the idea of content familiarity in ESP texts is a good help. Before I start reading in ESP, I think I can understand it. I have good self-confidence for it. This does not happen in my EGP reading. I always have stress about EGP reading. >>

**Student 2**

**Question 1:**

**Interviewer:** <<Explain how you read EGP and ESP texts? In other words, please elaborate on your strategic reading behavior in EGP and ESP. >> **High level student:** <<Well, I think the reading process for the kind of text I have answered in EGP and ESP is the same. In EGP reading I first skim for general meaning and then read for specific information. I use this strategy in my readings in Persian, as well. In do the same in ESP reading too. >> **Interviewer:** <<Do you have any stress in your reading both in EGP and ESP? >> **High level student:** << I think as ESP texts are content familiar they cause less stress in comprehension. In general, I use reading strategies easily in both. >> **Interviewer:** <<please look at the strategy items and say which are your main easy or difficult strategies. >> **High level Student:** <<I am familiar more with strategies that are related to vocabulary and structure. Some strategies, known as metacognitive strategies are less familiar to me and I do not know how to use them practically in my readings. This is true both in my EGP and ESP reading tasks. I also have this kind of behavior in my mother tongue or Persian. >> **Interviewer:** <<Once you find a language problem in a text both in EGP and ESP do you use any
strategies in order to solve it? If yes, what strategies? >> High level Student: <<Yes, of course. In fact, it depends on the problem. I use strategies that you mentioned in your questionnaire. For example, I guess the meaning of unfamiliar words through context. In general, I try to solve my comprehension problems in ESP and EGP by using reading strategies. However, as the content is more friendly and familiar to me in ESP texts, I am more comfortable and at ease with ESP texts. >> Interviewer: <<Would you like to have the instruction of reading strategies in the EGP and ESP curriculum? What kind of strategies? >> High level student: <<Yes. I think metacognitive strategies are very important. >>

Question 2:

Interviewer: <<Do you think you will have the same performance in EGP and in ESP reading tasks? Your reasons? >> High level student: <<I think I am good at both. I read both ESP and EGP texts at the same speed and fluency. Actually, I enjoy reading in both.>> Interviewer: <<Why? >> High level Student: <<In my academic life I am more in need of specialized papers and books. Therefore, as I am familiar with the content and can better understand the texts. In general, as I think the way of reading in EGP and ESP is the same I am at ease with both EGP and ESP reading. >> Interviewer: <<Which part is easy or difficult? Grammar? Vocabulary? or what? Explain more. >> High level Student: <<My awareness of reading strategies is good and helps me confront the difficulties in reading, I am at ease with both EGP and ESP readings. >>