

Persian Native Speakers Reading Persian and English Texts: Their Strategic Behavior to Overcome Syntactic and Semantic Problems

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This study aimed to discover semantic and syntactic problems Persian native speakers might have while reading English and Persian texts and different strategies they use to overcome those problems. To this end, a convenient sample of 40 intermediate students studying English Literature at Shiraz University was selected. Twenty of them were asked to do a cloze test in Persian (L1) and the rest to do the English version of the same text (L2). Then, a questionnaire was administered to find out the strategies they used while doing the cloze tests. Results showed that Persian native speakers mostly used syntactic strategies while reading an English text and semantic ones while reading the Persian version of the same text. This finding highlights the need for a stronger emphasis on different syntactic features of language in the teaching of reading English to Persian native speakers.

Key Words: reading, reading strategies, semantic problems, syntactic problems.

1 Introduction

The nature of reading has been investigated by cognitive and behavioral scientists for many decades and their works have contributed contrasting theories about what works best in the teaching of reading. Results of diverse studies confirmed the fact that reading is not a single factor process; rather, it is a multivariate skill involving a complex combination of a variety of cognitive, linguistic, and nonlinguistic skills which range from the very basic low-level processing abilities to high-level skills (Nassaji, 2003). Reading, according to Flavell (1979), whether in L1 or L2, is a “cognitive enterprise” which occurs, in part, as a result of the interaction among the reader, the text, and the context in which it takes place. Furthermore, to accomplish the task of comprehending the text successfully, the reader needs to utilize conscious or unconscious strategies.

Most of the research in reading has been in L1 reading and most of our current views of second language reading are shaped by research on first

language learners. The findings of Mokhtari and Reichard's study (2004) supported the prevailing view that second language readers need to be considered distinctive and different from first language readers. Indeed, their data indicated that second language readers do differ in some important ways from first language readers and that ways of thinking about literacy differ considerably across cultures. There is a generally accepted view among first and second language reading researchers and teachers that students who must study in a second or a foreign language are almost always at a disadvantage, especially in the area of reading and writing (Mokhtari & Reichard, 2004). Reading in a second language is influenced by factors which are not normally considered in L1 reading research. Second language students begin the L2 reading process with very different knowledge from that of L1 readers. L2 learners typically have not already learned a large store of oral language vocabulary; nor do they have a fairly complete knowledge of the grammar of the language (Grabe, 1991).

Researchers have identified different strategies which comprise the nature of reading. According to Carrell (1989, p. 121), "reading strategies are of interest for what they reveal about the way readers manage their interaction with written text and how these strategies are related to text comprehension". Block (1986, p. 463) claimed that "knowledge about the process, not just the product of reading is needed if we are to move from head-scratching to designing programs which truly meet the needs of our students".

Reading comprehension strategies are chosen to be studied since the most important channel that Iranian university students can use to communicate with an English language society is through reading. Despite the fact that several studies have been carried out to identify or classify reading comprehension strategies, none of them has focused on syntactic and semantic strategies of Iranian EFL students. To fill this gap, the present study attempted to investigate semantic and syntactic strategies utilized by Iranian EFL learners.

2 Literature Review

Language learning strategies are those operations or techniques undertaken—either consciously or often unconsciously—by individuals to enhance, improve, and facilitate the comprehension, storage, recall, and use of new information (Nyikos & Oxford, 1993; Oxford & Crookall, 1989; Oxford & Ehrman, 1995; Oxford & Nyikos, 1989).

Believing in cognitive theory of language learning, O'Malley and Chamot (1995, p. 1) defined learning strategies as "...special ways of processing information that enhance comprehension, learning, or retention of information..." Language learning strategies were also defined as "...the behaviors used by learners to move toward proficiency in a second or foreign

language” (Oxford & Crookall, 1989, p. 404). Similarly, White (1995, p. 210) defined language learning strategies as “the operations or processes which learners deploy to learn the target language”.

Reading strategies are considered as important language learning techniques since readers deliberately use them to better understand and remember what they read. By using reading strategies, all students including L1 and L2 students and those with special needs can learn to read independently and well (Graves, Juel, & Graves as cited in Allen, 2003). Comprehension strategies, according to Block (1986, p. 456), “...indicate how readers conceive a task, what textual cues they attend to, how they make sense of what they read, and what they do when they do not understand...” Block (1986) divided reading comprehension strategies into two major classes: one class belongs to general strategies which are applied when the reader faces some problems in understanding the whole text, and the other class belongs to local strategies which the readers use when they get caught in certain parts of the text.

Many studies have been carried out on reading comprehension strategies of learners (e.g., Block, 1986; Carrell, 1989; Kincaid & Beach, 1996; Munby & Li, 1996; Payne & Manning, 1992; to name some). Researching L2 reading comprehension strategies has proved to be a complex endeavor since the concept of strategy itself is difficult to define (Abbot, 2006). Three main approaches explain the nature of reading: (1) bottom-up processing which refers to “local, language-based reading strategies that focus primarily on word meaning, sentence syntax, or text details and are associated with attending to lower level cues” (Abbot, 2006, p. 637); and (2) top-down processing which refers to “global, knowledge-based reading strategies that focus primarily on text gist, background knowledge, or discourse organization and are associated with attending to higher level cues” (Abbot, 2006, p.638); and interactive processing in which every component in the reading process can interact with any other component whether it is higher up or lower down (Alderson, 2000). Syntactic and semantic strategies can be considered as bottom-up strategies used by learners while reading and the focus of this study is on these two types of strategies used by L1 and L2 readers.

From the earliest beginnings of modern psycholinguistics, most of the studies that have investigated the representations and processes by which humans understand language have focused on syntax (McKoon & Ratcliff, 2007). Central questions have been what kinds of syntactic information are available to the processing system, how the system produces the syntactic structures that are necessary for comprehension, and what form these structures take. According to Hatch, Polin and Part (as cited in Khaldieh, 2001), ESL learners need to focus more attention on syntax because they are not familiar with it. Additionally, results of many studies “add to the importance of competence in syntax as a factor among the building blocks of

reading comprehension” (Khaldieh, 2001, p. 418); for instance, Kern (1989) reviewed a number of studies and concluded that L2 readers tend to be more linguistically bound to the text than are L1 readers. Carrell's L2 research (1992) on the awareness of text structure showed that seeing relations between ideas and between main ideas and details helped L2 readers in recall. Students using text structure to guide their reading showed better recall both quantitatively and qualitatively.

Those L2 readers who lack appropriate cultural schemata are often at a disadvantage when processing a text; that is, they need a basic structure on which further structures can be built in their construction of meaning. Even highly proficient L2 readers show more text reliance than L1 readers (Bernhardt & Kamil, 1995; Horiba, 2000). It can be said that L2 readers, even highly proficient ones, seem to behave more like inefficient L1 readers, who are unable to reduce their reliance on the text despite their familiarity with the thematic content (Alptekin, 2006).

On a very basic level, vocabulary and syntactic knowledge are critical to reading; on a less obvious level, syntactic knowledge has an important facilitative effect on reading as shown in many studies (e.g., Rayner as cited in Grabe, 1991). As reported by McNamara (1970), knowledge of syntax appears to facilitate reading processes and helps readers predict meaning. In a similar line of research, Swaffar's study (1988, p. 129) suggested that “inadequate command of vocabulary and grammar may well interfere with reader conceptualizing” and “successful reading in L2 can only result after freedom from language mechanics”.

Chavez's study (1994) demonstrated that intermediate learners of German whose first language was English experienced more semantic difficulties when reading an English text and more syntactic difficulties when reading a German version of the same text. Similarly, a number of past studies on L2 reading suggested that L2 readers are less capable of using semantic information than L1 readers. In other words, their reading strategies were characterized by insufficient use of top-down strategies (Cziko as cited in Hayashi, 1991).

Vocabulary difficulty has consistently been shown to have an effect on understanding for first language readers as well as for second language readers (Alderson, 2000). Aronson-Berman (as cited in Ulijn, 1984) found syntax to cause serious comprehension errors in intermediate FL reading. More recently, considerations of meaning have begun to enter syntax research agendas and questions about the interactions of meaning with syntax have become salient in many discussions. On the contrary to the above-mentioned studies, Ulijn and Strother (1990) argued that L2 reading does not require much syntactic processing but needs a considerable amount of lexical semantic processing. Semantic processing (intratextual strategies) is aimed at individual constituents within the text primarily on the lexical level (Chavez, 1994). According to the findings of Landi and Perfetti (2007), semantic

Persian Native Speakers Reading Persian and English Texts: Their Strategic Behavior to Overcome Syntactic and Semantic Problems

processing ability may be an important underlying factor in reading comprehension skill regardless of age or developmental status.

However, Chavez (1994) believes that these contextual and intratextual strategies cannot be effective in the construction of meaning if applied in isolation. Based on psycholinguistic theory, meaning can be derived through the interaction of lexical properties and syntactic structure (Chavez, 1994). The construction of meaning of a text by a reader has a direct and positive relationship with fast and correct lower level processes of reading at the lexical and syntactic levels (Bernhardt, 1984; Carrell, 1984).

Nevertheless, many researchers emphasized the importance of lexical and semantic strategies while reading. For example, Vermeer (as cited in Khaldieh, 2001) expressed the view that effective communication and comprehension depend mostly on the mastery and knowledge of vocabulary rather than on grammatical knowledge. And Ulijn (1980) raised the question of whether L2 reading is syntactically or conceptually driven. He came to the conclusion that L2 readers have more difficulty understanding syntactic function words than content words and that conceptual analysis overrules syntactic analysis. The same argument has been put forward by Jonz (1987, p. 458) who stated that text-boundedness "... is a complement to the previously reported syntax-boundedness of nonnatives. Nonnatives are simply more dependent on text, not just syntax, for comprehension than are natives". In Bernhardt's opinion (1984), text-based perspective offers insufficient insight into the comprehension processes. According to the results of such studies, it is believed that lexical knowledge (intratextual strategies) is more critical than syntactic knowledge (contextual strategies) and that is why contextual strategies are highly underrepresented in the classroom.

These views towards syntactic processing has led to downplaying its role in the classroom for at least two reasons: (1) the use of contextual strategies is implicitly discouraged in some activities such as skimming and scanning in which students are instructed to create semantically organized schemata; (2) the use of contextual strategies is implicitly assumed, but not explicitly encouraged in inferring, paraphrasing and summarizing activities (Chavez, 1994).

What kind of reasoning underlies these pedagogical decisions is not clear. According to Chavez (1994, p. 322), there are two explanations for this:

- (1) the assumption that contextual strategies contribute little to the derivation of meaning or
- (2) the assumption that contextual strategies need not be explicitly taught because they are already accessible to students, either through transfer from the first language or as part of naturally occurring foreign language behavior.

The first assumption has been supported by many researchers mentioned above. However, some other researchers refused to accept this assumption by conducting different studies. This study is also an attempt to examine the validity of the first assumption.

3 Research Questions

This study attempts to seek answers to the following research questions: In the completion of a rational cloze test,

- (1) Will the proportional relationship of syntactic to semantic errors in the English language version (L2) be the same as in the Persian language version (L1) of the same text?
- (2) Will the participants completing the English language version report the same number of strategies as the participants completing the Persian language version?
- (3) Will the participants completing the English language version report the same ratio of syntactic versus semantic strategies as the participants completing the Persian language version?

4 Method

4.1 Instruments

The three research questions were empirically investigated in a two-part experiment. Part one consisted of a rational-deletion cloze test which was administered in two versions, one in English (L2), the other one in Persian (L1). By using identical texts, with the variant L2 versus L1, it was hoped to control for potential cultural bias or other prejudicial features which may distinguish any given two texts from each other. Chavez (1994, p. 324) held the view that “despite the development of readability scales, the possibility to determine a text’s ultimate syntactic, semantic, cultural, or other levels of difficulty has remained elusive”. As a result, studies which use two different texts for comparison in performance often face problems in attributing observed differences in the participants’ performance to the investigated variables rather than innate characteristics of the two texts (Chavez, 1994). Although there are certain drawbacks of using an original and a translated version of the same text, these disadvantages are secondary to the concerns of maintaining linguistic structures in the two experimental texts which are as similar as possible. In addition, previous research has shown that a careful translation of texts would yield cloze tests of equivalent difficulty (Oller, Bowen, Dien, & Mason, 1972).

The text was chosen from a published article (Farhady & Keramati, 1996) in which the authors claimed that the text was a reliable and valid instrument but they did not mention the reliability and validity indices of the

text. Therefore, the researcher herself calculated the reliability of the cloze tests using Kuder-Richardson formula 21 (KR-21). The reliability of the English cloze test was $r = 0.86$. The researcher and one of her classmates translated the text; then, she compared the two translations and the final translation was prepared by her. After translating the text, she asked a proficient English learner to back translate the text into English in order for her to determine the reliability and conciseness of the translation. His back-translation and the original text were 98% comparable confirming the reliability of the Persian translation. Then, she calculated the reliability of the Persian cloze test using (KR- 21) formula and it was $r = 0.69$. Given the short length of the cloze tests, it was felt that the reliabilities were acceptable.

Part two of the study consisted of a questionnaire in which the participants had to indicate whether they had used particular types of strategies in completing the cloze tests. This questionnaire was brief and worded in simple terminology with which the participants were quite familiar. Generally, it was designed according to a hierarchical structure in which main questions which reflected the areas of syntax, morphology, and semantics branched off into sub-questions which were evenly distributed across syntax, morphology and semantics. In order to preserve this even distribution of strategic targets, sacrifices had to be made with regard to the scope of investigation.

4.2 Participants

A total of 40 students participated in the study. A convenient sampling procedure was used because the students were already placed in particular classes and the researcher could not use random sampling procedures. They were intermediate learners of English (sophomore and junior English students) who were studying English Literature at Shiraz University and all of them were Persian native speakers.

4.3 Data Collection and Analysis Procedures

Twenty participants were assigned the English version of the cloze test and the rest of them received the Persian version. Each group was allotted 20 minutes for the completion of the task. The English group was asked to answer in Persian whenever they wanted or if they had any problems in word production because the researcher wanted to determine divergence between L1 and L2 in comprehension rather than production and the Persian group also answered in Persian. "The use of first language in responses in order to accurately measure reading comprehension has been recommended by among others, Lee and practiced by, among others, Koda"(Chavez, 1994, p. 324).

After doing the cloze test, both groups were given 12 minutes to report their strategic behavior. Statistical analyses consisted of simple t-tests

which were applied by the researcher herself using Statistical Package for the Social Sciences (SPSS). To determine significance throughout the study, the researcher used the standard of $p < .05$. This means that a result was considered statistically significant if it could have occurred by chance fewer than 5 times out of 100.

4.4 Evaluation Criteria

Responses were divided into three categories: correct, incorrect, and omitted (deletions which were not recovered). All suitable insertions were considered correct. Incorrect responses were further analyzed as either (a) semantically inappropriate (i.e., *man* instead of *mother*) or (b) syntactically inappropriate. The latter group consisted of two sub-groups: (b.1.) a category called “inflection” which consisted of errors in agreement relationships (including incongruity between subject and verb in number or person; e.g. **(she) do* instead of *(she) does*), other syntactic relationships (e.g. subject versus object; e.g. *he* instead of *him*), and tensing (e.g. *(he) goes* instead of *(he) went*), (b.2.) inaccurate syntactic category (e.g. a verb instead of a noun). Syntactic errors were evaluated both in total and according to the two sub-groups (inflection/morphology and syntactic category).

5 Results

Overall analyses of errors between the English and the Persian groups through t-tests yielded significant differences in all investigated variables except one variable (i.e. omissions). The variables which were investigated were: (1) inappropriate syntactic category, (2) inappropriate inflection, (3) inappropriate overall syntactic fit (the sum of 1 and 2), (4) inappropriate semantic choice, (5) omissions, and (6) accurate insertions (Table 1).

Table 1. Differences in Item Scores in English versus Persian (total number of items 41)

Language	Variable	N	Mean	SD	T-value	ρ
English	(1)	20	12.25	4.50	6.00	< .05
Persian	(1)	20	6.3	1.89		
English	(2)	20	1.40	0.75	8.10	< .05
Persian	(2)	20	0.05	0.22		
English	(3)	20	13.65	4.28	2.93	< .05
Persian	(3)	20	10.05	3.31		
English	(4)	20	5.65	2.18	-5.19	<.05
Persian	(4)	20	10.10	3.50		

Persian Native Speakers Reading Persian and English Texts:
Their Strategic Behavior to Overcome Syntactic and Semantic Problems

English	(5)	20	3.60	5.67	1.93	< .05
Persian	(5)	20	1.20	1.88		
English	(6)	20	18.10	5.49	-5.06	< .05
Persian	(6)	20	23.35	4.38		

Clearly, the number of some categories of error is much greater in English than in Persian. Conversely, the number of appropriate insertions is much greater in Persian than in English. In the next sections, we will examine how the results relate to the three research questions. Research question 1: Is the ratio of semantic to syntactic errors identical between the Persian and the English groups?

First, a translation of the mean scores into proportional relations showed that while for every one syntactically based error in Persian, 1.35 syntactically based errors occur in English, 1.78 semantically based errors occur in Persian for every one semantically based error in English.

Second, while the majority of inaccuracies in English were due to errors in syntax, inaccuracies in Persian resulted mainly from semantic errors. These findings are confirmed on a level of significance in paired t-tests (Table 2).

Table 2. Syntactic and Semantic Errors in English versus Persian

Language	Variable	N	Mean	SD	T-value	ρ
English	(3)	20	13.65	4.28	7.702	<.05
English	(4)	20	5.65	2.18		
Persian	(3)	20	10.05	3.31	-.142	<.05
Persian	(4)	20	10.10	3.50		

With regard to the first research question, the results show that syntax poses greater problems than semantics in English and conversely, semantic problems are more prevalent than syntactic ones in Persian (although the difference is not statistically significant, one can see that in Persian, the mean of semantic errors is greater than that of syntactic ones).

Research question 2: Does the number of strategies reported vary between L1 and L2? And research question 3: Do the types of strategies (semantic versus syntactic) differ between L1 and L2?

These two questions are closely related and will thus be discussed together. A simple t-test was used to determine whether the number of reported zero scores (each zero score indicating the omission of a particular strategy) varied between English and Persian groups with regard to (a) the overall (semantic, syntactic, morphological) strategy cluster and to (b) the

sub-feature strategy clusters that describe which constituents had been targeted by each of the general strategy types. Table 3 shows the results.

As observed in Table 3, there was no statistically significant difference between English and Persian groups in general features of strategy cluster. This finding shows that these participants used almost all general strategies in both English and Persian groups. However, the differences between English and Persian are statistically significant in sub-feature strategy clusters indicating that English participants reported more syntactic and morphological strategies while Persian participants reported more semantic strategies and the number of reported omissions was significantly higher in Persian than in English.

Table 3. Differences between English and Persian Groups in Different Types of Strategies

Strategy cluster	Language	N	Mean	SD	T-value	ρ
General features	English	20	2.60	.50	1.45	<.05
	Persian	20	2.40	.50		
Sub-feature/syntax	English	20	4.25	.63	6.21	<.05
	Persian	20	2.0	1.45		
Sub-feature/semantics	English	20	1.20	1.19	-8.143	<.05
	Persian	20	4.05	.82		
Sub-feature/morph.	English	20	2.50	.51	6.04	<.05
	Persian	20	.95	.99		

6 Discussion and Conclusions

The focus of this study was on syntactic and semantic reading comprehension strategies of Iranian EFL learners when reading an English text and when reading the equivalent of that text in Persian. Results indicated that the number of reported omissions of strategies was significantly higher in Persian than in English. This finding is contrary to the study conducted by Knight, Pardon, and Waxman (1985) who compared ESL to native speaker strategies. Nevertheless, the use of more strategies in L2 than in L1 can be explained with a greater need for strategic behavior in L2.

There was no statistically significant difference between English and Persian in general features of strategies pointing to the fact that participants in both groups tended to use all types of strategies. But the differences in all sub-feature groups were significant between English and Persian which shows that participants used different number of strategies in English and Persian groups. This finding is in contrast to that of Chavez (1994) who

found the differences between German and English were not statistically significant in any sub-feature groups of strategies although they were statistically significant in general features of strategies.

In this study, in the sub-feature syntax, the mean of the English group (4.25) was much higher than that of the Persian group (2.0). It shows that participants in the English group used more syntactic strategies compared to those in the Persian group. In the sub-feature cluster semantics, the mean of the Persian group (4.05) was much higher than that of the English group (1.20) indicating that Persian participants used more semantic strategies in comparison to English ones. In the area of morphology, the mean of English participants (2.50) was much higher than the mean of Persian ones (0.95) which shows that English participants used more morphological strategies than their Persian counterparts. This finding is supported by previous findings from process studies which found that FL readers focus more attention on processing language contained in the text than they do when reading in L1 (Chavez, 1994; Davis & Bistodeau, 1993; Horiba, 1996, 2000; Zwaan & Brown, 1996); however, it is in contrast to the findings of Ulijn (1980) and Jonz (1987).

Comparing the patterns of errors in English and Persian, one can find out high proportion of syntactic errors in English in comparison to Persian and high proportion of semantic errors in Persian in comparison to English. One reason for this diversity might be the difference between the orthography of the participants' L1 and that of English. This explanation rests on the assumption that there may be different information processing mechanisms involved in L2 reading by proficient L1 readers coming from different background orthographies (Nassaji, 2003). Although alphabetic, Persian has orthography completely different from that of English. However, Grabe (1991) held the view that if orthographic differences between a student's L1 and English are considered to be a likely cause of difficulties, it may be true for beginning readers and it is less clear for advanced readers of English. Clearly, there is a need for more research in this area to shed more light on this problem.

The findings of this study are in contrast to Ulijn's findings (1984) whose participants used more semantic strategies than syntactic ones when reading an L2 text. This can be explained by the fact that the technical texts used by his students had an organization favorable to contextual guessing of structure and they were familiar with this text type macrosyntax. Their familiarity with the text type might have helped them overcome the syntactic problems and rely more on the semantic cues. Furthermore, the present findings are contrary to Ulijn and Strother's findings (1990) which showed that L2 reading did not require much syntactic processing but needed a considerable amount of lexical semantic processing.

The participants of this study in both the English and the Persian groups used approximately similar strategies but the number of strategies

used was very different in each group. This finding is in line with Stevenson, Schoonen and Gloppe's findings (2003). Results of their study supported the claim that although there appears to be a large degree of overall similarity in the kinds of strategies used in L1 and L2, there are considerable proportional differences in the use of particular strategies. The present findings also confirm the results of Chavez's study (1994) and those of Hauptman's study (1981) who found that L2 readers use more syntactic strategies compared to L1 readers who use more semantic ones.

7 Implications

Considering English as a foreign language (EFL) pedagogy, materials developers, syllabus designers, and practitioners need to be made aware of the fact that the emphasis on intratextual semantic strategies to the near exclusion of contextual syntactic ones does not constitute sound pedagogical practices. Attempting to foster English reading comprehension, they may be able to gain most if they rely on an increased inclusion of syntactically based strategies.

This study was done on Iranian EFL readers and it can have useful and practical implications for EFL teachers in Iran. They can include some instructions about syntactic and semantic reading comprehension strategies and elevate their students' knowledge of them as well as recommend them use both types of strategies and avoid neglecting syntactic strategies while reading foreign language texts.

8 Limitations and Suggestions for Further Research

Like most empirical research, the present study is not definitive since it was based on a certain sample of English learners at a particular context in a particular language program learning a specific language. Future research is needed in which all of these factors are systematically varied in order to be able to define more precisely than what was possible here the factors affecting FL reading strategy use. The data presented here do, however, pave the way for examining the nature of reading strategies. This study investigated the syntactic and semantic strategies of intermediate learners of English; therefore, further research is urgently needed which investigates the differences between syntactic and semantic strategies of learners across different proficiency levels.

Still, studies of first- and second-language reading of languages other than English and Persian using other methodologies are clearly needed. Other studies can be conducted with different cultural groups to show whether members of different cultures use syntactic and semantic reading strategies in

the same way or differently and to find out if different cultures approach the task of reading in L1 and L2 in the same manner or differently.

One can investigate the effects of gender on the syntactic and semantic strategies used while reading L1 and L2 texts to see whether males and females differ with respect to the use of syntactic and semantic strategies or not. Since each study further our understanding of the specific conditions and variables that influence syntactic and semantic reading comprehension strategies, continued research in this area is strongly needed.

References

- Abbott, M. L. (2006). ESL reading strategies: Differences in Arabic and Mandarin speaker test performance. *Language Learning, 56*(4), 633-670.
- Alderson, J. C. (2000). *Assessing reading*. Cambridge, MA: Cambridge University Press.
- Allen, S. (2003). An analytic comparison of three models of reading strategy instruction. *IRAL, 41*(4), 319-338.
- Alptekin, C. (2006). Cultural familiarity in inferential and literal comprehension in L2 reading. *System, 34*(4), 494-508.
- Bernhardt, E. B. (1984). Toward an information processing perspective in foreign language reading. *The Modern Language Journal, 68*(4), 322-331.
- Bernhardt, E. B., & Kamil, M. L. (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic threshold and the linguistic interdependence hypotheses. *Applied Linguistics, 16*, 15-34.
- Block, E. (1986). The comprehension strategies of second language readers. *TESOL Quarterly, 20*(3), 463-494.
- Carrell, P. L. (1984). Three effects of rhetorical organization on ESL readers. *TESOL Quarterly, 18*, 441-469.
- Carrell, P. L. (1989). Metacognitive awareness and second language reading. *The Modern Language Journal, 73*(2), 121-134.
- Carrell, P. L. (1992). Awareness of text structure, effects on recall. *Language Learning, 42*(1), 1-20.
- Chavez, M. M. T. (1994). English native speakers reading German: Syntactic versus semantic problems and strategic behavior. *IRAL, 32*(4), 321-333.
- Davis, J. N., & Bistodeau, L. (1993). How do L1 and L2 reading differ? Evidence from think-aloud protocols. *The Modern Language Journal, 77*, 459-471.

- Farhady, H., & Keramati, M. N. (1996). A text-driven method for the deletion procedure in cloze passages. *Language Testing, 13*(2), 191-207.
- Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive development enquiry. *American Psychologist, 34*, 906-911.
- Grabe, W. (1991). Current developments in second language research. *TESOL Quarterly, 25*(3), 375-406.
- Hauptman, P. C. (1981). A comparison of first and second language reading strategies. *ITL Review of Applied Linguistics, 51*, 37-53.
- Hayashi, T. (1991). Interactive processing of words in connected speech in L1 and L2. *IRAL, 29*(2), 151-160.
- Horiba, Y. (1996). Comprehension processes in L2 reading: Language competence, textual coherence, and inferences. *Studies in Second Language Acquisition, 18*, 403-432.
- Horiba, Y. (2000). Reader control in reading: Effects of language competence, text type, and task. *Discourse Processes, 29*, 223-267.
- Jonz, J. (1987). Textual cohesion and second-language comprehension. *Language Learning, 37*(3), 409-430.
- Kern, R. (1989). Second language reading strategy instruction: Its effects on comprehension and word inference ability. *The Modern Language Journal, 73*, 135-148.
- Khaldieh, S. A. (2001). The relationship between knowledge of Iraab, lexical knowledge, and reading comprehension of nonnative readers of Arabic. *The Modern Language Journal, 85*(3), 416-431.
- Kincade, K. M., & Beach, S. A. (1996). Improving reading comprehension through strategy instruction (research into practice). *Reading Psychology, 17*(3), 273-281.
- Knight, S. L., Pardon, Y. N., & Waxman, H. C. (1985). The cognitive reading strategies of ESL students. *TESOL Quarterly, 19*, 789-792.
- Landi, N., & Perfetti, C. A. (2007). An electrophysiological investigation of semantic and phonological processing in skilled and less skilled comprehenders. *Brain & Language, 102*(1), 30-45.
- Macnamara, J. (1970). Comparative studies of reading and problem solving in two languages. *TESOL Quarterly, 4*, 107-116.
- McKoon, G., & Ratcliff, R. (2007). Interactions of meaning and syntax: Implications for models of sentence comprehension. *Journal of Memory and Language, 56*(2), 270-290.
- Mokhtari, K., & Reichard, C. (2004). Investigating the strategic reading processes of first and second language readers in two different cultural contexts. *System, 32*(3), 379-394.
- Munby, H., & Li, S. (1996). Metacognitive strategies in second language academic reading. *English for Specific Purposes, 15*, 199-216.

Persian Native Speakers Reading Persian and English Texts:
Their Strategic Behavior to Overcome Syntactic and Semantic Problems

- Nassaji, H. (2003). Higher-level and lower-level text processing skills in advanced ESL reading comprehension. *The Modern Language Journal*, 87(2), 261-276.
- Nyikos, M., & Oxford, R. (1993). A factor analytic study of language learning strategy use: Interpretation from information processing theory and social psychology. *The Modern Language Journal*, 77(1), 11-22.
- Oller, J. W., Bowen, D., Dien, T. T. & Mason, V. W. (1972). Cloze tests in English, Thai, and Vietnamese. *Language Learning*, 22(1), 1-15.
- O'Malley, J. M., & Chamot, A. U. (1995). *Learning strategies in second language acquisition*. Cambridge, NY: Cambridge University Press.
- Oxford, R., & Crookall, D. (1989). Research on language learning strategies: Methods, findings, and instructional issues. *Modern Language Journal*, 73(4), 404-419.
- Oxford, R., & Ehrman, M. E. (1995). Adults' language learning strategies in an intensive foreign language program in the United States. *System*, 23(4), 359-386.
- Oxford, R., & Nyikos, M. (1989). Variables affecting choice of language learning strategies by university students. *The Modern Language Journal*, 73(3), 291-300.
- Payne, B. D. & Manning, B. H. (1992). Basal reader instruction: Effect of comprehension monitoring training on reading comprehension strategy use and attitude. *Reading Research and Instruction*, 32(1), 29-38.
- Stevenson, M., Schoonen, R., & Glopper, K. (2003). Inhibition or compensation? A multidimensional comparison of reading processes in Dutch and English. *Language Learning*, 53(4), 765-815.
- Swaffar, J. K. (1988). Readers, texts, and second languages: The interactive processes. *The Modern Language Journal*, 72(2), 123-149.
- Ulijn, J. M. (1980). Foreign language reading research: Recent trends and future projects. *Journal of Research in Reading*, 3, 17-37.
- Ulijn, J. M. (1984). Foreign language (FL) reading: Conceptual and syntactic strategies and their consequences for the role of native language (NL). *IRAL*, 22(1), 71-73.
- Ulijn, J. M., & Strother, J. B. (1990). The effect of syntactic simplification on reading EST texts as L1 and L2. *Journal of Research in Reading*, 13, 38-54.
- White, C. (1995). Anatomy and strategy use in distance foreign language learning: Research findings. *System*, 23(2), 207-221.
- Zwaan, R. A., & Brown, C. M. (1996). The influence of language proficiency and comprehension skill on situation-model construction. *Discourse Processes*, 21, 289-327.

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