Reading strategy research around the world

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ABSTRACT: There has never been consensus among researchers for a clear cut definition of reading strategies. This diversity is largely due to the way the term has been used in different contexts such as first language (L1), second language (L2), or foreign language (FL) learning. However, research on second language reading strategies indicates that strategies refer to conscious reading behaviors (Cohen, 1998). Study of reading strategies, their different categories, their instruction outcomes and the factors that influence the readers’ use of them has attracted a lot of researchers in the field of language research and pedagogy in the recent decades. The present study is an attempt to synthesize and discuss some of the studies conducted on reading strategies all around the world.

I. INTRODUCTION

Reading researchers have identified a surprisingly wide variety of strategies used by both native and non-native language readers. Reading strategies include a wide array of differences from traditionally recognized reading behaviors as skimming a text to get the general idea, scanning a text for a specific piece of information, making contextual guesses about the meaning of unknown words, skipping unknown words, tolerating ambiguity, making predictions, confirming or disconfirming inferences, identifying the main idea, rereading, and using cognates to assist text comprehension, to more recently recognized strategies such as activating prior background knowledge and recognizing text structure (Carrell, 1998).

Many may think that since students ‘can’ read, they should know ‘how to read’ and that they must learn the necessary reading skills along their academic path. However, the reality is that although some students may pick up some of these skills, this does not necessarily make them strategic readers (Rivers, 1981). As Lau (2006) claims, good readers are those who use better strategies; poor readers either give up easily when they face problems or they use inefficient strategies.

Alderson and Urquhart (1984) claim, if the strategies that efficient readers use are discovered, general elements are found across different texts which can lead to reading improvement through teachers’ focus on those strategies which efficient readers use more frequently. However, they believe that reading strategies are indistinguishable from other cognitive processes related to thinking, reasoning, studying or motivational strategies.

Since reading comprehension has been distinctively important both in L1, L2/FL learning, the ways to enhance reading comprehension [reading strategies] are of great interest in the field of reading research (Zare & Mobarakhe, 2011).

II. STUDIES ON READING STRATEGIES

Reading strategies are of interest to many researchers as they show how readers interact with the written material and in what way are associated with text comprehension (Carrell, 1989).

Strengthened understanding about the kinds of reading strategies that are most associated with successful reading will enable educators to more effectively instruct less proficient readers in the processes to use the strategies that will positively affect reading comprehension (Cantrell & Carter, 2009).

Extensive research has been conducted to examine the effects of reading-strategy instruction on reading improvement (Carrell, 1998; Ernesto Macaro & Erler, 2008; Zhang, 2008). The results confirmed that reading strategies can be taught, and once students’ metacognitive knowledge about reading strategies and strategy use is developed, they will become better readers (Carrell, Pharis, & Liberto, 1989; Farrell, 2001; Zhang, 2008). Fundamental focus in most research on L1, L2, and FL reading is on the strategies that readers use to process written input (Broughton, Brumfit, Flavell, Hill, & Pincas, 1980).

Reading is considered the most important language skill especially in academic settings; as a result, a great body of research has concentrated on this skill and the strategies that make its perfect achievement easier.
and faster. In this section some of the studies in this field are discussed. The studies cited here are classified under 10 categories, i.e.:

B. reading strategy instruction outcomes (Hamp-Lyons, 1985; Kern, 1989; Carrell, Pharis and Liberto, 1989; Pappa, Zafropoulou and Metallidou, 2003; Muniz-Swicegood, 1994; Auerbach and Paxton, 1997; Carrell, 1998; Farrell, 2001; Taylor et al., 2006)
C. factors affecting the use of reading strategies (Li, 2010; Hayashi, 1999)
D. reading strategies of natives and L2/FL readers of the same language (Block, 1992; Sheorey and Mokhtari, 2001)
E. reading strategy use and reading comprehension (Hassan, 2003)
G. reading strategies while reading in the first language vs. reading in L2/FL (Kong, 2006)
H. frequency of strategy use and readers’ preferences (Temur and Bahar, 2011)
I. which strategies suit which readers (Ikeda and Takeuchi, 2003)
J. using the first language while reading FL/SL (Grenfell and Harris, 1999; Macaro, 2001; Chamot and Keatley 2003; Seng and Hashim, 2006)

A. successful and unsuccessful readers’ strategies
In 1977, Hosenfeld studied high school students, reading French, German, or Spanish but thinking aloud in English in the U.S. Her example of a “successful” foreign language reader did several things: 1) he kept the meaning of the passage in mind during reading, 2) he read in what she termed “broad phrases”, 3) he skipped words unimportant to total phrase meaning and 4) he had a positive self-concept as a reader. By contrast, Hosenfeld’s “unsuccessful” foreign language reader 1) lost the meaning of sentences as soon as they were decoded, 2) read in short phrases, 3) seldom skipped words as unimportant, 4) viewed words as equal in their contribution to total phrase meaning and 5) had a negative self-concept as a reader.

In 1986, Block studied generally native and nonnative non-proficient English readers enrolled in freshman remedial reading courses in the U.S. She found four characteristics which seemed to differentiate the more successful from the less successful of these non-proficient readers. These four characteristics of successful readers were: 1) integration, 2) recognition of aspects of text structure, 3) use of general knowledge, personal experiences, and associations, and 4) responding their text understanding needs in an extensive rather than a reflexive mode. In the reflexive mode, readers relate affectively and personally, directing their attention away from the text and toward themselves, and focusing on their own thoughts and feelings rather than on the information in the text. In the extensive mode, readers attempt to deal with the message conveyed by the author, focus on understanding the author’s ideas, and do not relate the text to themselves affectively or personally. Among the non-proficient readers investigated by Block (1986), one subgroup which she labeled “integrators”, integrated information, were generally aware of text structure, responded in an extensive mode, and monitored their understanding consistently and effectively. They also made greater progress in developing their reading skills and demonstrated greater success after one semester in college. The other subgroup, which Block labeled “non-integrators”, failed to integrate, tended not to recognize text structure, and seemed to rely much more on personal experiences, while responding in a reflexive mode. They made less progress in developing their reading skills and demonstrated less success after one semester in college.

Research reported by Anderson (1991) [p.19] shows that there are no simple correlations or one-to-one relationships between particular strategies and successful or unsuccessful reading comprehension. His research with native Spanish-speaking, university level, intensive ESL students, reading in English as their second language and self-reporting their strategy use, suggests wide individual variation in successful or unsuccessful use of the exactly same reading strategies. Rather than a single set of processing strategies that significantly contributed to successful reading comprehension, the same kinds of strategies were used by both high and low comprehending readers. However, those readers reporting the use of a higher number of different strategies tended to score higher on Anderson's comprehension measures. Anderson concluded from his data that “successful second language reading comprehension is not simply a matter of knowing what strategy to use, but the reader must also know how to use it successfully and how to orchestrate its use with other strategies. It is not sufficient to know about strategies, but a reader must also be able to apply them strategically.”

Similarly, Kern (1997) concluded from his data that there are good and bad uses of the same strategy, and that the difference between a ‘good” use and a "bad” use of the same strategy is in the context in which they are used, how they are used and how they interact with other strategies. In other words, Kern (1997) believed that the difference is in how the strategies are “operationalized”. He reported at the American Association of Applied Linguistics meeting in Orlando on a case study of two American university students reading in French as a second language, one ‘a good reader of French as L2’, and one less good. Kern (1997) showed that no
strategy is inherently a "good" or "bad" strategy; that so-called "bad" strategies are used by "good" readers and vice-versa. For example, using prior knowledge may sometimes be an effective strategy for one reader in one reading situation, but not for another reader or in another reading situation. Kern showed that the same is true of translation as a strategy.

Chamot and El-Dinary (1999), using think-aloud protocol, investigated the effective strategies of third-grade and fourth-grade students in elementary foreign language immersion classrooms. At the end, they concluded that "although there were no differences in total strategies used by high-rated and low-rated students, there were some differences in the types of strategies students relied on while reading. Low students used a greater proportion of phonetic decoding than high students. High students used a greater proportion of background-knowledge strategies [including inferences, predictions, and elaborations] than did low students.”

In the EFL context, in an attempt to examine the metacognitive knowledge and the use of such strategies by good and poor readers, Yin and Agnes (2001) found that good readers were more aware of metacognitive knowledge and used metacognitive strategies more frequently than poor readers. Several other studies have been conducted on poor and good readers’ use of strategies, demonstrating that good readers use more metacognitive strategies as they read (Dhib-Henia, 2003; Swanson & De La Paz, 1998; Zhang, 2001).

B. reading strategy instruction outcomes

Hamp-Lyons (1985) explored the influence of teaching EFL reading on the progress of students in academic reading classes of a university preparation course, comparing two different methods of reading instruction, i.e., ‘traditional’ and ‘text-strategic’. She used the same textbook as the basis for both treatments and a matched groups pretest/posttest design. The study compared the performance of the two groups through their pretest/posttest scores. She concluded that although the sample was small, and as expected in a classroom based study- the full range of variables could not be controlled for, the results of the study indicated that “a ‘text-strategic’ approach to the teaching of reading in a foreign language may be superior to the more traditional approach.” According to Hamp-Lyons (1985), the two approaches she used in her study were intended to reflect contrasting practices in the teaching of reading in EFL/ESL. The first approach, arbitrarily labeled ‘traditional’, was associated for her with the structuralist-behaviorist view of language [e.g. (Bloomfield, 1933; Lado, 1964)] and the audio-lingual view of language teaching [e.g. (Rivers, 1976)]. The second approach, again arbitrarily called ‘text-strategic’, was associated for her with recent developments in the analysis of discourse and communicative language teaching/learning theory [e.g. (Widdowson, 1978)]. She further clarified the unique characteristics of the two approaches, listing them in the following table [Figure 1].

<table>
<thead>
<tr>
<th>Traditional approach</th>
<th>Text-Strategic approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product centred</td>
<td>1. Process centred</td>
</tr>
<tr>
<td>2. Reading is passive [receptive]</td>
<td>2. Reading is active [interpretive, communicative]</td>
</tr>
<tr>
<td>3. Bound to specific context</td>
<td>3. Generalizable</td>
</tr>
<tr>
<td>4. Focus on form</td>
<td>4. Focus on meaning</td>
</tr>
<tr>
<td>5. Schema not considered</td>
<td>5. Schema important</td>
</tr>
<tr>
<td>6. Reading as a form of behaviour</td>
<td>6. Affective domain considered</td>
</tr>
<tr>
<td>7. Sentence level</td>
<td>7. Discourse level</td>
</tr>
<tr>
<td>8. Analytic</td>
<td>8. Analytic, synthetic</td>
</tr>
<tr>
<td>10. Discussion around text</td>
<td>10. Discussion of text</td>
</tr>
<tr>
<td>11. Emphasis on fact/details</td>
<td>11. Emphasis on ideas or generalizations</td>
</tr>
<tr>
<td>12. One definition of comprehension</td>
<td>12. Comprehension varies with purpose/need</td>
</tr>
<tr>
<td>13. Comprehension measured by means of literal, inferential, critical questions</td>
<td>13. Comprehension measured by varied activities: questions, logical manipulations [e.g. reorganization outlining, non-linear response] etc.</td>
</tr>
<tr>
<td>15. Decoding “right” answers</td>
<td>15. Encoding range of responses</td>
</tr>
<tr>
<td>17. Individual work</td>
<td>17. Groups/pairs: sharing</td>
</tr>
<tr>
<td>18. Teacher as authority</td>
<td>18. Teacher as facilitator</td>
</tr>
</tbody>
</table>

**Figure 1:** Hamp-Lyons (1985) list of the two approaches’ characters

Hamp-Lyons (1985) and Kern (1989) found that students who had strategy training did better in reading than those who did not have strategy training.
Carrell, Pharis and Liberto (1989) and Pappa, Zafropoulou and Metallidou (2003) also found that learners who had training on using semantic mapping and metacognitive strategies outperformed those without such training.

Muniz-Swicegood (1994) instructed the Spanish-English bilingual students of a primary school in the metacognitive reading strategies. The findings indicated that, following training in metacognitive Spanish reading strategies, Spanish dominant bilingual children improved in the area of reading performance on the La Prueba Spanish reading test and the Iowa Test of Basic Skills in English reading test. Post interview results of the Burke Reading Interview (Paris, Wasik, & Turner, 1991) [a 10-question interview that explores the reader’s perceptions about reading] translated into Spanish, showed increases in the frequency of Spanish reading strategies following metacognitive intervention. Directionality was also found in the area of transfer of metacognitive strategies across languages [from Spanish to English].

Auerbach and Paxton (1997) conducted a study to apply L2 reading research findings in an ESL course classroom of non-proficient readers to discover the effects of new reading strategies on the students’ comprehension performance. They reported that the results of this type of intervention, in which a combination of direct and indirect strategy instruction was used, were generally positive. The participants were able not only to increase their metacognitive awareness but also to increase their level of engagement in reading English texts. Carrell (1998).

After years of extensive research on reading strategies, argued that effective reading strategy training needs to include two key metacognitive factors: 1) knowledge of cognition [i.e., students are aware of what strategies they are currently using as they read in general] and 2) regulation of cognition [i.e., students are aware of appropriate strategy selection for successful comprehension]. Farrell (2001).

Found that reading strategy training in ESL/EFL contexts were worthwhile, even in a mixed-ability class because students can develop some metacognitive awareness of their reading processes. Taylor, Stevens, and Asher (2006).

After their meta-analysis of reading strategy instruction studies, concluded that teaching of reading strategies influence the improvement of L2/FL reading positively.

C. factors affecting the use of reading strategies

In Li’s (2010) study, 180 participants completed a 30-item questionnaire of metacognitive awareness of reading strategies (Mokhtari & Richard, 2002) while reading academic materials. He summarized the results of his data processing as follows:

1. Of all the three strategy sub-categories, Problem Solving Reading Strategies are the students’ favorite, followed by Global and Support Reading Strategies, irrespective of their reading ability or gender.
2. The students show medium strategy use while reading [mean of Overall Reading Strategies = 2.93].
3. Females show greater awareness of reading strategies in all three sub-categories as well as 24 individual reading strategies.
4. The high-proficiency students use all the three sub-categories and 27 individual reading strategies more frequently than the low-proficiency students.

According to his study results he suggested:

1. Students’ co-operative awareness should be cultivated.
2. Teachers should use different methods to treat different students.
3. Teachers’ roles should be reoriented.

Hayashi (1999), a Japanese teacher of TEFL, examines and reports the outcomes of his students of beginning and intermediate levels extensive reading in both their first [Japanese] and foreign [English] languages. He finds extensive reading in both languages more useful in EFL reading skill enhancement than mere direct strategy instruction. He argues that motivating Japanese students to read extensively in their first and foreign language results in the students’ discovery of suitable strategies on their own, motivating them to read more, increasing their background knowledge, helping them to be more skillful vocabulary meaning guessers and accelerating their speed in reading.

D. reading strategies of natives and L2/FL readers of the same language

Block (1992) compared the reading procedure in ESL and English native speakers through think aloud while reading a reading comprehension text. The results revealed similarities between proficient and non-proficient members of both groups in their strategy use or lack of use.

Sheorey and Mokhtari (2001) examined the differences in metacognitive awareness and perceived strategy use among 152 ESL and 150 native U.S. college students and found a positive correlation between the
students’ reading ability and their awareness and use of reading strategies while reading academic texts. In both groups, low ability readers reported a lower level of awareness and strategy use than higher ability readers.

**E. reading strategy use and reading comprehension**

Hassan (2003), reports on a study investigating the relationship between metacognitive strategy awareness in reading and reading ability in L1 and L2, studying forty Malaysian secondary school students who responded to a reading metacognitive awareness questionnaire and completed four sets of reading comprehension tests to determine their reading competence in L1 and L2. Results indicated that reading metacognitive strategy awareness significantly contributes to reading ability for both L1 and L2. According to him, this suggests that students are aware of what constitutes efficient reading, and the higher their knowledge of efficient reading, the better their reading ability.

**F. reading strategies of FL readers and L2 readers**

Anderson (2003) answered two questions in his study: 1) what are the online reading strategies used by second language readers? 2) Do the online reading strategies of ESL readers differ from EFL readers? To answer his research questions he chose a group of 247 L2/FL readers. One hundred thirty one [53%] of the learners were studying English as a foreign language at the Centro Cultural CostarricenseNorteamericano [CCCN] in San José, Costa Rica. The remaining 116 [47%] were studying in an ESL environment at the English Language Center [ELC] at Brigham Young University, in Provo, Utah. The Survey Of Reading Strategies [SORS] (Sheorey & Mokhtari, 2001) was adapted for use in this research project. Overall results revealed that there were no differences between the 247 online readers who participated in this research study. Also, there were no differences in the use of Global Reading Strategies and Support Reading Strategies between these two groups. The only difference between the two groups as reported in these data was in the use of Problem Solving Strategies. Learners in the EFL environment reported a higher use of Problem Solving Strategies than did the learners in the ESL environment. He concluded that perhaps the EFL/ESL distinction is diminishing. The traditional dichotomy between EFL and ESL may not be as important today as it has been in previous years. Learners of English around the world have increased opportunities for exposure to English. Radio, television, the Internet, and availability of good pedagogical materials are enhancing L2/FL learning in many parts of the world today. This exposure to English provides increased opportunities for input in English and thus decreases the traditional EFL/ESL dichotomy.

**G. reading strategies while reading in the first language vs. reading in L2/FL**

Kong (2006) used think aloud and interview to compare the types and amount of reading strategies four [three females, one male] advanced Chinese EFL learners used, while reading L1 and L2 texts. They were either students or researchers living in the U.S. She analyzed her data according to the Jimenez et.al.,(1996) who classified reading strategies into two classes:

1. Text initiated reading strategies
   a. Focusing on vocabulary
   b. Using the text structure
   c. Summarizing and utilizing pictures
2. Reader initiated strategies
   a. Invoking prior knowledge
   b. Predicting
   c. Evaluating
   d. Monitoring
   e. Translating

She asked the participants to read three texts [two English and one Chinese] one by one, while thinking aloud in Chinese. She also conducted an interview after each think aloud procedure with any participant. Analyzing the gathered data, she made some conclusions:

First, all four participants verbalized much more strategy use in reading the English texts than in reading the Chinese text. This might be explained by the fact that some well-practiced movements and routines of reading have become so automatic that the participants may not be consciously aware of them. Second.

The participants obviously demonstrated much more confidence and critical responses in reading and responding to the Chinese text than to the English texts. They exerted more anxiety and self-doubt in reading the English texts. The participants’ more accomplished proficiency level in the Chinese language and their familiarity with the Chinese culture in which the language and the content of the text were embedded clearly gave them an advantage in making sense of the text.
Third, although in general all four participants focused more on word meanings in reading English and more on comprehension in reading the Chinese text, they each demonstrated different degrees of transfer of strategy use across the readings of the two texts. While a higher L2 proficiency may make it easier for the participants to transfer the higher level cognitive and metacognitive knowledge across the tasks of reading the two languages, a low L2 proficiency seems to hinder the participant from using the more top down strategies; even though, they were exerted in L1 reading. This indicates that ESL readers need to develop L2 to a certain threshold level in order for the transfer to occur.

H. frequency of strategy use and readers’ preferences

Temur and Bahar (2011) in a study consisting of 264 male and female freshmen, sophomore and junior students studying English Language Education at a state university in Turkey, investigated the participants’ metacognitive awareness of reading strategies. To gather their data they made use of SORS (Mokhtari & Sheorey, 2002). The analysis of the results revealed that the reading strategies that university students used most were in turn, problem solving [=3.8], global [=3.6] and support strategies [=3.4] respectively. Also, although there were difference in the university students’ metacognitive awareness of reading strategies in favor of females, this difference was not statistically significant.

I. which strategies suit which readers

Ikeda and Takeuchi (2003) pointed out that bottom-up processing strategies were effective for lower-proficiency levels, whereas top-down processing strategies were effective for higher-proficiency levels to be taught.

J. using the first language while reading L2/FL texts

Grenfell and Harris (1999) found that students could use their L1 to plan and evaluate their work, whereas they could use the target language when they utilized strategy checklists, description of strategies and strategy activities.

Macaro (2001) pointed out that for beginning to low intermediate levels; it is not quite possible to avoid the use of L1 during the strategy instruction. Hence, in EFL contexts, depending on the level of learners’ language proficiency, the use of L1 as a medium of instruction may be an effective means to help learners improve reading proficiency because the focus here is not on developing speaking abilities.

In Chamot and Keatley’s (2003) study of teaching reading strategies, ESL teachers found it easier to teach reading strategies, such as sounding out, selective attention, summarizing, cooperation, predicting, brainstorming of prior knowledge and making inferences, through the students’ first language.

Chamot and Keatley (2003) also found that students who had opportunities to verbalize their thinking processes in their native language during L2 reading showed better comprehension than those unable to describe their thinking.

Seng and Hashim (2006) found that the use of L1 in L2 reading not only facilitated resolutions of word-related and idea-related difficulties, but also helped learners reduce affective barriers [e.g., anxiety] and gain more confidence in ESL reading comprehension.

III. CONCLUSION

The scope of reading strategy research is so wide; however, the most important probable conclusions to be drawn according to the literature review in this field are:

First, successful readers use reading strategies more actively and make use of a greater variety of strategies, and

Second, explicit reading strategy instruction is always useful; though, its usefulness varies according to different factors such as the teaching methods and the learners’ personal variables.

REFERENCES