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Metacognitive Reading Strategy Awareness of ESL and EFL Learners

■ This paper examines differences between first- and second-language reading strategies as well as differences between English as a Second Language (ESL) and English as a Foreign Language (EFL) reading strategies. Two versions of the Survey of Reading Strategies (SORS) (Sheorey and Mokhtari, 2001) were distributed to 396 learners of English. Two hundred sixty of the learners were studying EFL at the Centro Cultural Costarricense Norteamericano (CCCN) in San José, Costa Rica. The remaining 136 were studying in an ESL environment at the English Language Center (ELC) at Brigham Young University in Provo, Utah. The first version of the SORS asked the respondents to answer the questions based on their use of metacognitive reading strategies in their L1. The second version asked them to respond to the questions based on their use of metacognitive reading strategies in their L2. Participants also completed a background questionnaire. Similarities and differences between learners' use of reading strategies in their first and second languages as well as similarities and differences between the instructional environments are addressed. The results of this study provide helpful insights for teachers of reading to improve classroom instruction.

Introduction

Reading is an essential skill for learners of English. In fact, for most learners it is the most important skill to master to ensure success in learning. With strengthened reading skills, second/foreign language (L2) learners of English tend to make greater progress in other areas of language learning. Reading should be an active, fluent process involving the reader and the text in building meaning. Often, however, it is not. The average learner's L2 reading ability is usually well below his or her reading ability in the first language. This can impede academic progress. Second language teachers and learners face many challenges in the classroom. Teaching students how to use the skills and knowledge they bring from their first language, develop vocabulary skills, improve reading comprehension and rate,

and monitor their own improvement are just some of the elements that teachers must consider in preparing for an L2 reading class. For the student, learning to read in an L2 is a process that involves learning skills, learning new vocabulary and collocative patterns, and cultivating the ability to transfer these skills from the classroom to the real world where English is used.

Perceptive L2 readers are those who are aware of and use appropriate strategies for learning and communicating in an L2. The purpose of reading-strategy use is to improve performance in the use of one's L2. Strategies are the *conscious* actions that learners take to improve their language learning. Strategies may be observable, such as observing someone take notes during an academic lecture and then comparing the lecture notes with a chapter in a textbook to understand and remember information better; or they may be mental, such as thinking about what one already knows on a topic before reading a passage in a textbook. Because strategies are conscious, there is active involvement of the L2 reader in their selection and use. Strategies are not an isolated action, but rather a process of orchestrating more than one action to accomplish an L2 reading task. Although we can identify individual reading strategies, rarely will one strategy be used in isolation. Strategies are related to each other and must be viewed as a process and not as a single action.

The purpose of this paper is to examine the possible differences in reading strategy awareness between learners in an English as a Second Language setting (ESL) versus those in an English as a Foreign Language (EFL) setting. To date, very little research has targeted the comparison of strategies of L2 learners in these two learning environments.

Review of the Literature
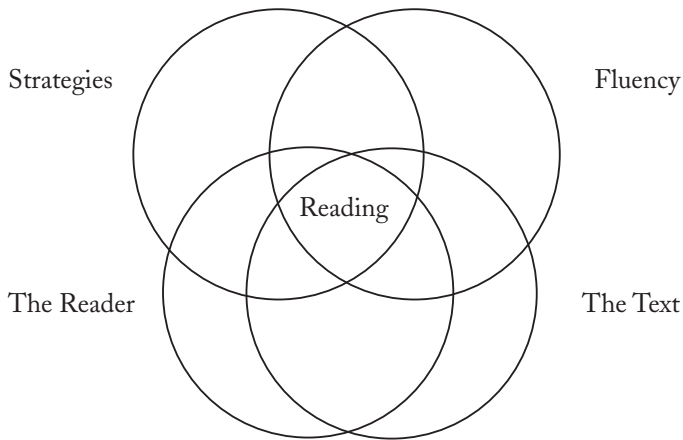
L2 Reading Research

Understanding the process of reading has been the focus of much research through the past 125 years. Models of how the printed word is understood have emerged from this research (Goodman, 1976; Stanovich, 1980). In contrast, understanding what happens from the moment our eyes meet the page to the "click of comprehension" (Samuels & Kamil, 1984, p. 185) has been researched for only the past 50 years. And serious second-language reading research has been conducted for the past 20 years (Alderson, 1984; Anderson, 1991, 1999; Bernhardt, 1991; Carrell, Devine, & Eskey, 1988; Grabe & Stoller, 2001). Our understanding of what happens during the act of reading has improved through this relatively short period, but we still have so much to learn. Carrell and Grabe (2002) emphasize that "[w]ithout a doubt, L2 reading research and instruction will grow in importance in the coming decade" (p. 233).

The models of reading can be divided into three broad categories: bottom-up models, top-down models, and interactive models. Reading researchers are in fairly strong agreement that the interactive models are the best representation of what happens when our eyes engage with printed

material. Interactive models combine the lower-level processes that are needed for successful reading as well as the higher-level processes. The lower-level processes involve rapid word recognition and the ability to combine those words into syntactic and semantic units. The higher-level processes involve a reader's ability to activate prior knowledge and monitor comprehension of the text.

Anderson (2003) defines reading as a process of readers' combining information from a text and their own background knowledge to build meaning. He emphasizes that reading is a fluent process and that the goal is comprehension. *Strategic reading* is defined as the ability of the reader to use a wide variety of reading strategies to accomplish a purpose for reading. Good readers know what to do when they encounter difficulties. *Fluent reading* is defined as the ability to read at an appropriate rate with adequate comprehension. Meaning does not rest with the reader nor does it rest in the text. The reader's background knowledge integrates with the text to create the meaning. The text, the reader, fluency, and strategies combined together define the act of reading. See Figure 1 for a representation of this definition of reading.

Figure 1
The Definition of Reading

Notice the overlapping circles. The intersection of all four circles represents reading. This is the point where meaningful reading happens. Grabe (1991) points out the complexity of even defining reading by stating that "a description of reading has to account for the notions that fluent reading is rapid, purposeful, interactive, comprehending, flexible, and gradually developing" (p. 378).

A reader learns to read only once. Once one has learned how to read in one language, he or she does not learn how to read again in a L2, but rather learns how to transfer skills that have already been learned to the new reading context in a new language.

Additional factors that are important to consider when examining reading are social purposes tied to reading (Grabe, 2002; Parry, 1993). How is reading viewed within the culture where the reader lives? What role do books play in the home? Do readers have good models of other readers, such as parents and teachers? These are factors that should be considered when we discuss reading.

The Importance of Language-Learning Strategies

Since the mid-1970s, close attention has been given to the role of strategies in L2 learning (Anderson, 1991; Cohen, 1990, 1998; Hosenfeld, 1979; Macaro, 2001; Naiman, Fröhlich, & Todesco, 1975; O'Malley & Chamot, 1990; Oxford, 1990, 1993, 2001a, 2001b, 2002; Rubin, 1975; Stern, 1975; Wenden, 1991, 2002; Wong-Fillmore, 1979). One consistent finding of this research has been that learners actively use strategies to accomplish their language-learning goals. Nunan (1999) emphasizes that learners who are most able to progress in their learning are those "who can make effective choices in terms of learning tasks and strategies" (p. 193).

Strategy Identification

One challenge in classifying language-learning strategies is that there is no agreed-upon taxonomy among teachers and researchers. Oxford and Cohen (1992) call this the "moving target syndrome" (p. 13). The greatest difficulty is the lack of our ability to compare results across studies since each researcher seems to use a separate classification system. Oxford and Cohen caution researchers of running the risk of "hypertaxonomizing" (p. 7). We end up generating very long lists of strategies and tactics of what learners do.

An additional concern is that there is synonymous use of multiple terms, all referencing language-learning strategies: learning behaviors, cognitive processes, problem-solving activities, thinking skills, and learning-to-learn skills. The terms begin to lose their distinct meanings. Some researchers use the terms in one way while others change the meaning. No consistent, agreed-upon set of definitions directs the research.

Research by Hsiao and Oxford (2002) clearly supports the notion that L2 strategies can be classified in a "systematic manner" (p. 377). Language-learning strategies have been classified into seven major categories: cognitive strategies, metacognitive strategies, mnemonic or memory-related strategies, compensatory strategies, affective strategies, social strategies, and self-motivating strategies. Oxford (1990, 2001b) refers to the first six of these categories, while other researchers (Chamot, Barnhardt, El-Dinary, & Robbins, 1999; Cohen, 1996; O'Malley & Chamot, 1990; Weaver & Cohen, 1997a) use a fewer number. Work by Dörnyei (2001) focuses on self-motivating strategies.

A recent research article provides empirical data into how best to classify language-learning strategies. Hsiao and Oxford (2002) compared classification theories of language-learning strategies. Fifteen strategy classifications were developed and tested based on classification systems proposed by Oxford

(1990), Rubin (1981), and O'Malley and Chamot (1990). The research findings support the classification of L2 learning strategies into six distinct categories: cognitive strategies, metacognitive strategies, memory strategies, compensatory strategies, affective strategies, and social strategies. These six categories correspond to Oxford's six dimensions of strategy classification for the Strategy Inventory for Language Learning (SILL). The SILL is perhaps the most frequently used inventory for collecting research data on L2 strategies.

L2 Reading Strategy Research

Birch (2002) encourages L2 researchers and teachers to take a new view of the proficient L2 reader: "that of an expert decision-making and problem-solving mind that uses extensive knowledge of language and the world, effective cognitive comprehension strategies, and quick automatic low-level processing strategies to interact with the text efficiently" (p. 146). This description is of a reader who is metacognitively aware, one who uses knowledge to effectively read, one who monitors and evaluates what is happening during reading comprehension.

Sheorey and Mokhtari (2001) and Mokhtari and Sheorey (2002) are conducting significant research on the identification of metacognitive reading strategies of L2 learners. They have developed a new instrument named the Survey of Reading Strategies (SORS) designed to measure the metacognitive reading strategies of L2 readers engaged in reading academic materials. One of the first studies published that used the SORS reports on the strategies of 152 native English-speaking students and 152 ESL students. The focus of the study was to examine the differences in reading-strategy use between native speakers and nonnative speakers of English. The researchers asked three primary research questions: (a) Are there any differences between ESL and U.S. students in their perceived strategy use while reading academic materials? (b) Are there any differences between male and female ESL and U.S. students, respectively, in their perceived strategy use while reading academic materials? And (c), is there a relationship between reported strategy use and self-rated reading ability?

Results show that the ESL students reported a higher use of strategies than the U.S. students. The ESL students reported using a greater number of support reading strategies, which should not be surprising. We would expect learners of English to engage in more support reading strategies than native speakers of English. As an entire group, no significant differences were reported between the male and female readers in this study. However, there was one significant difference in the use of the strategy of underlining information in the text for ESL learners. The female ESL students reported using the strategy more frequently than the male ESL students. Finally, students who had a higher self-reported rating of reading ability reported using a higher frequency of reading strategies than those readers who gave themselves a lower rating. Sheorey and Mokhtari (2001) report that "skilled readers…are more able to reflect on and monitor their cognitive processes while reading.

They are aware not only of which strategies to use, but they also tend to be better at regulating the use of such strategies while reading" (p. 445). This research contributes a great deal to our understanding of the reading strategies of L2 readers.

Anderson (1991) highlights that "strategic reading is not only a matter of knowing what strategy to use, but also the reader must know how to use a strategy successfully and orchestrate its use with other strategies. It is not sufficient to know about strategies; a reader must also be able to apply them strategically" (pp. 468-469). Additional research on reading strategies can be found in the work of Block (1986, 1992), Carrell, Pharis, and Liberto (1989), Janzen (1996), Knight, Padron, and Waxman (1985), and Song (1998).

Metacognitive Strategy Research

McDonough (1999) asks a provocative question of whether there is a hierarchy of strategies for language learning. Of the various categories of strategies identified through strategy research, does any one category play a more significant role than the others? It can be hypothesized that the metacognitive strategies play a more significant role than other strategies because once a learner understands how to regulate his or her learning through the use of strategies, language acquisition should proceed at a faster rate.

Riley and Harsch (1999) remind us that "being exposed to and even using [language-learning strategies] may not ensure success in language learning, especially if the learners do not metacognitively connect their strategies and language use" (pp. 1-2). O'Malley and Chamot (1990) strengthen the importance of the role of metacognitive strategies when they state that "students without metacognitive approaches are essentially learners without direction or opportunity to plan their learning, monitor their progress, or review their accomplishments and future learning directions" (p. 8).

The role that metacognition plays in reading is highlighted by Janzen (2001). She emphasizes that

> [a] traditional method of teaching reading—where the students activate their background knowledge about a text topic, review relevant vocabulary, read the text, and answer comprehension questions—will not elicit the kinds of behaviors that distinguish effective readers. Increased self-awareness of one's process of reading is needed for students to make more efficient use of a wider range of strategic behaviors. (p. 372)

Grabe (2002) includes metacognitive awareness and strategy learning as one of his 10 implications for L2 reading instruction. He emphasizes that the focus should be on the development of *strategic readers* rather than on *reading strategies*.

It is clear from the reading research that learners need to be metacognitively aware of what they are doing. They need to connect their strategies for

learning while engaged in a learning task with their purposes for reading. This awareness results in strong metacognitive strategies.

Metacognition Defined

Metacognition can be defined simply as thinking about thinking (Anderson, 2002). It is the ability to make one's thinking visible. It is the ability to reflect on what one knows and does and what one does not know and does not do. Metacognition results in critical but healthy reflection and evaluation of thinking that may result in making specific changes in how one learns. Metacognition is not simply thinking back on an event, describing what happened, and how one felt about it. It requires much deeper thinking and processing.

Metacognition of reading strategies can be divided into five primary components: (a) *preparing* and *planning* for effective reading; (b) deciding *when to use* particular reading strategies; (c) knowing how to *monitor* reading-strategy use; (d) learning how to *orchestrate* various reading strategies; and (e) *evaluating* reading-strategy use. Metacognition is not any one of the five elements in isolation. It is the blending of all five into a kaleidoscopic view that may be the most accurate representation of metacognition. Each of these five metacognitive components interacts with the others. Metacognition is not a linear process that moves from preparing and planning to evaluating. More than one metacognitive activity may be used at a time during a learning task.

The Role of Strategy Instruction

L2 learners need to learn how to use effective reading strategies to achieve their desired goals. Researchers have suggested that teaching readers how to use strategies be a prime consideration in the reading classroom (Chamot, Barnhardt, El-Dinary, & Robbins, 1999; Janzen, 2001; Weaver & Cohen, 1997a, 1997b). Nunan (1996, 1997) provides a good rationale for integrating explicit instruction of language-learning strategies into the classroom curriculum: "[L]anguage classrooms should have a dual focus, not only teaching language content but also on developing learning processes as well" (Nunan, 1996, p. 41). The primary purposes of instruction are to raise learners' awareness of strategies, to allow them to select appropriate strategies to accomplish their learning goals, and then to provide multiple opportunities for them to practice using the strategies.

Janzen (2001) states that to improve reading, teachers should embed the following five features in the course syllabus: (a) explicit discussion of what reading strategies are, along with where, when, and how to use them; (b) teacher modeling of strategic reading behavior; (c) students reading and thinking aloud while practicing targeted strategies; (d) classroom discussion of possible strategies to use during reading; and (e) adoption of a sustained area of content for the course (p. 369). The first four of these five features are essential for success in developing strategic readers. Note that the focus is not on reading strategies as such, but on the development of strategic readers. In

addition, the reader should understand how to apply a given strategy to other readings, and how to apply it in combination with other strategies. For this reason, Janzen's fifth point is vitally important. L2 readers need opportunities to read sustained content within the classroom. This sustained content allows for continual opportunities to practice the strategies that are being taught. Metacognitive awareness of the reading process is one of the most important skills second language teachers can teach learners about reading.

ESL Versus EFL Reading Strategies

An extensive research base on reading and reading strategies, and especially metacognitive strategies, is lacking when we move into examining possible differences between learners' reading strategies in ESL versus EFL instructional settings. An ESL instructional environment is defined as one in which English is used in the society in which the language is being studied. Learners studying in Australia, Canada, England, New Zealand, and the United States are in an ESL environment. An EFL environment is one where English is not the primary language of the society in which the language is being studied. Learners studying English in Brazil, Costa Rica, Japan, or Korea are in an EFL environment.

Riley and Harsch (1999) are among the few researchers examining the impact of learning environment on strategy use. They compared the strategy use of Japanese learners of English in ESL and EFL environments using two tools to gather data for their research project: a modified version of Oxford's Strategy Inventory for Language Learning (SILL) and a strategy journal. The modified SILL allowed the researchers to measure the learners' perceptions of the importance of strategy use. The journal served as a tool for exploring learner awareness, development, and use of language-learning strategies as well as what effect guided reflection has on the development of language-learning strategies.

Their findings suggest that learners in an ESL environment use more strategies than learners in an EFL environment. They offer four reasons to explain this finding: (a) ESL learners are "more motivated and active in their learning," (b) they have "more opportunities to use the target language and therefore have a greater need to use" strategies, (c) because of the instructional environment, ESL learners are "more aware of strategy use," and (d) "learners stay in an English-speaking environment" (Riley & Harsch, 1999, pp. 4-5). One interesting difference between the ESL and EFL learners to emerge from this study is that the ESL learners rated metacognitive strategies higher than did the EFL learners.

Based on their single study of differences between learning environments, Riley and Harsch (1999) conclude that "[t]eachers need to recognize that for EFL and ESL learners in particular, the environment can play an important part when learning another language" (p. 14). Clearly more research on this important topic is needed.

Research Questions

Based on the literature reviewed above, the current research project was undertaken in an effort to fill the gap and extend our knowledge on the role of metacognitive strategy awareness of L2 readers in two learning environments. Two research questions were addressed in this project: (a) Are there any differences between ESL and EFL students in their perceived strategy use while reading academic materials? And (b) is there a relationship between reported strategy use and self-rated reading ability?

Method

Participants

Participants in this study were 396 learners of English, as shown in Table 1. Two hundred sixty of the learners were studying English as a foreign language at the Centro Cultural Costarricense Norteamericano (CCCN) in San José, Costa Rica. The remaining 136 learners were studying in an ESL environment at the English Language Center (ELC) at Brigham Young University, in Provo, Utah. Fifty-nine percent of the participants were female and 41% were male. The learners ranged in L2 proficiency from low intermediate to advanced.

Table 1
Characteristics of EFL and ESL Learners

Level of proficiency	CCCN	BYU	Totals
Low intermediate	80	0	80
Intermediate	48	25	73
High intermediate	85	43	128
Low advanced	47	36	83
Advanced	0	32	32
Totals	260	136	396

Materials

The Survey of Reading Strategies (SORS) (Mokhtari and Sheorey, 2002) was the primary instrument used to gather data for this study. The SORS focuses on metacognitive strategy use within the context of reading academic materials. Mokhtari developed the SORS for postsecondary students who are native and nonnative speakers of English. The SORS is based on a separate metacognitive reading strategy survey developed for native speakers of English, the Metacognitive-Awareness-of-Reading-Strategies Inventory (MARSI). The SORS measures three categories of reading strategies: global reading strategies (13 items), problem-solving strategies (8 items), and support reading strategies (9 items). Mokhtari and Sheorey report reliability for the MARSI but not for the SORS. Reported MARSI reliabilities (as determined by Cronbach's alpha) are Global Reading Strategies, 0.92,

Problem-Solving Strategies, 0.79, Support Reading Strategies, 0.87, and Overall, 0.93.

Procedure

Participants at both the CCCN and the ELC completed a background questionnaire and the SORS as a homework assignment. The background questionnaire asked learners to describe a good and a poor language learner they knew. Also, they were asked to list their perceived strengths and weaknesses as a language learner. They also provided three self-assessments: level of challenge in learning English (on an 8-point scale); overall reading ability in English (on a 6-point scale: excellent, very good, above average, average, below average, poor); and a comparison of themselves with other students in their class in terms of their self-perceived proficiency in English (also on a 6-point scale). The background questionnaire also required consent from each subject to participate in the survey, allowing the researcher to use the results while preserving subject anonymity. The background questionnaire required approximately 10 minutes to complete. After completing the background questionnaire, subjects were instructed to respond to the 30 items on the SORS regarding their strategies while reading school-related, academic materials in English. The SORS required approximately 15 minutes to complete.

Results

Reliability of the SORS

Cronbach's alpha was calculated for the total SORS as well as the three subscales. Coefficients ranged from .64 to .85. The Cronbach's alpha for the overall SORS in English reading strategies was .85. The reported reliability for each subsection are Global Reading Strategies, .74; Problem-Solving Strategies, .64; and Support Reading Strategies, .67. These data help to establish that the SORS is a reliable instrument for assessing the metacognitive reading strategies of L2 readers.

First Research Question

The first research question asked whether there were any differences between ESL and EFL students in their perceived strategy use while reading academic materials. An ANOVA was calculated to answer this question. For the overall SORS, there is no significant difference between ESL and EFL readers. When the three subsections of the SORS were examined it was found that there is a difference in the use of problem-solving strategies between ESL and EFL readers. Table 2 reports the outcome of the ANOVA.

Subjects in the EFL environment reported a higher use of problem-solving strategies (X=32.0769) than did the readers in the ESL environment (X=29.6544). No other differences were found between ESL and EFL readers.

Table 2
Problem-Solving Strategy Differences Between ESL and EFL Readers

Source of variance	SS	df	MS	F	Pr > F
Model	617.4200	7	88.2028	5.12	<.0001
Error	6681.8198	388	17.2211		
Total	7299.2398	398			

Second Research Question

The second research question asked if there is a relationship between reported strategy use and self-rated reading ability. A PROC ANOVA was calculated to answer this question. The results suggest that there is a significant relationship between reported strategy use and self-rated reading ability (df 5, 373; F=3.61, p<.0034). Specifically, the higher one's self-assessment of reading ability in English, the higher the use of metacognitive reading strategies.

The top five and the bottom five strategies from the SORS for the ESL and EFL reading groups are shown in Table 3 on the next page. The strategies in *italic type* indicate an overlap between the ESL and EFL strategies.

Discussion

Few studies have examined the differences in reading-strategy use between learners in ESL and EFL environments; thus the results of the current research add to our understanding of how strategies are used by L2 readers, especially the potential strategy-use differences between ESL and EFL readers. This study suggests that there are perhaps greater similarities between readers in these two environments than there are differences. Based on responses gathered from 396 readers in Costa Rica and the United States using the SORS, no differences emerge between the readers on the overall SORS. Also, there are no differences in the use of global reading strategies or support reading strategies between these two groups. The only difference between the two groups as reported in these data is in the use of problem-solving strategies—learners in the EFL environment reported a higher use of problem-solving strategies than did learners in the ESL environment.

One interpretation of this finding is that the ESL/EFL distinction is diminishing. In terms of L2 reading, the traditional dichotomy between ESL and EFL learners may not be as important today as it has been in previous years. L2 readers around the world have increased opportunities for exposure to English. The Internet and availability of good pedagogical materials are reaching learners in many parts of the world today. L2 teachers are better prepared to teach reading than 30 years ago. This exposure to English by capable, qualified teachers provides increased opportunities for input in English and thus decreases the differences between readers in the traditional ESL/EFL dichotomy.

Table 3
Top Five and Bottom Five Metacognitive Reading Strategies
for ESL and EFL Readers

Top five reading strategies ESL	*EFL*	*Bottom five reading strategies ESL*	*EFL*
1. *Strategy #9:* I try to get back on track when I lose concentration. (Problem-Solving Strategy)	1. *Strategy #14:* When text becomes difficult, I pay closer attention to what I am reading. (Problem-Solving Strategy)	26. *Strategy #29:* When reading, I translate from English into my native language. (Support Reading Strategy)	26. Strategy #20: I use typographical features like bold face and italics to identify key information. (Global Reading Strategy)
2. *Strategy #14:* When text becomes difficult, I pay closer attention to what I am reading. (Problem-Solving Strategy)	2. *Strategy #25:* When text becomes difficult, I re-read it to increase my understanding. (Problem-Solving Strategy)	27. *Strategy #8:* I review the text first by noting its characteristics like length and organization. (Global Reading Strategy)	27. *Strategy #8:* I review the text first by noting its characteristics like length and organization. (Global Reading Strategy)
3. *Strategy #25:* When text becomes difficult, I re-read it to increase my understanding. (Problem-Solving Strategy)	3. Strategy #28: When I read, I guess the meaning of unknown words or phrases. (Problem-Solving Strategy)	28. Strategy #15: I use tables, figures, and pictures in text to increase my understanding. (Global Reading Strategy)	28. Strategy #30: When reading, I think about information in both English and my mother tongue. (Support Reading Strategy)
4. Strategy #7: I read slowly and carefully to make sure I understand what I am reading. (Problem-Solving Strategy)	4. Strategy #10: I underline or circle information in the text to help me remember it. (Support Reading Strategy)	29. Strategy #26: I ask myself questions I like to have answered in the text. (Support Reading Strategy)	29. Strategy #5: When text becomes difficult, I read aloud to help me understand what I read. (Support Reading Strategy)
5. Strategy #11: I adjust my reading speed according to what I am reading. (Problem-Solving Strategy)	5. *Strategy #9:* I try to get back on track when I lose concentration. (Problem-Solving Strategy)	30. Strategy #2: I take notes while reading to help me understand what I read. (Support Reading Strategy)	30. *Strategy #29:* When reading, I translate from English into my native language. (Support Reading Strategy)

The results also suggest the importance of the strong correlation between learners' self-assessment of reading ability in English and use of metacogni-

tive reading strategies. Readers have the ability to self-assess their ability level in reading. Those with lower levels of self-reported reading ability use fewer metacognitive reading strategies. This suggests that classroom teachers can focus learner attention to increasing their metacognitive strategy use. Doing so could accelerate learner language acquisition.

Implications

Pioneering research by Riley and Harsch (1999) emphasized that teachers needed to be more aware of the instructional environment in which they are teaching. However, data from this study suggest that the strategy behaviors of readers in Costa Rica and in the United States are not very different. The first implication of this study is that researchers may want to revisit the ESL/EFL distinction. Perhaps we need to reconsider whether this is a helpful way for us to look at potential differences in learning environments of L2 readers.

A second implication of this research relates to the strong relationship between one's self-assessment of reading ability and use of reading strategies. This is important because learners with lower levels of reading ability can be taught to take greater control of their learning of English by engaging in higher use of metacognitive reading strategies.

Perhaps the most interesting outcome of this research is the finding that metacognitive reading strategies play a far more essential role in successful L2 reading than perhaps we have previously considered. L2 reading teachers can focus learner attention on the metacognitive reading strategies identified in the SORS to help learners improve their reading ability.

Current findings thus emphasize the important role of metacognitive reading strategies for both ESL and EFL readers. We also learn that there is a relationship between readers' self-assessment of reading ability and strategy use. This suggests a continually important role for teaching metacognitive reading strategies in the classroom.

Ideas for Future Research

Although researchers have been engaged in L2 strategy-use research for more than 30 years, there is still much that we do not know. Researchers are at the point when we can move beyond the identification and measurement of reading strategies. The data from the past 30 years of research have been consistent in helping us understand that learners indeed engage in strategic learning. We should now move in the direction of the research reported here: to exploring possible relationships between learning strategies and specific skills and processes. The current project addresses these relationships by exploring links in reading-strategy use in two distinct learning environments—ESL and EFL.

Researchers might also ask, "What is the direction of causation between strategy use and motivation?" Macaro (2001) invites us to consider how "successful strategy use leads to successful learning and therefore to motivation.

Alternatively, and at the very least, it needs to demonstrate that unsuccessful strategy use is a contributory factor in demotivation" (p. 29). Research by Dörnyei and Skehan (2003) is moving us in that direction.

Additional questions that require our attention include: (a) Are strategies task-specific or are they easily transferable? (b) How do strategies interact with levels of proficiency, levels of maturity, and age? (c) Is it possible to identify combinations or clusters of strategies that learners use and then get them to monitor and evaluate their use via metacognition? (d) How can teachers understand what a reading strategy is so that it is not confused with a pedagogical strategy in the reading classroom? (e) What is the effect of the pedagogical approach in the classroom on a learner's use of strategies?

Perhaps the greatest need for language practitioners is to see the application of reading research in the classroom because classroom teachers are those who can best help increase our knowledge of strategy use in practice. Freeman (1998) focuses on the key role that teacher-research plays in our profession. He emphasizes the importance of "working at the hyphen. One can teach or one can research. To be and do both is to unite roles by undertaking two processes, teaching and researching, that have conventionally been separated and seen as distinct" (pp. 5-6). Macaro (2001) emphasizes that "[g]ood research feeds directly off the data that the classroom provides and good practice is informed by research" (p. 4). Classroom teachers will play an increasingly important role in the future in terms of augmenting our understanding of strategy use. In this way we can better translate the research into effective classroom practice.

Author

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