Reading Strategy Use of Low- and High-Proficiency Learners and the Effect of Reading Instruction

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Abstract

Research suggests that reading strategy usage is influential on L2 reading proficiency. Considering this, the LEC English Department decided to examine students' reading strategies as a part of its much larger curricular review. The results support existing research showing that more-proficient readers use somewhat more varied strategy usage. Posttest results reveal that a course on reading skills led to some minimal improvements in top-down reading strategies. Implications are discussed.

Keywords: ESOL, reading, strategy usage, curriculum

While one's knowledge of a second or foreign language (L2), especially vocabulary, is a key predictor of L2 reading proficiency, research suggests an effective use of reading strategies may also be a significant factor (Carrell, 1991; Song, 1998; Wang, 2008). If this is the case, teaching reading strategies for handling academic texts should be a part of English-language instruction at the university level. To evaluate the efficacy of the new curriculum implemented in 2013, one of the areas evaluated by the English Department of Okayama University's Language Education Center (LEC) was the effect of the program on students' reading strategy usage. (Formative evaluation measures also include pre- and posttests for vocabulary, motivation, confidence, etc. Summative measures include TOEIC test data on the four skills.)

After reviewing research on the potential importance of reading strategies, this paper describes the results and implications of the reading strategy survey. The first part of the study examines the pretest results to further explore the possible relationship of reading strategies on reading proficiency. Specifically, the study examines if higher proficiency students report greater usage of reading strategies, as in other studies. Second, the study examines the posttest survey results to determine if the program's first-year reading course led to changes in the students' reported usage of reading strategies.

Literature Review

Reading comprehension involves several processes working together (Alderson, 2000; Bernhardt, 1991; Grabe & Stoller, 2014). Factors influencing reading proficiency include one's background knowledge, text structure, syntax, passive vocabulary, etc. Cognitive and metacognitive strategy use is also influential. Cognitive strategies aid in constructing meaning from the text. They are often divided into bottom-up and top-down strategies, both of which are important. Bottom-up strategies include focusing on the meaning of each word and reading sentences in a linear fashion to construct the meaning of the text. Top-down reading means thinking about one's purpose, previewing the text, thinking about what one already knows about the topic, skimming for main points, etc. Metacognitive strategies are used to monitor the cognitive strategies; in other words the reader checks and evaluates

his/her comprehension based on his/her objectives and revises one's strategies based on this.

Research suggests that better readers use a greater variety of reading strategies and do not solely rely on bottom-up reading. Sheorey and Mokhtari's (2001) research of 152 ESL students showed that more proficient readers more often use a variety of cognitive and metacognitive strategies. Lau and Chan's study (2003) revealed that reading strategy usage has a higher correlation with reading comprehension than intrinsic motivation. Zhang and Seepo (2013) also found a significant correlation between metacognitive strategy use and reading achievement.

In addition to reading strategies (which are *communication* strategies), research also shows that more proficient learners also report more *language learning* strategy use (see Oxford, 2001 or Griffiths, 2003 for an overview). For example, Griffiths (2003) utilized a survey based on Oxford's (1990) Strategy Inventory for Language Learning (SILL) with 763 young learners of English. While not studying reading strategies or reading comprehension directly, she found that more proficient learners more often reported agreement with the following learning strategies: *I try not to translate word for word*; *I guess the meaning of unfamiliar words*; *I read without looking up every new word; I skim read then read carefully*. These are all top-down, global reading strategies, not bottom-up strategies. This may suggest that such reading strategies *lead* to more proficient users, but the reverse is also possible (see below).

Correlation, not Causation?

Just because high-proficiency learners report greater usage of reading strategies does not necessarily mean that effective strategy use leads to better readers. The reverse may also be possible; higher proficiency may allow for more (or different) use of communication and learning strategies. The idea that one's L1 reading strategies cannot be transferred to L2 reading unless the learner has reached a certain proficiency level was labeled as a language ceiling (Clarke, 1979). Without adequate knowledge of a text's lexis (i.e. text coverage), reading strategy use may not help (Bossers, 1991; Laufer & Hadar, 1997; Schoonen et al., 1998). Laufer's research (1989) suggested that learners need 95% coverage of a text to adequately comprehend it because learners cannot use certain strategies, such as inferring meaning from context, if there are too many unknown words.

However, Carrell (1991) found that both reading strategies and overall L2 proficiency are significant factors affecting on reading comprehension. Hu and Nation's research (2000) questioned if there was a specific comprehension threshold since even learners with 90% coverage in their research were able to reach comprehension through reading strategies and background knowledge. Prichard and Matsumoto (2011) further questioned the 95% threshold noting that dictionary use is a reading strategy that some (but not all) learners with low lexical coverage used to achieve comprehension in their study. The possible implication of all this is that, though less proficient learners obviously need to focus on acquiring vocabulary to become better readers, effective reading strategy use also helps. In sum, effective reading strategy use may be a cause *and* an effect of proficiency.

Research on Strategy Training

Even stronger support for the value of reading strategies is research that shows that strategy training helps learners improve their reading comprehension. Carrell's small-scale study (1985) suggested that teaching text structure can improve L2 readers' ability to read. This is because recognizing text organization helps learners read more strategically and understand relationships in the text more

clearly. Carrell, Pharis, and Liberto (1989) found that metacognitive reading strategy training can also increase learners' ability to read, as the experimental group improved more than a control group.

Salataci and Akyel (2002) utilized a think aloud protocol (only eight students) and a survey (20 students) to test the effect of strategy training. After the students had a four-week training period on reading strategies, the students significantly reduced their bottom-up strategy usage (e.g. dictionary use, questioning sentence structure, paraphrasing, etc.) in favor of more top-down strategies. More importantly, they improved their reading comprehension. However, the small sample size should be a caution.

In two other studies (Song, 1998; Wang, 2008), posttest results showed that experimental groups who underwent strategy training improved significantly more than control groups on reading comprehension. Song gave training to 50 students on the following reading strategies: summarizing, questioning, clarifying, and predicting. Wang utilized O'Malley and Chamot's CALLA model (1990) to practice reading strategies with 80 students. The model includes: Preparation (developing student awareness of different strategies); Presentation (developing student knowledge about the strategies); Practice (developing student skills in using strategies for academic learning); Evaluation (develop student ability to evaluate own strategy use); Expansion (develop transfer of strategies to new task).

Out: It is important to note that not all studies on strategy training showed improved comprehension (e.g. Yu-Ju, Shu-Hui, Shyh-Chyi, & Shu-Chu, 2014). However, this may be due to the efficacy of the particular training. Overall, the research suggests that if reading strategy training is extensive (e.g. the CALLA model), students can improve not only their strategy use, but also their reading ability. In the long term, perhaps even their overall English level will benefit. This needs to be researched more, however.

Methods

This study examines reading strategy survey data and reading test scores of students to gain further insights on the potential value of reading strategies and to evaluate the efficacy of the LEC's English curriculum.

Participants

The participants were 447 first-year students from the following faculties: Literature, Economics, Law, and Engineering. Their mean TOEIC Reading Score was 229. The students were taking the course Integrated English 2, which focuses on developing reading skills and fluency. The students were taught by 13 teachers in different classes.

The data did not reveal the teachers' names of each course, but the data was calculated by class to determine if any changes in students' data were program wide or class specific. The 15-week course was in the fall semester and lasted from the beginning of October, 2013 to just past the end of January, 2014.

Instruments

To measure the learners' reading proficiency, the students' TOEIC Reading scores were used from the beginning of the students' first year (April, 2013). To determine their reading strategy use, the Survey of Reading Strategies (SORS) developed by Mokharti and Sheorey (2002) was used. SORS

consists of 30 items divided into three constructs: global, problem-solving, and support strategies. Global strategies involve top-down strategies such as focusing on one's reading purpose and reviewing what one already knows about the topic. Problem solving strategies include guessing the meaning of unknown words and re-reading difficult parts. Reading support strategies include actions such as note taking and paraphrasing. The survey was adapted to a six-point scale and translated into Japanese.

Analysis

T-tests were used to see if more proficient readers (the top 20 percent on TOEIC reading) used the reading strategies significantly more than less proficient readers (the bottom 20 percent). T-tests were also used to determine if the students reported significantly more strategy usage after their reading course.

Results

Comparing "good" and "poor" L2 readers

The data show that more proficient readers reported significantly greater strategy usage overall (see Table 1). The most proficient readers reported higher usage on all three constructs, but only the global strategy results significantly differed. However, the overall correlation between reading scores and strategy usage for all 447 students was not statistically significant.

Table 1:*The reported strategies of students*

	Global	Problem-solving	Support	Total
Top 20% N=89	4.24*	4.29	4.07	4.20*
Bottom 20% N=89	4.02*	4.14	3.94	4.02*
All Students N=447	4.11	4.23	4.02	4.11

* $p < .05$

When looking at individual items, seven of the 30 strategies were reportedly used more often by the proficient readers (see Table 2).

Table 2: *Strategies Proficient Readers Use*

Global Strategies
I have a purpose in mind when I read. **
I think about whether the content of the text fits my reading purpose. *
I use typographical features like bold face and italics to identify key information. *
Problem-solving Strategies
I adjust my reading speed according to what I am reading. *
When text becomes difficult, I re-read it to increase my understanding. *
Support Strategies
When text becomes difficult, I read aloud to help me understand what I read. *
I underline or circle information in the text to help me remember it. *

* $p < .05$, ** $p < .01$

The only strategy more often used by less-proficient readers was a bottom-up reading strategy: "When reading, I translate from English into my native language."

Comparing pre- and posttests

After a 15-week Reading Course taught by 13 teachers, students reported slightly more strategy usage, but overall it was not significant (see Table 3). They did significantly increase their global strategy usage, though the mean difference was fairly small. The data suggest that students in certain classes increased their strategy usage a lot more than those in other classes; in one class usage increased by .33, but in another class it decreased (-.14).

Table 3: *Pre- and post-course reading strategy usage*

	Global	Problem-solving	Support	Total
Pre	4.13*	4.25	4.04	4.13
Post	4.19*	4.32	4.06	4.18

* $p < .05$

According to the pre- post- survey results, the students increased their usage of certain reading strategies over the semester, suggesting that the classes may have stressed them adequately (see Table 4). Two strategies showed significant declines, suggesting they may need to be stressed more.

Table 4: *Strategies Ss reportedly used more or less after the course*

Used more after the course
I think about whether the content of the text fits my reading purpose. **
When reading, I decide what to read closely and what to ignore. *
When text becomes difficult, I read aloud to help me understand what I read. **
I try to get back on track when I lose concentration. *
I adjust my reading speed according to what I am reading. *
I stop from time to time and think about what I am reading. **
Used less after the course
I underline or circle information in the text to help me remember it. *
When I read, I guess the meaning of unknown words or phrases. *

Discussion

Comparing proficient and poor readers

The research supports other studies in that more proficient readers utilize reading strategies more often and they do so more broadly. Specifically, global (top-down) reading strategies were shown to be used more often by better readers. While some educators suggest that certain reading strategies cannot be used by lower-level learners (i.e. inferring meaning when there are too many unknown words), global strategies can be used by all learners. In fact, less-proficient learners may benefit even more from such top-down strategies since they can support effective reading.

Nevertheless, while causation (i.e. reading strategy usage *leads* to better readers and learners) was clearly supported in some studies, one has to be hesitant to claim so based on this study alone. First, the mean differences were quite small. Cleary, reading is a complex process, and other factors played a factor in the variation of reading proficiency scores. Second, there are other possible reasons better

readers used reported more strategy use. For example, two strategies used more by better learners involved having a purpose while reading. More proficient readers may have more of a purpose because they are more likely to read for pleasure. Nevertheless, less-proficient learners can also have a purpose for reading and having one makes one more strategic in reading.

Comparing results before and after the course

While the students improved slightly on all constructs, the results revealed minimal improvement on reading strategies. Moreover, the varied results from class to class suggest that not all teachers focused on the strategy instruction equitably. Of course, other reading pedagogies are extremely valuable and should be stressed; extensive reading benefits learners' fluency and incidental vocabulary acquisition, and grammar-translation methods may improve learners' vocabulary, understanding of syntax, and bottom-up reading skills.

However, research suggests intensive communicative reading methods should also be utilized to help readers improve their ability to read more efficiently and effectively. For example, after providing an authentic and meaningful task for reading a text, the students can preview the organization to determine which part they should focus on to effectively complete the task. While they might be encouraged to skim much of the text, they can be encouraged to read key parts more carefully. Another example of intensive reading instruction is teaching, practicing, and reflecting on vocabulary coping strategies (e.g. inferring meaning, ignoring unknown words, and dictionary use). Students can be encouraged to use a dictionary only a limited number of times on their first reading, which encourages them to be more strategic in their dictionary use.

Content-based and/or task-based instruction and utilizing interesting and/or challenging content may also induce students to read more strategically because they will have more intrinsic motivation or the need to read strategically. Mentioning and practicing a strategy a few times is also likely to lead to further minor increases in strategy usage. However, for more significant results, more explicit and focused strategy training may be necessary. For example, O'Malley and Chamot's CALLA model involves awareness activities, instruction, practice, application, and review of strategies. Overall, teachers may need more awareness about the importance of reading strategies and ways to teach them.

Conclusion

The results suggested that better readers more often used reading strategies, especially global, top-down strategies. While the findings were not particularly strong, they support other studies which have shown that more proficient readers use more varied strategies and have more metacognitive awareness. Posttest survey results showed some minimal gains by the students after the reading course, but the data varied depending on the class.

Rather than to simply practice reading comprehension in class; one key implication of the existing research and this study is that it may be useful to have reflection activities, instruction and practice on reading strategies. Nevertheless, this does not discount the importance of other reading methods. Reading is incredibly complex, and various reading pedagogies implemented in a balanced way in the curriculum may lead to more significant gains in reading proficiency and language acquisition.

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