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Alex Poole,
Western Kentucky University, USA

Corresponding author: alex.poole@wku.edu

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The Metacognitive Strategic Knowledge of Seven Successful Chinese L1 Readers at a North American University: A Qualitative Study

Alex Poole, Western Kentucky University, USA

Abstract

This study examined the metacognitive strategic knowledge possessed by Chinese and Taiwanese ESL learners (N=7) studying at a North American university. Specifically, it sought to discover the factors that influence their decisions about whether or not to use reading strategies. However, instead of analyzing participants' use of individual strategies, it looked at the common themes which influenced their overall strategy use. In order to do so, participants first filled out a 30-item quantitative survey called the Survey of Reading Strategies (SORS) (Mokhtari & Sheorey, 2002). They then wrote justifications for their responses to each item. The results showed that time, memory, and text comprehension influenced participants' strategy selection. In addition, the content of the text and its length and difficulty also influenced strategy use. Finally, learners avoided certain strategies because they simply did not like them. Pedagogical implications for Chinese L1 students planning to study at the university level in the United States or other majority English-speaking countries are discussed, as are areas for future research.

Keywords: Metacognitive, reading, strategies

The Importance of Metacognitive Strategic Knowledge

One of the issues which has received a lot of attention during the last three decades is how second language (L2) learners use reading strategies, which Afflerbach, Pearson, and Paris (2008) identify as the "deliberate, goal-directed attempts to control and modify the reader's efforts to decode text, understand words, and construct meaning out of text" (p. 15). According to Mokhtari and Sheorey (2002), successful readers are aware of a variety of strategies and can use them in flexible ways; in contrast, struggling readers are generally aware of few strategies, which they frequently apply incorrectly. In short, successful readers have *metacognitive strategic knowledge*, which is "general knowledge about what strategies are, why they are useful, and specific knowledge about when and how to use them" (Wenden, 1998, p. 519). A plethora of studies have demonstrated that successful readers tend to use comprehension strategies more effectively than struggling readers (e.g., Baker & Boonkit, 2004; Ikeda & Takeuchi, 2006; Jiménez, García, & Pearson, 1996; Kamhi-Stein, 1998; Schoonen, Hulstijn, & Bossers, 1998;

Sheorey & Baboczky, 2008; Sheorey, Kamimura, & Freiermuth, 2008; Sheorey & Mokhtari, 2001).

Reading strategies and Chinese L1 EFL learners

Strategy research using Chinese L1 EFL learners also supports such results. Specifically, these studies have demonstrated that struggling readers frequently use bottom-up strategies that are not particularly useful for understanding the text as a whole (e.g., using the dictionary when unfamiliar words are encountered, translating from English into Chinese, and examining sentence-level morphosyntactical structures) (Gan, Humphreys, & Hamp-Lyons, 2004; Zhang, 2000, 2001, 2002, 2010). In contrast, successful readers tend to utilize strategies that aid text comprehension such as guessing the meaning of lexical items, skimming, comprehension monitoring, and guessing what the text will be about (Yang, 2002; Zhang, 2000, 2001, 2010). In addition, they frequently use a greater quantity of strategies than their struggling peers (Lee & Liao, 2007; Zhang & Wu, 2009).

While these studies shed light on the reading strategy use of Chinese L1 EFL learners, they are problematic, for they all took place in Chinese-speaking environments (i.e., Mainland China, Taiwan, and Singapore) in which English is a *foreign language*, rather than a *second language*. Language learning strategies, in general, and reading strategies, in particular, have been shown to differ in English as a second language (ESL) and English as a foreign language (EFL) settings (Poole, 2005). Moreover, while it is unlikely that English will be the medium of instruction in most universities in EFL countries, it will always be so in universities in ESL countries. Typically, in English-medium universities, reading loads are quite heavy. In fact, according to a recent study, undergraduate students at one North American university spend an average of almost 15 hours a week on academic reading (Mokhtari, Reichard, & Gardner, 2009).

Problematically, we know little about how successful Chinese L1 university students use reading strategies in ESL environments. Such information would give Chinese L1 EFL teachers the tools to help prepare their students to study in ESL settings such as the United States, Great Britain, and Australia. In the United States, in particular, huge numbers of Chinese-speaking students are enrolled in undergraduate and graduate programs. In fact, during the 2009-2010 academic year, 128,000 Mainland Chinese were studying in the United States alone, making

them the largest group of international students in that country. During the same time period, Taiwan sent 27,000 students to the United States (Douglass & Paulson, 2010).

Thus, the following study aimed to fill a gap in the research by examining the reading strategy use of successful Chinese L1 ESL students. However, unlike the previously discussed studies of Chinese L1 EFL learners' reading strategy use, which investigated their awareness of or use of specific strategies, the present study sought to discover whether or not there were common themes which guided successful learners' decisions about whether or not to use *multiple strategies*. Such knowledge would help future Chinese ESL students (i.e., current EFL learners who plan to study in an ESL setting) by allowing their instructors to give them criteria by which to judge the appropriateness of numerous strategies, and thus go beyond simply teaching individual strategies. In the words of Carrell, "effective second language pedagogy must include not only training and practice in the use of task-specific strategies (i.e., strategy training), instruction in orchestrating, overseeing, and monitoring these strategies (i.e., self-regulation training), but more importantly, *information about the significance and outcome of these strategies and the range of their utility* [emphasis added] (i.e., awareness training)" (as cited in Li & Munby, 1996, p. 210). By studying successful L2 learners' reasons for using or not using strategies, instructors will have more knowledge about the end results of effective strategy use, which they can, in turn, pass on to their students.

Method

Participants

The present study aimed to fill this void by investigating Chinese L1 ESL learners' metacognitive strategic knowledge; specifically, the factors which influence their choice to utilize or avoid strategies. The participants consisted of five ($N=5$) Mainland Chinese graduate students and two ($N=2$) undergraduate students (1=Mainland Chinese; 1=Taiwanese) studying at a large North American University. The participants—two of whom were female, five of whom were male—were deemed successful because they had fulfilled the English-language proficiency entry requirements (i.e., a minimum paper TOEFL score of 550 or the completion of a university-affiliated academic English program) required by the university. In addition, all were in good academic standing at the time of this study. This does not mean that participants did not struggle with English inside and outside the classroom, but rather that they were able to carry out

coursework in an English-medium university. Their selection was based on convenience: they were the Chinese L1 students enrolled in a composition course taught by the author.

Participants were enrolled in undergraduate and graduate programs in marketing, business administration, electrical engineering, and education. In the results and discussion sections, they will be referred to under the pseudonyms of Robert, Larry, Leah, Paul, Richard, Zack, and Yolanda.

Data collection

Data were collected from participants in an advanced ESL writing course. First, the students completed a strategy inventory called the Survey of Reading Strategies (SORS) (Mokhtari & Sheorey, 2002). This instrument is a self-report measure which describes ESL and EFL learners' use of three types of strategies: global ($N=13$), problem-solving ($N=8$), and support strategies ($N=9$). Global strategies involve planning and managing one's reading (e.g., using tables and charts to increase text comprehension, previewing texts, and determining whether or not texts fit one's reading purposes). Problem-solving strategies are actions learners carry-out when they encounter comprehension problems (e.g., reading slowly and cautiously in order to understand text, being extra attentive when reading challenging texts, and occasionally pausing to reflect on the text's content). Finally, support strategies are mechanisms learners utilize to boost their understanding of text (e.g., translating into one's native language, asking oneself questions about the text, and underlining and circling important information). The SORS is scored using a five-point Likert scale (i.e., 1=I never use this strategy; 5=I always use this strategy), with scores of 3.5 and above reflecting high strategy use; 2.5-3.4 signifying moderate strategy use; and 2.4 and below representing low strategy use. Using Cronbach's Alpha, Mokhtari and Sheorey determined that the survey was reliable overall, as were all of its subscales. After completing the survey, the participants were instructed to justify their responses (in writing) to each of the thirty items in order to tap into their metacognitive strategic knowledge about reading.

Data analysis

Even though the SORS is a quantitative instrument, descriptive statistics were not taken because the small number of participants would prohibit making generalizations about this

population. More importantly, emphasis was put on obtaining a thick description of the rationale behind their reading strategy use. Thus, a qualitative method—analytic induction—was used in order to attain such a description. According to Goetz and LeCompte (1984), analytic induction involves “scanning the data for categories of phenomena and for relationships among such categories, developing working typologies and hypotheses upon an examination of initial cases, then modifying and refining them on the basis of subsequent cases” (p. 180). In this case, themes were established based on participants’ responses on the SORS. As in Mu’s (2009) study of EFL learners’ language awareness and Leki’s (1995) investigation of ESL writers’ coping strategies, participants’ explanations were constantly analyzed in order to discover significant themes. As data were analyzed, themes were established; if subsequent data did not fit into existing themes, such themes were modified or new themes were established. A second reviewer, who possesses a graduate degree in applied linguistics, teaches Spanish as a foreign language, and frequently uses the SORS in her classes, examined the researcher’s themes to ensure that they were not built on erroneous interpretations of participants’ explanations of their strategy use.

Results

The results indicated that participants’ decisions about whether or not to use strategies revolved around four themes: time, text characteristics, memory, and comprehension. However, as discussed below, less than rational reasons also influenced their strategy use.

Time

Some strategies are selected due to their ability to save time, as in the following example in which Yolanda explains that she adjusts her reading speed depending on what she reads because “that can help me save time and also get my purpose. The more important, the slower.” She also explains that she always has a purpose in mind when she reads because it saves time by helping her to “know where I need to put emphasis and where not.”

Other strategies are frequently used because participants do not want to “waste” their time and using them helps them avoid doing so. Robert reports that he regularly considers whether or not texts fit his reading purpose because “I do not want to waste lots of time in reading articles that is not any help for me.” However, participants shunned other strategies

because they perceived them to be too time-consuming. Larry claims that reading carefully and slowly not only wastes his time, but also “shortens” his reading speed so he rarely does it.

Text characteristics

Participants’ use of strategies also depends on textual characteristics, such as content. More specifically, science and technology articles are invoked as the rationale behind using several strategies. Robert, for example, claims that he guesses the content of science and technology articles and pictures/visualizes it, too; however, while working with the same types of texts, he infrequently thinks about what he knows to help him comprehend them because “this method do not work,” although it is useful when he reads articles about “our daily life.” He also states that he only occasionally takes an overall view of the text before reading it because “when I read GMAT article, I usually find that if I take an overall view of text to see what it is about before reading it, I occasionally make an incorrect choice. I must respond to the author’s thought.”¹

In addition to content, participants select strategies based on the text’s difficulty and length. Zack claims that he reads slowly and carefully “sometimes if the text is really hard to read.” Likewise, the choice of whether or not to adjust his reading speed “depends on the difficulty of the text book.” Yolanda, on the other hand, reports that stopping from time to time is a difficult strategy to utilize when she reads a “huge amount of information,” as she often forgets “the main point of the article.” Finally, Richard reports determining what to read closely and what to ignore if the essay is long.

Finally, certain strategies are used depending on whether or not the participant finds the text enjoyable. Zack, for example, writes that he only loses concentration and subsequently has to get back on track “if the text is not interesting.” Larry comments that he has a purpose in mind “if the topic is interesting for me.”

¹ The Graduate Management Admission Test (GMAT) is a standardized test consisting of verbal, mathematical, and analytical questions. It is required for admission to most North American MBA programs.

Memory

The third major theme that emerged involved memory. Simply put, the participants state that they use certain strategies because they help them remember what they read. Leah, for example, visualizes information because it aids her in retaining it. Paul paraphrases texts because doing so helps him recall them. Zack critically analyzes and evaluates a text's content in order to remember it. Larry claims that he can recollect more of the text if he makes guesses about its meaning and checks to see if they are correct.

Comprehension

Finally, participants' use of strategies is related to their utility in helping them comprehend a text's main ideas. Robert commented on strategies he uses to help him understand the main idea of a text, including: having a purpose in mind when he reads; underlining or circling words; and going back and forth in a text to find relationships between its parts. Likewise, Yolanda asserts that she stops from time to time to reflect on what she is reading because, "When I read a huge amount of information, I always forget the main point of the article." She also previews the text before reading about it because doing so "helps me understand main ideas."

Less than rational reasons

While participants generally have thoughtful explanations regarding their strategy use, they report an unsubstantiated dislike of reading aloud. Comments range from straightforward statements of aversion, such as "I don't like to read aloud" (Yolanda), to more judgmental comments about its intrinsic value, like "I think that's a stupid behavior and when at the library, especially" (Richard), and "Reading aloud is no help for me to understand better, but sounds stupid" (Leah).

Discussion

Most of the results of this study were similar to those which focused on Chinese L1 EFL learners. First of all, participants reported utilizing strategies that save time and avoiding those they perceived to be time-wasting, which was also seen in Zhang's (2001, 2010) studies of

university students in Mainland China. Moreover, he found that struggling readers did not know how to effectively utilize their time while reading.

Another finding that was similar to other studies involved the connection between text characteristics and participants' strategy choices. Specifically, they knew that certain types of strategies were used with certain types of texts (e.g., science, engineering), which was also found by Li and Munby (1996) and Zhang (2010) in their studies of graduate and undergraduate Chinese L2 learners. Successful Chinese L2 learners have also been shown to use different strategies depending on text difficulty (Feng & Mokhtari, 1998; Li & Munby, 1996; Zhang, 2001), as was seen in the current study.

The third theme that emerged in this study—memory—revealed that participants were concerned with remembering what they read. Interestingly, Gan et al. (2004), Gu (2003), and Rao (2006) have shown that rote memorization of English grammar and vocabulary using tools such as vocabulary lists and flash cards is common in Mainland Chinese EFL instruction. Ding (2007) and Rao (2006) suggested that such a concern with memory could be related to the influence of L1 instruction, which involves students memorizing thousands of Chinese characters. However, it should be noted that the participants in the current study were not memorizing decontextualized morphosyntactical or lexical items, but rather using strategies such as visualizing, paraphrasing, critically analyzing and evaluating, and checking to see if their guesses were correct or incorrect in order to remember what they read. In other words, in Chinese EFL instructional settings, learners are directly engaging in memorizing language, while in the current ESL-based study, they were engaging in non-memorization strategies that will help them remember the content of the text. Nevertheless, it seems probable that their previous EFL instructional experiences contributed to their preoccupation with memory. However, the connection between the two has not been firmly established.

Finally, participants used strategies depending on whether or not they perceived them to help comprehend texts. Such findings were not surprising since numerous studies have shown that successful Chinese L1 EFL readers focus on comprehension (Zhang, 2001, 2002, 2010). Obtaining overall text comprehension, or what Rao (2003) calls *global comprehension*, is important because it “enables us to dismiss various misinterpretations because they do not fit in with the overall message” (p. 41). Interestingly, the connection between reading proficiency and

concern for overall comprehension has been found in research on university students who are native speakers of English (Saumell, Hughes, & Lopate, 1999).

In short, while the present study showed that participants' strategy use was similar to that of successful Chinese-speaking L2 learners in other studies and reflected the goal-oriented reading strategy use seen in successful L1 learners (Pressley, 2002), it was not entirely rational. Specifically, some claimed to dislike reading aloud, and a few even called it "stupid." One reason for this strong dislike of reading aloud could be that it is a common practice in Mainland Chinese EFL classes (Rao, 2003), which some students find to be stressful and humiliating (Ding, 2007). The participants here could have had similar negative experiences. Future studies should investigate whether or not Chinese L1 ESL students' dislike of reading aloud is, indeed, related to negative experiences as EFL learners or other factors such as not understanding its purpose. Future studies should also investigate whether or not memorization, another commonly-used strategy in Chinese L1 EFL settings, is related to learners' concern with memory in ESL settings or if the two arise independently.

Future studies should likewise use larger numbers of participants. The small number of participants in the current study is hardly sufficient to make generalizations about successful Chinese ESL readers. In addition, the current study focused on participants' *reported* strategy use rather than their *actual* strategy use. Direct observation through techniques such as think-alouds could be used in future inquiries in order to observe these strategic habits to see if they correlate with certain goals (i.e., comprehension) (Jiménez, García, & Pearson, 1995; Merriam, 2001; Mokhtari & Sheorey, 2002). Finally, the process by which students develop metacognitive strategic knowledge should be investigated. While reading strategy instruction has been shown to be effective in fostering L2 growth (Song, 1998), little is known about the non-classroom mechanisms (e.g., pleasure reading, peer modeling) which contribute to learners' reading strategy development.

Instructional Implications

In spite of its limitations, this study's findings have several implications for those preparing Chinese L1 students to study at the university level in the United States or in other ESL countries. First, students need to be encouraged to use strategies that lead to overall comprehension, but do not impede them from completing the reading task in a reasonable

amount of time. However, knowing whether or not they are achieving this balance will probably require them to try out a variety of strategies with a variety of texts. Thus, instructors should remind them that there is no easy one-to-one correspondence between specific strategies and reading comprehension, so they need to be patient. Nevertheless, instructors can foster comprehension-oriented strategy use by implementing what Rao (2003) terms a *top-down* approach to strategy instruction which avoids focusing on sentence-level items (i.e., grammar, vocabulary), but instead promotes the use of comprehension-oriented strategies such as utilizing one's background knowledge and making predictions about the text. Moreover, instructors can encourage their students to become more comprehension-oriented by teaching them to monitor their own understanding of what they are reading. This skill, which is known as *comprehension monitoring*, enables learners "to know what has been done right or wrong and to integrate new information with prior existing knowledge" (Yang, 2002, p. 19), which is "crucial because readers need to possess the ability to be aware of what kind of reading problem they are encountering, and what kind of strategies should be used to solve them" (Yang, 2002, p. 36). Finally, instructors can implicitly show their students that text content and difficulty affect what strategies are necessary to achieve comprehension by modeling think-alouds with various text types (e.g., biology textbooks, poetry) of dissimilar levels of complexity (Kamhi-Stein, 1998).

Instructors need to bear in mind, however, that effective strategy use is heavily influenced by prior knowledge (Dole, Duffy, Roehler, & Pearson, 1991; Recht & Leslie, 1988) and lexical knowledge (Pang, 2008). In fact, various researchers have suggested that, regardless of the strategies learners employ, if a certain "threshold" of L2 proficiency is not present, text comprehension will be very difficult to achieve (Clarke, 1980; Schoonen et al., 1998). Thus, one recommendation to help learners more effectively use comprehension strategies is to help them build their overall L2 proficiency, especially their lexical knowledge. One way of doing this is through *free voluntary reading*, which is when students read challenging, yet comprehensible, foreign language materials at their own pace (Krashen, 2007). According to Krashen (2011), significant gains in academic language proficiency have been made by L2 learners who have engaged in such reading.

Conclusion

This study evaluated the metacognitive strategic knowledge possessed by seven successful Chinese L1 ESL students at a North American university. Specifically, it investigated whether or not there were common themes that influenced their decisions about strategy use. The results showed that time, text characteristics, memory, and comprehension guided their strategy use. Methodological limitations notwithstanding, such findings have important pedagogical implications for Chinese L1 EFL learners who want to study in the United States—or any other ESL country—for they demonstrate that successful strategy use is guided by specific themes. In light of the breadth, depth, and sheer volume of reading required at English-medium universities, these students will need to be skillful strategy users in order to achieve academic success.

Notes on contributor

Alex Poole (PhD, Oklahoma State University, 2003) is an applied linguist whose interests include focus on form instruction, Spanish-English bilingualism, and reading strategies. He regularly publishes articles on these topics and presents at national and international conferences. Dr. Poole directs the ESL Endorsement/TESOL Graduate Certificate programs at WKU. He also teaches courses in composition, TESOL methodology, and pedagogical grammar, among others. When not teaching, advising students, or researching, Dr. Poole lectures on issues related to English language learners and reviews scholarly submissions to peer-reviewed journals.

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