

Conceptualizing Reading to Learn: Strategy Instruction and Student Cognition

Mr. Yenus Nurie*

Bahir Dar University, P.O. Box 79, Bahir Dar, Ethiopia.

**Corresponding author: Yenusn@gmail.com, Telephone: +251918020940*

Abstract ← 10pt, Arial bold

Several studies have investigated the linkage between increased strategy use and reading comprehension. However, little or no linguistic study has previously reported the effects of reading strategy instruction on the strategy use of Ethiopian EFL (English as a Foreign Language) university students. The Survey of Reading Strategies (SORS) questionnaire was employed before and after the intervention to examine the effects of reading strategy instruction on the strategy use of 55 accounting and finance students at Bahir Dar University, Ethiopia. A paired t-test was used to determine whether there was a significant difference between the frequency of students' strategy use before and after the instruction. The findings of this study revealed that strategy instruction had a significantly positive effect on the strategy use of university students. Further, the post intervention mean scores showed that the students' strategy use of meta-cognitive strategies significantly increased after instruction. This study revitalized the concept of meta-cognition as proposed by Flavell (1976) and provides insights into EFL pedagogy by indicating the linkage between reading strategy instruction and strategy awareness of university students. Implications from this study suggest that EFL teachers should provide students with direct and explicit instruction and show them how to apply meta-cognitive reading strategies to improve students' strategy use, and thereby fostering reading comprehension.

Keywords: Keywords: reading strategy use, Survey of Reading Strategy (SORS), meta-cognitive awareness, reading strategy instruction, reading comprehension

Introduction

The medium of instruction in Ethiopian high schools is English. The necessity of reading is more evident when students join universities where almost all the academic resources are written in English. Students must read textbooks and articles to take notes and write assignments, term papers, senior essays and theses. David, Sheila and Richard (2014) asserted that success in university depends to a considerable degree upon students' ability to engage in strategic reading of extensive academic or informational text. In connection, Simpson and Nist (2000) reported that 85 % of university learning requires careful reading, and "The academic importance of reading comprehension cannot be understated" (Molly, 2009, p.143). Ippolito, Steele and Samson (2008) maintained that as proficient literacy skills are critical predictors of success in high school and college, great numbers of adolescent learners appear to lack the literacy skills needed to understand highly sophisticated information, synthesize main ideas across texts, and make meaning when reading for academic purposes.

On the other hand, students often face difficulty in understanding academic literature in their fields of studies. Consistent with the point presented above is the finding of Faggella-Luby et al. (2009) who claimed that adolescent readers who struggle with reading comprehension encounter difficulty spontaneously facilitating their comprehension while reading academic texts such as textbooks and ancillary materials. Hong-Nam, Leavell and Maher (2015) also reported that as some students advance past the elementary and middle school levels, their comprehension (especially in content areas) falters as they are confronted with increasingly complex texts. Byers, Jones and Kervin (2012) maintained that adolescent readers are expected to comprehend many texts, each complex in discipline-specific ways. Ahmadi et al. (2013) asserted that many students of EFL/ESL have "major difficulties" with English reading comprehension even after years of learning the English language.

The conceptualization of strategy instruction as a problem solving process has guided much of the instructional research on the topic during the past 30 years. Eventually, the current research has provided us with a clearer vision of how best to help learners acquire and use the strategies and skills that foster good comprehension. Accordingly, several general characteristics of effective strategy instruction have arisen from this body of work (Rice, 2009). While this basic concept embodies several crucial features of reading, the most indispensable factor that helps meet the needs and aspirations of the reader falls on their active engagement in using reading strategies. When encountering more difficult text, the proficient reader copes with the text challenges by selectively using comprehension strategies (Pressley, 2006). Reading strategies are, therefore, the deliberate decisions made by the reader in order to aid reading comprehension occurring before, during, and after reading (Pressley, 2002).

In respect to the impetus of strategy use for reading comprehension, Huang et al (2009) maintained that research on reading tend to explore the utilization of reading strategies to enhance learners' reading performance and believe that successful use of reading strategies will benefit learners' reading comprehension, and skills in comprehension and strategies can be taught (Zarrillo, 2007). Pressley (2006) maintained that strategic reading instruction practices can be adapted to various situations, modeling strategic reading behavior, and providing feedback on student strategy use by teachers. The purpose of this training is, therefore, to give students complete awareness that reading is an active process and that comprehension-fostering and monitoring activities are important (Paris et al., 1991).

Theoretical Framework

In his model of cognitive monitoring or regulation, Flavell (1976) proposed four major components of metacognition, namely meta-cognitive knowledge, meta-cognitive experiences, goals or tasks, and actions or strategies. He maintains that meta-cognitive knowledge consists primarily of knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of cognitive enterprises, whereas meta-cognitive experience is the intentional intellectual experiences that lead to success or failure in learning. For example, a reader may feel a sense of confusion after reading a text. Flavell (1976, p.232) argued that these experiences can also occur at any time before, after, or during a cognitive enterprise. For instance, the reader's intention of reading comprehension for an exam, which will propel him or her to the use of metacognitive knowledge further, helps him or her use new meta-cognitive experiences. Flavell (1976, p.232) also explains that meta-cognition includes "the active monitoring and consequent regulation and orchestration" of information processing activities. Thus, exploring the meta-cognitive reading strategy awareness of students can provide an impetus for EFL reading pedagogy to design appropriate reading courses.

Reading strategy instruction and Strategy use

The literature and empirical studies support the preeminent effects of strategy instruction for improvement of reading comprehension of students. Similarly, prominent researchers in the field have showed an increasing emphasis on the role of meta-cognitive awareness. Wang et al. (2009) maintained that meta-cognitive reading strategies have various benefits on students' reading comprehension and fostering their learning activities. Meta-cognitive learners are able to monitor their progress during learning, recognize when they are not learning effectively, and decide which strategy from a repertoire of learning strategies they must employ to improve their learning processes and outcomes (Alexander, 2008). The findings of Yoosabai (2009) and Wang (2003) also revealed that students who received explicit and modeled reading strategy instruction improved their metacognitive reading strategies through the meta-cognitive process.

Further, a large body of research has revealed the relationships between strategy use and self-rated reading proficiency (Mokhtari & Reichard, 2002, Sheorey & Mokhtari, 2001, Hong-Nam & Leavell, 2007). The most determinant factors that affect reading proficiency in adolescents are inadequate reading strategy use and a lack of meta-cognitive awareness (Mokharti & Reichard, 2002, Pressley, 2000, Shokrpour & Fotovatian, 2009, Madhumathi & Ghosh 2012, Cubukcu, 2008, Akkakoson & Setobol, 2009). Meta-cognitive strategies facilitate students' reading comprehension (Cantrell & Carter, 2009, Singhal, 2001). Singhal (1999) asserted that students tended to report using a wider range of strategies and they used strategies more frequently following strategy instruction. Taken together, the findings of the studies stated above showed that meta-cognitive awareness and use had a significant contribution for the development of students' reading comprehension, which implies that it is crucial to understand the effects of reading strategy instruction on the strategy awareness of EFL students.

The fundamental assumption of understanding the effects of reading strategy instruction emanates from reading experts who realized that reading strategies used by proficient readers are powerful tools to foster the reading comprehension of students. Meta-cognition has been recognized as a key factor in academic success (Winne & Nesbit, 2010). Explicit instruction helps students understand the rationale behind the use of main strategies, and this type of instruction transfers the metacognitive strategies from the teacher to the students. (Vacca & Vacca, 1989). This notion is also supported by Paris and Winograd (1990) who maintained that although adolescent readers lack the proficiency of reading strategies that foster their reading comprehension, explicit instruction in reading comprehension strategies has shown to help readers acquire such procedural knowledge and improve comprehension.

Evidence shows that reading comprehension teachers showed little or no instructional practice to teach strategy to their students, or reading comprehension instruction remains largely abandoned in the field of English language teaching (Durkin, 1981, Hong-Nam et al, 2015). The present research emanates from a well-documented failure of Ethiopian students' reading proficiency (Collins & Gillies, 2010, USAID, 2010). Consequentially, adolescent literacy has been and should continue to be a hot issue in literacy education for the coming years (Cassidy, Ortieb & Shettel, 2011).

Unlike this research, which aimed at understanding the effects of strategy instruction on the strategy awareness of EFL university students, most of the local research on the reading strategies of ESL/EFL readers (Daniel, 2003, Dawit, 2014, Yohannis, 2012, and Abiy, 2012) has been limited to students at lower levels of education (either at elementary or secondary schools). Thus, it is necessary to examine how university instructors can help their students' comprehension by designing problem solving and strategic instructions and teaching explicitly strategies vital to enhance reading comprehension. This research seeks to examine the impact of students' awareness on the uses of various meta-cognitive reading strategies. The results of this research may extend the literature on reading strategies.

The rationale of this research was grounded in understanding the effects of reading strategy instruction on the strategy use of students that could help to conceptualize, plan and implement reading strategies in EFL classrooms. Therefore, the results of this study will generate baseline information and provide insights to curriculum designers in higher education institutions and in the Ministry of Education. This study will also work as a foundation for more research on meta-cognitive reading use in EFL settings.

Research questions

1. Which meta-cognitive reading strategies do students use most before and after the intervention?
2. What effects does reading strategy instruction have on the reading strategy use of EFL University level students?
3. Is there any significant difference of students' strategy use before and after the instruction regarding the overall reading strategy use?

Methods

Participants

The participants of this study were 55 under graduate regular students in the Department of Accounting and Finance at Bahir Dar University in 2016/17 academic year. The researcher selected one class with 55 students and taught them CSR (comprehension strategy instruction) for 12 weeks. In this type of strategy instruction, the researcher explains the strategy clearly, models the strategy, guides the students as they learn and apply the strategy, and provides practice with the strategy until students can apply it independently. So as to ensure consistency in instruction and assess the effects of reading strategy instruction on students' strategy use, only one researcher taught the students throughout the entire study.

Data Collection

Before and after the treatment sessions, students filled in a Survey of Reading Strategies Questionnaire (SORS) adapted from Sheorey and Mokhtari (2001). The results of the Survey of Reading Strategies (SORS) was used to determine the effects of reading strategy instruction on the strategy use of

students. Three major meta-cognitive reading strategies were incorporated, and these are: support reading strategies, problem solving strategies and global reading strategies. Mokhtari and Sheorey (2002) note that the SORS is scored on a five-point Likert scale in which scores of 2.4 or below show low strategy use, 2.5 to 3.4 signifies moderate strategy use, and 3.5 or above demonstrates high strategy use. Therefore, this study seeks to examine the effects of strategy instruction on the strategy use of Ethiopian tertiary level students through the SORS questionnaire. Further, a paired t-test was used to determine whether there was a significant difference between the frequency of students' strategy use before and after the intervention.

The intervention procedures

Prior to the reading strategy instruction, the researcher discussed with the students about strategic reading and the rationale for the intervention and informed them that they would have reading strategies training. The week before the study began; the researcher oriented all the students so that they could be familiar with the metacognitive reading strategies. The reading strategy instruction was incorporated into six reading lessons. The students received direct instruction of meta-cognitive reading comprehension strategies with a total of six reading texts. The researcher modeled the strategies and provided adequate time for participants to practice the strategies through guided practice and independent work. The researcher's intervention began by explicitly teaching how students could use their schemata before reading a text.

The Reading Strategy Instruction procedures

A group of 55 students received CRS instruction that consisted of engaging participants in the use of comprehension strategies, such as activating schemata before reading, pausing and predicting what will come next while reading, questioning and summarizing what they have read in short. A reading strategy use training manual was also prepared before each lesson began.

The procedure for training students was carried out in the following ways. First, the researcher made detailed descriptions on how each strategy use can be applied in reading a text using the thinking aloud technique. It was also highlighted to students about the most appropriate context to use each strategy. Second, the researcher modeled each strategy briefly using various examples. Third, the students, with the support of the researcher began using each strategy in action, which the students gradually employed the strategies independently.

Data analysis

To examine the difference between the reading strategies the students used prior to and after the intervention, the data obtained from the pre- and post-administration of the SORS questionnaire was analyzed using the mean scores and standard deviation (SD) of each meta-cognitive reading strategy. The results obtained from a paired t-test scores were used to further analyze the presence of significant differences between the students' strategy use before and after the instruction. Significance was determined at $p \leq 0.05$

Results

In response to question one, 'which meta-cognitive reading strategies do students use most before and after the intervention?', it was shown that before the instruction was provided, the three major strategies the students used most were global strategy, problem solving strategy and support reading strategy with a mean of 3.358, 3.237 and 2.926 respectively. After the instruction, the students did not show any discrepancy in terms of using these strategies with a mean of 3.396, 3.232, and 2.955 respectively, as indicated in Table 1.

Table 1: *The mean and standard deviation of students' strategy use of the three major strategy classifications*

Strategy	Before instruction		After instruction	
	Mean	Standatd Deviation	Mean	Standatd Deviation
GLOB	3.358	5.42757	3.396	5.890
PROB	3.237	5.33495	3.232	4.774
SUP	2.926	7.06834	2.955	6.813

Table 2 shows the mean scores and level of the use of the meta-cognitive strategies before they were taught through reading strategy instruction. Before training, the participants made good use of strategies like using of prior knowledge with a mean score of, 3.33, previewing text before reading (3.44), determining what to read closely, adjusting reading rate (3.43) and guessing meaning of unknown words (3.17). On the other hand, checking understanding with a mean score of 1.91, Taking notes while reading noting text characteristics (2.24), visualizing information to read (2.31), Finding relationship among text ideas (2.41) were some examples of reading strategies that students did not use adequately before the strategy instruction.

Table 2: *The five most and five least frequent individual strategies the students employed before the instruction*

Item	Mean	Level	Standatd Deviation
Previewing text before reading	3.44	M	1.176
Adjusting reading rate	3.43	M	1.039
Using of prior knowledge	3.33	M	1.374
Guessing meaning of unknown words	3.17	M	.986
Determining what to read closely	3.13	M	.991
Finding relationship among text ideas	2.41	L	1.237
visualizing information to read	2.31	L	1.226
noting text characteristics	2.07	L	1.007
checking understanding	1.91	L	.976

Regarding individual and overall reading strategies, the data from the SORS questionnaire revealed that the students showed a great improvement on all reading strategies. After the training, the participants exhibited a good use of strategies, such as determining what to read closely, adjusting reading rate, predicting or guessing text meaning, setting purpose for reading and trying to stay focused on reading with a mean of 4.42, 4.29, 4.16, 4.11, 4.04 respectively. Compared to the significant improvement of the students in using most of the other strategies, they showed little strategy use after the instruction on strategies like translating from English to L1, finding relationship among text ideas, noting text characteristics, checking understanding, taking notes while reading with a mean of 3.15, 2.80, 2.76, 2.76, 2.45.

Table 3: *The five most and five least frequent individual strategies the students employed after the instruction*

<i>Item</i>	<i>Mean</i>	<i>Level</i>	<i>Standard Deviation</i>
Determining what to read closely	4.42	H	.832
Adjusting reading rate	4.29	H	.936
Predicting or guessing text meaning	4.16	H	.898
setting purpose for reading	4.11	H	.956
Trying to stay focused on reading	4.04	H	1.071
Translating from English to L1 (Amharic)	3.15	M	1.325
Finding relationship among text ideas	2.80	M	1.432
Noting text characteristics	2.76	M	1.667
Checking understanding	2.76	M	1.261
Taking notes while reading	2.45	L	1.214

In response to research question two, 'What effects does reading strategy instruction have on the strategy use of EFL University student?' Table 4 shows the mean scores and level of the use of the meta-cognitive strategies before and after the students were taught through strategy instruction. The 5 reading strategies that the students showed a significant difference at $p \leq 0.001$ after the strategy instruction include: setting purpose for reading, determining what to read closely, predicting or guessing text meaning, trying to stay focused on reading and adjusting reading rate with a mean of 2.85 3.13, 2.89, 2.96, 3.43 respectively.

Table 4: *The five top strategies the students showed significant improvement after the instruction*

<i>Strategy Item</i>	<i>Before instruction</i>			<i>After instruction</i>				
	<i>Mean</i>	<i>SD</i>	<i>Level</i>	<i>Mean</i>	<i>SD</i>	<i>Level</i>	<i>t</i>	<i>p</i>
Setting purpose for reading	2.85	1.017	M	4.11	.956	H	7.638	.002
Determining what to read closely	3.13	.991	M	4.42	.832	H	9.437	.000
Predicting or guessing text meaning	2.89	1.355	M	4.16	.898	H	9.096	.000
Trying to stay focused on reading	2.96	1.132	M	4.04	1.071	H	6.584	.000
Adjusting reading rate	3.43	1.039	M	4.29	.936	H	7.026	.000

H: High strategy use M: Moderate strategy use L: Low strategy use

In response to research question three, 'Is there any significant difference the experimental and control group of students regarding the overall reading strategy use?' the reading strategy students used was compared when they read a text. To achieve this a paired t-test was used to determine whether there was a significant difference between the frequency of students' strategy use before and after the intervention. The paired t-test results of the strategy use of the students before and after the intervention are presented below.

Table 5: *The participants' mean standard deviation and t- value of strategy use before and after the instruction*

	<i>Mean</i>	<i>Std. Deviation</i>	<i>t</i>	<i>p</i>
Before the instruction	2.7574	.45078	-7.492	.000
After the instruction	3.4722	.60911		

Table 5 indicates that the overall average mean of all the 30 meta-cognitive reading strategies used by the participants before the instruction was 2.7574 and the mean of students' strategy use after the instruction was 3.4722. The data also shows that there was a significant difference between the students' strategy use before and after the instruction at $p \leq 0.001$ levels. Based on the paired t-test results of the pre- and post-administration of the SORS questionnaire, this study revealed that meta-cognitive reading strategy use had a positive and strong correlation with reading strategy use.

Discussion

This section presents the major findings of the study and their implication in addressing the three stranded research questions. The major findings revealed that the reading intervention had a significantly positive effect on the strategy use of university students. Evidently, the students employed significantly more meta-cognitive reading strategies after the reading strategy instruction at $p \leq 0.001$ levels. This finding is consistent with Singhal's (1999) study who revealed that students tended to report using a wider range of strategies and they used strategies more frequently following strategy instruction.

From the finding, it was indicated that the students used all the meta-cognitive reading strategies more frequently after instruction. One item, guessing meaning of unknown words, was the only reading strategy that was found to be less frequently used after the instruction. Regarding this, Wang et al, (2009) maintained that meta-cognitive reading strategies have various benefits on students' reading comprehension and fostering their learning activities. This finding supports the idea that teachers may need to raise students' awareness by giving systematic and direct teaching and training of strategies use (Boulware-Gooden et al., 2007).

The findings of this study is similar to Yoosabai (2009) and Wang (2003) who reported that students who received explicit and modeled reading strategy instruction improved their meta-cognitive reading strategies through the meta-cognitive process. After the reading strategy instruction, the students realized their full potential in using many of the reading strategies when reading a text. For example, the participants were well aware of how to preview a text before reading. Explicit instruction helps students understand the rationale behind the use of main strategies, and this type of instruction transfers the meta-cognitive strategies from the teacher to the students. (Vacca & Vacca, 1989).

This study ranked the order of the three major reading strategies the students employed in ascending order as global, problem solving and support reading strategies. Regarding this, Mokhtari and Reichard (2004) found that adolescents who perceived themselves as excellent readers reported higher use of global meta-cognitive reading strategies and problem solving meta cognitive reading strategies. Similar to the finding of this study, Alsheikh (2014) also revealed that the support Reading Strategies were the least reported and actually used strategies in both languages (Arabic and English). This study underscores the pedagogical implication of strategy instruction in increasing students' strategy awareness, and hence fostering reading comprehension of EFL students. Nevertheless, concerns remain about how the students were completely obsessed with checking understanding, a reading strategy which they showed no progress at all.

This study revealed that explicit reading strategy instruction enhanced the strategy use of university students. However, with certain limitations in terms of the sample size and variables included in this study, the results of the present study are not generalizable across all university students as to whether explicit reading comprehension instruction enhanced reading strategy use. Thus, there is good number of reasons to pursue further research that could shed light on the strengths of using other instruments and including fair number of students in various departments, academic levels and gender.

The results of this study bear important pedagogical implications in many aspects of reading strategy instruction and strategy use. Many students have continued to struggle with the demands of academic reading, especially at universities where they encounter the problem of understanding various complex texts. Ippolito, Steele and Samson (2008) asserted that as proficient literacy skills are critical predictors of success in high school and university, great numbers of adolescent learners appear to lack the literacy skills needed to understand highly sophisticated information, synthesize main ideas across texts, and make meaning when reading for academic purposes. Accordingly, it becomes the responsibility of teachers and curriculum designers to find ways to assist them. One way of assisting students to read their academic texts and improve their comprehension can be by explicitly teaching them how to use reading strategies. The current study hopes to provide EFL teachers a practical and pedagogical

cal knowledge on this research-based type of reading strategy instruction, which can effectively guide and help their students.

Reference

- Abiy, Y. (2012). The impact of students' self-regulated language learning on their reading achievement: Grade 9 students in focus. *International Association of Research in Foreign Language Education and Applied Linguistics ELT Research Journal*. 1(3): 175-188.
- Ahmadi, M., Hairul, N. & Abdullah, M. (2013). The Importance of Meta-cognitive Reading Strategy Awareness in Reading Comprehension. *English Language Teaching*. 6(10):235-244.
- Akkakoson, S., & Setobol, B. (2009). Thai EFL students' use of strategies in reading English text. *The Journal of KMUTNB*. 19(3):329-342.
- Alsheikh, N. (2014). The Perceived and Actual Use of Metacognitive Reading Strategies by the UAE High School Students: *Journal of ELT and Applied Linguistics*. 2(1):140-153.
- Boulware-Gooden, R., Carreker, S., Thornhill, A., & Joshi, R. (2007) Instruction of meta-cognitive strategies enhances reading comprehension and vocabulary achievement of third-grade students. *The Reading Teacher*. 61(1):70-77.
- Byers, S., Jones, P., & Kervin, L. (2012). What counts as comprehension in teacher practice? Literacy Learning: *The Middle Years*. 20(3): 18-27.
- Cantrell, C., & Carter, J. (2009). Relationships among learner characteristics and adolescents' perceptions about reading strategy use. *Reading Psychology*. 30:195-224.
- Cassidy, J., Ortieb, E., & Shettel, J. (2011). What's hot for 2011? *Reading Today*. 28(3):6-8.
- Claros, M. (2008). Psycho-linguistic and sociocultural approaches to language learning: A never ending debate. *Colombian Applied Linguistic Journal*. 10:142-154.
- Collins, P. & Gillies, J. (2010). Using Opportunity to Learn and Early Grade Reading Fluency to Measure School Effectiveness in Ethiopia, Guatemala, Honduras, and Nepal. USAID Washington. Retrieved 20 October 2016 from: www.equip123.net/.../e2-school.
- Creswell, J. (2009). Research Design. Qualitative, quantitative and mixed Methods Approaches. London. Sage Publications,
- Cubukcu, F. (2008). Enhancing vocabulary development and reading comprehension through meta-cognitive strategies. *Issues in Educational Research*. 18(1):1-11.
- Daniel, A. (2011). The effect of primary English readers on reading skills in Ethiopia .University of Pretoria. Unpublished PhD Dissertation. Retrieved 12 June 2016
from: repository.up.ac.za/.../complete.pdf?...10.
- Dawit, T. (2014). The Effect of Explicit Reading Strategy Instruction on Reading Comprehension of Upper Primary Grade Students. *International Journal of Education*. 6(3):81-100.
- David, C., Sheila A. & Richard, R. (2014). The Effectiveness of Strategic Reading Instruction for College Developmental Readers. *Journal of College Reading and Learning*. 35(1):24- 49.
- Durkin, D. (1981). Reading comprehension instruction in five basal reader series. *Reading Research Quarterly*. 16(4):515-544.
- Faggella-Luby, M. N., Ware, S. M., & Capozzoli, A. (2009). Adolescent literacy reviewing adolescent literacy reports: Key components and critical questions. *Journal of Literacy Research*. 41:453-475.
- Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.). *The nature of intelligence* (pp. 231-236). Hillsdale, NJ: Erlbaum.
- Hong-Nam, K., Leavell, G & Maher, S. (2014) .The Relationships among Reported Strategy Use, Meta-cognitive Awareness, and Reading Achievement of High School Students, *Reading Psychology*. 35(8): 762-790.

- Hong-Nam, K., & Leavell, A. G. (2007). Strategic reading awareness of college bilingual students in an EFL learning context. *Korea TESOL*. 9(1): 27–44.
- Huang, H., Chern, C., and Lin, C. (2009). “EFL learners’ use of online reading strategies and comprehension of texts: An exploratory study,” *Computers & Education*. 52(1):13-26.
- Ippolito, J., Steele, L., & Samson, F. (2008). Introduction: Why adolescent literacy matters now. *Harvard Educational Review*. 78(1):1–5.
- Madhumathi, P. and Ghosh, A. (2012). Awareness of reading strategy use of Indian ESL students and the relationship with reading comprehension achievement,” *English Language Teaching*. 5(12):131-143.
- Mokhtari, K., & Reichard, C. (2002). Assessing students’ metacognitive awareness of reading strategies. *Journal of Educational Psychology*. 94(2): 249–259.
- Mokhtari, K., & Reichard, C. (2004). Investigating the strategic reading process of first and second language readers in two different cultural contexts. *System*. 32:379–394.
- Mokhtari, K., & Sheorey, R. (2002). Measuring ESL students’ awareness of reading strategies. *Journal of Developmental Education*. 25:2-10.
- Molly, N. (2009). Reading Comprehension Strategies in Secondary Content Area Classrooms: Teacher Use of and Attitudes towards Reading Comprehension Instruction. *Reading Horizons*. 49(2):143-166.
- Paris, S., Wasik, B., & Turner, J. (1991). The development of strategic readers. In R. Barr, M. L. Kamil, P. Mosenthal & Pearson, P. (Eds.), *Handbook of Reading Research* (vol. 2) (pp. 609-640). New York: Longman.
- Paris, S., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp. 15–51). Hillsdale, NJ: Erlbaum.
- Phakiti, A. (2003). A close look at the relationship of cognitive and meta-cognitive strategy use to EFL reading achievement test performance. *Language Testing Journal*. 20(1):26-56.
- Poole, A. (2009). The reading strategies used by male and female Colombian university students. *Issues in Teachers’ Professional Development*. 11(1):29-40.
- Poole, A. (2005). Gender Differences in Reading Strategy Use Among ESL College Students. *Journal of College Reading and Learning*. 36(1): 7-20.
- Pressley, M. (2006). *Reading instruction that works: The case for balanced teaching*. New York, NY: Guilford.
- Pressley, M. (2002). Metacognition and self-regulated comprehension. In A.E. Farstrup, & S. Samuels (Eds.), *What research has to say about read instruction* (pp. 291–304). Newark, DE: International Reading Association. Retrieved October 20, 2016 from: <http://www.reading.org>
- Pressley, M. (2000). What should comprehension instruction be the instruction of? In M. Kamil, P. Mosenthal, P. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3) (pp.545–561). Mahwah, NJ: Erlbaum.
- Rice, M. (2009). *Making Connections: Reading Comprehension Skills and Strategies*. Educators Publishing Service, a division of School Specialty Publishing. Retrieved 3 March 2016 from: www.ccsenet.org/elt
- Salataki, R., & Akyel, A. (2002). Possible effects of strategy instruction on L1 and L2 reading. *Reading in a Foreign Language*. 14(1):1-17.
- Sheorey, R. & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. *System: An International Journal of Educational Technology and Applied Linguistics*. 29:431-449.
- Shokrpour, N. & Fotovatian, S. (2009). Effects of consciousness raising of meta-cognitive strategies on EFL students’ reading comprehension. *ITL – International Journal of Applied Linguistics*, 157:75-92.

- Showers, B., Joyce, B., and Bennett, B. (1987). "Synthesis of research on staff development: A framework for future study and a state-of-the-art analysis." *Educational Leadership*. 45:77-87.
- Simpson, M., & Nist, S. (2000). An update on strategic learning: It's more than textbook reading strategies. *Journal of Adolescent & Adult Literacy*. 43(6):528-541.
- Singhal, M. (2001). Reading proficiency, reading strategies, metacognitive awareness and L2 readers. *Reading Matrix: An International Online Reading Journal*. 1(1). Retrieved April 2, 2016 from: <http://www.readingmatrix.com/journal.html>
- Singhal, M. (1999). The effects of reading strategy instruction on the reading comprehension, reading process and strategy use of adult ESL readers. Published dissertation. The University of Arizona. UA Campus Repositories. Retrieved November 1, 2016 from: <https://arizona.openrepository.com/.../azu>
- Vacca, R. & Vacca, J. (1989). Content area reading (3rd Ed.). Glenview, IL: Scott, Foresman
- Wang, J., Spencer, K., Minjie, & Xing, M. (2009). Meta-cognitive beliefs and strategies in learning Chinese as a foreign language. *System*. 37(1): 46-56.
- Wang, D. (2003). Metacognitive Strategy Training and Learner Autonomy. *Teaching English in China*. 26:43-46.
- Winne, P. & Nesbit, J. (2010). The psychology of academic achievement. *Annual Review of Psychology*. 61:11 653-678.
- Yohannis, T. (2012). Implications of Schema-based Pre-Reading Tasks in Facilitating Comprehension. *Ethiopian Journal of Education & Science*. 8(1):1-10.
- Yoosabi, Y. (2009). "The Effects of Reciprocal Teaching on English Reading Comprehension in a Thai High school Classroom". Unpublished Dissertation. Retrieved 22 June 2016 from: thesis.swu.ac.th/swudis/.../Yuwadee_Y.pdf.
- Zarillo, J. (2007). Are you prepared to teach reading: A practical guide for self-assessment. Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Zhang, L., & Seepho, S. (2013). Meta-cognitive Strategy Use and Academic Reading Achievement: Insights from a Chinese Context. *Electronic Journal of Foreign Language Teaching*. 10(1):54-69.
- Zhang, L., & Seepho, S. (2012). Effects of MST (Meta-cognitive Strategy Training on Academic Reading Comprehension of Chinese EFL Students. *US-China Foreign Language*. 10 (2):933-943.
- Zhang, L., & Wu, A. (2009). Chinese senior high school EFL students' meta-cognitive awareness and reading strategy use. *Reading in a Foreign Language*. 21(1): 37-59.