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Exploring Effective Reading Strategies that Promote Higher Level Thinking and Comprehension for a Chinese-speaking College Student

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Exploring Effective Reading Strategies that Promote Higher Level
Thinking and Comprehension for a Chinese-speaking College Student

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April 28, 2015

Submitted in partial fulfillment of the requirements for a Master of Arts in Education degree.

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By

Panyang Wu

2015

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ABSTRACT

The purpose of the case study was to explore some effective literacy strategies that prompt higher-level thinking abilities to help one Chinese English as Foreign Language (EFL) student who struggles with academic reading in college classes at a small, liberal arts college. Only one participant named Cathy was involved in the study. Cathy is a Chinese student who studied at college as a regular undergraduate student and had poor performance in her college level literacy class, as indicated by her professors and Cathy herself. Cathy was expected to improve reading comprehension by receiving an intensive one-month reading development intervention, which included seven interventions related to comprehension and higher-level thinking about text. The research employed both qualitative and quantitative measures for data collection and analysis. Data sources included: A qualitative reading inventory, pre- and post-tests, field notes, recordings of class sessions, and informal interview questions. The data were analyzed using coding of the qualitative data and by triangulation all the data sources to determine whether higher-level thinking abilities were gained during the reading intervention. The learning and gains formula was adopted to measure the improvement from pre-to post-test. The results revealed that high-level thinking abilities happened during the strategy lessons that comprised the seven interventions. The results also showed there was a significant improvement in reading comprehension at the end of the one-month period.

Section One

Introduction

As an international graduate student at Otterbein University, I have been working as a reading tutor for the Academic Support Center's Writing Center as part of my independent study courses. My job was to support the EFL students, who struggled for reading and had poor performances in college-level English literature class. Specifically, I had to provide practical reading strategies and guidance when they read. Professors at Otterbein recommended some of their Chinese students to come to the writing center for extra support. It seems it becomes more and more noticeable by the professors that there is a literacy gap between English speaking students and Chinese students. At writing center meetings at the Academic Support Center, the director and other teachers discussed the issues Otterbein professors had with non-native English speakers. For example, some Chinese students earned poor scores on reading quizzes, they did not prepare the assigned reading before the class, and the students experienced a hard time understanding and breaking down the homework requirements to complete fully developed writing assignments about their reading.

Moreover, as the number of Chinese students studying in the US colleges has increased rapidly, researchers have placed more and more attention on academic achievements and problems encountered by Chinese students in English-speaking colleges (Aghajanian & Wang, 2013). Chinese students at various institutions have identified English-related skills, such as listening ability, lecture comprehension, reading comprehension, note taking, oral communication, vocabulary and writing, as being

problematic for their learning (Lee, 1997; Lewthwaite, 1996; Senyshyn, Warford, & Zhang, 2000). A New Zealand study established that working hard did not necessarily result in good grades for international Chinese students (Holmes, 2004). The study noted the ways students lacked discussion skills, listening comprehension during lecture, and reading comprehension of course texts. As a result, learning reading skills and enforcing higher-level thinking ability play important roles in college-level study and correlate with academic achievements.

Taking the above-mentioned factors into consideration, it becomes apparent that effective academic reading strategies might benefit college-level Chinese students in terms of understanding the content, doing better on quizzes, and generating personal thinking toward the readings of the class. This realization led me to pursue a capstone project that might supplement my future TESOL (Teaching English to Speakers of Other Languages) career in China with some authentic teaching experience related to academic literacy skills.

Significance of the Study

Reading is most emphasized in traditional foreign language teaching and learning, and, even today, is the primary task of English as Foreign language (EFL) instruction in many countries (Susser & Robb, 1990). Meanwhile, in comparison with the teaching of other aspects of language use--such as grammar, listening, speaking, and writing--reading has received the most attention from English as Second Language (ESL) teachers (Aebersold & Field, 1997). Grabe and Stoller (2002) indicated that becoming a highly proficient reader in a second language is very difficult. It is also found that many non-native English speaking students have difficulties in understanding what they read, especially complex, academic texts (Snow, 2002). Moreover, second language readers, to some extent, still have difficulties

in comprehending texts thoroughly, despite passing tests such as the TOEFL, which is a college entrance exam of academic English skills (Eskey, 2005).

In the 2014 spring semester, I worked with several Chinese students in the form of “reading tables” and “conversation tables” for the Otterbein Academic Support Center. During the one-semester long tutoring sessions, I observed some common reading habits in these Chinese students. For example, they tended to stop reading every time they found new words that they did not recognize, and they looked up those words in a dictionary. This slowed the process of reading tremendously. Likewise, they read without a pen or highlighter in their hands, which means they seldom marked or wrote down notes of spontaneous thinking or personal observations that are generated in a high-level reading process. Moreover, these students failed to remember details from the text, when they took reading quizzes for their reading class, and they seemed to lack abilities to articulate an analysis of the text, when they were asked to finish reflective papers after reading.

It seems that EFL students at a college level lack many important reading abilities, such as vocabulary identification strategies, metacognitive reading strategies or the strategies that support comprehension of complex and difficult texts, and personal connection making that helps readers formulate analyses of the text. Thus, this study aimed to explore effective reading strategies to help Chinese students who are deficient in effective reading strategies of complex, academic texts. The research questions that framed the study were,

1. What are some reading strategies that prompt higher-level thinking abilities?
2. How can we approach these students’ problems with effective critical literacy reading strategies and academic support that allows for meaningful comprehension development?

3. How do we, as EFL facilitators and professors with limited experiences teaching international students in their classes, motivate higher-level thinking abilities that prompts critical literacy technique for both meeting the college level reading and personal reading development?

This capstone study could provide authentic experiences in supporting non-native English speakers for an academic reading, lessening the literacy gap between non-native English speaker and native English speaking students so they can better understand what they are reading and thinking critically. Further, this study would expectedly heighten the awareness of how American college professors and staff in the field of teaching language and literacy make the content more accessible to Chinese EFL students and other non-native English speakers.

Section Two

Literature Review

This review attempts to explore the academic difficulties that international students confront when they enter U.S. colleges. It will reveal research findings on the cognitive perspectives on reading comprehension and on reading strategies related to higher level thinking ability. It will also introduce academic literacy and advanced reading comprehension as a shared challenge for international students.

International Students in the U.S. University

Today, studying abroad is a common practice whether the experience is a short period of time, typically spending one semester in another country to study the language, or long-term, relocating to a different nation to complete a degree program. According to the report from the Institute of International Education, in 2012-2014, colleges in the United States, enrolled a record 886,052 foreign students, among whom Chinese students accounted for almost 60 percent of the foreign students.

With the increasing number of international students studying in U.S. universities, research finds that they all experience various culture differences, adapting themselves into a new environment, and fitting into the college academic system. Business professors, according to Tompson and Tompson (1996), indicated that international students' most unproductive behaviors were studying with and sitting next to same-country peers, and avoiding questions when they were unclear about assignments. The expectation is that students likely prefer the learning systems to which they are most accustomed (Andrade, 2006). Ladd and Ruby (1999) discovered that although 80 percent of the students surveyed

identified the lecture as the most common mode of instruction in their homelands, their preferred learning approach was direct experience, involving contact with topics and situations related to their studies. Findings indicated that this group of students preferred to work alone, which supports a common view that international students dislike group work (Sarkodie-Mensah, 1998). Moreover, instructors in the Robertson (2000) study felt that international students lacked critical thinking skills, had difficulty understanding spoken English and had weak writing skills in English. Despite the language gap between international students and English speaking students and the facts that educational systems and ways of thinking are cultural, international students confront more complex challenges of interacting with literacy and using skills and strategies that they have not previously learned or adopted.

The Challenges of Reading Comprehension at the College Level

Reading is the key to academic success for all students (Tavakoli, 2014). Experienced readers are able to construct meaning from a variety of texts. All teachers want to help their students develop comprehensive reading strategies. Teachers of ESLs try their best to cultivate effective reading skills in the L2. According to River (1981), most of the English learners in a foreign language context will never have the chance to converse with native speakers, but they will have access to the literature and scientific and technical materials written in English, which is what they need to assist them with further studies or in their work. Eskey (2005) reported that it is reading where many EFL students access the richness of information in English. However, college students' reading abilities have consistently been an area of difficulty. Reading and literacy in English is challenging for students who study in American.

universities. In 1995, according to the statistics from U.S. Department of Education, 20% of the students at a public two-year college, 8% at a public four-year college, and 10% at private college commenced their studies with less than adequate reading comprehension strategies and entered developmental reading classes or attend assistance labs (Falk-Ross, 2001). Sanoff (2006) noted in a study that 41% of college professors thought that students, in general, were not prepared for college-level reading and had poor reading comprehension. The reading proficiency of college students has declined over the years partly because of competition from technology, including television, video games and the Internet (Anderson & Kim, 2011) Therefore, the need to address the problem of college students' reading comprehension skills is critical, especially for those who are double challenged with reading and learning in a second language.

Reading Comprehension

The primary goal for reading is “comprehension,” and everything else that happens during reading is a means to this end (Goldenberg, 2011). Comprehension is the ability not only to know the meanings of words, but also to understand the ideas in a text and the relationships of those ideas (McNamara, 2007). Traditionally, readers were regarded as passive recipients of text information, possessing many sub-skills which automatically apply them to comprehend all kinds of texts; that is, it was assumed that reading comprehension occurred automatically (Dole, 2000). In the 1970s, a conceptual shift to a cognitive model of learning stressed that reading is an interactive process and comprehension is a constructive process (Dole, Duffy, Roehler, & Pearson, 1991). Han (2009) reported that the whole language approach which treated reading as a literacy skill may lead to better comprehension.

A major advocate of whole language reading instruction is Goodman (1973). One line of early reading research carried out by Goodman (1967) was from a psycholinguistic perspective via qualitative methods. Goodman suggested that reading is a process of constructing meaning from text by using background knowledge, psychological strategies, including sampling, predicting and inferring, confirming and integrating.

In *I Read It, But I Don't Get It: Comprehension Strategies for Adolescent Reader*, Chris Tovani (2000) disclosed that students are taught to read purposefully in elementary school. Reading encompasses more than the ability to pronounce words from left to right; it also includes the ability to extrapolate implicit and explicit meanings from those words, form judgments about those words, and connect them to other texts. It is “the cognitive process of getting meaning from or putting meaning into print and/or sound, images, and movement, on a page or screen, used for the purposes of analysis, synthesis, and evaluation” (Horning, 2007, p. 112).

Second Language Reading Comprehension

Research on reading strategies in second language context demonstrated reading strategies can be taught to students, and that they can bring improvement in their reading proficiency. One area of focus in the research is metacognitive reading strategies. Metacognitive reading strategies are defined as strategies that function to monitor or regulate cognitive strategies (Skehan, 1993). Barnett (1988) found that the proficient ESL readers showed more awareness of their using metacognitive reading strategies in reading comprehension than less proficient readers. According to Chern (1993), there was a positive relationship between readers' metacognitive reading strategies and their reading

comprehension. She found that the good learners used more metacognitive strategies which differentiated them from the poor learners. In Song's (1998) research, she gave four concrete metacognitive reading strategies including summarizing, questioning, clarifying, and predicting to 68 first-year students at a university in Korea and used pre-test and post-test to measure the improvements made by all selected students. The results showed that low and intermediate proficiency groups made more improvement than high level readers, which indicated that metacognitive reading strategy training may be more helpful for less proficient reader although it still enhanced proficient readers with their reading ability. Moreover, Shokrpour (2009) explored the effects of instructing metacognitive strategies on Iranian EFL readers' comprehension. After a four-month inventory, the results of pre-test and post-test design showed improvement made in the experimental group who were trained to use metacognitive strategies in their reading tasks as compared with the control group. Another study was conducted by Qanwal (2014) to explore a correlation between metacognitive reading strategies instruction and learner's proficiency in text comprehension among higher level ESLs in Pakistan. Forty students were randomly selected from the department of English at the Islamia University of Bahawalpur. The participants were required to assess different types of reading strategies instructions used by their teachers in the form of questionnaire and take a reading comprehension test in order to check their reading ability. The result showed a very strong positive correlation between using metacognitive reading instruction to ESLs and proficiency in text comprehension. With a view to the found correlation, it can be proposed that learners' comprehension might be the outcome of metacognitive reading instruction given by their teachers. These studies all confirmed that

skilled ESLs use more strategies involving higher-level thinking than less skilled readers.

Taking a look at studies above, research about reading strategies is mostly conducted on the sample of students who are English major. While other research focusing on adolescence literacy teaching were specialized to ESL/EFLs who are in beginner level or in a language program that provides readiness for college enrollment. Hence, there is still a paucity of research into exploring the effective reading strategies enhancing the higher-level thinking ability to college non-native English students for the sake of achieving critical comprehension and improved academic literacy in college- level classes.

Section Three

Methodology

This capstone was a case study conducted on a single subject, named Cathy, a Chinese woman who studies at a Midwestern University in the United States as a regular student. In this case study, she received one pre-test, one post-test and seven different treatments concerning reading strategies and higher-level thinking ability within one month. This case study was completed with multiple measures, including the Qualitative Reading Inventory (QRI), informal assessments during each session and self-assessments conducted by Cathy. Cathy will take a pre-test at the beginning of our tutoring and a post-test at the end our treatment.

Participant

This study was conducted on a single subject named Cathy, who self-identifies as ethnically Chinese and practices the cultural traditions of China, such as speaking Chinese (i.e., Mandarin, Fujian dialect) in her home and in most other settings outside the classroom, and studied in China until she graduated from middle school. Cathy currently lives with her aunt who has been living in Columbus for 10 years and went to a high school in a Midwestern suburban district. After graduating from high school, Cathy enrolled at a university as a regular student in the finance major. As such, Cathy has more experiences in both daily life and academic background compared with other international students from China as exchange students.

The reason I chose Cathy as the subject of my case study is that she experienced a hard time in her English literature class because she did not seem to use many reading

strategies and higher level thinking abilities. Her professor for the literature class turned to the Academic Support Center for help, claiming that Cathy has a poor performance on class quizzes and fails to fully develop answers to open-ended questions about the book. Moreover, Cathy's class schedule did not overlap with this tutoring program. She could attend all 14 hours of the intervention I planned, including the pre- and post-assessments, which ensures the whole study could be consistent and coherent.

Procedures

The study comprised an intensive one-month reading development intervention in which the Cathy was expected to improve reading comprehension and higher level thinking abilities by receiving seven interventions related to vocabulary, close reading, and interpretive reading. I defined close reading as skimming and scanning, pair reading, and word analysis, and I defined interpretive reading as reflective reading, self-monitoring reading, and summary writing. The book selected as reading material was *The Woman Warrior: Memoirs of a Girlhood Among Ghosts*, a memoir, or collection of memoirs, by Maxine Hong Kingston, published by Vintage Books in 1976. The book has also been chosen as a must-read English literature for her Integrative Study (INST) in the university.

The seven interventions were implemented in 14 sessions as strategy mini-lessons. A mini-lesson (Robb, 1999) is a short lesson with a certain focus that provides instruction in a skill or concept that students will then relate to a larger range of knowledge. The seven mini-lessons tackled with building background in literature, word analysis, skimming & scanning the text before reading to activate prior knowledge, paired reading, reflective reading, self-monitoring and summary writing (Table 1). Each intervention was introduced

and practiced in a two-session cycle. The two-session cycle made it easy for Cathy to learn new strategy and practice with the prior strategy given in the previous session in a coherent way. Each session included introducing strategies and literacy tools, independent reading conducted by the student, and a measurement time, altogether lasting about 45-60 minutes.

Strategy Lesson Title	Mini-lesson: Think aloud with Guided Practice	Intended benefits of the strategy	Independent Practice & Assessment
Building Background	Using online resources to help you build your background Higher level question sheet to locate important fact of background info	Selecting important information to have a general view of a book Distinguishing important from less important ideas in text building connection between the known and new	Creating a graphic organizer to record the important background facts
Word Analysis	Using prefix and suffix sheet to enlarge vocabulary, to determine the meaning of the word Using context to acquire word meaning	Building vocabulary for Cathy	Creating tutee's own prefix and suffix sheet that derived from the a part of text we are working on
Skimming & Scanning	Reading one section of Shaman using skimming and scanning	Enhancing the speed of reading through Setting reading purpose and activating prior knowledge	Answering questions of factual information appeared in the text
Paired Reading	Reading one section with tutee in the book Woman Warrior, pose questions when reading and retelling	Asking questions of themselves, the authors they encounter, and the texts they read	Asking questions related to the book encountered
Reflective Reading	Reading Chapter Shaman and sharing my experience that is similar to a character's motives, thoughts, and feeling in the story	Searching for connections between what they know and the new information they encounter in the text they read	Small writing: Make connection between text-to-self, text-to-another text and text-to-world
Self-monitoring Reading	Making prediction, Supporting Adjustment	Setting purpose to reading Enhance and monitor understand	
Summary	Summary writing	Comprehensive synthesis ability that combining new information with existing knowledge to form an original idea or interpretation	Small writing: give a summary to one of the chapter we've read

Table 1. Reading Intervention Session Plan for the Seven Strategies Focused on Interpretive and Close Reading

This study was completed with both quantitative and qualitative measures for data collection and analysis. Cathy took a pre-test at the beginning of our tutoring intervention program and a post-test at the end the program. The post-test aimed to determine how much progress was made by Cathy. Although this study did allow me to determine which specific strategy had an effect on Cathy's interpretive reading, all the strategies focused on improving interpretive and close reading, so claims could be made about general strategies that support interpretive and close reading. After the one-month treatment, all the data (Table 2) including written documents, Cathy's thinking-aloud, informal assessments, pre-assessment and post-assessment were synthesized.

Data collection and analysis

The purpose of the study was to explore effective reading strategies that enhance interpretive reading capacities and overall comprehension and high-level thinking, so a mixed method study organized as a case study of single learner was used to determine the merits of a reading intervention program focused on interpretive reading and comprehension. Four data sources were collected (Table 2) and data analysis included coding the qualitative data for patterns related to Cathy's understanding and good use of the strategies and using a learning gain formula to determine the gain or growth in comprehension between the pre- and post-test reading assessments. I re-read the codes to determine which patterns were the strongest ones in all the data sources.

Data Source	Quantity
Copies of Cathy’s written documents including entrance card, exit card, summary, open-ended questions sheet, surveys,	20 pages
Transcripts of Cathy’s thinking-aloud during part of sessions	3
Tutor’s field notes recorded during and following participant observation	5
Pre-test and Post-tests of comprehension skills	8

Table 2. Data sources of the study

Then, I used analytic induction (Lincoln & Guba, 1985) to search for similarities in multiple sources and then developed claims (e.g., the self-monitoring reading intervention strengthened higher level thinking skills). Only ideas that were present in a minimum of two data sources became the grounds for a claim and were further analyzed. For example, the fact “her comprehension ability became sophisticated” can be traced back in written documents, transcripts, and field notes. The analysis of each claim led to convergence on several central conclusions.

At last, I used the learning gain formula to measure the improvements Cathy made during the tutoring period, examining the results deriving from Cathy’s pre-assessment and post-assessment test scores. I integrated these data into the qualitative data and the claims made about the qualitative data. In short, the gains supported the other findings.

Section Four

Findings

The seven interventions were designed to help Cathy with different ability towards reading. Building background, word analysis and skimming and scanning sessions aimed to provide foundational skills. The practices of paired reading, reflective reading, self-monitoring reading and summary writing focused on training higher level thinking abilities. In this chapter, we report the findings related to improvements in overall levels of reading comprehension, the ability of using academic reading strategies, and reading speed. Likewise, interventions such as self-monitoring reading and reflective reading yielded higher level thinking process.

Learning Gains Results from Pre- to Post-test

Using the learning gain formula, I saw Cathy's improvements from pre-test to post test in using reading strategies to enhance her reading speed and the ability of acquiring factual and detailed information in passage. The pre-test and post-test were two different tests including three passages and eight questions. All the passages came from the International English Language Testing System (IELTS). IELTS is an international standardized test of English language proficiency for non-native English language speaker. It is one of the major English-language tests in the world which was designed by Cambridge English Language Assessment, the British Council and IDP Education. The questions towards each passages ranged from lower level such as choosing the best description to the word in the passage to higher level question such as analyzing the purpose of author.

Cathy got 50% in the pre-test before any invention was given to her and 72% in her post-test after we completed all the inventories. The gain between the pre and posttest was 0.44. The test indicated that the positive gains between pre and post-tests did exist for Cathy. Figure 1 displays the increase of Cathy's scores.

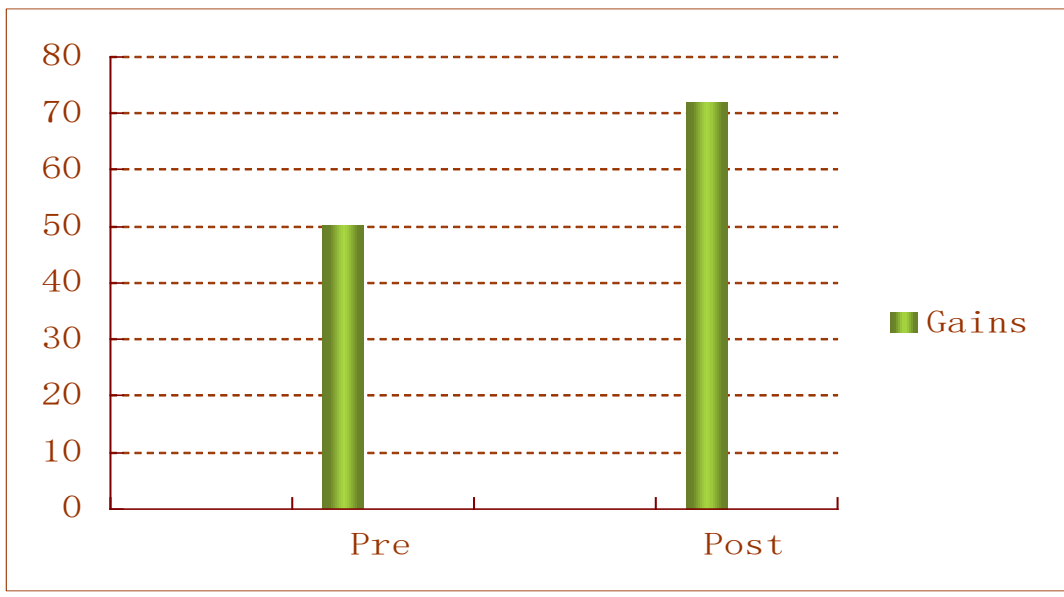


Figure 1. Learning Gains for Cathy from Pre-test to Post-test

Result for Cathy's learning gain may indicate that Cathy used reading strategies such as skimming and scanning, reading with a purpose, vocabulary building and the other strategies we practiced. It is not possible to say the intervention caused the gains in comprehension, but in a short time period of one-month, it would be unlikely for Cathy to develop a .4 gain without any support. The gain result suggests intervention in academic literacy support promote reading comprehension. Because Cathy needed to complete both pre-test and post-test in 20 minutes which forces her to apply reading strategies given in the inventories. It also implies that Cathy's higher-level thinking abilities got strengthened in that both pre-test and post-test demanded not only memorizing detail and factual content (lower-level thinking), according to Bloom's Taxonomy, but also higher level thinking such

as inferring author's idea, selecting the best statement that summarized the paragraph (higher-level thinking). Thus, the learning gain (0.44) from pre- to post assessment shows that the seven interventions help Cathy start using reading strategies and thinking more advanced while reading.

Self-monitoring reading intervention strategy strengthens higher level thinking

Self-monitoring relates to the concept of "metacognitive awareness," which is "knowing when what one is reading makes sense by monitoring and controlling one's own comprehension" (Harris & Hodges, 1995, p. 153). By giving the self-monitoring in terms of introducing reading, predicting, retelling, and adjustment (Robb, 2003), Cathy's thinking toward the content of the book and the author's perspective became more and more sophisticated, evidenced when she wrote the summary and answered the questions challenging her higher level thinking abilities. In a typical example of this, drawn from a transcript of one of our tutoring sessions about self-monitoring, Cathy was able to fully develop her thinking by making claims and finding supporting evidence in the content.

Teacher: Who is the main character in this chapter?

Cathy: Brave Orchid.

Teacher: What do you think of the main character Brave Orchid? Yes, that is the most important part of her character. Why do you think she is brave, what make you think she is brave? What else do you think of her.

(Cathy was looking up the details in the book back and forth)

Cathy: I feel she is smart, independent

Teacher: She is smart because? Could you find any supporting fact in the book?
(Cathy was underlining in the book)

Cathy: Yes, Brave Orchid let other classmates copy her answer during the test. She receives high scores in assignments and tests. She memorizes medical term quickly. She believes in the existence of ghost even she is smart in school work. People don't believe in ghost nowadays. She spent the whole night in the room that people believed all the ghost were living there. She fought with these invisible ghost and set fire to burn them. In these case, I think she believes that

ghost really existed and she can conquer those ghosts.

Teacher: She is superstitious. Superstitious is a belief or notion, not based on reason or knowledge.

(Cathy continued browsing the book)

Teacher: You gave me smart, brave and superstitious. Which one do you think is the most important features of Brave Orchid.

Cathy: Brave.

Teacher: Because?

Cathy: Every story told in the chapter is showing that she is very brave.

In this typical example, when Cathy was first asked what the feature of the *Brave Orchid* is, she could barely answer with one word, which was “brave.” The feature of brave is pretty obvious because Cathy could know this by just read the name of the character rather than making sense of what she is reading. Students sound like good readers because they can “read” all the words. However, when you ask them what the selection was about, they might simply reply, “I read it.” They are unable to recount what they read because they have not been actively engaged in thinking about what they were reading. In other words, they lack self-monitoring as they read (Guisinger, 1988). Unless students are self-monitoring while they are reading, they cannot truly comprehend the text. When Cathy listed the details such as, “Brave Orchid received high scores,” “she memorizes very quick,” and “she fought with invisible ghost,” it seems that she may have reviewed in her mind about what she had read and interpreted the text.

In the later stage of the intervention, after practicing the self-monitoring strategy of read, pause, retell, re-read, and adjust, Cathy started to reread the book and supported her idea by giving me more supportive facts by rereading the book. Re-reading is a way of seeing evidence that a reader is self-monitoring. It is noticeable that when Cathy gave me the second (smart) and third words (superstitious) to describe the character of Brave Orchid, she spontaneously supported her idea with evidence. Moreover, she also was challenged by

choosing the most important fact about Brave Orchid, which forces her to adjust and confirm her previous thinking. Good readers use metacognitive strategies to think about and have control over their reading. While they are reading, they might monitor understanding by adjusting their reading speed to fit the difficulty of the text or use their “fix-up” strategies to reread, read ahead, or identify the area of confusion (Robb, 2000). In a word, self-monitoring was an area of improvement for Cathy. Cathy used to complain that she hated going back and finding different support and she felt overloaded by interacting with the literature when she was struggling with tons of unknown words. It seems she failed to identify what she does not understand during reading or self-monitor her reading (Robb, 2003). Self-monitoring treatment and an emphasis on training metacognitive ability gave Cathy a new experience in dealing with English literature.

Self-monitoring strategy promoted better comprehension towards reading in terms of writing summary to the chapter Cathy read. In a written document , Cathy selected the plots that strongly effect the development of the whole story in her summary and highlighted brave and tough as two most important merits of the character, which made it a compelling evidence showing that she was controlling her own comprehension. Cathy wrote:

She describes all the American people are ghost and she can not accept anything in the US when she first came to this country. Brave Orchid finally accept these “ghost”, American life and people. She wants her daughter can fit in and stay with her in the US. She is brave and independent she conquer this like she fight with the ghosts in the midwife school back in China. She fears nothing.

Cathy made an analogy between Brave Orchid successfully fought with the ghost in the midwife school in China and fitted herself into the life surrounding with various western ghosts in the U.S.

In the field note I took during the whole session, I noticed that Cathy gradually made longer notes when she read and underlined some sentences she thinks important to better understand the chapter.

Reflective reading intervention strengthens higher level thinking

Research suggests that reflective reading strategies are fundamental to higher levels of academic literacy (Damico, et. al., 2009). These reading strategies ask students to connect the beliefs and experiences they have to the texts they read. Connecting to books can deepen our understanding of personal values, family relationship, and universal problems, hopes, and dreams (Robb, 2000). As a result of the month-long focus on academic reading strategies, we believe Cathy comprehended the book, *The Woman Warrior*, in stronger ways by making connections between the text and her personal experiences, as practiced in several tutoring sessions.

A typical example of Cathy possessing a deeper insight to riches that the author Kingston held was her written answer to the questions and prompts about making connections. The question during the tutoring session was, “Have you lived through similar situations? Can you relate the text to yourself when you first came to America and connect that to Kingston’s childhood experience in living in the U.S?” Cathy wrote the following:

When I first come to America, I found that people here are different with Chinese. The way they talk to people is different. For example, in China when you saw the people, you don’t know they will never say hi to each other. But in America, even you don’t know the people, they smile at you and say hi to you. At the beginning, I was scared when people say hi to me. Kingston’s childhood in the America is full of scaring by the American people.

In this written document, the question required Cathy to give specific examples from

her daily experiences, which promotes higher level thinking strategies applied to reading literature. Cathy linked her personal experiences to the author of the book, Kingston. She found the feeling of anxiety that was shared by herself and the author. Connecting her real life experience to what she read made it easy for her to go deeper into the book because this connection created a resonance fulfilled with vivid memory and similar feeling, which made it unforgettable.

Cathy's improvement in the area of reflective reading were also demonstrated in the transcripts of recordings of her think-aloud during the session.

Teacher: Why Kingston wrote so many word of moth ghosts stories from her mother Brave Orchid at the beginning of the chapter?

Cathy: Her mother had a great impact on her by telling stories.

Teacher: What impact exactly?

Cathy: The ghost stories leave her a bad impression when Kingston was little. Good impact was Kingston became brave like her mother.

Teacher: Why they call American people ghost?

Cathy: Chinese people and American people are totally different. The stories scared Kingston. She hardly accepts all the "ghost" because her mother never speak to the "ghost". I will do the same, to following my mother, if she regards American people as ghosts and never speak to them. Because Kingston eager to get love and attention from her mother.

When Cathy said "because Kingston eager to get love and attention from her mother, it seems that she may have used her perception to understand the author's feeling in the book.

The reflective reading intervention improved Cathy's higher level thinking ability because she reaches analysis of arguments ("Why Kingston wrote so many stories?"), making inferences, using reasoning ("I will do the same"), judging or evaluating ("The ghost story leave her a bad impact"), and making decisions ("follow my mother" action). Most recently, the Parternship for 21st Century Skills has identified higher level thinking as one of several learning and innovation skills necessary to prepare students for college education and the

workforce. In addition, the newly created Common Core State Standards reflect higher level thinking as a cross-disciplinary skill vital for college. In this way, making personal connections in terms of examining the experiences and beliefs they bring to the book they read cultivates the higher level thinking.

Section Five

Conclusion

Using and acquiring a range of reading strategies is extremely important for non-native speakers of English at the college level because it serves as an effective way to overcome language gaps and obtain better understanding in college classes. Providing a focused intervention on higher level thinking and metacognitive reading made Cathy improve her critical response toward reading from a challenging college class. Changes in several areas of comprehension development occurred. Her comprehension ability became more sophisticated, more critical, and more productive. These changes were noticeable through her participation, in the assessments, and from my observations. Although the study involved only one student in the case study, it provides a depth of knowledge about complex phenomena (Hammersley, 1992) and responds to the need for an increased number of investigations of approaches to literacy teaching and learning for non-native English speakers (Shanahan, 1997).

One potential take-away from this project is for the Academic Support Centers that many higher education institutions have available to students. This capstone provides ESL tutors in college level and international students who struggle with college level literacy with seven interventions which enhance both reading skills and higher-level thinking ability. Moreover, it offers ESL/ELL tutors and students themselves some effective approaches for construction of useful literacy strategies for success in college classes and application in their learning. ESLs in college developmental reading support need to be introduced to all these strategies and to have them explicitly planned, modeled, practiced, and discussed in order to narrow the literacy gap between professors' expectation toward both English speaking

students and non-native students and the reality. Besides ESL supporting tutor should stress the importance of introduction and mastery of higher-level thinking ability for its close relationship to better comprehension.

Finally, with a major focus of the college in the U.S. on critical thinking on academic work and literacy reading, international students must equip themselves with practical reading strategies and critical literacy techniques that facilitate better comprehension and academic achievements. However, many international students entered U.S. Colleges without efficient reading skills to engage the literacy classes. This study builds on previous research, describing some approaches that allow non-native college student to reach a meaningful and appropriate comprehension.

Limitations

Although carefully constructed, this study has limitations. For example, the sample size was limited with only one Chinese student involved in the study. Therefore, some inventories yielded the growth of critical literacy ability to Cathy might not be less effective when given to a larger number of students or students from other country. Another limitation was the literacy that I used for the whole treatment. Cathy read the first and second chapter of the book *The Woman Warrior* in her women literature class when she was a freshman.

Although she claimed that she understood nothing when she was reading the book for the first time. This could cause a better comprehension coming from previous familiarity rather than from the seven inventories. To achieve a greater level of objectivity, new literacy would have been selected. Unfortunately, due to restraints from time and heavy school work, it was difficult for me to overload Cathy with a total new book that both Cathy and I need to start

over. Cathy gave two hours for each session.

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