Teaching Metacognitive Skills to Adolescents to Further Reading Comprehension

Danielle E. Bartl  
*St. John Fisher College*

Follow this and additional works at: [https://fisherpub.sjfc.edu/education_ETD_masters](https://fisherpub.sjfc.edu/education_ETD_masters)

Part of the Education Commons

How has open access to Fisher Digital Publications benefited you?

Recommended Citation


Please note that the Recommended Citation provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit [http://libguides.sjfc.edu/citations](http://libguides.sjfc.edu/citations).

This document is posted at [https://fisherpub.sjfc.edu/education_ETD_masters/48](https://fisherpub.sjfc.edu/education_ETD_masters/48) and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.
Teaching Metacognitive Skills to Adolescents to Further Reading Comprehension

Abstract
This action research report looks at how metacognitive teaching strategies help to improve upon adolescents' reading comprehension and self-regulated learning. Educational theorists support teaching specific metacognitive learning tools to further students' comprehension and self-regulation through appropriate application of the strategies learned to various literacy experiences. This study's methodology focused on observing two practicum candidates incorporating metacognitive instruction into their literacy lesson plans and each of their three students' responses and growth in their comprehension and self-regulatory learning. In alignment to the literature, my own findings further revealed the positive value of teaching metacognitive strategies to students' to further their comprehension and self-regulation learning. My research suggests for teachers to incorporate various oral communicative and self-reflective activities and also model the metacognitive strategy taught in regards to a specific literacy experience.

Document Type
Thesis

Degree Name
MS in Literacy Education

Department
Education

First Supervisor
Gloria E. Jacobs

Subject Categories
Education

This thesis is available at Fisher Digital Publications: https://fisherpub.sjfc.edu/education_ETD_masters/48
Teaching Metacognitive Skills to Adolescents to Further Reading Comprehension

By

Danielle E. Bartl

Submitted in partial fulfillment of the requirements for the degree
M.S. Literacy Education

Supervised by

Dr. Gloria E. Jacobs

School of Arts and Sciences
St. John Fisher College

May 2010
Abstract

This action research report looks at how metacognitive teaching strategies help to improve upon adolescents’ reading comprehension and self-regulated learning. Educational theorists support teaching specific metacognitive learning tools to further students’ comprehension and self-regulation through appropriate application of the strategies learned to various literacy experiences. This study’s methodology focused on observing two practicum candidates incorporating metacognitive instruction into their literacy lesson plans and each of their three students’ responses and growth in their comprehension and self-regulatory learning. In alignment to the literature, my own findings further revealed the positive value of teaching metacognitive strategies to students’ to further their comprehension and self-regulation learning. My research suggests for teachers to incorporate various oral communicative and self-reflective activities and also model the metacognitive strategy taught in regards to a specific literacy experience.
Teaching Metacognitive Skills to Adolescents to Further Reading Comprehension

Introduction

Today, many adolescents face various challenges in their reading comprehension due to diverse factors: low motivation, lack of confidence, immaturity, etc. However, by adolescence, these students have developed the necessary cognitive capabilities to be able to process abstract and other higher order thinking concepts (Cognitive Foundations, ND). By reaching the formal operations stage in their cognitive development, adolescents are capable of isolating variables as well as displaying combinational and proportional reasoning (Cognitive Foundations, ND). In effect, adolescents are capable of thinking processes that children are not, enabling them to monitor and reason about their own processes. Thus, adolescents have the capacity for metacognition—“thinking about thinking,”—which enables them to learn and solve problems more proficiently (according to Chalmers & Lawrence, 1993; Keating 1991; Kuhn, 1999, as cited in Cognitive Foundations, ND, p. 69).

Educational specialists recognize metacognitive thinking often as “more profitable that the knowledge itself” (according to Callahan, Clark, and Kellough 296, as cited in Joseph, 2006, p. 46). Fundamentally, metacognition enables learners to reflect upon their thinking, enabling them to recognize their strengths and weaknesses and gain the necessary skills to become problem solvers and/or self-regulated learners. Thinking about one’s own thinking allows a learner to develop tools to overcome challenging material that is difficult to comprehend.

Furthermore, research contends that [adolescents] “have more sophisticated interests and social skills, and those who struggle in reading have little patience for methods and materials designed for young children. Effective ... reading instruction must respond to adolescent student’s developmental needs and build on their strengths” (Slavin, Chamberlin, & Daniels,
Adolescence is a time of "interactions" between biological, behavioral, and social domains;" it is the transitioning period to adulthood (Dahl, 2004, p. 10). Teachers must capitalize and foster adolescents’ greatest need of independence by implementing multi-faceted activities that involve others. Through socially-facilitated experiences in the literacy classroom, teachers can build upon adolescents’ social cognitive development and utilize this energy to positively influence their metacognitive thinking and reading comprehension skills. Through discussing, questioning, retelling, and other oral communicative activities, adolescents metacognitive, literacy and self-regulated learning will be fostered.

Adolescents who do not develop metacognitive awareness in respect to their literacy development have difficulty acquiring the necessary skills (reading, writing, listening, and speaking), due to their lack of self-reflection and communication. In addition, students who are unable to apply metacognitive strategies have difficulty understanding higher order thinking concepts due to their abstractness and need to conceptualize in a more critical manner. Students who are metacognitive learners apply critical and reflective thinking skills that further develop their comprehension of various concepts and topics; all due to their ability to self monitor, analyze, and evaluate. Fundamentally, adolescents must learn and practice metacognitive skills and strategies through socially-facilitated instruction when developing their reading comprehension and skills as a life-long learner.

Theoretical Framework

Literacy as a Social Practice

Literacy acquisition is developed over time through varied experiences, practices, and materials in multiple discourses. Throughout the decades, a change in classroom literacy instruction is shown from the transformation of the autonomous to ideological model of learning
in the classrooms, where the traditional, teacher-directed learning has transformed to student-centered, inquiry-based activities (Larson and Marsh, 2005). Research shows that learners’ who take ownership in their own learning processes and learn the essential strategies to apply in various situations as capable of developing their comprehension and critical thinking skills. In addition, these new experiences and practices are heavily influenced by socially-constructed interactions and dialogues, which are essential to learners’ literacy acquisition in their discourses in and outside of school. Many researchers’ work (Freebody and Luke, 1999; Larson and Marsh, 2005; and Moll and Gonzalez, 2001) are representative of this new literacy recognized ‘as a social practice’ and contend that it is one of the fundamental components in learners’ reading comprehension and self-regulated learning.

Further, Larson & Marsh (2005) contend that there are four main theoretical traditions in which learners’ acquire literacy: New Literacy Studies, Critical Literacy, New Technologies and Literacy, and Sociocultural-historical theory. These authors’ argue for a balanced literacy framework, but one that focuses heavily on the social aspect of literacy development, thus, Sociocultural-historical theory. This viewpoint is represented within their ideological model where social learning is captured through Rogoff’s ‘changing participation’ and Gee’s little ‘d’ and big ‘D’ discourses (as cited in Larson & Marsh, 2005). Through learners’ engagement in various culturally-based, social experiences within their primary and secondary discourses, the acquisition of literacy and further learning skills emerge. Halliday’s (1969) seven utterances’ model, Goodman’s (2001) three generalizations of literacy and Freebody & Luke’s (1990) Four Resources model are all reflective of Larson & Marsh’s (2005) ideological model. According to all of the authors, in addition to Alexander and Fox’s five era’s of learning (as cited in Fresch, 2008), literacy is seen as a socially-constructed practice. Research shows that “...pedagogic
work, -- the actual labor of social interaction and discourse exchange that occurs in [varied contexts] – constructs and shapes… literate knowledge, power, and discourse” (Luke & Freebody, 1999, p. 2). These social experiences are all heavily mediated via interactions with others through ongoing discussions representative of questioning, analyzing, and critically reflecting upon various topics presented within various literacy opportunities.

**Comprehension and Socialization**

Furthermore, Freebody and Luke (1990) also discuss the current socio-cultural, economical, and political shift that is representative of the literacy practices and ideologies that are currently reflective of classroom practices today. The authors’ focus on the aspects of a successful reader and the four interrelated roles that must be learned and acquired: the code breaker, text participant, text user, and text analyst (p. 7). These roles indirectly observe critical aspects of writing as well, but heavily focus on reading comprehension and providing a balanced literacy framework that includes the ‘basic skills’, ‘communicative,’ and ‘critical’ approach to instructional practices. Freebody and Luke continually argue that literacy is a comprehensive set of social practices and ideological theories that engages learners’ in connecting letters and sound with the meaning of the text via making text to text, text to self, and text to world connections, through social literacy events. In addition, Freebody and Luke also recognize the importance of critical readers in a complex system of various social practices, theories, and pedagogical perspectives on how to teach literacy in various learning contexts.

Essentially, the authors’ believe in a student-directed learning environment that is representative of a collaborative, diversified, socially-facilitated setting in order to foster all learners’ reading comprehension and self-regulated learning processes. Adolescents are capable of these higher order thinking processes when provided instructional opportunities to critically-
think and reflect upon their learning through strategic, comprehensive, and social experiences. Today, classrooms with diverse socialization opportunities enable meaningful critical dialogues among peers and self-reflective thought, furthering learners’ reading comprehension and self-regulated learning skills. Research today indicates that metacognitive instruction within a socially-diversified context is one way to further adolescents’ reading comprehension and autonomous learning skills due to the strategic tools learned.

Metacognition

Researchers define metacognition differently based upon their specific interest and findings within the area. Schneider and Sodian (1997) define metacognition as “children increasingly becoming aware of their thinking—meaning their own personal knowledge state, the characteristics of tasks that have an impact on learning, as well as their own strategies to monitor their learning (as cited in Dignath & Buettner, 2008, p. 235). This differs from Schneider’s (2008) definition that states metacognition as “any knowledge or cognitive activity that takes as its cognitive object, or that regulates, any aspect of cognitive activity” (p. 114). This author’s definition exemplifies various cognitive researchers (Peverly, Brobst & Morris, 2002; Stavrianopoulos, 2007) that believe metacognition is the ability to reflect and apply cognitive skills to various situations to improve one’s knowledge base. Essentially, all researchers contend that metacognition is highly based on cognitive thought processes and a repertoire of learned strategies to utilize in various learning processes. Moreover, learners’ who possess metacognitive skills are able to apply specific strategies to various learning opportunities in which they participate, demonstrating ownership, control, and reflection of their own thinking processes: self-regulated learning.
According to Weinstein and Van Mater Stone (1993), “The future belongs to individuals who can identify their own learning needs and who have the resources to … orchestrate and manage their own learning activities (p. 32). … [In addition,] expert learners have an awareness of personal strengths and weaknesses, the knowledge about whether or not they have succeeded, and also the ability to create reasonable goals” (as cited in Maitland, 2000, p. 27). This statement aligns directly to the European Framework of Life-long Learning (EU Council, 2002) where it is stated: “Today’s society requires students to be able to learn in a self-regulated way during and after schooling and throughout their entire working life” (as cited in Dignath & Buettner, 2008, p. 232). In addition, more recent studies on self-regulated learning have found a significant positive impact on academic achievement and motivational learning through metacognitive learning practices (Schneider, 2008). Research indicates that learners who utilize metacognitive skills in their daily practices are demonstrating effective self-regulating strategies by showing effective monitoring, planning, evaluation, and motivation to carry out their daily endeavors.

Essentially, all of these skills (metacognition, comprehension, and communication) taught together create a balanced, instructional reading framework, one representative of various researchers’ work (Fresch, 2008; and Freebody and Luke, 1999; Larson and Marsh, 2005). Learners must engage in reading experiences and practices (think-alouds and retelling activities) like that of Maier and Vasquesz that are heavily-based on the sociocultural-historical theoretical framework (as cited in Larson and Marsh, 2005), demonstrating metacognitive, self-regulated processes. Through socially-constructed learning experiences, both learners’ oral and written language development, thus reading comprehension, will increase through explicit metacognitive, scaffolded instructional activities.
Research Question

Given that literacy is a social practice and learning occurs during social interaction, this action research project asks, how does metacognitive teaching strategies help to improve adolescents' reading comprehension and self-regulated learning processes?

Literature Review

Introduction

Metacognitive instruction furthers adolescents reading comprehension and self-regulatory processes through the specific strategic skills taught and utilized in the literacy discourses in which the learners' participate. Learners' who demonstrate metacognitive awareness are able to effectively self-regulate their literacy learning and communicate effectively with others in their various environments. Further, metacognitive learners' are able to problem solve with others by successfully applying skills such as monitoring, analyzing, and evaluating, due to their ability to self-reflect and critically think about their own thinking. Through critical analysis, learners' further develop their literacy and comprehension skills, as well as understanding of others and the world surrounding them. Through oral communicative means, such as peer to peer talk and retelling, learners' are able to conceptualize abstract thoughts and the underlying messages conveyed in various literary works via the ongoing dialogue and discussions with others. Moreover, by effectively applying metacognitive skills learned to various literacy and oral communicative situations, learners are able to effectively further their understanding of the literacy world surrounding them via the self-reflective and regulatory skills gained.

Background on Metacognition

According to Pressley, Borkowski, & Schneider (1989), the theoretical background of metacognition is within the Good Information Processing Model, which links procedural (control and self-regulation) and declarative (knowledge about people, tasks, and strategies)
metacognitive knowledge (as cited in Schneider, 2008). Essentially, this model shows how learners' utilize their general knowledge about the world, motivation orientation, strategies, and ability to automatically choose effective learning procedures to diverse situations. These researchers state that learners' specific strategy knowledge base directly influences the effectiveness of the metacognitive strategies applied to various learning experiences. Moreover, the greater strategy repertoire and opportunities learners have to apply these various metacognitive strategies, the more refined their skills become in metacognitive awareness and thinking. Further, Pressley et al. contend that learners who are able to apply more efficient strategies when learning are expanding their knowledge base, and even more so, demonstrating effective self-regulation skills which is the end goal to their success in the real world. Learners who possess self-regulatory skills, such as monitoring and evaluating, are able to further their literacy and reading comprehension skills due to their ability to apply strategic thinking tools and skills learned. Comprehension develops through application of strategies while reading and even more so, through reflection of the skills applied and an understanding of what works to certain situations. Learners, who utilize metacognitive skills to further their literacy learning, thus reading comprehension, are developing an overall awareness of their knowledge repertoire and how they learn best. Overall, metacognition enables learners to participate effectively in everyday reasoning and social interactions, which are critical to their daily practices and success within them.

As the researchers discussed (Peverly et al., 2002; Stavrianopoulos, 2007), metacognition and cognitive thinking processes do interrelate, but it is important to note the difference between both of their strategies (McCombs and Marzano, 1986). Metacognitive strategies refer to learners’ awareness, as well as control over their own cognitive thinking,
whereas cognitive strategies refer to learners’ cognitive processes during the practice of encoding information. This difference is essential when implementing metacognitive instruction because the learning experience must demonstrate the significance of the learner reflecting upon their own thinking. Furthermore, several researchers (Meloth & Deering, 1992; Schraw, 1998; Stavrianopoulos, 2007) suggest three main groups of metacognitive strategies: planning, monitoring, and evaluation. By practicing skills within these areas, learners should further develop their “thinking about thinking” skills as practiced metacognitive learners (Dignath & Buettner, 2008).

Following these skills (monitoring, analyzing, and evaluating), several researchers believe it is imperative for learners to understand how to use these strategies, as well as where, when, and why to apply them to their learning (Butler, 2002; Schraw, 1998, as cited in Dignath & Buettner, 2008; Wynn-Dancy & Gillam, 1997). All of these authors stress the importance of strategic instruction in order to provide learners with the specific strategies needed to apply to different learning experiences, which is proven in a study Meloth & Deering (1992) carried out on three areas of learning: task-related talk, comprehension, and metacognition. Results indicated that the students in the strategy condition scored significantly higher than their counterparts on the comprehension strategy measure due to the specific metacognitive strategies (evaluation, planning, regulation, and conditional knowledge) they applied to their literacy learning. This study further demonstrates the importance of strategic instruction in order to provide learners a repertoire of strategies to utilize in their learning endeavors in all of their discourses.

**Metacognition and Learning**

According to Nelson and Narrens (1990, 1994), self-monitoring and self-regulation directly correspond to two specific metacognitive levels of processing that are closely
interrelated (as cited in Schneider, 2008). These authors refer to self-monitoring as learners regularly watching where they are with their goal of comprehending and remembering, known as the bottom-up process. Similarly, self-regulation refers to learners’ control of their main executive functions, including: planning, directing, and evaluating, which is known as a top-down process. Teachers who understand how learners’ engage in metacognitive practices to further their learning can plan and carry out strategic instruction that supports their learning capabilities and needs to further develop their knowledge base and skills. According to Schneider (2008), it is critical for teachers to study metacognitive monitoring processes because monitoring is believed to play a fundamental role in directing learners how to study; a critical piece in knowledge expansion.

Definitions on self-regulated learning generally view self-regulated students “as metacognitively, motivationally, and behaviorally, active participants in their own learning process who self-generate thoughts, feelings, and actions to attain their learning goals” (Zimmerman, 1986, 2001, as cited in Dignath and Buettner, 2008, p. 233). Through metacognitive awareness and self-regulation, adolescents further develop their independence by continually reflecting upon their practices and setting short and long term goals based on their learning needs. This statement is in alignment with Stavrianopoulos’s (2007) research indicating students who utilize knowledge monitoring strategies are furthering their learning repertoire by effectively seeking academic help when necessary. According to the author’s findings, this ‘help seeking behavior,’ is a characteristic of students’ capability to monitor and evaluate what they learn; both serving as vital aspects of metacognitive learners’ growth, which further aligns to many other researchers findings (Meloth & Deering, 1992; Peverly et al., 2002; Schneider, 2008). Essentially, metacognitive practices enable learners to take charge of their own learning,
making them active participants who are aware of their learning needs and capabilities to further develop as self-regulatory individuals.

Slavin, Chamberlin, and Daniels (2007) also discuss the importance of goal setting and adolescent ownership in their learning based on their Reading Edge program, which has students set their own short and long term goals at the start of the academic year. These authors contend that unlike elementary students, adolescents are capable and have the motivation to look and plan for the future. By enabling adolescents to set learning goals with their teachers and peers, students are being further motivated to work hard and persevere when confronted with challenging material. These authors’ contentions are similar to Stavrianopoulos’s (2007) who believes adolescents who possess achievement motivation, metacognition, and academic help-seeking behavior together are capable of mastering tasks to reach their goals. This author further discusses the importance of knowledge monitoring as an active and instrumental approach to learning, as well as awareness of cognitive resources and control as primary aspects of learners’ metacognitive abilities to attain their learning goals. Essentially, Stavrianopoulos’s research has shown three components (metacognitive monitoring, academic help-seeking, and achievement goal orientation) as the vital contributors to academic success. Her contentions align directly to other researchers’ (Peverly et al., 2002; Schneider, 2008; Wynn-Dancy & Gillam, 1997) that believe further research needs to be done in all three of these areas to understand the differences in students learning.

Other authors further argue the importance of self-regulatory practices in order to enable application of metacognitive skills. Joseph (2006) believes it is important to note that “mood, affect, impulsivity, impatience, and aggression may prevent some students from appraising and managing their own behavior in the classroom,” causing them to resist change when
Joseph (2010) argues to continually embed self-reflective practices into instruction in order to encourage students to make reflection a key component to their learning. His further research findings indicate that “metacognition is vital to the social learning theory and personal development, indicating that appropriately focused metacognitive instruction increases practical intelligence, thus enabling students to gain greater insights into their learning strategies” (p. 100). Several researchers’ (Peverly et al., 2002; Schneider, 2008; Stavrianopoulos, 2007; Wynn-Dancy & Gillam, 1997) findings are similar to Joseph’s contentions that self-regulated learning and metacognitive practices work in conjunction with one another in furthering learners’ knowledge and skills in their daily endeavors. Even more so, these practices help further learners’ reading comprehension abilities via by teaching them to apply specific strategies to various learning situations through reflective processing skills of the literacy material. Through metacognitive and self-regulated learning processes, learners’ reading comprehension develops due to their ability to process abstract concepts through strategic and reflective thought.

**Metacognition and Reading Comprehension**

Several researchers’ (Carretti, Borella, Cornoldi, & Beni, 2008; Meloth & Deering, 1992; Peverly et al., 2002) contend that learners’ reading comprehension is furthered with the use of self-regulatory and metacognitive skills. According to Maitland (2000), struggling readers are unaware of how their reading is progressing, which leaves them unable to apply strategies to improve. Based on her research, as well as others, (Joseph 2006; Slavin et al., 2007; Joseph, 2010) metacognitive skills improve reading comprehension. Through its two essential aspects—reader awareness of personal resources in relation to the text and reader understanding of the self-monitoring processes (Baker & Brown, 1984, as cited in Maitland, 2000)—students’ comprehension and self-regulated learning capabilities are furthered. Carretti et al. (2008)
further explains this relationship by sharing the involvement of working memory (e.g. executive control of WM tasks) in reading comprehension. These authors’ data suggests that tasks that involve both maintenance and manipulation of information (those that utilize the executive functions) have a positive correlation with reading comprehension. Essentially, learners who actively participate with a text by connecting new pieces of information with prior knowledge are engaged in both the maintenance and merging of new knowledge into their working memory. By practicing self-regulatory and metacognitive skills (monitoring, organizing, evaluating, etc.) learners’ comprehension of material is growing because they are utilizing specific skills in accords with their working memory processes. According to these authors’ data, increasing working memory skills (self-regulation and metacognition) in poor comprehenders’ may create a positive shift on the aspects needed for them to better comprehend.

The positive link between metacognition and reading comprehension is further discussed by several other researchers. Weir (1998) indicates that readers who practice metacognitive strategies are able to access prior knowledge, monitor their comprehension, correct misunderstandings when reading, determine main points, draw inferences, and ask questions. These skills are similar to another researcher, Penticoff (2002) that also discusses what strategies are utilized by proficient readers. Her findings also note additional techniques, such as using sensory images, determining the relative importance of the text, and synthesizing new information. All of these skills are equally important in learners’ understanding of the reading process. Essentially, self-reflective learners are able to make the connection between the reader and the text and comprehend the author’s voice and message, both skills that are vital to literacy comprehension and can be developed through the use of metacognitive strategies.
Moreover, adolescents practicing metacognitive skills are developing their reading comprehension and literacy acquisition in a number of different ways. Even further, Weir (1998) states: “Metacognition [is] not just another skill, but … a fundamental understanding about literacy” (p. 459). She also contends that metacognitive practices enable students to become skillful, effective readers because it teaches them to use a variety of strategies (questioning, visualizing, re-reading, etc.) when comprehending a text; aligning to other researchers’ findings discussed earlier (Joseph 2006; Penticoff, 2002; Slavin et al., 2007). One example of effective use of monitoring for reading comprehension was shown in a study that analyzed the contributions of comprehension ability and metacognitive control of several study strategies among average and above-average seventh and eleventh graders (Peverly et al., 2002). The research indicated that students who used more monitoring strategies did better on the comprehension tests than those who used fewer monitoring strategies. In addition, the authors found that total recall of the information was significantly related to the metacognitive skills, such as selection and monitoring, for all students who participated. These authors believe skills in metacognition are more critical for the older versus younger students due to their limited cognitive resources and increased demands of high school, college, and later in life. As stated, “metacognition may be a seminal part of ‘what develops’ in the cognitive skills of adolescents” (Peverly et al., 2002, p. 214). Through effective and efficient application of metacognitive strategies, many researchers have shown that learners’ reading comprehension and self-regulatory skills are furthered.

**Metacognitive Instructional Strategies for Reading Comprehension**

**Oral communication.**

There are many suggested metacognitive strategies to utilize in the classroom to further adolescents’ reading comprehension. One way adolescents develop their metacognition and
reading comprehension is through socially-facilitated experiences, such as questioning, peer to peer talk, and retelling. The Teaching for Understanding (TfU) framework provides metacognition and comprehension instruction through various independent and oral communicative activities that occur before, during, and after reading (Weir, 1998). One instructional technique is by incorporating embedded questions for the learners’ during and after reading. One example of a question to be answered in written form is: ‘What do you think will happen next? Make a prediction.’ Another example of an embedded question, but in picture form is: ‘Stop and visualize X. Draw a sketch of your visualization.’ Incorporating questions during and after reading that incorporates different multiple intelligences is enabling learners to cognitively reflect in various ways; in turn, ‘think about their own thinking’ through diverse connections to the text and apply the best strategy to the situation presented. Embedded questions that ask for a number of different representations of students’ learning are essential to their comprehension abilities because it has them reflect upon their own learning through various means. In the study, the teacher also suggested to have the students collaborate on the answers to the embedded questions. This enabled further exploration and engagement in their metacognitive learning because the students were to share their thinking aloud to others. Through the process of ‘retelling,’ the students actively engaged in metacognitive strategies (selection, monitor, evaluation) that are shown by proficient readers, which also aligns to Joseph’s (2006) research on retelling.

Further, Weir (1998) states: “Embedded questions in a Teaching for Understanding context have proven to be just such a powerful strategy, one that can jump-start metacognition and transform a passive reader who is really in the driver’s seat” (p. 463). The TfU framework centers on transforming the learner from passive to active, which is essential to becoming a
skillful reader. It aligns to other researchers’ work such as Murphy (2009) who states, “Learning is more likely to happen when students like what they are doing---when they are involved, active, and learning from and with other students, which also follows Joseph’s (2006) contentions. Additionally, Carrelli et al.’s (2008) research also signifies this notion of students better comprehending through active participation and oral means. These authors’ findings confirmed that working memory tasks that involve a great deal of attention increase the performance of readers’ comprehension versus the tasks that ask for simple application of strategies. It was found that tasks that require verbal information processing were the best predictors at distinguishing between the poor versus good comprehenders.

Furthermore, other research’s findings reflected positive results when metacognitive strategies and peer talk were utilized in a study to further learner’s reading comprehension (Meloth & Deering, 1992). Results indicated that the focus of peer talk had an important effect on the learners’ ability to apply the metacognitive strategies (evaluation, planning, regulation, and conditional knowledge) and comprehension strategies (prediction, inference, main idea, and summarization) appropriately. The pre and post gains for both conditions were significant, which was found to occur through the increased discussion time and targeted strategies. Most of all, it was found that the learners’ in the strategy condition reaped the most significant gains in their reading comprehension due to the strategies applied to their learning. The researchers further discuss that metacognition is not an automatic by-product of collaborative peer talk, but suggests that teachers encourage specific metacognitive strategies to be applied during the discussions to achieve positive results. This additionally indicates the importance of strategy instruction to further learners’ self-regulated learning and comprehension. In effect, students’
metacognitive and comprehensive skills are able to be furthered through various independent and
oral communicative activities that involve active participation and learning processes.

Joseph (2006) also shares the strategy of retelling to further learners’ reading
comprehension. This technique he shares asks students to “retell the text” (p. 41). Through oral
communicative means, students review the content and establish the main and supporting details
of a text by explaining what they have read to another. Joseph (2010) contends that teachers
must provide time for students to explain their thinking processes that they use to comprehend
the material in order to demonstrate effective comprehension and self-monitoring strategies, as
well as clear up misconceptions from the material read with another. Essentially, good readers
are able to “talk to the text” and actively participate in the reading process (p. 102). Through the
strategy of retelling, students and teachers will know whether or not the material is understood
and what instruction and/or learning needs to further take place.

In contrast, one researcher’s work indicated a positive relationship when providing
learners’ independent activities that targeted specific metacognitive skills to further their reading
comprehension. These independent activities were incorporated into the TfU framework
described earlier which involved the learner working solely with the text (Weir, 1998). This
fostered independence and the internalization of the metacognitive process that is actually a
solitary experience. Some activities in which the learners’ practiced solely were summarizing,
self-questioning, and predicting (abilities shown in highly-skilled metacognitive learners). The
learners also gained experience in annotating text-underlining and writing notes and questions in
the margins. Weir believes the physical manipulation of the text as an important piece to
comprehension and metacognitive learning overall.

Self-reflective activities.
Another instructional strategy that utilizes metacognition to develop learners’ reading comprehension includes self-reflective activities, such as self-assessments and reading inventories. Fundamentally, the TfU framework’s most critical aspect is student self-assessment when drawing upon students’ metacognition and comprehension abilities. It is the most important piece in the process because it enables the learners to reflect on their learning by analyzing and evaluating what they have done. One way students can self-assess is by having them list all of their past questions and activities in their journals in order to reflect back on what had been completed. Through self-analysis, students can recognize what further questions they may have and what they have learned and understood. According to Perkins (1992), the “highest level of metacognitive thinkers are ‘reflective learners’ who ‘reflect on their thinking-in-progress, ponder their strategies, and revise them’” (as cited in Weir, 1998, p. 458). It is imperative that teachers recognize and embed self-reflection experiences throughout students’ daily learning practices in order to further develop their metacognitive, self-regulatory, and comprehension skills.

Incorporating self-reflective activities, such as reading inventories, to promote metacognitive awareness for reading comprehension is also discussed by Joseph (2006 and 2010). According to Williams et al. (2002), reading inventories enable students to think about reading in relation to their own lives, thus developing their metacognitive abilities as skillful learners (as cited in Joseph, 2006). Self-assessment tools are imperative in metacognitive growth because they encourage students to become active learners and gain a deeper understanding on what constitutes good, satisfactory, or poor performance. Some other suggested self-assessment tools that enable students to reflect on their learning and of what they have accomplished include portfolios, learning logs, journals, and rubrics (Joseph, 2006). These tools are fundamental to
students’ metacognitive and comprehension growth because they enable them to further analyze their strengths and weaknesses, set goals, and provide motivation to continually persevere by recognizing personal accomplishments.

**Think-alouds.**

Another way to develop adolescents’ metacognition for comprehension is through the technique known as the ‘think-aloud’ (Joseph, 2006, 2010; Lapp, Fisher, & Grant, 2008; McKeown & Gentilucci, 2007; Penticoff, 2002). This technique requires the teacher to model the process. These researchers suggest guiding students through a text and sharing their own thinking processes while reading it. For example, while reading a text aloud, the teacher will pause to make a comment, ask a question, or make a connection, essentially demonstrating the importance of being an active participant in the reading process. This technique recognizes the importance of teacher modeling when teaching metacognitive skills. Teachers must model this mental activity in order to show students how skillful readers approach a text. Additionally, several researchers (Joseph, 2006, 2010; Lapp et al., 2008; McKeown & Gentilucci, 2007) suggest having students practice this technique following the teacher model with a partner. Furthermore, Penticoff (2002) notes the importance of students creating their own questions from the text, representative of self to text, text to text, and text to world. She stresses that these questions must be generated from the students manipulation of the text and not the teachers.

Another way to use the think-aloud strategy is through group readings, which expands upon the idea of socially-facilitated experiences to foster metacognitive and comprehensive practices. McKeown & Gentilucci (2007) believe it benefits all learners involved because it creates a community of learners that share various perspectives, converse and discuss them, and come to a consensus of their understandings. As stated by Pressley et al. (1989), the think-aloud
is one of the "transactional strategies" because it represents collaboration among teachers and students constructing meaning while interacting with various texts (as cited in McKeown & Gentilucci, 2007). Essentially, the ‘think-aloud’ strategy enables oral communicative and metacognitive means that serve to further learners’ reading comprehension and self-regulatory practices. Through ongoing dialogue and discussion, whether it is in oral or written form with oneself or another, the ‘think-aloud’ strategy is a vital means to making further connections to the literacy material in order to develop learners’ reading comprehension and learning awareness.

Conclusion

Metacognitive instruction is imperative to adolescent growth in reading comprehension through socially-constructed activities, such as peer to peer talk via ongoing dialogues and discussions that foster their cognitive and developmental growth as learners. Through reflective thinking processes, these learners are furthering their comprehension as well as other learning skills because they are self-monitoring and recognizing their own learning processes. Teaching adolescents to take ownership of their learning through metacognitive processes is also furthering their skills of becoming a self-regulated learner because they are learning to apply the best strategies to various learning situations presented. Essentially, "Teaching students to monitor their cognitive processes by developing strategies for thinking, comprehending, and remembering is a valuable investment for their future. Through metacognitive instruction, students can practice these skills over time, increasing the chance these valuable thinking strategies will strengthen their practical intelligence and become part of their repertoire as learners" (Joseph, 2010, p. 102). Even more so, learners who possess self-regulatory processes are able to critically examine and analyze others opinions and understandings of the literacy
world and the material that is presented to them. Becoming a reflective literacy learner who can think for oneself enables further understanding of daily interactions and situations, due to the ability to effectively communicate via the metacognitive skills learned and applied. Learners gain fundamental social skills through metacognitive learning practices (e.g. monitoring, analyzing, evaluating); enabling them to have positive and successful literacy experiences with others. In essence, metacognitive instruction is a critical tool in adolescents’ comprehension, and most importantly, in their growth as lifelong, reflective learners.

Methods

Context

Research for this study occurred in the Ralph C. Wilson, Jr. School of Education building at St. John Fisher College, located in Rochester, New York. The research took place during a tutoring practicum course and a literacy coaching course; both part of the Graduate School of Education Literacy program. The research at St. John Fisher College consisted of three formal observations of two practicum tutors working with each of their three students during the literacy practicum course’s tutoring session times. These formal observations were done in two different classroom environments in the Ralph C. Wilson, Jr. School of Education building. Further, all names indicated in this research study are pseudonym to protect all participants privacy rights.

The first practicum candidate’s classroom consisted of groups of desks clustered together, a large table at the front of the room, two white boards, and one computer. During observation times, two other practicum candidates and their fellow students were working in the room, however, due to the large space in the room, all candidates and their students were provided with ample space to carry out their activities effectively. Further, all of the practicum candidates’ students working in the classroom were representative of either third or fourth grade.
In contrast, the second practicum candidate’s classroom consisted of rows of tables, a large table at the front of the room, three white boards, and one computer. During observation times, one other practicum candidate and his/her fellow students were working in the room, however, due to ample space in the room, all candidates and their students were provided with ample space to carry out their activities effectively. Further, all of the practicum candidates’ students working in this classroom were representative of either seventh or eighth grade. Essentially, all of the practicum candidates within both of the classroom contexts created quiet and conducive learning environments for all participants involved.

**Participants**

The two practicum tutor candidates in this study, named Lisa and Janelle, are both part of the Graduate School of Education Literacy program at St. John Fisher College and working towards earning their literacy degree in order to be certified in birth through grade twelve. Though they may not become literacy coaches in their future endeavors, they are working toward completing the necessary requirements to be able to work in the position. Both Lisa and Janelle were enrolled in the practicum tutoring course that served as the formal observations location, which is part of the Graduate School of Education Literacy program requirements.

**Practicum tutor candidates.**

In addition to the first practicum candidate, Lisa, being enrolled in the Graduate School of Education Literacy program, she is also a substitute teacher at all grade levels in four different districts. Lisa enjoys gaining the experience at all grade levels, but typically works with students grades K-8. Before starting to substitute in the fall of 2008, she attended SUNY Geneseo and earned her Elementary and Special Education certifications in birth through sixth grade. Her goals for the literacy program include learning effective tools, skills, and methods from her
practicum experiences. In addition, she hopes to carry out various activities and lessons with her students and self-reflect, as well as receive critical feedback to improve upon her future teaching abilities and instruction.

In addition to the second practicum candidate, Janelle, is enrolled in the Graduate School of Education Literacy program. She also has previous substitute teaching experience in two different school districts. Janelle enjoys gaining the experience at all grade levels, but typically works with students grades K-6. Before starting to substitute in the fall of 2008, she attended SUNY Geneseo and earned her Childhood Education certifications in birth through sixth grade. Janelle’s goals for the literacy program include learning appropriate skills and strategies to utilize in the classroom. In addition, she hopes to gain experience implementing these skills and strategies in the practicum experience and gain useful feedback to improve on these skills.

**Practicum candidates’ students.**

The first practicum candidate, Lisa, worked with three female students, with two being in fourth grade and one in third.

Student one, Ashley, is an 8 year old Caucasian female. Ashley can be shy around people that she does not know well. However, it did not take her long to become comfortable with the small group, demonstrating active listening via responding to the questions asked by the practicum tutor, and further, contributing to the whole group and peer to peer discussions during the tutoring sessions. Ashley is also a conscientious student, which is shown via the time she invests when completing assignments in a detailed, thorough manner. When not in school, she likes to play with her friends. They often play “cell phones.” She also enjoys playing soccer. Although she expressed that she would rather play than read, she often selects *Junie B. Jones* books by Barbara Parker to read independently. Ashley is reading at about a 3rd grade reading
level. She lacks confidence in both reading and writing and often struggles with comprehension. Writing is also an area that Ashley needs to improve. She needs to work on strategies that help her expand and develop her ideas. In addition, she would also benefit from word study skills, including spelling activities.

Student two, Melissa, is 9 year old female student. She was adopted from Cambodia as a baby and is very proud of her heritage. Melissa can be soft spoken and shy around people she does not know well. She consistently demonstrated a respectful attitude and attentive listening via contributing consistently during all tutoring sessions. As she began to feel more comfortable within the small group, she was more talkative and seemed to enjoy herself more. She is also detail-oriented, shown through her hard work ethic and time she takes on completing assignments. When not in school, she enjoys playing soccer and participating in Girl Scouts. She likes to watch football as well. Elephants are her favorite animal, and she often selects books about animals to read independently. Additionally, Melissa enjoys reading books by authors Dan Gutter and Jan Brett. The A-Z Mysteries is a series of books by Ron Roy and John Steven Gurney that Melissa often reads at home.

According to assessment results, Melissa is reading at about a 3rd grade level or Level N using Fountas and Pinnell’s leveled reading system. These scores were obtained from conducting a running reading record. Melissa lacks confidence in her reading and writing and also has an Individualized Education Program. Within this program, some of the goals and objectives include making sure that Melissa receives extra help in reading, math, and speech.

To improve Melissa’s reading and confidence level, her teacher encourages her to read at least a book or two a week at home. Melissa’s mother expressed that the homework can be overwhelming to Melissa at times, sometimes needing extra support through motivational
techniques. Decoding, development of comprehension skills, including inferential and literal, and visualization are all skills that need to be strengthened. Although Melissa enjoys writing stories, she would benefit from a focus on paragraph writing, including more detail and expanded sentences within her writing.

Student three, Rachel, is a 9 year old Caucasian female. Rachel is an energetic and outgoing girl, always eager to participate and try her best. When not in school, she likes to play with her friends, often outside activities. She also likes to have sleepovers with friends and have pillow fights. Although she would rather play than read, she selects *The 39 Clues* to read independently, sometimes with help from her mom. *The 39 Clues* is an adventure series about two siblings, published by Scholastic, which combines online gaming with card collecting, making it an interactive experience that Rachel enjoys. She lacks confidence as a reader and writer, often second-guessing herself. Although she is reading at about a 3rd grade level, other assessment results indicated that she may read with 90% accuracy, but has a comprehension score of 30%. Comprehension is a major area of need for Rachel, identified by both her mother and teacher at school. Rachel was referred by her teacher to participate in the tutoring program at St. John Fisher College. Rachel needs to take her time to complete her school work more thoroughly. Rachel’s mom described her as a “hurry up and get it done kind of girl.”

In regards to writing, her writing sample indicated a score of Level 3 on a rubric ranging from Level 1-6, with Level 6 characterizing an advanced writer. In addition it showed that Rachel attempts to express ideas coherently and at the beginning stages of writing paragraphs in an organized manner via simple sentences. Further, the sample showed her use of high frequency vocabulary. Essentially, Rachel needs to continually focus on organization and
editing of her work. Additionally, writing complete thoughts, ideas, and sentences are areas in need of improvement.

The second practicum candidate, Janelle, worked with three students, with two being male and one female, all currently in the seventh grade.

Student one, Derek, is a thirteen year old Caucasian male who can be described as an energetic student with an active imagination. He is especially outgoing when he gets to incorporate subjects such as soccer and video games into his learning activities. According to John’s BRI, he is currently reading at a seventh grade instructional level, with an eighth grade frustration level.

Student two, Tiffany, is a thirteen year old African-American female who can be described as a focused student due to her hard work ethic shown while working independently and consistent participation during small and whole group discussions. However, this student can be quite outgoing, but seems to be a bit intimidated, thus, much quieter due to the presence of two other boys in the small group. According to John’s BRI, she is currently reading at a fifth grade instructional level, with a sixth grade frustration level.

Student three, Cory, is a thirteen year old Caucasian male who can be described as a quiet student. However, he often participates actively when the learning deals with a topic in which he is familiar and possesses strong schematic knowledge. It is important to note that this student strongly dislikes reading and writing. Further, according to John’s BRI, he is currently reading at a fifth grade instructional level, with a sixth grade frustration level.

**Researcher Stance**

For this study’s purposes, I served solely as an observer, with the research being based upon formal observation methodology as its main data collection source. I took extensive field
notes while analyzing the effectiveness of specific metacognitive skills on students’ reading comprehension, thus, not serving as a participant in the instructional practices.

Currently, I am working toward earning my literacy degree in grades birth through twelve in the Graduate School of Education literacy program at St. John Fisher College. In addition, I am completing the necessary requirements to also earn my Special Education and English certifications in grades seven through twelve. Further, I work for the Ralph C. Wilson, Jr. School of Education at St. John Fisher College as the graduate assistant to the Dean’s office. Additionally, I also am a substitute teacher in twelve districts in all grade and content areas.

Prior to the start of this Graduate program, I attended SUNY Brockport and earned my Early Childhood, Childhood, Special Education certifications in grades birth through sixth. My additional teaching experiences include private tutoring students’ grades second through twelve in literacy instruction and for state mandated exams. My further endeavors include working with English Language Learners while serving as a literacy tutor for the America Read’s program at SUNY Brockport.

Method

Research was obtained through three formal observations of two practicum tutors, Lisa and Dana, working with each of their three students during the literacy practicum course’s tutoring session times. Each of these formal observations took place during three different tutoring sessions, lasting a total time of twenty minutes apiece. Both the practicum candidates and I communicated prior to each formal observation in order to schedule the date and time of each one of them, as well as confirm what aspect of metacognitive instruction will be reflected in the lesson.
This study’s methodology focused on two practicum candidates, Lisa and Dana, incorporating metacognitive instruction into their literacy lesson plans in order to further their students reading comprehension. The three metacognitive skills chosen, which was based upon the literature, to be incorporated into the practicum candidates’ instruction and observed, were think alouds, teacher modeling, and retelling/peer to peer talk. Each of these skills were taught in isolation by the practicum candidates’ in each of the three formal observations scheduled.

Quality and Credibility of Research

For the quality and credibility of this study, I followed Mill’s (2007) suggestions for carrying out a research methodology in accords to its credibility, transferability, dependability, and confirmability.

Credibility.

Credibility, or the ability of the researcher to look at all challenging aspects in a study and work out those that are not easily explained, is demonstrated in this research study in several ways. One way is through ‘peer debriefing,’ in which the researcher discusses their insights on the research process with a “critical friend” (Mills, 2007, p. 85). Through ongoing collaborative discussions and feedback with the ‘critical colleague’ created at the start of this research process, I worked through various challenges met and gained further understanding of the study’s aspects and findings as well through the feedback received. Another way I sought credibility was via collecting artifacts, such as lesson plans and student work samples in order to provide raw evidence of the research outcomes.

Transferability.

This study is also representative of transferability, the idea that everything studied in research is context bound and the goal of the work is not to develop statements that can be
generalized to larger groups of people (Mills, 2007). This aspect is shown through the detailed descriptions of the data and the detailed descriptions of the contexts in which research was collected in order to ensure its ‘transferability’ to other possible contexts.

**Dependability.**

Another significant aspect that shows quality and credibility of this study is that of dependability, or the stability of the data represented (Mills, 2007). One way I demonstrated dependability is through the multiple data collection methods utilized in order to compensate a weaker method with a stronger one if identified as applicable in this study. Further, an “audit trail” was established, in which a critical colleague reviewed the entire research process: data collection, analysis and interpretation, and additional artifacts obtained (Mills, p. 86).

**Confirmability.**

The last aspect that demonstrated the quality and credibility of the research study was confirmability, or the neutrality or objectivity of the data collected (Mills, 2007). In this study, triangulation, or utilizing a variety of methods to cross-check the researcher’s findings; and reflexivity, or reflecting on the data obtained in order to reveal any underlying assumptions or biases that may have presented itself; were both utilized by myself through the study’s process.

**Informed Consent and Protecting the Right of the Participants**

Informed consent from various individuals was required to carry out this study, participants included: the practicum candidates’ two adjunct professors, practicum candidates, and also both practicum candidates’ three students and their parents. All of these individuals were notified and explained all of the study’s aspects in order to protect their individual rights. Both of the practicum candidates and their adjunct professors were provided in written and oral form an overall consensus of the research study. Further, each of the practicum candidates’ three
students and their parents were provided consent forms that explained the purpose of the study and asked for permission to participate in the observation methodology by filling out the form along with a signature. In both oral and written form, I provided the students and their families’ information about the study in order to make sure all of their rights were protected and that all aspects of the research were clearly conveyed. Furthermore, I clearly identified all marks on the student work samples and removed them for the study’s confidentiality purposes.

**Data Collection**

Data sources collected for this study included three items: field notes, lesson plans, and student work samples. These sources provide this study specific data on the effectiveness of utilizing metacognitive skills to further reading comprehension via showing in written form and mere analysis the instruction that occurred.

**Field notes.**

First, extensive field notes were collected by me for each of the three formal observations of the two practicum candidates carrying out instruction with their students. These notes reported what the practicum candidate did with his/her students, essentially the activity’s components, what the candidate did both orally and behaviorally, and the students’ responses. The primary focus on these notes was taking down ‘what was shown.’

**Lesson plans.**

The second data source collected was the lesson plans for each of the three formal observations of the two practicum candidates. Each of the lesson plans received by the practicum candidates reflected one metacognitive instructional skill to be taught in conjunction with the reading activity planned during that tutoring and observation session. Prior to each scheduled observation, each practicum candidate sent their lesson plan via e-mail twenty-four
hours in advance. Communication between myself and the practicum candidates’ took place prior to starting the formal observations, in regards to the three metacognitive skills that needed to be taught and when they were each going to be observed within the three formal observations. Both myself and the practicum candidates’ communicated regularly in order to make sure everyone remained on the same page in regards to what was being observed and the day/time it was to take place. In addition, the practicum candidates created the lesson plans on their own; I only provided the three aspects that needed to be observed, as well as suggestions for possible instructional activities.

**Student work samples.**

The third data source collected was student work samples. These samples were collected by me following each of the three observations of the two practicum candidates working with each of their three students. Samples were collected from each of the students represented in both practicum candidates’ small groups. The student work samples reflected the day’s metacognitive skill taught and how it was utilized in their reading instructional activity.

**Data Analysis**

Analysis occurred via initially reviewing my three data sources that were collected for this study: field notes, lesson plans, and student work samples. When reviewing these sources, I looked for common themes that were shown among all of them. However, the field notes played the most vital role in developing my findings due to the wealth of information gathered via observation of the practicum tutors and their students. Moreover, the lesson plans and student work samples received enabled me to further confirm the themes that emerged from the field notes, serving as critical pieces to my research study as well. In addition, I also compared my data source findings to the literature I collected prior in order to gain further perspective on their
reliability and validity in regards to adolescent metacognitive instruction, reading comprehension, and self-regulated learning processes. Essentially, all of the data sources together played a significant role in the development of my findings and further, implications.

Upon completion of the review process, I came across three reoccurring themes: oral communication, self-reflection, and modeling; all of which must be reflective within a teacher’s instruction. In each of these themes I found several points that shared commonalities to the data that I collected. Each of these data points proved to be important in my determination on how metacognitive teaching strategies help to improve adolescents’ reading comprehension and self-regulated learning processes.

**Findings and Discussion**

Through analysis of the data sources I collected (field notes, lesson plans, and student work samples) and further, their comparison to today’s literature, I recognized many common themes with regards to how metacognitive teaching strategies help to improve adolescents’ reading comprehension and self-regulated learning processes. Each method of gathering data in my research provided me with a different view in reference to how teachers can be most effective in furthering adolescents’ reading comprehension and self-regulation via incorporating specific metacognitive strategies into their daily literacy instruction. These findings can be broken down into three major themes with regards to instructional activities reflective of oral communication, self-reflection, and modeling.

**Oral Communication**

Literacy instruction that continually incorporates ongoing communicative activities between the teacher and their students, and even more so, students and other students, is found to be an essential component to students’ growth in their reading comprehension, metacognition,
and self-regulation skills. Oral communication was shown to be a primary piece incorporated within each of the three formal lessons that I observed of each of the practicum tutors, Lisa and Janelle, working with each of their three students. Exemplified in all six formal lesson plans received, as well as field notes collected while observing, oral communication has been shown to be a critical piece to furthering students’ reading comprehension, metacognition, and self-regulation. The oral communicative activity that was incorporated into each lesson observed was whole group discussion. Additional oral communicative activities observed were peer to peer talk and retelling. Each of these activities are discussed below.

**Whole group discussion.**

In each of the six lesson plans and field notes collected, whole group discussion was represented at least once, but in some plans reflective twice. There were two whole group discussions observed; one taking place during or following the reading activity and the other serving as the wrap up to the day’s lesson. The first whole group discussion that I observed occurred during or following the reading activity and can be found in all three of Lisa’s lesson plans that were observed. By her incorporating a whole group discussion following a read aloud, the students’ comprehension of the story’s elements increases due to their ability to converse through questioning, commenting, and reflecting upon what was just read to one another through oral communicative means. The students listening and responding to one another’s thoughts demonstrates utilization of pertinent critical thinking skills, which further develops their metacognitive, self-reflective thought, and further, comprehension. For example, within Lisa’s lesson plan on peer to peer talk, the students’ work samples showed increased understanding of the events that occurred within the story due to the discussion that followed the story prior to completing the independent activity. During the discussion, my field notes indicate student two
named Melissa stated, "I remember Trixie leaving Knuffle Bunny at the Laundromat because I also left my favorite stuffed animal one time at a store. I bet Trixie felt as sad as I did when I lost mine." Additionally, prior to the writing activity, student one named Ashley stated, "I have to have time to "think" before I begin to write. I now have a lot more ideas to include" (Field Notes, 04/06/2010). These statements demonstrate metacognitive thought via making self to text connections and taking time to 'ponder' prior to the retelling narrative in which each student created. Further, analysis of the student work samples demonstrates a thorough, in-depth understanding of the main story elements in sequential order via the length and detailed narratives written, which also include a picture to further exemplify their retelling.

In the three lessons I observed of the practicum tutor Lisa working with her students, the discussion following the read aloud demonstrated fundamental significance to the students' ability to comprehend the story's main ideas in order to complete the independent activity to follow, and even more so, develop and demonstrate use of the metacognitive skill being taught during that day's lesson. For example, during the discussion in the think-aloud lesson, my field notes indicate student three named Katie stating, "I like ‘thinking-aloud’ when reading because it makes me stop and think about what is happening when I read. Plus, I like answering questions that I can relate to" (Field Notes, 03/09/2010). This demonstrates the high value that the think-aloud strategy has on helping students better understand the material and even more so, increased interest in the literacy activity in which they participate. Essentially, the students conversing and discussing with one another and the teacher served as a critical aspect to their cognitive development comprehensively and metacognitively; all due to the self-regulated processes that are practiced and become established via oral communicative means.
Further, the second whole group discussion observed, which was shown in all six lesson plans, served as the wrap up and/or ending piece to each lesson; essentially, reflective of a student ‘sharing time.’ During this sharing time, students were asked to discuss what they found out and learned upon completion of their independent activity. In addition, they were to show any work that was completed in written or grapheme form in order to further demonstrate and tell their peers what was learned from the activity in which was participated. For example, in Janelle’s lesson on retelling, where the students were to ‘retell’ a section from the *Diary of a Wimpy Kid* in oral and written form, student one, named Derek stated, “I really liked this section because it made me think about when I went trick or treating last Halloween. I felt ‘too old’ just like Greg, but still had fun. Do you guys still go trick or treating? Do you think being teenagers now, we are too old?” (Field Notes, 03/30/10). Derek’s sharing sparked further discussion on Halloween and the appropriate age for trick or treating, as well as what occurred in the story. Further, Derek shared his retelling of the story in oral and written form, fostering his peer’s interest and literacy learning through the details included within it. In addition, I observed the students looking back at the text in order to re-confirm the sequence of events for the specific occurrences, such as Halloween night, within that section of the story (Field Notes, 03/30/10). Through showing and telling, the students were able to further demonstrate the metacognitive strategy in practice, make text to text, self, and world connections, as well as any other additional comments during this time. In accumulation, the students’ peers were able to make comments, questions, and connections based on the student’s detailed explanation and work presented.

This sharing time served as a fundamental piece to all of the students’ understanding of the metacognitive skill being taught and its importance, as well as their comprehension of the book, which were both the main aspects of each of the lesson’s observed. However, most
importantly, this sharing time was critical to the students' development due to the ongoing communication back and forth that enabled questioning, commenting, and analysis via sharing and receiving feedback from one another. Students were able to facilitate one another's learning capabilities through oral communicative means that enabled critical thought analysis via discussing ideas and thoughts presented to one another during these sharing experiences. In addition I observed high interactivity and attentiveness during these sharing times due to the collective thought provided prior during the independent activity, thus, enabling each student to feel comfortable and prepared to present what they have found out and completed. My field notes indicate Melissa and Ashley highly engaged in Rachel's sharing of her 'mental image' of the read aloud via asking questions and making various connections to it. For example, Ashley stated, "Rachel, Did you draw music notes because you like to sing; like the character in the story? I drew them in my picture because I love to sing." Following, I observed the students referring back to the book to see what the character sang (Field Notes, 03/16/10). By creating instruction representative of the lesson plans received, students are more willing to openly share what was learned via having time to reflect and complete the day's focus activity independently, and further, better comprehend what was learned via orally presenting it to their peers.

Essentially, this student sharing time enabled the students to discuss the content of the story learned and show and demonstrate use of the metacognitive strategy taught for the day's lesson, enabling further self-regulated learning skills due to the control and ownership that the students had to demonstrate during these whole group discussion times.

Peer to peer talk and retelling.

Two other oral communicative practices reflective in lesson plans and field notes collected were peer to peer talk and retelling. According to my data sources, I observed peer to
peer talk continually throughout every lesson observed during the whole group discussion, as well as time set aside by the instructor for the peers to converse directly with one another. When observing the peer to peer talk I noticed the students applying critical thinking skills, thus reaching higher order thinking processes, due to their close comfort level in having in depth discussions on their assigned activity and reading. The students’ working one on one enabled further in depth sharing and connections made to the material due to the direct focus and attentiveness received through a one on one conversation. During two students sharing of their retellings in Janelle’s small group of students, my field notes indicate student one named Derek stating, “I agree with you about feeling nervous on stage, especially when there is a large audience. In the sixth grade school play, when I played the rabbit, I felt like I was going to throw up right in front of everyone. I understand why Greg doesn’t want to be in the play” (Field Notes, 03/30/10). Derek’s openness to Cory is one example of students possessing increased comfort in asking more questions and making further literary connections in order to improve upon their understanding of the story when in one to one versus whole groups.

In essence, both peer to peer and whole group discussions both serve as positive activities in which to further students’ metacognition, comprehension, and self-regulation due to the ownership and wealth of learned information shared to one another. However, I suggest that both of these oral communicative activities are used in conjunction with one another within a literary lesson in order to enable students to gain deeper understandings of the literacy material through various oral communicative means at the comfort level in which they feel the most at ease conversing and sharing their schematic knowledge.

Another oral communicative activity observed was retelling, which was shown in both oral and written form via all six students. In both Lisa and Janelle’s final lesson plans observed,
retelling by students thinking about and showing in oral or written form the order and details of the events in the story, served as the primary metacognitive strategy being utilized to further their comprehension of the book, and even more so, their self-regulatory skills. During sharing time of Lisa’s students’ retellings, my field notes signify student one named Ashley stating, “For me, it made more sense to number the events in my retelling. It helped me to put the events in the correct order and better remember all of the details in the story” (Field Notes, 04/06/2010). Ashley made this statement while both explaining and showing her retelling to the rest of the group; demonstrating confidence and understanding of the story’s content and the strategy that was utilized to further her metacognitive thinking skills. As shown by the field notes, students gained greater comprehension of the story read via practicing the retelling strategy in both written, then oral form. Further, the details and main events in sequential order within the retelling narratives further exemplify their correct use of the strategy and increased comprehension of the story (see Appendix A – student work sample, student one).

In addition, both of the practicum tutors incorporated discussion time prior to the students completing their written ‘retelling’ narratives independently. Lisa’s students participated in a whole group discussion while Janelle’s students participated in peer to peer talk. However, both oral communicative activities served equally significant in enabling the students’ to independently create their own retelling of the story’s read via the participation in a discussion prior to, whether it was with one or more individuals. Through discussion, the students were able to ask questions, make comments, and further connections to understand the essential story’s elements. In addition, in both observed groups, as the students shared their recollection of the stories to one another, I noticed self-correction of the order of events while sharing. Through oral communicative means, students also further their self-regulatory skills via
participating in reflective thought via “thinking about their own thinking” while and after sharing out loud to others. Moreover, oral communication activities are one essential means in a teacher’s daily instruction to develop their students’ metacognition, comprehension, and self-regulation skills.

**Self Reflection**

Self reflection is another critical aspect that must be reflected throughout teachers’ daily instructional plans in order to increase students’ metacognition, comprehension, and self-regulation skills. Through self reflection activities, students are continually utilizing higher order thinking and critical analysis skills, such as evaluation and synthesis; all of which demonstrate metacognitive thinking and self-regulatory processes. Further, via practicing these skills, students are able to apply these specific metacognitive tools learned to their literacy experiences in order to better comprehend the material.

In all of my data sources (lesson plans, field notes, and student work samples), self reflection was shown to play a key role in students’ ability to effectively practice and demonstrate the metacognitive skill learned for the day through completion of the independent activities accurately and thoroughly. All of the student work samples collected demonstrate increased knowledge and understanding of the book read via the metacognitive strategy learned and practiced for that day’s lesson. For example, within Lisa’s three students’ work samples that were collected from the think-aloud lesson, higher order thinking skills, such as evaluation and inferring, were shown via the students’ responses written to the questions asked. For one question asked, “How does Faith feel?” student two, Melissa responded, “Faith feels really sad because she has to leave Josefina behind ☹”. In Melissa’s explanation, she stated the emotion felt and why, as well as included a pictorial image (sad face) to further complete her response.
(see Appendix B – student work sample, student two). Another example that demonstrates students’ self reflective thought in accords to their comprehension development is shown in Janelle’s students' work samples from the think-aloud lesson in which she taught. When responding to The Diary of a Wimpy Kid text via writing text to self connections for each page read, many of the responses reflected the direct thoughts of the students, demonstrating “thinking about one’s own thinking.” For one page’s reaction, Tiffany wrote on her post-it, “Sometimes I have stress in my life” which was her text to self response to a character dealing with a difficult situation in the book (see Appendix C – student work sample, student two). These varied responses through the think-aloud strategy show the students’ application of this metacognitive strategy to their literacy learning via evaluating and synthesizing what is being read according to the prompts and then making various types of connections, such as text to self and world to the text.

In addition, I observed students possessing hard work ethics and high interest in completing each independent activity due to the ownership and control that these self-reflective activities enabled them to have over their own learning. For example, during Janelle’s think-aloud lesson, the many student work samples received from her students, in particular student two named Tiffany, exemplifies this statement. By looking at the collection of post-its notes I received in which reflect various text to self, world, and text connections in response to the book read, Tiffany clearly shows self regulatory skills via taking control of her own learning and further, demonstrating understanding of the text read via the diverse connections made. One connection she wrote declared, “At my old school thats we did. We had find out if we were popular or not” (see Appendix C – student work sample, student two). Through analysis of student work samples, such as Student two named Tiffany, I concur that metacognitive
strategies, such as think-alouds, foster students ability to practice critical analysis of the learned material via making text to self, text, and world connections, and further, evaluation and synthesis to their prior schema; all increasing their metacognition, comprehension, and self-regulation skills simultaneously.

**Teacher Modeling**

In each of the six lesson plans and field notes, and further, shown by the completed student work samples, teacher modeling of the day’s metacognitive strategy served as a foundational piece to the students’ ability to develop their metacognition, self-regulation, and comprehension skills. By Lisa and Janelle modeling the various metacognitive strategies via showing (body language and tangible materials) and telling (explaining and discussing), all of the students were better able to understand the day’s strategy purpose in accords to the activity being presented, as well as how to apply it on their own to further their daily reading comprehension and literacy activities in which they each participate.

For example, within Janelle’s teacher modeling lesson on ‘mental imagery,’ the students showed understanding of the poem’s messages and content via drawing a picture representing a significant event(s) that stood out to them. Student one named Derek incorporated a number of symbols and events that were mentioned in the poem including sleeping, the sun, birds chirping, etc. In addition, my field notes indicate when he explained his mental image drawing he stated, “This poem reminded me of the many summer days I spent last summer. So, I drew what was similar in my own experiences to that of the story. So, I drew bees buzzing around my friend’s head and me falling asleep in the chair while lying out in the sun” (Field Notes, 03/09/2010 and see Appendix D – student work sample, student one. As shown, Derek’s drawing demonstrates both details from the poem and prior schema based on metacognitive thought processes and
application of the strategy ‘mental imaging’ while being read the poem, which was the strategy, taught for the day. Students’ understanding of the strategy, and application of it to further their comprehension, such as of the poem in this lesson, was successful due to the practicum tutor, Janelle, effectively modeling the strategy prior to the students practice and completion of the independent activity.

As indicated in my field notes, each of the three students observed remained attentive and focused on the practicum tutor’s modeling of the strategy, whether it is during a read aloud or prior to the start of the independent activity. In observations, I believe the practicum tutors’ introductory statements, about the day’s metacognitive strategy and its importance, served as vital pieces to the students’ interest and attentive behavior when the new strategy was to be presented. Both practicum tutors’ consistently gave clear expectations and an outline of the day’s lesson activities for each observed lesson, which to my knowledge, served as a vital piece to the students ability to capture the focused strategy and apply it to the book being utilized for that day’s lesson. Additionally, the student work samples collected exemplify the teacher models’ created for the students to use as a reference. The students’ clearly utilized these tangible model pieces, as well as listened and watched attentively when the teacher modeled orally and via body language.

Implications

Based upon my findings, there are many implications that can be offered to teachers and their instructional planning in order to further students’ metacognition, comprehension, and self-regulation skills. As the literature indicated, strategic teaching is imperative in students’ ability to increase their comprehension through appropriate application of specific metacognitive skills due to students’ control and knowledge of their own learning capabilities (Butler, 2002; Schraw,
USING METACOGNITIVE STRATEGIES TO IMPROVE READING COMPREHENSION

1998, as cited in Dignath & Buettner, 2008; Wynn-Dancy & Gillam, 1997). In alignment with recent theorists’ findings (Peverly et al., 2002; Stavrianopoulos, 2007; Schneider, 2008), my research looked further at how metacognitive teaching strategies help to improve adolescents’ reading comprehension and self-regulated learning processes.

Based on the literature reviewed and my own findings, teachers’ instruction must include activities that incorporate oral communication and self reflection and further teacher modeling of specific strategies and tools being taught. Through incorporation of these essential aspects, as shown in both my research and the discussion of the literature, students’ growth in their metacognitive and self-regulated learning, as well as comprehension of various texts will be further developed.

Additionally, I have learned by incorporating various oral communicative activities, such as whole and small group discussions, peer to peer talk and retelling, students’ interest level increases due to the high interactivity that socially-facilitated learning environments possess. Based on my findings and the literature, students engage in greater higher order thinking through oral communicative activities due to the ongoing conversing that consists of questioning, commenting, sharing connections, and making further inferences and conclusions based upon all the responses shared. Students who demonstrate effective critical analysis skills show increased capability to regulate their own learning via applying specific strategies learned to various literacy learning experiences in order to better comprehend the material. Teachers must incorporate various oral communication activities, such as the ones suggested prior, in order to further their students’ literacy learning capabilities via metacognitive and self-regulatory processes.
Further, the literature reviewed and my own research demonstrates the significant value of self reflection within teachers' instructional activities. In my own teaching experiences and through this research study, I further recognized the impact that self reflection activities had on students increasing their learning capabilities. Students learning a specific skill through teacher modeling and then applying the skill learned to a literacy experience independently, served as an effective means to developing a repertoire of tools to utilize in various literacy experiences in which they participate. Through analysis of each observed lesson and different strategy taught, I recognized the students improving upon the application of the strategy taught due to their increased knowledge and schema of various metacognitive tools. Essentially, by teachers incorporating metacognitive strategies into their instruction, both students' comprehension and self-regulated learning capabilities are being furthered due to the ownership and control being shown through the application of the specific skills to the learning opportunity.

For my future teaching experiences, I hope to utilize various metacognitive teaching skills within my instruction in order to effectively model to my students and even more so, teach them their importance in learning and comprehending skills. Through application of metacognitive strategies, students' learning capabilities are further developed via demonstrating continual ownership and control of their own learning; moreover, students increase their comprehension capabilities through ongoing practice of self reflection and critical thinking skills via metacognitive and self-regulatory learning processes.

Conclusion

This action research project looked at how metacognitive teaching strategies help to improve upon adolescents' reading comprehension and self-regulated learning processes. The educational theories reviewed support teaching specific metacognitive learning tools to further
students' literacy comprehension and self-regulation through appropriate application of the strategies learned to various literacy learning experiences. The literature further discussed the importance of socially-facilitated learning environments; those reflective of various oral communicative and self reflective activities in order to foster students critical analysis skills via continual questioning, commenting, and inferring in various discussion-based groupings.

In alignment to the literature (Meloth & Deering, 1992; Peverly et al., 2002; Schneider, 2008), my own findings further revealed the positive value of teaching metacognitive strategies to students' to further their reading comprehension and self regulation learning processes via incorporating various metacognitive teaching strategies into instruction: peer to peer talk, retelling, think-alouds, and mental imagery. Further, my research also indicated the importance of teacher modeling of the strategy in regards to the specific literacy opportunity.

As a researcher, I would have liked to have the opportunity to interview the two practicum tutors and their students in order to gain further insight on the impact of metacognitive instructional strategies and their benefits in regards to comprehension and self-regulation processes. By interviewing the practicum tutors and each of their three students, I would be able to ask specific questions in regards to strategic teaching and the application of these specific metacognitive tools to various literacy learning situations. Further, I would gain more understanding of the most beneficial oral communicative and self reflective activities based upon the practicum tutor and student responses. As a teacher and future literacy specialist, I believe the implications from this research are important for all professionals in the educational field due to the cognitive and social analysis of literacy, metacognitive, and self-regulatory learning. As a professional in the educational field, this research serves as the groundwork for further research
in metacognition, literacy, and learning processes to further students' literacy knowledge, application, and skill sets.
References


Cognitive foundations. *Chapter three*. (pp.62-95).


Appendix A

In your own words, tell what happened in the story *Knufflebunny* by Mo Willems. Be sure to include details and provide a re-telling that includes a beginning, middle, and end.

1. Tricky and her dad went to the londrymat.
2. Tricky started to make a fuss. She started to say stuff that didn't make any sense.
3. Tricky and her dad went to the door and when her mom open the door she said what is knuffel bunny. The family raced to the londrymat and her dad searched and searched. Then....
   **Knuffel Bunny. The End**
Appendix B

**Student 2**

Make a prediction about what will happen in this chapter. (Pg. 15)

What do you think will happen when she saves Allay? (Pg. 15)

STUDENT TWO

MELISSA

How does Faith feel? (Pg. 19)
Student Two

Tiffany

Sometimes I have stress in my life. (p. 8)

My brother sometimes wakes me up. (p. 11)

At my old school, my new friends were popular. (p. 10)

At my old school, I had friends who were people in my class because Potter lived close to me. (p. 8)

I am getting use of waking up at 6:30 in the morning on the first day of school. (p. 10)
Appendix D