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# The Socratic seminar's effect on reading comprehension

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CARDINAL STRITCH UNIVERSITY  
COLLEGE OF EDUCATION AND LEADERSHIP

THE SOCRATIC SEMINAR'S EFFECT ON READING COMPREHENSION

A THESIS

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

MASTER OF SCIENCE, URBAN SPECIAL EDUCATION

By

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Milwaukee, Wisconsin  
2015

This Graduate Field Experience  
for Michael Dietrich  
has been approved for  
Cardinal Stritch University by

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April 20, 2015  
(Date)

## **Acknowledgements**

I would like to take a brief moment to thank my family for all of their love and support in providing me with the many opportunities I have had in my life. Futhermore, I must thank my fellow students of the 2012 Teaching Cohort, for whom I could not have made completed my studies without their many antics and group camaraderie. I wish them all the best of luck in their young careers as urban educators and I hope they continue to have the same pasionate spark to they day they walk away from the classroom. Lastly, I would like to thank Lisa Casper, my companion and soon to be partner in life. Thank you for all of your patience and never-ending love and support.

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## **Chapter 1: Introduction**

In today's modern educational community, teachers, paraprofessionals, and administrators alike have consistently been exposed to Bloom's Taxonomy (1956) of Higher Order Thinking. These six levels of intellectual thinking are used as a model for effective teacher practice, learning objectives and outcomes, as well as a standard for students to practice and achieve higher-level critical thinking skills. The six original levels are as follows:

Knowledge, Comprehension, Application, Analysis, Evaluating, and Creating. These domains are ordered from the least intuitive to the most advanced level of thinking skills, working from the ground up. When professionals in the field refer to High Level Bloom's, they are typically referring to the top three domains: Analyze, Evaluate, and Create. It is common practice when educators are instructed to create their daily learning objectives using High Level Bloom's, they typically utilize key words within the "Analyze" domain, such as compare/contrast, examine, or classify, and then make the claim that they have utilized "High Level Blooms." This study focused on the top two domains, Evaluate and Create, and explored how these two areas of higher order thinking skills influenced a student's reading comprehension.

The purpose of this action research project was to investigate the effect of Socratic Seminars and their use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic Seminar was the vehicle to which these higher order-thinking skills were implemented and utilized by two students within in a four-week literacy program. Data were collected to explore the effects of the Socratic Seminar on a student's overall reading comprehension within two isolated case studies. Chapter 2 will provide a more detailed discussion concerning the clarification of the Socratic Seminar strategy in connection with relevant and important research that supports this study.



## **Problem Statement**

The problematic conditions that led to this study were that educators are often tasked and evaluated on their use Bloom's Taxonomy of Higher Order Thinking (1956) in the classroom, specifically "Higher Level Bloom's" – Analysis, Evaluating, and Creating. However, it is very difficult for educators to successfully implement and get their students to utilize a higher level thinking strategy beyond Analysis (compare/contrast, classify, distinguish), especially in a remedial reading class. The goal of this study was to explore the use of higher level thinking strategies, specifically Evaluating and Creating of Bloom's Taxonomy (1956), and its impact on a student's overall reading comprehension. This study was created in order to inform educators and administrators alike, about possible higher order thinking strategies that could be utilized in a younger age group or lower level reading classroom.

## **Guiding Questions and Hypothesis**

The questions that guided this study were: (a) What are higher-order-thinking skills? (b) What does it mean to comprehend a text? (c) What is the connection between higher order learning and reading comprehension? (d) What instructional practices improve student reading comprehension? (e) How does the Socratic Seminar embody Bloom's higher-level domains? The hypothesis of this action research plan stated: Socratic Seminars and their use of higher order thinking skills, such as critical, logical, reflective, metacognitive, and creative thinking, will increase a student's reading comprehension of a given text, as measured by informal assessments. The researcher will provide a more detailed discussion of the nature of the study in Chapter 3.

## Purpose of the Study

The purpose of this study was to investigate the effect of the Socratic Seminar strategy on a student's overall reading comprehension. According to Chorzempa & Lapidus (2006), Socratic seminars are a group-discussion model, which are designed in such a way to resemble Socrates' instruction-through-questioning method. This method involves students reading a selection and then exploring their ideas and questions in an open discussion (Queen, 2000). The open discussion method not only allows students to support their own opinions with details and evidence from the text, but it also strengthens their ability to use a personal voice in their writing and improves the depth of their comprehension (Sorenson, 1993). In Chorzempa and Lapidus' (2009) study of a 3<sup>rd</sup> grade inclusive classroom utilizing the technique of the Socratic Method, they identified students learning to analyze a text through questioning, find evidence in the text, and create a written response reflecting the main themes of the story. Furthermore, the researchers noted students with special needs that utilized the seminars helped the students focus their thoughts, resulting in a more organized writing sample (Chorzempa and Lapidus, 2009).

The goal of this action research program was to investigate the use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic seminar was the vehicle to which these higher order-thinking skills were implemented and utilized by students within in a four-week literacy program. The entirety of this study occurred within the One-on-One Tutoring sessions of two students, one of which was identified as a student who is *Learning to Read*, and the other a student who is *Reading to Learn*. The academic needs of these two participants would directly benefit from the explicit instruction of specific comprehension strategies in order to improve their overall comprehension skills. Therefore, these two students proved to be ideal candidates

for this action research project due to their baseline skills in reading and metacognitive ability to practice alternative strategies that will improve their ability to fully understand and comprehend a text.

## **Conclusion**

The purpose of this study was to investigate the use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic Seminar was the vehicle to which these higher order-thinking skills were implemented and utilized by two students within in a four-week literacy program. Data were collected to explore the effects of the Socratic Seminar on a student's overall reading comprehension within two isolated case studies. Prior to the implementation of the specific reading intervention strategy in the action research program, the students completed two days of pre-tests. The Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011) was used as the primary data source in both case studies. The results were used to design and evaluate the specific interventions used within the study. In addition to the record of observations from the researcher, the QRI-5 Reading Passages were used to measure student growth at the end of the University Literacy Program. This study expected to reveal the importance of utilizing an effective combination of high-level thinking and reading strategies in order to teach two elementary students how to read and comprehend a text. An explanation of how this expectation was met will be discussed in Chapter 3. This study may contribute to the body of knowledge needed to address the problem of students who may or may not read at grade level, but who cannot fully comprehend what they are reading.

Chapter 2 will provide a more detailed clarification of higher order thinking and the Socratic Seminar strategy in connection with relevant research and important research that

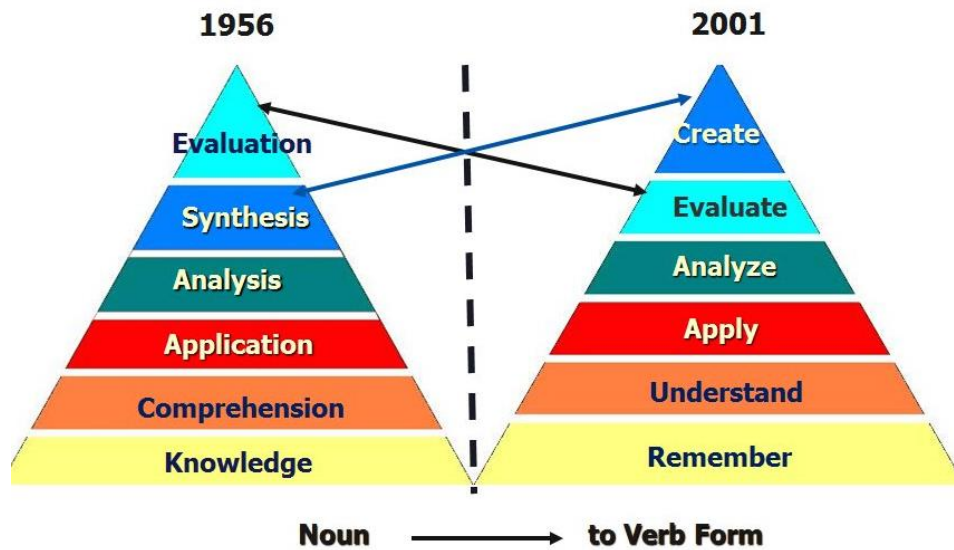
support this study. Chapter 3 will present the researcher's choice of methodology and data collection. Chapter 4 will address the findings and how they influenced the study results. Chapter 5 will make available the overall conclusion and the study's implications for future research.

## Chapter 2: Review of Literature

In today's modern educational community, teachers, paraprofessionals, and administrators alike have consistently been exposed to Bloom's Taxonomy of higher order thinking. These six levels of intellectual thinking are used as a model for effective teacher practice, learning objectives and outcomes, as well as a standard for students to practice and achieve higher-level critical thinking skills.

In the early 1950s, Benjamin Bloom (1956) and a team of colleagues developed a classification of intellectual behaviors. Within Bloom's taxonomy, there are three domains: Cognitive, Psychomotor, and Affective. The cognitive domain has six levels, and has become the major focus of modern educational practices, as it is the most advanced of the three domains (Truschel, 2007). The six original levels are as follows: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. Nearly 50 years later, Lorin Anderson, a student of Bloom, and David Krahtwahl (2001), one of the Taxonomy's original authors, revised Bloom's Taxonomy for the 21<sup>st</sup> century. The focus of the revision was to modify the domains to serve as verbs, rather than nouns (Wilson, 2001). The new domain names are as follows: Remember, Understand, Apply, Analyze, Evaluate, and Create. For the purpose of this study, references will be made to the revised version of Bloom's Taxonomy. The changes made between 1956 and 2001 can be seen in the following diagram.

**Figure 1 - Bloom's Taxonomy of Higher Order Thinking (Revised)**



These domains are ordered from the least intuitive, to the most advanced level of thinking skills, working from the ground up. When professionals in the field refer to High Level Bloom's, they are typically referring to the top three domains: Analyze, Evaluate, and Create. It is common practice when educators are instructed to create their daily learning objectives using High Level Bloom's, they typically utilize key words within the "Analyze" domain, such as compare/contrast, examine, or classify, and then make the claim that they have utilized "High Level Blooms." This study will focus on the top two domains, evaluate and create, and explore how these two areas of higher order thinking skills can influence a student's reading comprehension.

The purpose of this action research project was to investigate the effect of Socratic Seminars and their use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. This chapter summarizes research studies that address the important questions pertaining to this action research project: What are higher-order-thinking skills? What does it mean to comprehend a text? What is the connection between higher order learning and reading comprehension? What

instructional practices improve comprehension of a student? How does the Socratic seminar embody Bloom's higher-level domains? The first section focuses on Bloom's Taxonomy and the definition of higher order thinking skills. The next section presents the importance of comprehension and higher-level strategies that can be used to develop a student's reading ability. The subsequent section examines the Socratic seminar and its connection to Bloom's Domain levels of Evaluating and Creating. The final section focuses on the importance of using an integrated and multi-faceted approach to improve a student's reading comprehension.

### **Definition of Higher Order Thinking Skills**

According to the Florida State University Center for Advancement and Learning Assessment, higher order thinking skills include critical, logical, reflective, metacognitive, and creative thinking (King, 2008). These thinking skills come into play when individuals encounter unfamiliar problems, discrepancies, questions, or dilemmas (King, 2008). It is important to note that higher order thinking skills are grounded in lower order skills such as identifying, simple application and analysis (King, 2008).

### **Higher Order Thinking and Student Learning**

It has been well documented that when teachers seek to improve a student's use of higher order thinking skills through instruction, student achievement will improve. Higher order thinking skills can manifest in the classroom through a number of strategies and mediums. A differentiated activity that requires students to make a prediction can be considered a higher order thinking strategy, even when the student writes or verbalizes his or her response. More often than not, these higher-level thinking strategies occur in the classroom by accident, or without intentionality. To cultivate these essential skills, higher order thinking strategies must be implemented with the intent to directly support classroom instruction and student outcomes.

In Zohar and Dori's exploratory study (2003), they surveyed four separate educational programs that shared the same goal: fostering a student's higher order thinking skills in the context of science and technology instruction. Each program was unique in content, student population, and means of assessment. However, a common pattern emerged in each program, in that students with both high and low academic achievements made tremendous gains as a result of the explicit instruction in higher order thinking.

The purpose of Zohar and Dori's study (2003) was to explore this essential question: Do low-achieving students gain from teaching and learning processes that are designed to foster higher order cognitive skills? In order to answer this question, the researchers completed four different studies with different student populations (all within the Israel Public Schools), core science content, and higher-level thinking skill sets. For example, the first module studied was titled, "Quality of Air Around Us," (1999) which is a chemistry, environment, and social aspects module that is intended to expose students to controversial issues, develop their ability to pose questions, and to read scientific articles in a critical manner. This particular module was developed as a part of a Science, Technology and Environment in Modern Society (STEMS) project, and the module's main focus was to investigate if students' question-posing capabilities can serve as an alternative assessment method (Dori & Herscovitz, 1999).

The research population included seven 10<sup>th</sup> grade classes from five different schools in northern Israel, totaling 127 students divided into three academic levels, which was verified by a portion of a pre-test in scientific literacy: high (H), science majors; intermediate (I), or average students; and low (L), students with learning disabilities and impairments (Zohar & Dori, 2003). The module consisted of five case studies taken from newspaper articles, magazines, and academic journals. After reading the case studies, students received explicit instruction in how



to analyze data, solve complex problems, pose questions, conduct critical group discussions, play different roles, and write creative titles and passages with regard to controversial issues (Zohar & Dori, 2003). Students were given opportunities to interact with their peers in a small group setting to discuss and then construct new responses or questions. To assess the effect of the module's impact, a post-test was administered to measure the students' improvement in question-posing capability as a result of the module's learning process. The pre and post-assessments consisted of case studies, where the pre-test results served as a guide to instruction, and the post-test results served as a measure of progress (Zohar & Dori, 2003). After the students read the selected case study, the students were asked to create a set of questions that pertained to the case study. To assess the questions, the researchers determined whether or not the question only required knowledge from the case study. If yes, then the question received a complexity score of zero. However, questions requiring analysis, application, value judgment, or expression of an opinion, received a higher score. The student's aggregate complexity score is comprised of only the questions that utilize higher-order thinking skills (Zohar & Dori, 2003).

The researchers' findings in this module were that both high and low academic students improved the number and complexity of the questions they posed. While there still was a significant difference between the mean number of questions posed from higher level students and lower level students, the important result was that students at both the high and low levels improved their average question complexity, which led the researchers to believe that the students' achievements were positively correlated with the quality of questions posed (Zohar & Dori, 2003). This module is just one of four studies where the researchers concluded positive gains were made in student achievement based on engagement with higher order thinking skills. In each subsequent study, Zohar and Dori (2003) found that high and low academic students

improved their questioning abilities, their reasoning skills, and their scores within higher order thinking-based assessments. These results are a testament to the benefits that students will gain through projects and activities that employ higher order thinking skills. Furthermore, the researchers determined through empirical evidence that higher order thinking skills sets are not mutually exclusive to higher-level students. Zohar and Dori's study has significant implications within the field of education by working to change the mindset of educators in that all students are capable of achieving their own academic gains by using an advanced skill set of critical thinking and reasoning.

In order to foster and develop each individual student's use of higher order thinking skills, the instructor must become a primary facilitator to the student's learning. In Caulfield-Sloan and Ruzicka's study (2005) the researchers sought to instruct teachers in the use of higher order thinking and questioning strategies to be implemented within their classrooms. While the hypothesis in this study is not explicitly stated, it is inferred that if teachers utilize these advanced level thinking and questioning strategies within a K-8 Science Curriculum, student comprehension would be enhanced, and the overall mastery and creative application of the subject would improve.

The participants of this study were 120 third grade students randomly chosen from a total population of 600 students, as well as 27 teachers. Teachers were placed into a variable or control group, receiving or not receiving an experimental workshop in Bloom's Taxonomy of Educational Objectives, focusing on higher level thinking skills in analysis, evaluation and creativity. From each of the two teacher groups, sixty students responses were randomly chosen (Caulfield-Sloan, 2005).

The methodology of this study was comprised of an experimental workshop developed by Caulfield-Sloan to illustrate the use of higher order questioning strategies within a lesson in the form of a science experiment taught to a group of third graders (2005). The lesson was recorded and presented to the variable group of teachers who, in turn, observed the targeted strategies. They were then charged to implement the strategies during multiple classroom observations where evaluators examined the effectiveness of the targeted strategies. After the teachers completed the science lesson in the variable and control group, the students were assessed using the same test and rubric and the researchers compared the scores to see which group achieved more games. (Caulfield-Sloan, 2005).

The study's findings show a clear distinction between the experimental group and the control group's quantitative performance. In one example, the rubric responses were compared on the basis of low (non-proficient) or 0-1 responses, and high (proficient) or 2-3 responses. The control group had 90% low responses and only 10% high responses, whereas the experimental group's low range scores totaled 38.4%, and 61.7% scored in the high range (Caulfield-Sloan, 2005). There was also a significant qualitative study that was based on the researchers' observations, but there is a possibility of bias for the researchers observing their "handy-work."

Overall, this study directly connects to the claim that the use of higher level-thinking strategies can be implemented to increase comprehension and mastery across multiple subjects. Furthermore, Caulfield-Sloan and Ruzicka (2005) showed that their methodology can, in fact, be taught and implemented within the general education curriculum setting, and increase student achievement of critical thinking skills. When examining the definition of reading comprehension, the use of higher order thinking skills is the pinnacle point of a reader's development. Zohar and Dori (2003) support this notion as they concluded both high and low

academic students improved their questioning ability, their reasoning skills, and their scores within higher order thinking based assessments. These results are a testament to the benefits that students can make academic gains through projects and activities that employ higher order thinking skills. Furthermore, one could make the argument that these particular strategies are directly correlated to the development of a student's reading comprehension.

### **Strategies for Building Reading Comprehension**

Attempting to develop a student's reading comprehension is no small feat. The process takes time, routines, and strategies that require justification and supporting details, rather than right or wrong answers. Furthermore, it is difficult to measure student progress and mental capacity because of the intangible nature to understanding what is read. Proper assessment and screeners are essential to peer into a student's thought process and determine if the student is successfully reading with purpose or extracting information. Reading comprehension is not a skill that is quickly developed, but rather an extensive, critical process.

### **Reading comprehension defined**

The RAND Reading Study Group (RRSG) defines reading comprehension as, "the process of simultaneously *extracting* and *constructing* meaning" (RAND Reading Study Group, 2002, page 11). The emphasis on the words *extracting* and *constructing* is a compromise to the importance, as well as insufficiency of the text as a measure to reading comprehension (Snow & Sweet, 2003). In other words, a proficient reader is able to read a text and pull specific information from the text, but, in turn, create new meaning and make connections with prior knowledge.

Contemporary research supports this multi-faceted approach to reading comprehension as the role of the reader has clearly expanded. The 21<sup>st</sup> century educational community no longer

expects a reader to simply decode a text, but rather be a code breaker, text participant, text user, and text analyst (Luke & Freebody, 1999). According to Dr. Frank Serafini (2012) of Arizona State University and Southwest Educational Consultants, Inc., an expanded definition of reading comprehension includes four processes: 1. Navigating textual elements, such as written language and visual images, 2. Generate meanings in transaction with texts, 3. Articulate one's ideas and meanings within a community of readers, and 4. Examine the meanings within in a recursive, socially grounded process. Serafini's (2012) expanded view of reading comprehension supports the notion that there are many truths to a text, and many ways to interact with a text.

The way a student extracts, evaluates, and constructs meaning within a text is clearly a direct correlation to Bloom's higher order cognitive domains and the critical thinking skills that are present within a Socratic seminar.

### **Higher Order Learning Strategies**

Contemporary research and recent studies have shown that the use of higher order thinking strategies can increase student achievement. In Glaubman and Ofir's study (1997), the researchers chose to explore two theoretical methods for training kindergarten children: "To develop self-questioning skills, and study the connection between the quality of the questions asked and academic achievement in story comprehension and in self-directed learning" (Glaubman & Ofir, 1997, p. 4). The hypothesis of this study stated that special training for self-questioning, using a theory-based structured model, results in greater effectiveness for a group, than for a control group whose members are instructed by a non-structured conventional teaching methods (Glaubman & Ofir, 1997). The research variable was one group of students who received explicit instruction in self-questioning interventions to enhance the use of metacognitive strategies and generate more questions at a higher quality level.

The participants of this study included all Israeli-born native Hebrew speakers of medium socioeconomic status families. The children were randomly divided into three groups with two groups consisting of two children, and the third group comprised of three children. After each group's designed pre-tests and formal norm-referenced test (PPVT-R), the students were randomly divided into three subgroups, each receiving a different intervention program in "training for question-generation" (Glaubman & Ofir, 1997, p. 6). One program was based on the metacognitive theory: questioning that involves awareness of self and task at hand; one program was based on the active processing theory: asking many questions to naturally raise the quality of questions and promote comprehension; and the third program, which served as a control group, was based on a conventional method commonly used in kindergartens: asking questions that are generally based on the curriculum (Glaubman & Ofir, 1997). In the post-testing phase, the same measurements and procedures were used to reassess the students.

The researchers' results showed student comprehension to be far more superior and accurate in the metacognitive (MCT) and active processing theories (APT), than the conventional curriculum based questioning. The MCT training method, in particular, helped the kindergartners acquire skills of motivation, curiosity, autonomy, and self-directed learning while consciously using critical thinking (Glaubman & Ofir, 1997). This study is extremely important in the research of using higher level thinking skills to increase student comprehension because it implies that students at a very young age are capable of metacognitive thinking and self-directed learning. Therefore, one must conclude that it is possible for similar strategies to be implemented within a four-week action-research program involving older elementary students. This supports the idea that higher order thinking skills manifest themselves within the classroom

through multiple mediums and strategies. These strategies can be simple activities that when taught with intentionality, are effective at any age or ability level.

McKown and Barnett (2007) of Saint Xavier University supported this same conclusion through their action research project to improve the reading comprehension of second and third grade students by using higher-order thinking skills such as predicting, making connections, visualizing, inferring, questioning, and summarizing. The researchers instructed and modeled these strategies through the think-aloud process and graphic organizers. Students then used these strategies within the classroom environment as a whole class, small group, and independently. McKown and Barnett (2007) predicted that variable explicit instruction of these comprehension strategies to students, and, in turn, having those same students implement the strategies in a small group setting or independently, would improve their reading comprehension of a given text.

The setting of this action research project was at one elementary school with a population of 493 students, 92.3% Caucasian, 1.8% Hispanic, 3.9% African American, and the remaining 1.8% as Native American and Asian. The researchers reported that in 2005, 21.3% of the students were eligible to receive free or reduced price lunches (McKown & Barnett, 2007). In this study, the target groups were students in a second-grade classroom and students in a third-grade classroom. Over the course of the 16-week period, the researchers modeled one of the six strategies through the think-aloud process or use of graphic organizers. Next, the strategies were practiced by the whole class, then small groups, and then independently. After teaching the reading strategies, the researchers administered the Metacomprehension Strategy Index (MSI) (Schmitt, 1990) to see if the strategies changed the student approaches to reading (McKown & Barnett, 2007).

At the end of the 16-week study, the researchers found that the use of teacher modeling, the thinking aloud process, and the use of graphic organizers to utilize new reading strategies, had a positive impact on student comprehension. The results of the MSI showed a 20-30% increase in correct student responses in each of the three parts of the assessment, measuring the use of strategies before, during, and after reading. The researchers concluded that as a result of the variable explicit instruction, the students' knowledge of the reading strategies increased and they were able to raise their reading comprehension scores (McKown & Barnett, 2007).

Mckown and Barnett's study (2007) is valuable in showing that higher level thinking skills, such as predicting, making connections, visualizing, inferring, questioning, and summarizing, are able to be taught through explicit instruction using a single reading comprehension strategy, such as the think-aloud process or graphic organizers. In this action-research program, higher level thinking skills as prescribed under Bloom's Taxonomy Levels of Evaluating and Creating, were utilized throughout the four-week Summer Literacy Program. In order to accommodate varying levels in fluency, multiple reading activities were used within the seminar sessions. It is important to remember that the highest level of Bloom's Taxonomy is Creating, which can be attained through many different mediums. Some of these strategies are as simple as sorting and interacting with groups of words.

Sarah Nixon and John Fishback's study (2009) found that students who worked with word sorts and in small groups to discuss the relationships among key terms, reported enhanced confidence and comprehension of their curriculum's vocabulary words. The variable strategy that the researchers focused on was a word sort, which is an active learning, critical thinking strategy that involves students in small groups of three or four actively discussing words that have been provided for them by the instructor (Fishbeck & Nixon, 2009). The researchers



predicted that by choosing key vocabulary terms of the core curriculum, the word sort strategy would help students learn and retain new course content and create connections between the terms and their own prior knowledge base (Fishbeck & Nixon, 2009).

The study was implemented within a community college nutrition course over one academic year (two semesters), during a 90-minute or 50-minute class session. The purpose of this mixed design research study was to see if a content-heavy, text-driven science course could be effectively taught in a non-traditional manner that used active learning and critical thinking strategies rather than a traditional-style lecture (Fishbeck & Nixon, 2009). The word sort strategy consisted of words being presented to students in envelopes, with each word on its own strip of paper so that students could physically manipulate the words into varying categories.

The study's procedure was implemented in three stages. One: Students worked in small groups discussing the meanings of key terms and their relationships to other terms within the unit. Two: the students read the text independently to discover for themselves the meaning of words and their relationships. Three: the students re-sorted the words after having read the text and discover the meanings and relationships (Fishbeck & Nixon, 2009). During the shorter class sessions, the researchers asked the students to individually create a graphic organizer chart with the terms from the word sort.

The word sort was just 1 of 30 active-learning and critical-thinking strategies that were implemented. However, the only data sources directly related to the word sort were considered in its effectiveness as a critical thinking strategy. Both qualitative and quantitative data came from exit cards at the end of each class period, final surveys, and student interviews, in order to determine if the word sorts were beneficial (Fishbeck & Nixon, 2009).

The researchers found that the majority of students (80%) who were interviewed “loved” the word sorts and stated they wished the instructor had used the strategy more often. The students commented that the word sorts helped them to gain a deeper understanding of the concepts when focusing on their relationships with the vocabulary words (Fishbeck & Nixon, 2009). In all of their qualitative data sources, the researchers found that the instructional strategy assisted students in retaining information from the course and improved their chapter quiz and unit exam scores.

While there are no quantitative comparisons of test results from the students who did receive the instructional strategy and those who did not, the researchers’ findings still provided support for instructional strategies that allow for critical thinking skills. The students who used the word strategy gained a profound confidence and deeper comprehension of the course content by creating relationships between vocabulary terms and linking them to their overarching concepts. Furthermore, Nixon and Fishbeck’s prescribed interactions (2009) within small groups and the cultivating of a student’s ability to evaluate, was the exact level of higher order thinking that this study’s Socratic Seminar sessions sought to explore.

Whether a student is reading below grade level or is at a young developmental age, Bloom’s Taxonomy of Higher Order Thinking can still apply to a student’s learning and be used as a tool to develop advanced critical thinking skills. In Senokossoff and Fine’s (2013) exploratory study to develop reading comprehension, they instructed students on using visible thinking strategies and writing to engage with a given text. The researchers predicted that by teaching adolescent readers to use three visible thinking strategies, they would enhance their critical thinking abilities and reading comprehension (Senokossoff & Fine, 2013). The three visible thinking strategies were chosen from the Visible Thinking Project (Harvard Graduate

School of Education, 2011). “What makes you say that?” is a routine that asks students to interpret something they are viewing or reading, explain their thinking, and provide evidence to support their thinking. “Circle of Viewpoints” is a strategy that requires students to consider someone else’s perspective and interpret that person’s thoughts and feelings. “I used to think, but now I think” is a routine that helps students identify their new understanding after reading and to explain how and why their thinking has changed (Harvard Graduate School of Education, 2011).

The participants in this study were five adolescent readers, four of whom are English language learners. One participant was identified with Asberger’s Syndrome, and one participant was identified with Attention Deficit Disorder and a reading comprehension disability (Senokossoff & Fine, 2013). Throughout this study, four graduate students in a reading master’s program administered a Basic Reading Inventory (BRI) (Johns, 2010) and Cooper’s Interest Inventory (Cooper, 2001). These two assessments were used to determine each student’s reading level and reading interest to match the students to texts. After the initial pre-testing, the participants were exposed to two hours of tutoring a week over the course of a six-week period. Each of the three Visible Thinking Strategies was used twice throughout the study. At the last meeting during the eighth week of the study, another reading inventory was administered to measure if the students had enhanced their reading comprehension abilities (Senokossoff & Fine, 2013).

The researchers in this study found that there were no significant gains measured by the BRI. However, the researchers observed gains in the students’ responses within the visible thinking strategies and determined the exploratory study has merit. The researchers noted there are many variables to whether the students were getting the exact same explicit instruction, and

they also cited the study itself deserved a longer implementation period. In spite of this, all of the participants either maintained their reading level or slightly improved, and the participants' responses within the graphic organizers showed evidence of progress in their depth of comprehension and understanding of a text (Senokossoff & Fine, 2013).

Senokossoff and Fine's study (2013) showed that true growth in these higher-level skills may not be completely measured by a norm-referenced assessment, but rather the researcher's detailed observations, anecdotal records, and work samples of the student. It can be concluded that the use of higher order thinking and questioning strategies can result in observable gains within a wide range of student reading abilities and intelligence levels (McKown & Barnett, 2007) (Glaubman & Ofir, 1997) (Senokossoff & Fine, 2013). Higher-level critical thinking skills are the most advanced skills a reader can utilize during reading, and subsequently they are the most difficult to teach and accurately measure. Through the Socratic Seminar strategy, a specific period of time can be set and devoted to developing these higher-level skills (Glaubman & Ofir, 1997). Furthermore, through numerous activities and methodologies, there are clear opportunities for student assessment in higher level thinking skills, as well as a safe learning environment where students are able to create and expand their intellectual boundaries (Fishbeck & Nixon, 2009).

### **Socratic Seminar Strategy**

#### *Theoretical Framework of the Socratic Method of Instruction*

The Socratic seminar is a form of intellectual discourse where students take an active role in learning (Tredway, 1995). Socratic seminars are modeled after the instruction through-questioning methods of Socrates. They focus on a wide range of topics including specific readings, scientific demonstrations, and the arts. Furthermore, the seminar's methodology

utilizes enhanced abstract thinking, win-win conflict resolution, and values clarification (Polite & Adams, 1997). The seminars are held in a student-centered environment where the teacher acts as a facilitator of learning, rather than a keeper of knowledge (Chorzempa & Lapidus, 2009).

There are many different approaches to implementing a Socratic seminar, but the core premise is to have students read a given text, then generate questions to further explore that text within a discussion-based setting (Chorzempa & Lapidus, 2009). As an activity that promotes advanced critical thinking and analytical skills, the Socratic seminar strategy is typically associated in Middle or Secondary School classrooms. However, through leveled text and appropriate accommodations for the student's skill level, there are clear opportunities to utilize Bloom's Taxonomy and develop a young student's higher order thinking skills through the Socratic seminar strategy.

#### *Bloom's Taxonomy and the Seminar in Practice*

Polite and Adams (1997) of the Catholic University of America researched and assessed the effectiveness of Socratic Seminars in a Chattanooga, Tennessee Middle School. Specifically, the researchers focused on Lookout Valley's Middle School students' lack of ability to think critically, and whether Socratic Seminars could increase fluency and student achievement (Polite & Adams, 1997). At the time of the study, the researchers did not propose a specific hypothesis, but rather chose to engage in an unbiased investigation.

Lookout Valley is one of 11 Middle Schools in the Chattanooga Public School system. The researchers collected school and teacher-related data over two school years, with approximately 20 seminars held per year at each grade level: 40 seminars at the 7<sup>th</sup> and 8<sup>th</sup> grade levels, and 20 seminars at the 6<sup>th</sup> grade level. Lookout Valley serves approximately 220 students from an urban, working class setting. In 1993, 73% of the students ranked within the average

range in Math, Reading, and Science. The researchers conducted interviews with eight of the nine middle school teachers, observations of interdisciplinary team meetings, and Socratic seminar sessions during the 1994-1995 school year. Student data was collected from a random sample at Lookout Valley and consisted of one-on-one interviews. Three levels of analysis were performed on the data. First, the only information considered was provided by the respondents' direct response to a specific question. Second, the researchers compared and contrasted the respondents' answers on related questions. Finally third, the researchers disclosed and analyzed general patterns across multiple answers (Polite & Adams, 1997). The student responses were also categorized by grade and gender, and examined to reveal patterns that remained consistent throughout the sample population.

In spite of minor-perceived teacher problems, such as consistent implementation and lack of uniform teacher support, Polite and Adams (1997) concluded that their qualitative data suggest the potential of Socratic Seminars as a viable means of increasing the cognitive and social functioning of middle school students. Specifically, the student interviews indicated that Socratic Seminars engaged students with opportunities to develop critical thinking skills and be metacognitive in their learning. The researchers provided several recommendations to the Lookout Valley Middle School, including teacher workshops that clearly defined metacognition and the Socratic seminar method, as well as encourage teachers to plan seminars that are based on higher order and abstract thinking skills.

While this study is holistically qualitative, it does provide a viable connection to the use of Socratic seminars being used as a specific tool or venue to implement higher order questioning and thinking strategies as defined under Bloom's Taxonomy Levels of Evaluating and Creating. Therefore, one can predict that Socratic Seminars can increase a student's overall

comprehension of a text based on the research that Bloom's Higher Order levels of thinking, will increase student achievement and critical thinking skills.

The Socratic Seminar has been cited to improve many facets of a student's education that are directly linked to reading comprehension. In Molly Mee's (2000) multi-subject case study, she explored the influences of the Socratic Seminar on three 7<sup>th</sup> grade student's motivation to learn. The researchers' intent was to confirm, disprove, explore, or extend her belief and existing claims that Socratic Seminars can be a motivation method of instruction for students (Mee, 2000).

A 10-week, qualitative multi-case study approach was used to assess three 7<sup>th</sup> grade students, each with varying degrees of motivation, in a 7<sup>th</sup> grade language arts classroom where the variable Socratic Seminar was implemented on a weekly basis (Mee, 2000). The researcher used multiple data sources, including seminar observations, individual and group interviews, student journals, and both a pre and post study Course Interest Survey (CIS). The first survey was written to explore the student motivation for the language arts class, whereas the second survey was used to measure student perceptions of their motivation for the Socratic Seminar, after the 10-week period of weekly observations, interviews, and culminating student journals (Mee, 2000).

The researcher found that the data on all three students indicated that they perceived their participation in the Socratic Seminar captured their attention and made them motivated for learning (Mee, 2000). The students' reasoning varied, but included feelings of safety and control over their learning, as well as an increase in self-confidence and being able to talk about concepts relevant to them with their peers (Mee, 2000). The students' responses revealed the Socratic Seminar motivated them because it encompassed the nine characteristics that positively

influence their motivation for learning (attention, relevance, confidence, satisfaction, talk, peer collaboration, control, safety, positive student-teacher relationships) (Mee, 2000).

This study contributed to the notion that the Socratic Seminar can be used as a valid, student-centered instructional tool that will increase a student's motivation to learn. It is not difficult to create a link between a student's motivation to learn and their academic achievement, specifically their ability to comprehend a text and engage in **higher-level** critical thinking skills. This study posed another significant benefit to the Socratic Seminar. One can conclude that if the instructional strategy can motivate students to learn, then a student's ability to increase comprehension of a specific concept or text will improve. This level of student motivation and involvement cannot be present within a Socratic seminar without a student-centered approach. In comparison to a teacher-directed learning environment, the student-centered approach encourages learning through student responses and ideas. The concept forces the student to do the "heavy lifting" and make connections to the instructional objective. The following study makes this same comparison, utilizing a treatment group of student-centered instruction weighed against a traditional, teacher-led classroom.

In Diaz's study (2006), she emphasized the use of a student-centered approach within a Socratic method of instruction. The purpose of her study was to examine the use of the Socratic method of instruction infused with a Rogerian student-centered approach. The hypothesis of the study was that this variable method of instruction would enable students to achieve higher scores on standardized tests and achieve the students' overall academic goals (Diaz, 2006).

Diaz's study utilized a treatment group of 46 students and a control group of 36 students, with a total of 82 students of various academic levels, ethnicity, and gender, within a 7<sup>th</sup> grade class in South Texas (2006). Over the course of a 12-week period, the treatment group



participated in the Socratic method of instruction infused with a Rogerian student-centered approach, while the control group was taught using a teacher-directed approach. The treatment group received instructional sessions utilizing the Socratic method for one hour in length, five times a week, totaling sixty hours of treatment (Diaz, 2006). The researcher utilized several literary pieces from authors such as Emily Dickinson, Walt Whitman, etc., and focused on dialogue, critical thinking, and open questioning with the students in the treatment group. The general format of a single session included a close reading of the text, first reading for literal understanding and then reading for deeper levels of meaning, and then to develop an opening question that connected to both the text and the group (Diaz, 2006). It is important to note that the researcher's use of the Socratic method of instruction utilized Socratic literature circles and Socratic seminars interchangeably throughout her research. The researcher also included a qualitative study based on an eight-person sample within the Treatment Group to examine student motivation and perceptions of the variable instruction.

To assess the quantitative study, Diaz used three standardized tests: The TAKS Reading Tests (Texas Education Agency, 2003), the Gates-MacGinitie Reading Test (GMRT) (Gates & MacGinitie, 2000), and the Standardized Testing Assessment in Reading (STAR) (Richards, 1998). Diaz concluded that the students in the treatment group attained significant gains in their achievement compared to the control group, based on pre and post standardized test scores (Diaz, 2006). Both the quantitative and qualitative results confirmed the positive effects of implementing the Socratic method of instruction infused with a Rogerian student-centered approach. The students' reading achievement scores improved. In addition, overall motivation, talent, and context increased (Diaz, 2006). Diaz's study cited multiple methods and benefits to utilizing the Socratic method of instruction in improving a student's reading comprehension.

Furthermore, the emphasis of Diaz's research on the student-centered learning culture supports this study's one-on-one tutoring environment and the overall nature of the Socratic seminar, where the instructor acts as a facilitator of learning, rather than a disseminator of information.

The Socratic seminar is a viable method of teaching that can provide students at multiple levels the opportunity to develop and improve their higher order thinking skill-set. Qualitative studies (Polite & Adams, 1997; Mee, 2000) have concluded there is a significant potential of Socratic Seminars to be used as a viable means of increasing the cognitive and social functioning of middle school students. Specifically, student and teacher interviews have indicated that Socratic Seminars engaged students with opportunities to develop critical thinking skills and be metacognitive in their learning. Furthermore, the use of the Socratic Seminar strategy has been cited to improve student's reading scores on standardized tests, and in some instances making more gains than a traditional, teacher-directed method of instruction (Diaz, 2006; Zohar & Dori, 2003). However, it is imperative that the use of the Socratic method of teaching be incorporated into a multi-faceted approach to improve a student's reading comprehension.

### **An Integrated Approach to Improve Reading Comprehension**

Higher-order thinking skills are grounded in lower order skills (King, 2008). The Socratic seminar's method of utilizing higher-order thinking to interact with a given text is an advanced task that uses a very specific set of skills. Previous studies determined that higher order instructional strategies are not mutually exclusive to higher-level students (Caulfield-Sloan & Ruzicka, 2005; Zohar & Dori, 2003). However, a student's ability to interact with a given text is directly correlated to reading ability, which includes a student's phonological awareness, decoding ability, vocabulary, and reading fluency. Therefore, it is imperative that higher order

instructional strategies are administered within a comprehensive and multi-faceted approach to improve a student's reading comprehension.

One example of this integrated approach lies in Berninger, Abbott, Vermeulen, and Fulton's study (2006) of 2<sup>nd</sup> graders at risk for reading disability. The purpose of their research was to investigate the use of reading strategies that help improve a student's ability to read words, and as a result improve reading comprehension. The study included a data analysis of a control group consisting of students in a general reading program that included some decoding instruction, but emphasizing reading comprehension, and then a treatment group of before and after school reading *clubs* that received a comprehensive integrated approach supplementary to the general education curriculum (Berninger, et al. 2006). Both of these studies support a shared path to improving reading comprehension through an integration of foundational decoding and fluency skills.

The study involved 98 second graders (43 girls and 58 boys) from 10 elementary schools in a single district, who were identified through state-mandated assessments as being at risk for failing to meet state standards in reading.

Students were randomly assigned to the treatment or control group; 46 in the control group, and 47 in the treatment group. The main goal was to evaluate whether the treatment groups that received the supplemental intervention improved more in word decoding, reading fluency and comprehension than a control group that received only the general education program in reading for second graders (Berninger, et al., 2006). According to the researchers, the treatment group was treated like a club where students whispered a secret password to gain entrance and they were intrinsically motivated by the exclusivity of the reading club. The daily schedule for each session included initial word play through riddles and jokes, sounds, and

letters, and then skill and drill word work, including accuracy and automaticity of the alphabet and sight words (Berninger, et al. 2006). From there, students engaged in story reading and word play, such as bingo for structure words and searches for long words. Through each session's word play, word work, and story reading, instructional components were integrated with sub-word work and text levels of language that are necessary for creating functional reading systems in the reader's mind (Berninger, et al., 2006). The researchers successfully integrated multiple levels of language and numerous components of reading within each session of the supplementary program.

What the researchers found at the end of the second study was that both the control and treatment group improved significantly in reading comprehension. This anomaly could be explained through individual developmental milestones in oral language that preceded the pre-treatment and control assessments. However, the lesson from Study 2 is that instruction that integrated decoding and reading comprehension improved the accuracy of phonological decoding significantly more than the general instruction in the control group (Berninger, et al., 2006). The key finding of these two studies combined is that oral vocabulary knowledge is directly correlated to the development of reading comprehension (Berninger, et al., 2006). Study 1 provided direct evidence through formal reading assessments, and Study 2 provided indirect evidence through supplementary integrated reading instruction. The researcher's results directly support the notion that a comprehensive approach to improve a student's reading ability is far more beneficial and effective to improve reading comprehension, rather than devoting one's instructional constructs on a single foundational skill. This type of integrated reading instruction is vital to a student's overall development as a reader, and can be applied at any level or age

group. Of course, higher level thinking process cannot be completely developed without the foundation of phonemic awareness and sufficient decoding skills.

According to White's 2005 study, post-test data showed positive gains of improving reading comprehension through systematic, analogy-based phonics in second graders. In this exploratory study, 15 teachers utilized 150 lesson plans to develop low and average-performing students' ability to decode by analogy (White, 2005). These lessons were delivered over the course of a single academic year in the context of a comprehension-oriented reading program.

The participants included 15 teachers and 280 second-grade students at four public elementary schools in Hawaii (White, 2005). According to an index of educational risk that included scores of entering kindergarten students on the Peabody Picture Vocabulary Test (PPVT-R) (Dunn, 2007), a measure of socioeconomic status (SES), and scores on the Grade 2 Stanford Achievement Test (Holt, 1993), the three largest schools ranked in the lowest 15% of schools in the state, and the fourth and smallest school ranked in the bottom 40% (White, 2005). Nearly 54% of the students who participated in this study are bilingual and spoke a nonstandard dialect: Hawaiian Creole English. Furthermore, it is important to note that the teachers involved in the study were all volunteer participants who had been trained to implement the Kamehameha Elementary Education Program (KEEP), a comprehension-based reading program that targets native Hawaiian students who are at risk for educational failure (White, 2005).

To implement the study, each participating teacher received a binder of 150 lesson plans developed by PM Cunningham. Each 20-minute lesson was taught to the entire class on a daily basis for 30 weeks (White, 2005). Teachers began each week with a lesson that introduced six or seven "wall words." Once introduced, wall words were displayed permanently on a wall or bulletin board in the classroom, where they could be seen and referred to by teachers and

students during reading or writing activities. The second, third, and fourth lessons of the week reviewed the wall words and systematically built the students' ability to decode by analogy, from prior skills to independent application. The fifth day of the week was devoted to individual student assessment (White, 2005). Wall words can be described as the first 200 words on a common sight words list, and include various spelling patterns and irregular words. As a pretest, students had taken the Metropolitan Achievement Test battery (Primary 1) (Pearson Education, Inc. 2011) at the end of first grade, about four months before the intervention began. Scores on three subtests, Reading Comprehension, Sight Vocabulary, and Phoneme/Grapheme: Consonants, were used as pretest measures. In May following the intervention, students took the Word Reading and Reading Comprehension subtests of the Stanford Achievement Test battery (Holt, 1993). These served as posttest measures of word reading and reading comprehension (White, 2005).

Over the course of the study, the average number of lessons completed by the participating teachers was 99.8. The researcher made two significant conclusions, in that the students' performance on the post-test assessments was positively and significantly impacted by the number of lessons completed, and second, nearly all the students made positive gains in their word identification and reading comprehension by .20 and .40 standard deviation units respectively (White, 2005). In a controlled variance and assessment-based study, these results are in fact quite significant. Within the researcher's analysis, the use of a systematic and strategic, balanced approach to teaching literacy is the most effective. The researcher noted that all but one teacher implemented the program with precision, and consequently shifted her focus to strictly using comprehension strategies outside of the KEEP methodology. That teacher's student sample did not show the same level of gains in post-test assessments in comparison to the

teachers who correctly implemented the planned sequence of phonic elements and transfer of decoding skills novel studies, writing, and other language-based activities (White, 2005). This study shows a direct relationship of success when using a balanced literacy program, where teachers engage students in explicit instruction of foundational reading skills, and then apply those skills to the practice of reading and writing.

Theresa Cooper's (2008) study sought to investigate the relationship of early literacy levels and specific reading strategies in kindergarten students. The purpose of this exploratory study was to measure the success of a comprehensive reading program that utilized a combination of nine reading strategies. The participants included 32 students (21 boys and 11 girls) of 2 kindergarten classes in South Carolina, which served as the treatment group, and 16 students (10 boys and 6 girls) enrolled in the researcher's school of the previous year, which did not receive treatment, served as the control group (Cooper, 2008). To assess their progress, the students were administered the Developmental Reading Assessment (DRA) as a pre and post-test. The DRA assesses accuracy, fluency, and comprehension. It is designed to check for the student's individual reading level, as well as comprehension.

Students in the treatment group received explicit instruction in a combination of nine reading strategies that are designed to be an effective, comprehensive approach, determined by the National Reading Panel and Sousa (Cooper, 2008). The nine strategies are as follows: phonemic awareness, phonics, fluency, vocabulary, comprehension, drill and practice, high expectations for learning with applications from brain research, activating the student's prior knowledge, and utilizing parental support. The control group received instruction in phonics and phonemic awareness. The treatment group received explicit instruction over the course of three months. The results of their pre and post-post assessments were then compared to the control

group's data from the previous academic year (approximately nine months). The researcher's final analysis indicated that the treatment group had a significantly larger increase in reading performance compared to the comparison group (Cooper, 2008). The DRA scores from the treatment group showed a 53.1% gain in 3 months as compared to a gain of 3.75% of the control group in 9 months. The results of this study clearly show a substantial benefit to utilizing a comprehensive reading program to develop a student's overall fluency and reading comprehension.

These studies show that one cannot improve a student's reading comprehension by only focusing on specific comprehension strategies. There needs to be a solid foundation of reading fluency, phonics, and vocabulary, in order for a student to really make the next step of using higher order thinking strategies. Of course, these strategies are not restricted to students who read at a proficient level, but it is important to use a balanced approach of a foundational word study to develop fluency, as well as higher order thinking strategies that challenges students and can help them make it to the next level as a strong reader.

### **Conclusion**

One of the main goals of this action research program is to investigate how an educator can more frequently and effectively utilize the two top levels of Bloom's Taxonomy of Higher Order Thinking: Evaluating and Creating. It is the purpose of this action research project is to investigate the effect of Socratic Seminars and their use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension.

There is a connection to the use of higher order thinking skills and increased student achievement (Caulfield-Sloan, 2005). Due to the 21<sup>st</sup> century expanded view of reading



comprehension, the way a student extracts, evaluates, and constructs meaning within a text is clearly a direct correlation to Bloom's higher order cognitive domains and the critical thinking skills (Serafini, 2012). These skills can manifest themselves within the Socratic method of learning. Socratic seminars are modeled after the instruction through-questioning methods of Socrates (Polite & Adams, 1997). The seminars are held in a student-centered environment where the teacher acts as a facilitator of learning, rather than a keeper of knowledge (Chorzempa & Lapidus, 2009). The core premise is to have students read a given text, then generate questions to further explore that text within a discussion-based setting (Chorzempa & Lapidus, 2009). As an activity that promotes advanced critical thinking and analytical skills, the Socratic seminar strategy can be made accessible to any grade or intellectual level through leveled text and appropriate accommodations (Chorzempa & Lapidus, 2009). The Socratic seminar will be the vehicle to which these higher order-thinking skills will be implemented and developed by students within in a four-week literacy program.

## **Chapter 3: Procedures for the Study**

The goal of this action research program was to investigate the use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic seminar was the vehicle to which these higher order-thinking skills were implemented and utilized by students within in a four-week literacy program. Data were collected to explore the effects of the Socratic Seminar on a student's overall reading comprehension within two isolated case studies. This chapter includes a description of the research site and sample population, a description of the methods used in the data collection, as well as the procedures used to carry out the project and an explanation of how the data were read and analyzed.

### **Description of Sample Population**

The data were collected at a University Literacy Center, located in Southeastern Wisconsin. The mission of the Literacy Center is to provide access to functional, lifetime literacy for students, regardless of cultural, economic, linguistic, or biological factors. The Literacy Center offers comprehensive literacy assessment and intervention services for students in grades K-12, including individualized intervention plans built from research-based best practices in phonological awareness, phonics, vocabulary, fluency, comprehension, writing, and study skills (<http://www.stritch.edu/literacy>, 2014).

Graduate literacy professionals or graduate students taught all of the students involved in the University Literacy Center, in groups of one to three. The 18 students who were invited to participate in the Science Summer Literacy Program were representative of readers in 3rd to 5th grade. Of this sample population, 50% identified themselves to be African-American, 27% White, 5% Latino, and 16% as Other. During the Science Summer Literacy Program, each

student was exposed to three hours of literacy instruction, four days a week. The Program was divided into three areas: Literacy Instruction through Science, Reading and Writing Workshop, and One-on-One Tutoring. The focus of this study occurred in the One-on-One Tutoring sessions of two students, one of which was identified as a student who is *Learning to Read*, and the other a student who is *Reading to Learn*.

The student learning to read, or Marcus<sup>1</sup>, was a 5th grade student entering 6<sup>th</sup> grade. Based on the study's pre-assessment results and historical reports, Marcus was currently functioning at a 1<sup>st</sup> grade reading level. Marcus was a student who received specialized services within an inclusion classroom setting, and held an Individualized Education Program (IEP) at his traditional calendar K-8 school. He was identified with a Specific Learning Disability (SLD) label. Marcus participated in the Motivation to Read Profile-Revised (Malloy, Marinak, Gambrell & Mazzoni, 2013). Based on this profile, Marcus believed he was an "OK" reader. At the time of this study, his concept of himself as a reader was quite low, but Marcus does understand the importance of being able to read and its impact on his life. Marcus stated that he was interested in most academics at school; however, he struggled to complete work due to its perceived difficulty and his lack of motivation. Marcus was very outgoing and liked to share stories with his classmates and instructors. He exhibited, in fact, an incredible base of background knowledge on several topics.

The student who was reading to learn, or Travis<sup>2</sup>, was a 4<sup>th</sup> grade student entering 5<sup>th</sup> grade. Based on the pre-assessment results and historical reports, Travis was currently functioning between a 4<sup>th</sup> and 5<sup>th</sup> grade level. According to the Motivation to Read Profile-

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<sup>1</sup> To protect the anonymity of the study's participants, a pseudonym will be used in place of the student's real names. Therefore, the student who is as learning to read will be identified as Marcus.

<sup>2</sup> The student who is reading to learn will be identified as Travis.

Revised (Malloy, Marinak, Gambrell & Mazzoni, 2013), Travis had a positive self-concept as a reader. At the time of this study, Travis responded that he is a good reader and indicated that he is capable of sounding out words, understanding what he reads, and he enjoys talking about what he reads. However, Travis was not a confident reader when he reads in front of others. He stated that he sometimes worried about what other kids think of his reading, and that reading is kind of hard for him. Travis had a slight speech impediment, and he received speech therapy services in the past at his traditional calendar K-8 school. Overall, Travis valued reading, especially topics in which he is interested, such as basketball and other sports. He stated that he likes to read, but rarely spends his free time doing so. Travis demonstrated excellent active reading skills and showed maturity in his inference making abilities.

### **Methods Used in Data Collection**

Demographic information used to gather descriptive data on students included a parent, teacher, and student survey of school and home literacy environment. The parent survey was sent home to be completed and the student survey was administered in the classroom. The students were issued a Motivation to Reading Profile (Malloy, Marinak, Gambrell & Mazzoni, 2013) that included a multiple-choice assessment and conversational interview. The students heard the researcher read the survey questions and brief discussion of the question for clarity, if needed, and then students were provided the opportunity to respond. The Motivation to Read Profile focuses on type of genres preferred, enjoyment of reading, amount of time spent watching television, playing video games, and the perception of the student as a reader. At the end of each pre-test session, the student survey was reviewed with the student for clarity purposes. The parent survey asked parents about the students' school progress, reading difficulties and kind of reader the student is at home. The teacher survey asked the greatest reading need, description of

a typical reading/language arts class, as well as individual questions about project participants. The questions about the project participants focused on ability, attitude, interests, needs and behavior.

Prior to the implementation of the specific reading intervention strategy in the action research program, the students completed two days of pre-tests, and then two days of post-tests at the end of the study. There were three key assessments that were utilized to determine present reading levels, guided the researcher's instruction, and measured student growth: The Dr. Seuss Words Assessment (Santa and Hoiem, 1999), the Power Patterns Placement Survey (Cohen and Cheney, 1999), and the Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011). The Dr. Seuss Words Assessment is a collection of word lists that are designed to assess emergent and beginning readers' recognition of the most common word families, spelling patterns, and rimes in the English language. The sequence is based on Santa and Hoiem's (1999) Early Steps Word Family Sequence. The Power Pattern Placement Survey is a collection of word lists that are designed to assess beginning and proficient readers' recognition of the most common vowel/syllable patterns. This sequence is based on Cohen and Cheney's (1999) vowel-syllable progression. These two assessments were used together based on the student's ability. For example, if 90% or more words are correct at the final two levels of the Dr. Seuss Words Assessment, it is then necessary for the researcher to move on to the Power Patterns Placement Survey. If the student is missing multiple word patterns at various levels, then it is imperative to re-teach the level emphasizing the words missed. The results of these assessments were used to design and evaluate the specific interventions used within the Word Study portion of each individual session, and in turn measure growth at the end of the project through post-testing.

The Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011) was the primary data source for the two case studies. The QRI-5 is an informal assessment used as the criteria to determine the highest instructional reading level of each student. Administered to each student individually, the instrument provided word lists and numerous passages to assess the oral reading ability of students. Specifically, the QRI-5 provided information about word identification, reading fluency, and comprehension. The results were used to design and evaluate the specific interventions used within the study. Finally, the QRI-5 documented student growth at the end of the project.

This research project was, in fact, two separate case studies of two students being exposed to reading intervention strategies that incorporate higher order thinking strategies, specifically the Socratic seminar. Therefore, essential pieces of data were collected through observations, detailed notes, student work samples, graphic organizers, and recorded instructional sessions to establish the effectiveness and impact of the Socratic seminar strategy.

### **Description of Procedures Used**

The Socratic seminar strategy was implemented within each student's 55-minute one-on-one tutoring session. Each session occurred four days a week, from approximately 1:00pm to 1:55pm, and 2:00pm to 2:55pm, for a total of 16 sessions per student.

The study began with two days of initial pre-testing, in order to determine the student's present reading ability, which served as a tool to guide instruction and the use of leveled text. Before testing began, the students were administered the Motivation to Read Profile Survey during which the researcher read the survey questions and then students were provided the opportunity to respond. At the end of each pre-test session, the student survey was reviewed with the student for clarity purposes. The Motivation to Read Profile Survey focuses on type of

genres preferred, enjoyment of reading, amount of time spent watching television, playing video games, perception of the student as a reader. At the end of each pre-test session, the student survey was reviewed with the student for clarity purposes. The students then completed pre-tests using the QRI-5. This assessment was administered to determine student-reading comprehension prior to the implementation of action research project.

Over the course of the four-week program, each session was broken down into two parts: a comprehensive Word Study, and a Socratic Seminar session. As part of a holistic approach to improving reading comprehension, the Word Study focused on isolated deficiencies within the students' reading ability as identified by the initial pre-tests. For example, the instructional level of Student A was a 5<sup>th</sup> grader functioning at a 1<sup>st</sup> grade reading level, therefore his Word Study included interventions to improve phonemic decoding, segmenting, and blending, as well as phoneme-grapheme mapping and high frequency words (HFW) from the Dolch Word List. Student B was a 4<sup>th</sup> grader functioning at grade level, and his Word Study included interventions to improve fluency, vocabulary, high frequency words from the Fry Word List, and the use of meaningful word parts. The activities and intervention strategies in the word study varied from day to day, and occurred for approximately 15-20 minutes within the 55-minute one-on-one tutoring session. It is important to note that the skills practiced within the Word Study, were often referred to and revisited within the Socratic Seminar and daily readings.

The second part of the session was devoted to the Socratic Seminar, for a period of approximately 30-40 minutes (which at times carried over to the following day's tutoring session). Students read an expository text at their instructional level that was meant to provoke thought and critical conversation. Throughout the four-week reading program, students participated in training in the Socratic seminar, open-questioning and discussion strategies. For

example, the teacher (seminar leader) would read a given text with the student. Based on the students' reading level, they would either be read to orally, or participate in a guided reading strategy such as choral reading or shared reading. The student was taught the Socratic method of questioning, using open-ended questions and collaborative discussion. The student then learned how to reflect and create his or her own response, either orally or in written form. When the student was familiar with the necessary components of the Socratic approach of teaching and discussion, a specific event known as the Socratic seminar, using higher order questioning and critical thinking strategies, was used in class to explore these texts.

Due to the young age of the students and limited amount of time available during each session, the Socratic seminar strategy was broken down into five steps:

1. Read and Analyze
2. Create a Response
3. Create a Question
4. Discuss
5. Reflect and Evaluate

After reading the text with the Seminar Leader, the student created an initial response, verbally or written, chose two to three open-ended questions from a given list, and then conducted the seminar discussion with the seminar leader. The discussion included responses to the leader's open-ended questions, the student's questions, or both. After the seminar discussion concluded, the student engaged in a follow up activity, such as creating a written response or reflection, drawing an important scene or concept from the text, or evaluated the text in terms of its theme, setting, and characters.



Throughout the program, the researcher maintained student attendance records and detailed notes regarding each session. At the end of the four-week program, post-tests were administered to measure student growth. Each student and parent received feedback on the reading project and the effect on their student's reading comprehension.

### **Utilized Texts**

Chrisp, P. (2009). *Dinosaur detectives*. London: Dorling Kindersley.

Christopher, M. (2008). *On the court with-- LeBron James*. New York: Brown and Little.

Penner, L., & Williams, W. (1995). *Sitting Bull*. New York: Grosset & Dunlap.

Medearis, Angela S. (1994). *The Seven Days of Kwanzaa*. New York: Scholastic.

Wagner, F. (1963). *Submarine fighter of the American Revolution: The story of David Bushnell*. New York: Dodd, Mead.

### **Description of Data Collection**

To determine the effects of the Socratic Seminar and its use of higher order thinking skills on a student's reading comprehension, the study required detailed analysis of the QRI-5 (Leslie & Caldwell, 2011) informal assessment data, as well as instructor observations, daily notes, student work samples, graphic organizers, and recorded instructional sessions. During the QRI-5 assessment, students were administered a word list and asked to pronounce each word on the list. All answers were audio recorded. The word list was used to select a passage of the same readability level in which the student scored an instruction level. The expository passage concept questions determined the student's familiarity with the topic of the selection. As the students read the passage orally, miscues such as substitution, omission, insertion, and self-correction were recorded on the examiner copy of the passage.

## **Pre and Post Assessments**

The QRI-5 assessment provided reading fluency percentage, retelling percentage, and comprehension score without look-backs.

### *Reading Fluency*

The researcher used the findings from the QRI-5 to evaluate automaticity of word identification or reading fluency of participants by calculating the correct words per minute. The correct words per minute were calculated by the number of words in the passage minus the miscues/errors multiplied by 60 and divided by the number of seconds took to read the passage. As part of a holistic approach to improving reading comprehension, the assessment of reading fluency is important in this study since there may be a direct correlation between weak reading fluency and a student's inability to comprehend a text.

### *Retelling*

After the student completed the reading of the passage during the pre and post assessment, the passage was removed and the student was asked to retell the passage as if telling to someone who had never heard the passage before. Thereby, telling what the author wrote about in the passage.

### *Comprehension.*

The researcher asked comprehension questions and scored them based on the suggestion provided by the QRI-5 manual. The questions were scored as either right or wrong. The comprehension question score was determined by adding the number of correct answers provided by the students out of five questions relevant to the passage. The comprehension questions asked the reader to identify the main idea, facts, stated in the passage to support the identification idea, main idea sentence and infer or figure out the answer to the question.

## **Conclusion**

The purpose of Chapter 3 was to familiarize the reader with the description of the research site and sample population, instruments used in the data collection, the procedures used to carry out the project, and an explanation of how the data were analyzed. In summary, the research project took place at University Summer Literacy Center in order to improve and develop the overall reading comprehension of each student involved in the study. The QRI-5 word list was used to identify the beginning point for passage reading. The expository passages determined automaticity and comprehension at the student's highest instructional level. Over the course of 16 sessions in a four-week program, the two students involved in the study were exposed to a daily word study and Socratic seminar reading strategy. The students were trained in the philosophy and implementation of the Socratic method of questioning and learning, and then engaged in a Socratic seminar using a given expository text. The data collection was implemented through pre and post assessments of the Dr. Seuss Words Assessment (Santa and Hoiem, 1999), the Power Patterns Placement Survey (Cohen and Cheney, 1999), and the Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011), as well as alternative pieces of data such as instructor observations, daily notes, student work samples, graphic organizers, and recorded instructional sessions. The next chapter will present an analysis of the data collected in the form of two case studies of the individual students utilizing the Socratic seminar and its use of higher order thinking skills to improve their overall reading comprehension.

## **Chapter 4: Results**

The goal of this action research program was to investigate the use of higher-order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic seminar was the vehicle to which these higher-order thinking skills were implemented and utilized by two students within in a four-week literacy program. Data were collected to explore the effects of the Socratic Seminar on a student's overall reading comprehension within two isolated case studies. This chapter serves as a narrative that highlights the major findings of each case study. This chapter also includes specific information about the methods utilized for each case study, as well as analyses and a summary of the findings. The two case studies of the action research program are categorized as a *Student Learning to Read*, and a *Student Reading to Learn*.

### **Case Study 1: Student Learning to Read**

#### **Student Description**

At the time of the study, *Marcus* was a 5th grade student entering 6<sup>th</sup> grade. During the traditional calendar school year, Marcus attended an urban, public K-8 school that specializes in teaching students with moderate to severe disabilities. In its most recent Wisconsin School Report Card, Marcus' attending school had a student population of 48.7% with disabilities, and was consistently rated as "Meeting Few Expectations" (Wisconsin Department of Public Instruction, 2014). Marcus attended summer school classes at his attending school, and was a past participant of the Summer Literacy Center. In spite of its State Report Card, Marcus attended a school that is perceived to be a stronger Elementary school than most of its district equivalents, has strong administrative leadership, and actively seeks to meet the needs of its students.

Marcus was a student who received specialized services within an inclusion classroom setting, and held an Individualized Education Program (IEP) at his traditional calendar K-8 school. He was identified with a Specific Learning Disability (SLD) label; however, based on notes in Marcus' Literacy Center file and present observations, he also showed traits of a cognitive disability (CD) and Dyslexia. Marcus participated in the Motivation to Read Profile-Revised (Malloy, Marinak, Gambrell & Mazzoni, 2013). At the time of this study, Marcus stated that he was an "OK" reader. His concept of himself as a reader was quite low, but Marcus understood the importance of being able to read and its impact on his life. Marcus stated that he was interested in most academics at school; however, he struggled to complete work due to its perceived difficulty and his lack of motivation. Marcus was a very outgoing student who liked to share stories with his classmates and instructors. He did, in fact, have an incredible base of background knowledge.

In reading fluency and phonics, Marcus' ability to identify sight words was very poor. Based on observations in the study, Marcus read very slowly and stumbled over many of his words. According to the QRI Word Identification Lists (Leslie & Caldwell, 2011), Marcus was proficient at identifying words at a Primer and Primer 2/3 levels, but struggled when administered a First and Second grade word list. He often skipped over unfamiliar words and replaced them with other words that look similar (Table 1). In the Reading Dr. Seuss Words Assessment (Santa & Hoiem 1999), Marcus' weakest area was identifying *short a* word families (Table 2). However, in every other category Marcus was able to identify the correct pattern at a proficient level. This may be explained by Marcus' ability to identify basic patterns within a list of words in place of reading them accurately. Nevertheless, many of Marcus' struggles came from consonant blends and short-a versus long-a sound patterns. Marcus required the most

intense instruction in phonemic decoding, which greatly impacted his ability to participate in higher-level thinking strategies based on what he read, rather than what he already knew.

**Table 1 – QRI-5 Sight Word Accuracy (Marcus)**

<b>QRI-5 Word list</b>	<b>Initial Assessment</b>
	Date: 7/8/2014
Level	1
Level/% automatic	65%
Level/% total	80%
Independent/Instructional/Frustration	Instructional
<b>QRI-5 Passage Accuracy</b>	<b>Initial Assessment</b>
Passage	“Night in the City”
Readability Level [RL]	1.5
Fountas and Pinnell [FP]	G
Passage Type (Narrative/Expository)	Narrative
Concepts Familiar/Unfamiliar %	Unfamiliar (58%)
Level/% Total Accuracy/Acceptability	90% accurate 92% acceptable

**Table 2 - Dr. Seuss Words Assessment (Marcus)**

**Level 1 (cvc families sequenced by short vowels)**

<b>Short <i>a</i></b>	<b>Initial Assessment</b>
<b>Words Correct</b>	<b>3</b>
<b>Number/%</b>	<b>30%</b>
<b>Patterns Correct</b>	<b>4</b>
<b>Number/%</b>	<b>40%</b>

<b>Short <i>i</i></b>	<b>Initial Assessment</b>
<b>Words Correct</b>	<b>8</b>
<b>Number/%</b>	<b>80%</b>
<b>Patterns Correct</b>	<b>9</b>
<b>Number/%</b>	<b>90%</b>

<b>Short <i>o</i></b>	<b>Initial Assessment</b>
<b>Words Correct</b>	<b>7</b>
<b>Number/%</b>	<b>70%</b>
<b>Patterns Correct</b>	<b>9</b>
<b>Number/%</b>	<b>90%</b>

<b>Short <i>e</i></b>	<b>Initial Assessment</b>
<b>Words Correct</b>	<b>6</b>

<b>Number/%</b>	<b>60%</b>
<b>Patterns Correct</b>	<b>10</b>
<b>Number/%</b>	<b>100%</b>

<b>Short u</b>	<b>Initial Assessment</b>
<b>Words Correct</b>	<b>7</b>
<b>Number/%</b>	<b>70%</b>
<b>Patterns Correct</b>	<b>10</b>
<b>Number/%</b>	<b>100%</b>

**Level 2 (mixed cvc families)**

<b>Word Families</b>	<b>Initial Assessment</b>
<b>Words Correct</b>	<b>9</b>
<b>Number/%</b>	<b>45%</b>
<b>Patterns Correct</b>	<b>11</b>
<b>Number/%</b>	<b>55%</b>

In reading comprehension, Marcus’ explicit and literal comprehension skills were quite strong within a narrative text. He could remember and retell very specific details at his instructional level. According to the QRI-5 Comprehension Passages (Leslie & Caldwell, 2011), Marcus’ instructional level was at a mid first grade reading level (Table 3). In retelling ideas from a middle first grade level passage, Marcus was able to retell 58% of relevant concepts related to what he read. When the reading level of the material increased as seen in the next passage, Marcus’ rate of retelling decreased to 56% (Table 3). In answering questions about a passage, Marcus tended to latch on to a set amount of specific details and use those to answer multiple questions, even if they were unrelated. For example, while reading *Sitting Bull* (Penner & Williams, 1995) on the third day of the program during the second Socratic Seminar session, Marcus focused on physical, tangible details throughout discussion, specifically the action sequence from a battle scene early on in the book. When asked a question about *Sitting Bull*’s individual strengths, Marcus focused on the physical traits of the scene that he read about or the

pictures that depicted the battle. He was stronger in explicit, observational details, but implicit connections and extracting intangible details from a text was an area that needed improvement.

**Table 3 - QRI-5 Reading Comprehension (Marcus)**

<b>QRI-5 Retelling and Questions</b>	<b>Initial Assessment</b>
	Date: 7/8/14
<b>Grade</b>	Primer
<b>Passage</b>	“A Night in the City”
<b>Narrative/Expository</b>	Narrative
<b>Familiar/Unfamiliar</b>	Unfamiliar
	Retelling: 21 of 36 ideas (58%)
	4 explicit 100% w/o lookbacks
	1 implicit 50% w/o lookbacks
<b>RL=            FP=</b>	RL= 1.5    FP= G
<b>Independent/Instructional/Frustration</b>	Instructional
<b>Grade</b>	1
<b>Narrative/Expository</b>	Narrative
<b>Familiar/Unfamiliar</b>	Familiar
	Retelling: 25 of 44 ideas (56%)
	4 explicit 100% w/o lookbacks
	1 implicit 50% w/o lookbacks
<b>RL=            FP=</b>	RL= 1.8    FP= I
<b>Passage</b>	“The Surprise”
<b>Independent/Instructional/Frustration</b>	Instructional

Based off of the study’s pre-assessment data, Marcus was identified as a beginning reader. The key characteristic of Marcus as a case study was his inability to fluently read a text beyond a 1<sup>st</sup> grade reading level. This posed a major challenge in developing Marcus’ comprehension skills through the use of higher-level thinking strategies, especially when reading



and interacting with a lower level text at his instructional level. However, research cited in Chapter 2 of this study (Zohar & Dori, 2003; Caulfield-Sloan, 2005), clearly shows that higher-order thinking strategies can be employed across multiple grade levels, content areas, and instructional reading levels of students. The key factor to employing these strategies were through simplified, step-by-step instructions, as well as program modifications that would accommodate Marcus' reading ability.

### **Strategies Implemented**

Due to the limited amount of scheduled time with Marcus in the Summer Science Literacy Program, as well as Marcus' 1<sup>st</sup> grade reading level, the strategies implemented within this case study needed to be appropriate for a 20- to 30-minute time frame. Previous studies have shown (Berninger, et al. 2006; White, 2005; Cooper, 2008) that improving student reading comprehension can be most effective when utilizing a comprehensive approach that includes explicit instruction in phonics, vocabulary, and fluency, in addition to comprehension methods and complex thinking strategies. Marcus It was imperative to Marcus' development as a reader that he received explicit instruction within a Word Study at the beginning of the session, and then was taught key skills such as citing evidence, forming questions/observations, and drawing inferences within the Socratic Seminar strategy in the second half of the session. However, this did in fact reduce the Socratic Seminar strategy to a much shorter window than most traditional Socratic Seminars operate.

For the purpose of this case study, the Socratic Seminar was broken down as follows.

1. Read/Analyze
2. Create a response
3. Create a question

#### 4. Discuss

#### 5. Reflect and Evaluate

This step-by-step model was posted in several areas around the small office room where the one-on-one tutoring sessions took place. Before Marcus was fully exposed to the Socratic Seminar strategy, he was first introduced to the concept and made fully aware of the philosophy and goal of the study.

During Session 2, after the initial assessments had been completed, Marcus participated in a short activity that introduced the Socratic Seminar and the concept of open-ended questions. Marcus was given a photograph, specifically a photo from a Spiderman movie scene, which was an area of interest for Marcus (see Appendix A.1). Marcus was tasked to examine the photograph and record as many details as he could within three categories: I see... I observe... I notice... These categories served as sentence starters that helped Marcus to organize his observations. After discussion of his responses, Marcus was then instructed to create three open-ended questions that could have multiple responses, and provoke discussion. From this initial activity, it was easy to tell that Marcus was very observant and was able to engage in topics that he had found interesting. It was also clear from this introductory session that Marcus would consistently have great ideas, but his reading and writing skills would continue to be a significant barrier in the progress of the study.

In the next day's session, Marcus began the Socratic Seminar process. In choosing a text for Marcus, it was important to utilize a non-fiction, expository text that was suitable for Marcus' reading level. The first book that was utilized in this case study was *Sitting Bull* by Lucille Recht Penner (1995). This book was chosen because it is a Level 2 book in the Penguin Young Readers Series, qualifying as a first to second grade reading level. The key was to find a high-

interest book at Marcus' reading level. Throughout Marcus' case study, the shared reading strategy was heavily relied upon, where Marcus would read a paragraph, and then the instructor would read a paragraph, as well as choral reading where both the student and the instructor read together. Furthermore, the instructor often worked as a scribe for Marcus in order to accurately record his thoughts and ideas. These strategies helped to decrease the weight of reading and writing on Marcus and cultivate a more fruitful session.

After the shared reading, the instructor then taught Marcus to create a response to what he had read. This was done in a number of ways, including pictures, statements, and reflections. Marcus was taught to use sentence starters that were posted on the wall around the room. The prompts ranged in complexity, from "I like..." or "I think..." to "I'm confused about..." or "I see this part in two ways..." From there, Marcus was instructed to create a question, which could be developed on his own or through the use of question stems that were posted on the wall around the room. Based on the level of engagement from Marcus, the instructor created several questions and Marcus would choose which one he wanted to discuss. After a discussion led by the instructor, Marcus would then create a reflection or evaluation of what he had read, the questions asked, or the conversation held. Once again the instructor would serve as a scribe to support Marcus in his response and analysis. Throughout this entire process, Marcus was instructed and encouraged to cite evidence, and share with the instructor where in the book he found the observation or information.

The second text that was utilized in this case study was chosen by Marcus from the Literacy Center Library. The book was titled *Dinosaur Detectives* (Chrisp, 2001), which is a Level 4 "Proficient Readers" text from the DK Readers Series. Marcus was allowed to use this book because of its expository content and its third to fifth grade reading level. This would

undoubtedly be a challenge for Marcus to read, but with the shared reading strategy and Marcus' engagement with a book that he chose, the text served as an appropriate challenge to finish the study.

Based on the time available in each session, the Socratic Seminar strategy and its step-by-step process was often broken up into two days to allow for adequate discussion and analysis of the day's reading and responses. Furthermore, certain steps in the process could take much longer than planned if Marcus was inattentive or struggling with the day's reading. The key to the implementation of the Socratic Seminar strategy with Marcus was to be flexible and accommodating, while allowing plenty of think time and opportunities to engage in discussion.

### **Comparison of Data**

After the one-on-one tutoring sessions, the students were given the same initial assessments as a posttest during the final two days of the Summer Literacy Program. The results were compared using the Qualitative Reading Inventory-5 (QRI-5; Leslie & Caldwell, 2011) as the primary data source for the two case studies. In addition to the record of observations from the researcher, the QRI-5 Reading Passages were used to measure student growth at the end of the Summer Literacy Program.

**Table 4 - QRI-5 Pre and Post Assessment Data (Marcus)**

<b>QRI-5 Retelling and Questions</b>	<b>Initial Assessment</b>	<b>Post Assessment</b>
	Date: 7/8/14	Date: 7/30/114
<b>Grade</b>	Primer	1
<b>Passage</b>	"A Night in the City"	"The Bear and the Rabbit"
<b>Narrative/Expository</b>	Narrative	Narrative
<b>Familiar/Unfamiliar</b>	Unfamiliar	Familiar
	Retelling: 21 of 36 ideas (58%)	Retelling 14 of 31 ideas (45%)
	4 explicit 100% w/o	4 explicit 100% w/o

	lookbacks	lookbacks
	1 implicit 50% w/o lookbacks	0 implicit 0% w/o lookbacks
<b>Reading Level (grade)= Fontas &amp; Pinnell Level=</b>	RL= 1.5 FP= G	RL= 1.6 FP= G
<b>Independent/Instructional/Frustration</b>	Instructional	Instructional
<b>Grade</b>	1	2
<b>Narrative/Expository</b>	Narrative	Expository
<b>Familiar/Unfamiliar</b>	Familiar	Familiar
	Retelling: 25 of 44 ideas (56%)	Retelling 13 out of 42 ideas (30%)
	4 explicit 100% w/o lookbacks	2 explicit 50% w/o lookbacks
	1 implicit 50% w/o lookbacks	3 implicit 75% w/o lookbacks
<b>Reading Level (grade)= Fontas &amp; Pinnell Level=</b>	RL= 1.8 FP= I	RL= 2.2 FP= J
<b>Passage</b>	“The Surprise”	“Seasons”
<b>Independent/Instructional/Frustration</b>	Instructional	1. Instructional

According to the QRI-5 (Leslie & Caldwell, 2011) pre and post-assessments, Marcus made marginal gains in his ability to read and comprehend a text. Comparing the first level narratives from the pre-test and post-test, Marcus increased his retelling of ideas slightly by 11%, and his implicit comprehension questions by 50% (improving from 0 correct answers to 1 correct answer). Unfortunately, at Marcus’ reading level, expository texts were not available below level 2 of the QRI-5, which means a comparison cannot be made between an expository text in the pre-test and the post-test. Nevertheless, Marcus’ answers to both explicit and implicit comprehension questions on the expository Level 2 text, scored 50% and 75% respectively. Based on the post-assessment data, Marcus’ ability to retell specific ideas from what he has read

did not significantly improve. However, these percentages were relatively strong from the beginning to the end of the study, showing an overall strength for Marcus.

It was difficult to determine if Marcus made any significant gains in reading comprehension based on the QRI-5 post-assessment results. The QRI-5 (Leslie & Caldwell, 2011) is a clear and concise measure of a student's reading ability that was instituted on two separate days, once at the beginning of the study and once at the end of the study. Marcus' performance in each one-on-one session varied from one day to the next. Marcus' progress and ability to utilize the Socratic Seminar cannot be fully measured in one pre- and post-assessment. When interpreting the overall impact of this study on Marcus' reading comprehension, it was important to consider all forms of data, both numerical measurements as well as intangible observations and pieces of evidence.

### **Analysis**

Marcus made progress in working with the Socratic Seminar strategy. As a whole, his responses and discussion questions increased in their complexity and level of higher order thinking. However, Marcus's development and performance in the one-on-one session was inconsistent and unpredictable based on his demeanor and attitude. He was a respectful student who was more focused in a one-on-one setting, but Marcus also tried to avoid more difficult activities that required the use of higher level thinking skills.

In the initial photograph activity, Marcus' observations were strong and detailed, but his open-ended questions focused on simply "What" or "Why," which required little discussion or complex ideas ("Why is Spiderman holding Jane in the sky?" "What happened to Spiderman?"). Marcus tended to focus on very physical, tangible details, and it was a challenge to move away from what he was physically able to see in order to make an inference. Early on in the study,

Marcus could create an open-ended question, but an advanced level Socratic Seminar question was still a far-reaching goal.

Marcus began reading *Sitting Bull* (Penner, 1995) with fluency and accuracy at his instructional level, and he was engaged in the book. He quickly stated that he liked the action, in which many external conflicts occurred throughout Sitting Bull's life. In his first session, Marcus began with a blanket statement, such as "I like the action in the book," and then proceeded to recall a particular scene where a young Sitting Bull defended himself against an enemy warrior. In Step three of the prescribed Socratic Seminar Process, Marcus created the question, "Why is the character hunting a buffalo?" This spurred a discussion about the importance of buffalo in a tribe's diet and well-being, but during our work together he did not reach the top levels of creation and evaluation. Marcus began his fifth step of Reflection and Evaluation with a discussion of fact versus opinion, in which he mistook facts and opinions as similarities and differences. This was clarified and retaught, and then brought forth a close to the first Socratic Seminar session. Based on this first session, it was clear that Marcus needed to be taught how to make observations and form questions that are based on ideas and values that may not be explicitly stated in the text or appear in a picture.

At this point, just three sessions into the case study, when Marcus was tasked with a critical thinking activity, or relied on to do the "heavy lifting," he became very tired and drowsy. This became a significant problem in later sessions, where Marcus would even fall asleep if not genuinely engaged with the material. This may have been an avoidance tactic implemented by Marcus when he perceived activities to be difficult or when he became frustrated (Marcus would be in the middle of a response, slow his speech, gradually close his eyes and stop speaking, then almost instantaneously began to snore out loud). Consequently, this behavior greatly impacted

Marcus' progress in the one-on-one session, and therefore adjustments needed to be made to allow for small incentives such as a healthy snack, physical activity, or time playing a literacy game, which decreased the amount of time spent in the Socratic Seminar.

In the second week of the study, the first session began with more issues in behavior as Marcus struggled to stay on task because of fatigue. A lot of time was spent getting Marcus up and moving, and engaging with the researcher to move through the Socratic Seminar process. One strategy that was employed to positively address Marcus' avoidance tactic was a "Walk and Talk," where Marcus and the researcher created their response and questions after reading, and then proceeded to walk around the Literacy Center while discussing the day's reading. This strategy was effective at keeping Marcus engaged, but he was often distracted and lost focus while walking and observing other student session in the Literacy Center. The same results occurred while implementing a "Chat and Chew," where Marcus was allowed to have a snack while participating in a discussion with the instructor. This again proved to be more distracting than productive.

By the seventh and eighth day of the study, Marcus was still struggling to create an open-ended question that could be effectively utilized in the Socratic Seminar strategy. It was very difficult for Marcus to create an intangible or abstract observation, and then evaluate it. He was using higher level thought processes by crafting responses to what he has read, but at this stage, Marcus was still developing an understanding of how to create questions that related to a reasoned argument or evidence-based inference. Marcus was still basing his questions about what he could physically see in the text pictures or from reading explicit details. This in turn resulted in very basic questions, and he relied on using "why" or "how" to generate a question. Marcus was then taught to put himself in the mindset of the character when making a question.



The instructor had Marcus visualize himself as the character he had read and choose from a selected list of questions and sentence starters based on the prompt, “If I were this character, what would I ask in that situation?” This visualization strategy was taught to help Marcus develop a deeper understanding of the book’s protagonist, antagonist, their intentions, and emotional characteristics. Marcus was then taught to back up his observations with evidence from the text, operating simply under the prompt, “Where in the book did you learn that?”

During the third week in the study there were some significant developments in Marcus’ progress. By day 9, Marcus and the instructor finished the text and began to do a final Socratic Seminar and evaluate the text. Although Marcus focused on very specific, physical details about what he has read, he did make some strong conclusions to what he previously read about Sitting Bull. For example, based off of specific life events that he read in the book, Marcus concluded that Sitting Bull was very honorable, had a duty to protect his tribe, and “he is a great leader who is always watching and learning.” These are the most advanced connections that Marcus had made based on textual evidence, and not just his own prior knowledge and experiences. There was also a major shift in Marcus’ ability to utilize the text in formulating conclusions and evaluating the protagonist. However, his questioning skills still required significant prompting and guidance from the instructor in order to cultivate a meaningful seminar session.

On day 10, Marcus began reading the second text, *Dinosaur Detectives* (Chrisp, 2001), with average fluency and few mistakes: 47 words per minute (WPM), 42 correct words per minute (CWPM). When interacting in the Socratic Seminar, Marcus began making connections not to what he had read, but rather to the movie *Jurassic Park*, specifically how dinosaur fossils were discovered in the film. After refocusing, Marcus was able to retell key details about different scientists and state the main idea of the text. In creating a question to later discuss,

Marcus failed to make key connections between the roles each individual scientist had in the early history of paleontology, and how those roles contributed to the main idea of the text. Nevertheless, Marcus improved his demeanor and was more alert in class while reading *Dinosaur Detectives* (Chrisp, 2001).

Entering the final week of the study, Marcus' reading ability fluctuated from one day to the next. He continued to focus on very specific details, but his ability to connect what he had already read in the past to what he was currently reading showed improvement. For example, Marcus connected what he had previously learned about water-based dinosaurs and how they evolved to dwell on land, to the different methods that early paleontologists could have discovered this transition. Marcus was beginning to make connections in order to help him remember what he had read, which is a major goal of the Socratic Seminar process. It appeared that the interaction and engagement with the text through question forming and discussion, built a foundation of information in Marcus' understanding that could later be accessed to utilize higher level thinking skills such as creating and evaluating. Marcus still required significant prompting and guidance through the Socratic Seminar process, but his responses and focus on textual evidence toward the end of the study had made a noticeable impact.

## **Case Study 2: Student Reading to Learn**

### **Student Description**

*Travis* was a 4th grade student entering 5<sup>th</sup> grade. He was a very active and engaged student. Travis was full of energy and he knew how to apply it appropriately to his learning. He participated eagerly during class by offering his opinions, acting, and reading out loud. Travis enjoyed playing basketball and reading books that related to the sports that he played. During the traditional calendar school year, Travis attended an urban, public K-8 school that specializes in

the Montessori method of teaching. In its most recent Wisconsin School Report Card, Travis' attending school was consistently rated as "Exceeds Expectations" (DPI; Wisconsin Department of Public Instruction, 2014). According to the Wisconsin DPI, Travis was attending a high-quality elementary school that had strong administrative leadership, a positive learning environment, and was able to meet the needs of its students.

Travis participated in the Motivation to Read Profile-Revised (Malloy, Marinak, Gambrell & Mazzoni, 2013). Based on this profile, Travis had a positive self-concept as a reader. Travis responded that he is a good reader and is capable of sounding out words, understanding what he reads, and enjoys talking about what he reads. However, Travis was not as confident when he read in front of others. He stated that he sometimes worries about what other kids think of his reading, and that reading is kind of hard for him. Travis valued reading and believed reading is very important. He sometimes liked to read at home but rarely spent his free time doing so. As a whole, Travis demonstrated excellent active reading skills and showed maturity in his ability to make inferences and extend a text.

According to the QRI Word Identification Lists (Leslie & Caldwell, 2011), Travis' instructional level was between fourth and fifth grade. In both of the QRI Comprehension Passage assessments, Travis displayed strong reading fluency with very few miscues that changed the meaning of the text. His Total Acceptability rate in each passage is at an independent reading level on both the 5<sup>th</sup> and 6<sup>th</sup> grade level passages. Travis also took the Power Patterns Placement Survey, which the words were designed to assess beginning readers' recognition of the most common vowel/syllable patterns. Travis did an excellent job of recognizing vowel-syllable patterns throughout the assessment. In each section, Travis' accuracy of correct patterns either matched or exceeded his amount of total words correct.

Travis struggled with vowel-plus-r patterns, and open long vowel patterns, specifically when which vowel sound should be used in each pattern. As a whole, Travis was aware of his tendency to read through a given text very quickly and gloss over certain words or concepts, but he often self-corrected when prompted. Travis also had a slight speech impediment that sometimes changed how he pronounced certain vowel sounds and consonant blends. However, this impairment did not severely impact the listener’s ability to understand what Travis is saying.

**Table 5 – QRI-5 Sight Word Accuracy (Travis)**

<b>QRI-5 Word list</b>	<b>Initial Assessment</b>
	Date: 7/7/14
Level	4
Level/% automatic	80%
Level/% total	85%
Independent/Instructional/Frustration	Instructional
<b>QRI-5 Passage Accuracy</b>	<b>Initial Assessment</b>
Passage	“Plant Structures for Survival”
Readability Level [RL]	<b>4.6</b>
Fountas and Pinnell [FP]	<b>T</b>
Passage Type (Narrative/Expository)	<b>Expository</b>
Level/% Total Accuracy/Acceptability	93% / 98%

**Table 6 - Power Patterns Placement Survey (Travis)**

Level 1: Closed short vowel patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	17
<b>Number/%</b>	85%
<b>Patterns Correct</b>	19
<b>Number/%</b>	95%

Level 2: silent vowel patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	17
<b>Number/%</b>	85%
<b>Patterns Correct</b>	17
<b>Number/%</b>	85%

Level 3: vowel digraph [talkers] patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	8
<b>Number/%</b>	80%
<b>Patterns Correct</b>	9
<b>Number/%</b>	90%

Level 4: vowel plus r patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	6
<b>Number/%</b>	60%
<b>Patterns Correct</b>	7
<b>Number/%</b>	70%

Level 5: vowel diphthong [whiners] patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	7
<b>Number/%</b>	70%
<b>Patterns Correct</b>	7
<b>Number/%</b>	70%

Level 6: open long vowel patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	6
<b>Number/%</b>	60%
<b>Patterns Correct</b>	6
<b>Number/%</b>	60%

Level 7: consonant plus -le patterns	<b>Initial Assessment</b>
<b>Words Correct</b>	8
<b>Number/%</b>	80%
<b>Patterns Correct</b>	8
<b>Number/%</b>	80%

<b>Memory Patterns</b>	<b>Initial Assessment</b>
<b>Words Correct</b>	7
<b>Number/%</b>	70%
<b>Patterns Correct</b>	7
<b>Number/%</b>	70%

Reading comprehension was definitely an area where Travis needed to improve his reading. In both QRI Comprehension passages, Travis’ retelling of explicit ideas was about average, scoring 22% and 32% of retelling explicit details. Overall, his implicit comprehension of a passage was strong, mainly due to Travis’ extensive prior knowledge. In other words, Travis could not recall a large amount of specific details from a text, but he could use his background knowledge to accurately answer implicit comprehension questions, rather than information from what he has just read. Travis had a tendency to read words for the sake of reading, instead of engaging with the text and reading to gain information. Travis seemed to enjoy reading only when it was about subjects that he was interested in, such as basketball and other sports that he plays.

**Table 7 - QRI-5 Reading Comprehension (Travis)**

Comprehension	<b>Initial Assessment</b>
<b>QRI-5 Retelling and Questions</b>	Date: 7/7/2014
<b>Grade</b>	4
<b>Passage</b>	“Plant Structures for Survival
<b>Narrative/Expository</b>	Expository
<b>Familiar/Unfamiliar</b>	Familiar
	Retelling 13 out of 57 ideas (22%)
	Question: 87.5% w/o lookbacks
	3 explicit
	4 implicit
<b>RL=          FP=</b>	RL= 4.6      FP= T
<b>Independent/Instructional/Frustration</b>	<b>Instructional</b>
<b>Grade</b>	5
<b>Narrative/Expository</b>	Expository
<b>Passage</b>	“How we Absorb Oxygen”
<b>Familiar/Unfamiliar</b>	Familiar
	Retelling 24 out of 74 ideas (32%)
	Questions 75% w/o lookbacks
	4 explicit
	2 implicit
<b>RL=          FP=</b>	RL= 5.6      FP = N/A
<b>Independent/Instructional/Frustration</b>	<b>Instructional</b>

Based off of the study's pre-assessment data, Travis was identified as an independent reader at his grade level. The key characteristic of Travis as a case study was that he was a student who was reading to learn, and required intervention strategies to improve his reading comprehension. The biggest challenge to his progress was finding and utilizing non-fiction, grade-level text that both engaged and challenged Travis in his reading.

### **Strategies Implemented**

Similar to the previous case study, the strategies implemented needed to be appropriate for a 20- to 30-minute time frame. While Travis was able to read at grade level, his word study focused more on vocabulary and verbal fluency. Travis' received explicit instruction within a Word Study at the beginning of the session, and then was taught key skills such as citing evidence, forming questions/observations, and drawing inferences within the Socratic Seminar strategy in the second half of the session.

Travis was instructed to utilize the Socratic Seminar in the same step-by-step process as Marcus. This step-by-step model was posted in several areas around the small office room where the one-on-one tutoring sessions took place. Before Travis was fully exposed to the Socratic Seminar strategy, he was first introduced to the concept and made fully aware of the philosophy and goal of the study. After the initial assessments were completed, Travis participated in a short activity that introduced the Socratic Seminar and the concept of open-ended questions. Travis was given a photograph, specifically a photo of a painted portrait of Kevin Durant, which is Travis' favorite basketball player (see Appendix A.2). Travis was instructed to examine the photograph and record as many details as he could within three categories: I see... I observe... I notice... These categories served as sentence starters that helped Travis to organize his observations. After the discussion of his responses, Travis was

then taught to create three open-ended questions that can have multiple responses, and provoke discussion. Travis wrote down the following questions for discussion: 1. *Who is he painting it for?* 2. *Why is the painting so big?* 3. *Why does he have to paint it?* From this initial activity, I noted Travis was able to talk-out his analysis and express his thoughts and ideas in written form.

In the next day's session, Travis began the Socratic Seminar process. In choosing a text for Travis, it was important to utilize a non-fiction, high-interest expository text that would hold Travis' attention. Of course the ultimate goal was to get Travis to read and comprehend texts of unfamiliar topics, but it was important to establish the routine of the Socratic Seminar with a book with which Travis would willingly interact. The first book that was utilized in this case study was *On the Court with Lebron James* by Matt Christopher (2008). This book was chosen because it was a grade level text for Travis and it also a high-interest chapter book that challenged Travis, and still kept him engaged in the text.

The second text that was utilized in this case study was chosen by Travis, at the Literacy Center Library. The book was titled *Submarine fighter of the American Revolution: The Story of David Bushnell* (Wagner, 1963). This book was a high 8<sup>th</sup> grade level, non-fiction text that would challenge Travis' verbal reading ability. Travis was allowed to use this book because of its expository content that is clearly separated from his passions and interests. The key strategy was to get Travis to read with purpose and to gain information from a text that is not related to basketball or other sports.

Travis continued to utilize the Socratic Seminar process in each one-on-one session. He was an athlete who was inherently active; therefore, Travis' session included multiple "Chat and Chews" and "Walk and Talks" to keep him engaged in discussion. These strategies actually proved to be very effective in keeping Travis focused and on task. As a whole, Travis was very



attentive in his reading and he was mature in conversation, allowing him to multi-task and participate while carrying an interesting conversation. Travis required little motivation to read and participate in the session activities. His behavior was not a significant issue throughout the case study. Travis was only redirected when it was necessary for him to stay on topic in discussion and in his reflections.

### **Comparison of Data**

After the one-on-one tutoring sessions, the students were given the same initial assessments as a posttest during the final two days of the Summer Literacy Program. The results were compared using the Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011) as the primary data source for the two case studies. In addition to the record of observations from the researcher, the QRI-5 Reading Passages were used to measure student growth at the end of the Summer Literacy Program.

**Table 8 - QRI-5 Pre and Post Assessment Data (Travis)**

<b>Comprehension</b>	<b>Initial Assessment</b>	<b>Post Assessment</b>
	Date: 7/7/2014	Date: 7/31/14
<b>Grade</b>	4	5
<b>Passage</b>	“Plant Structures for Survival	“The Octopus”
<b>Narrative/Expository</b>	Expository	Expository
<b>Familiar/Unfamiliar</b>	Familiar	Unfamiliar
	Retelling 13 out of 57 ideas (22%)	Retelling 38 of 54 ideas (70%)
	Questions: 87.5% w/o lookbacks	Questions 87.5% w/o lookbacks
	3 explicit	4 explicit
	4 implicit	3 implicit
<b>Reading Level (grade)= Fontas &amp; Pinnell Level=</b>	RL= 4.6 FP= T	RL= 5.4 FP = U
<b>Independent/Instructional/Frustration</b>	Instructional	Instructional
<b>Grade</b>	5	5

<b>Narrative/Expository</b>	Expository	Expository
Passage	“How we Absorb Oxygen”	“Martin Luther King Jr.”
<b>Familiar/Unfamiliar</b>	Familiar	Familiar
	Retelling 24 out of 74 ideas (32%)	Retelling 33 of 53 Ideas (62%)
	Questions 75% w/o lookbacks	Questions 75% w/o lookbacks
	4 explicit	3 explicit
	2 implicit	3 implicit
<b>Reading Level (grade)= Fontas &amp; Pinnell Level=</b>	RL= 5.6 FP = N/A	RL= 5.6 FP= N/A

According to the QRI-5 (Leslie & Caldwell, 2011) pre and post-assessments, Travis made measurable gains in his ability to retell and comprehend a text. Travis’ retelling of ideas improved exponentially as he consistently recalled at least 30% more details in both of the post-assessment passages. The comprehension questions, however, remained fairly consistent with both assessments scoring the same percentage of correct answers at 87.5% and 75% respectively. One could argue that Travis’ ability to answer implicit comprehension questions has improved slightly, but the results show a slight margin of improvement and relative consistency between both assessments.

It is difficult to determine if Travis made significant gains in reading comprehension, solely based on the QRI-5 post-assessment results. When interpreting the overall impact of this study on Travis’ reading comprehension, it is important to consider all forms of data, both numerical measurements as well as intangible observations and pieces of evidence.

### **Analysis**

Travis was an active student who could hold a conversation that was consistent to the subject and task at hand. In a one-on-one setting, there were no issues in getting Travis to participate in an activity and discuss what he had read. Because of Travis’ reading and writing

skills, he was able to fully participate in the literacy program with little assistance or modifications. From the very first introduction activity, Travis was able to make observations and connections that were relevant to the picture presented to him. However, at the beginning of this case study, Travis was literal in his observations and answered questions, pointing out minor details such as a big table, an old man, paint, and so on (see Appendix A.2). Travis also liked to tie in personal connections to a discussion, but they were not always relevant. For example, he would often relate a recent basketball game or physical, athletic maneuver when discussing personal hardships and triumphs. In other words, Travis failed to reach a deeper level of analysis that utilized human emotions or character traits. When creating open-ended questions in the beginning of the study, Travis' prompts were basic in their structure and necessary response ("Who is he painting it for?" "Why is the painting so big?" "Why does he have to paint it?"). Even though Travis had strong fluency skills, he still needed direct instruction in the Socratic Seminar strategy and creating open-ended questions to instigate discussion and evaluation of the text.

In the first formal Socratic Seminar session of the case study, Travis was able to choose a response, and immediately went with "I'm confused about" as a sentence starter. After being taught what an open-ended question is and practiced making several of his own, he ultimately created a question about why LeBron's mother had left him with another family for a short period of time in his life. Granted, this question came to light immediately after Travis had read it, but it was an excellent start to the Socratic process. Travis was instructed to look for questions that would assist in comprehension of the text. During the discussion, Travis participated in a "Walk and Talk" with grapes and his Socratic Seminar activity sheet. Travis again did very well

communicating his thoughts and ideas while moving and remaining active. He could be easily distracted, but he was also easily redirected back to the text and its meaning.

In the 2<sup>nd</sup> week of the study there was consistent improvement in utilizing the Socratic Seminar strategy. Travis was able to make many connections between the text and his own life, but also improved his ability to ask complex, open-ended questions, such as “What quality makes a basketball player elite?” and “Are there consequences of being exposed as a young superstar athlete?” Travis was able to discuss what he has read and making connections to his own life, but by the sixth and seventh day of the study, he began to make connections to the author’s overall message in his reflection. Travis was taught to use sentence starters and question stems such as “The author is trying to tell me…” and “How can I restate the author’s message?” At times, his conclusions could be very implicit in discussing the main idea of the passage, and citing textual evidence to support a claim was still a challenge for Travis. However, his overall engagement in the book was substantial for a student at his age and level.

Travis excelled in the Socratic seminar strategy while utilizing a topic in which he was interested and with which he was familiar. The second text utilized in this case study was chosen by Travis because he was interested in the topic, but it was also a selection that would prove to be a challenge for Travis. In reading the *Submarine Fighter of the American Revolution* (Wagner, 1963), Travis’ reading fluency was strained, and he needed to correct himself much more frequently. He had particular trouble with words such as *perpetuate*, *nautical*, and *revolutionary*. With a more difficult text to read, Travis began latching on to specific explicit details that stood out to him, rather than citing details to support a theme or overarching concept. For example, the author spent a small portion of the first chapter in setting the scene of the hardships endured by the American soldiers early on in the Revolutionary War. Travis became

fixated on this portion of the chapter and failed to make the connection that these hardships instigated the need for a breakthrough in naval warfare on behalf of the Americans. The following sessions that utilized the advanced text focused on teaching Travis to create a question that was based off of a supporting statement or paragraph, in order to gain a deeper understanding of the passage's main idea. For example, Travis cited the impact of naval blockades on an infantryman's state of being, and then in turn questioned the location of and effectiveness of British blockades on certain cities. The discussion that followed with Travis was productive, as he was able to cite several pieces of evidence into why certain cities were chosen and he continued to support his claims.

Unfortunately, this level of success was not consistent with Travis and the expository text. Towards the end of the third week in the study and third full day with the *Submarine Fighter of the American Revolution* (Wagner, 1963), Travis began to struggle to keep focused while reading the text. Because the book was entirely fact-based and included many primary resources per page, it was difficult for Travis to keep all of the details straight and in a consistent order. While the second expository text was an excellent challenge for Travis, to avoid an outburst of frustration, a third expository text was selected for Travis, titled, *Seven Days of Kwanzaa* (Medearis, 1994). Travis was tasked to read the first chapter of the book, "How Kwanzaa Began," and implement the Socratic Seminar strategy. The chapter was much closer to Travis' level, and he read fluently. To begin, he had fairly basic responses, but when pushed, he was able to get more in depth and use details in his question forming and reflections. Creating a question was still a difficult skill for Travis, but he was improving his ability to use information from the text to support a main idea or argument. For example, Travis was able to cite evidence in support of his claim that Kwanzaa was initially an oppositional movement by African-

Americans to boycott Christmas. Travis highlighted this position changed as Kwanzaa became more popular throughout the country and most African-Americans observe Kwanzaa during their Christmas celebrations. By the end of the study, it was especially encouraging to see Travis interact with an unfamiliar topic, as much as he would with a book about Basketball or Lebron James.

### **Conclusion**

The strategies implemented within these two studies focused on two major goals: One, to get students to actively engage in Bloom's top two levels of higher order thinking (Creating and Evaluating); and two, to increase overall student comprehension of expository text. The results of these strategies were recorded using a pre and post-assessment measure as part of the population's Literacy Center Program. However, the most significant data that were recorded within two separate case studies, using anecdotal records, instructor observations, and evidence of the student's ability to utilize the Socratic Seminar strategy and high level thinking skills. It is important to note that these two case studies may have been impacted by the student's comprehensive literacy program in which they participated. This does not negatively skew the researcher's data, but rather support the concept of a holistic and comprehensive approach to improving a student's reading comprehension. In line with this approach, one must measure the success of this action research program through the lens of the pre and post-assessment data, as well as the anecdotal records from the two case studies.

## Chapter 5: Summary, Conclusions, and Recommendations

### Overview

The goal of this action research program was to investigate the impact of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic seminar was the vehicle to which these higher order-thinking skills were implemented and utilized by two students within in a four-week Summer Literacy program. Data were collected to explore the effects of the Socratic Seminar on a student's overall reading comprehension within two isolated case studies: a *Student Learning to Read*, and a *Student Reading to Learn*.

The participants in this study were both students in a Summer Science Literacy Program. Each student was exposed to three hours of literacy instruction, four days a week. The Program was divided into three areas: Literacy Instruction through Science, Reading and Writing Workshop, and One-on-One Tutoring. The focus of this study occurred in the One-on-One Tutoring sessions of two students. The students were given pre-tests in the first two days of the study, and then received approximately fourteen, 55-minute sessions of individual instruction utilizing the Socratic Seminar strategy within the University Literacy Program. After the one-on-one tutoring sessions, the students were given the same assessments as a posttest during the final two days of the Summer Literacy Program.

The significance of these results was determined using the Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011) as the primary data source for the two case studies. The QRI-5 is an informal assessment used as the criteria to determine the highest instructional reading level of each student. Administered to each student individually, the instrument provided word lists and numerous passages to assess the oral reading ability of

students. Specifically, the QRI-5 provided information about word identification, reading fluency, and comprehension. The results were used to design and evaluate the specific interventions used within the study, and measure student growth at the end of the Summer Literacy Program.

### **Interpretations of the Findings**

Previous studies have shown (Caulfield-Sloan & Ruzicka, 2005) (Diaz, 2006) (Zohar & Dori, 2003) that quantitative gains can be made on standardized reading assessments through direct instruction using higher level thinking skills and exercises, including the Socratic Seminar strategy. Furthermore, qualitative studies (Polite & Adams, 1997; Mee, 2000) have shown substantial improvement in students' ability to create questions and be metacognitive in their learning. Research concluded there is a strong relationship between the use of high-level thinking strategies within the Socratic Seminar and its beneficial impact to student learning.

This study measured the effectiveness of the Socratic Seminar strategy on improving a student's overall reading comprehension. Over the course of four weeks, the two students who participated in this study were taught how to create questions and respond to what they have read through a Socratic-based discussion with the instructor. In both case studies, the students made marginal quantitative gains in the QRI-5 (Leslie & Caldwell, 2011) post-assessment. However, based on the study's qualitative findings, the participants greatly improved their question making ability, reflection skills, and use of critical thinking within the four-week study.

Nixon and Fishbeck's study (2009) found that students who worked in small groups to discuss the relationships among key terms, had reported enhanced confidence and comprehension of their curriculum's vocabulary words. In all of their qualitative data sources, the researchers found that the instructional strategy assisted students in retaining information



from the course and improved their chapter quiz and unit exam scores (Nixon & Fishbeck, 2009). The students who used the word strategy gained a profound confidence and deeper comprehension of the course content. Furthermore, Nixon and Fishbeck's prescribed interactions (2009) within small groups and the cultivating of a student's ability to evaluate, was the exact level of higher order thinking that this study's Socratic Seminar sessions sought to explore.

Polite and Adams (1997) concluded in their exploratory study that their qualitative data showed the potential of Socratic Seminars as a viable means of increasing the cognitive and social functioning of middle school students. Specifically, the student interviews indicated that Socratic Seminars engaged students with opportunities to develop critical thinking skills and be metacognitive in their learning. While Polite and Adams' study was holistically qualitative, it does provide a viable connection to the use of Socratic seminars being used as a specific tool and venue to implement higher order questioning and thinking strategies as defined under Bloom's Taxonomy Levels of Evaluating and Creating. Therefore, the researcher concluded there are benefits to the use of the Socratic Seminar strategy and its qualitative benefits to improving student reading comprehension.

Based on the study's anecdotal records and observations, Marcus and Travis showed improvement in their ability to interact with a given text and utilize higher order thinking skills. By the end of the four-week literacy program, both case studies showed visible progress in forming questions and drawing conclusions that evaluated what they had read. These foundational skills are pivotal in developing higher level thinking skills that can improve a student's overall comprehension of a text.

## **Recommendations**

The results of this study support the use of the Socratic Seminar strategy, within a combination of reading strategies, in order to promote critical thinking skills and improve reading comprehension. Based on the results, the researcher would recommend the use of the Socratic Seminar strategy when teaching young readers how to read and comprehend a text. This study enabled the researcher to determine the effectiveness of the Socratic Seminar strategy in an isolated setting. The small sample size of this research limits applicability to other schools and states since the sample was from one University literacy center in Wisconsin. Recommendations for further study include a larger sample size, different grade levels, longer data collection times, and comparing schools and districts that utilize the same reading strategies. Further research should include a longer data collection time including the ability to completely weekly progress monitoring in reading comprehension and overall literacy growth. Additionally, further research should evaluate the effectiveness of the Socratic Seminar strategy in comparison to other higher level thinking strategies, focusing on the differences in the way the strategies are taught and utilized in the classroom.

On behalf of Marcus and Travis, the researcher recommended that each student should continue to use the method of formulating questions that was used in the Socratic Seminar sessions. This skill of creating a question for later discussion will further develop the students' ability to interact with a text and make inferences. As seen in this study, the more opportunities Marcus and Travis have to verbally interact with a text, the further they will develop total comprehension of what they have read. In addition to formulating questions, the researcher recommended that Marcus and Travis continue to read expository texts that are within their ability level, but also not within their immediate area of interest. By reading non-fiction text that

is unfamiliar to the student, Marcus and Travis will be continue to expand their knowledge base and ability to adapt to new subjects while still utilizing higher level thinking skills above the domains of Remember, Understand, and Apply (Wilson, 2001). As developing readers, Marcus and Travis should continue practicing higher level thinking skills as prescribed in Bloom's Domains of Evaluate and Create with all given texts and content areas.

### **Conclusions**

The goal of this action research program was to investigate the use of higher order thinking skills, specifically Bloom's Domain Levels of Evaluating and Creating, on a student's overall reading comprehension. The Socratic Seminar was the vehicle to which these higher order-thinking skills were implemented and utilized by two students within in a four-week literacy program. Data were collected to explore the effects of the Socratic Seminar on a student's overall reading comprehension within two isolated case studies. Prior to the implementation of the specific reading intervention strategy in the action research program, the students completed two days of pre-tests. The Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011) was used as the primary data source in both case studies. The results were used to design and evaluate the specific interventions used within the study. In addition to the record of observations from the researcher, the QRI-5 Reading Passages were used to measure student growth at the end of the University Literacy Program. Results indicated that the two participants made little quantitative gains in their reading comprehension. However, the qualitative benefits of the implemented strategies showed the students' question-making ability and use of critical thinking skills improved.

This research study provided more evidence on the use of higher order thinking strategies and teaching students how to fully understand a text. The overall data suggested that the

Socratic Seminar strategy is effective and beneficial in developing a student's reading comprehension skills. The simple act of interacting with a text in a way that is separate from individual reading will increase a student's memory and extend the experience with a text. The information gained from this study in combination with current research on utilizing strategies in higher order thinking strategies have the potential to improve the academic success of students at any level. Furthermore, this study provides another vehicle for educators to employ high-level thinking strategies and satisfy Bloom's top two levels of Higher Order Thinking: Creating and Evaluating.

Learning to read is a process with the main goal being comprehension. Students who struggle with comprehension often read to just read words; they do not read with purpose. By employing these strategies, educators are compelling students to read with purpose, gain information, and utilize what they have read to create a response or question. The student is no longer just reading words for the sake of reading words, but rather reading to learn and enjoy a text. Reading is a lifelong skill and vital attribute to function in modern society. It should be the goal of all educators to develop young readers with a two-prong approach: functional phonics and fluency, and the high-level critical thinking skills that help put the newly acquired information into practice.

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Appendix A: Seminar Tools and Images

A.1



A.2



A.3

Name \_\_\_\_\_ Date \_\_\_\_\_

### **Question Stems**

Who is it that...?

Can you tell why...?

Can you give an example of...?

What do you think will happen next if...?

How would you use...?

How is this similar to...?

How is this different than...?

What is the relationship between...?

What would happen if...?

How can I develop a plan to...?

What is a better solution to...?

What is the most important...?

# The Socratic Seminar Step-by-Step

1. Read / Analyze
2. Create a response
3. Create a question
4. Discuss
5. Reflect / Evaluate

### Socratic Seminar Student Guide

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**1. Read and Analyze**

**2. Create a Response**

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**3. Create a Question**

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**4. Discuss**

**5. Reflect and Evaluate**

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