Reading Practices in Social Studies Classrooms:
Teacher Support for Middle School Students with ASD

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DISSERTATION

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Abstract

Teachers face the challenge of teaching students with Autism Spectrum Disorder (ASD). Along with the increased focus on teacher accountability and standards-based reform, meeting the reading comprehension needs of students with ASD in content area classrooms is something teachers face. No research has studied teacher's perceptions related to this. The purpose of this study was to describe the perceptions of general education middle school social studies teachers related to their teaching practices and the inclusion of students with ASD in their classrooms. More specifically, an in-depth exploration of 10 teachers' planning, teaching and assessment practices, and incorporation of reading comprehension strategies was conducted. Using a qualitative approach, teachers' perceptions of their teaching practices were studied through in-depth interviews and artifact exploration. Five major themes surfaced from the data. The first theme focuses on the evidence that teachers are reporting that they are teaching reading in the social studies classrooms. The second theme addresses the variety of reading comprehension strategies that the teachers report that they are using. The third theme involves the teaching practices the teachers report that are using to meet the needs of all learners in an inclusionary setting. The fourth theme discusses how teachers report that they plan given that they have a student with ASD in their classroom. Finally, the fifth theme explains the assessment practices the teachers' report that they are using to meet all students' needs. Future ideas for research and implications for practice are discussed.

Dedication

This dissertation is dedicated in memory of my beloved mother who taught me that with hard work and determination anything is possible.

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Chapter I

Introduction

The last ten years in K-12 public education have seen some dramatic changes in the United States. Federal legislation such as No Child Left Behind (NCLB, 2001) and Individuals with Disabilities Education Improvement Act (IDEIA, 2004) has increased teacher accountability for all students in their classrooms regardless of ability, ethnicity, and other identifying diversity factors. The legislation, coupled with language such as standards-based reform and research-based practice, has required general education teachers to revise aspects of their teaching so they account for all students, including students with disabilities. Given this increase in accountability, the act of learning to read and the ability to effectively use reading skills in all content areas has become more important than ever, particularly as children progress through the grade levels. Research by the National Reading Panel (NRP, 2000) suggested that students at all grade levels benefit, across the curriculum, from instruction in reading comprehension and the construction of meaning from different kinds of text. In addition, recent education policy changes such as the implementation of the Common Core standards and revisions to individual states professional teaching standards suggest that all teachers are teachers of reading.

The passage of the amendments to IDEIA (2004) required that students with disabilities have instruction in the "core academic areas" and are accountable to the same performance goals and indicators as the general education population. The implications of such legislation (IDEIA, 2004; NCLB, 2001) and the findings of the National Reading Panel (2000) along with the adoption of the Common Core ("Common Core State Standards

Initiative", 2011) suggest that teachers of students with disabilities, both general and special educators, need to include in their instruction the development of literacy skills such as reading comprehension. This expectation requires general education teachers to have the knowledge and skills to assist students with disabilities by providing effective instructional practices and accommodations (Maccini & Gagnon, 2006). Furthermore, general education teachers are expected to adapt content area curriculum so that all students including those with significant support needs, are able to comprehend and learn new content (Lee et al., 2006). The instruction of topics in content area courses, such as social studies, may require students to read textbooks, answer questions about what they are reading, and could require students to paraphrase or summarize what they have read to show their understanding of the new content. These practices are particularly evident in middle school and high school content-area classrooms, which are often text-based. Given these disciplinary reading requirements, the current legislation, and expert opinion, reading comprehension skills are essential to the success of all students, especially students with disabilities, in the general education environment. Thus it is essential to understand the process of teaching reading and how middle school teachers, who are among the first content specialists students encounter in their education, teach reading as part of their curriculum. At the same time, the teaching of reading in the content areas involves supporting students with very different characteristics and needs in reading, both in learning how to read and in using reading to learn.

Effective Reading Practice

Gray's (1948) reading model describes how deeper comprehension is achieved throughout the reading process (see Figure 1). Gray defined reading as a four-step process

in which each step is interdependent leading to complete understanding and the ability to problem solve within the text (Gray, 1948). Step one in the process involves word perception, the ability to pronounce a word within the text. Step two is comprehension which means developing an understanding of what the words mean within the context of what is being read. Step three is reaction requiring the reader to make a judgment and have an emotional response to what is being read. Step four is integration focusing on the reader's ability to connect new ideas to personal experiences. If the reader has the ability to use all four steps in an interdependent fashion, it leads to better understanding and meaningful reading experiences (Maggart & Zintz, 1992).

Gray's (1948) model also expresses the idea that reading requires more than just word identification and comprehension and that learning to read, which comes early in the process, can be seen as a lower level skill. In addition, reading comprehension is linked to reading response, which helps the reader connect with the text. The cyclical nature of Gray's model of the reading process (see Figure 1) shows that the transition from learning to read to more advanced reading, reading to learn, requires the ability to understand the language of the words and then use those understandings as well as ones' emotions, and personal experiences to unlock the language for problem-solving with text (Maggart & Zintz, 1992). As readers mature in their skill level, they move from the lower level skills of learning to read to higher level skills of reading to learn by applying metacognitive thinking skills such as evaluation, judgments, imagination, reasoning, and then finally problem-solving (Maggart & Zintz, 1992).

Given that Gray's model is dated and was developed as a hierarchical model, it is important to connect his ideas to ideas that reflect a more recent view of reading that takes

into account a balanced model for developing comprehension. Carnahan, Williamson, & Christman (2011) describe a framework for thinking about reading comprehension that takes into account multiple factors occurring simultaneously which influences comprehension (see Figure 2). Reading comprehension is multifaceted and to develop deep and meaningful comprehension factors such as the reader, the text, and the context contribute to complete understanding (Carnahan, Williamson, & Christman, 2011). The first factor is related to the reader's characteristics of attention, information processing, and planning and organization. Things to consider would be the reader's ability to understand other perspectives, the background information the reader brings, and the reader's interest and understanding of vocabulary (Carnahan et al., 2011). The next factor is related to the text. Characteristics of this factor are the text type, the content presented in the text, the readability and length of the text, and picture supports provided (Carnahan et al., 2011). Lastly, the factor of context is important. Some characteristics of this factor are the purpose for reading text, the environment that the student is reading in, and the student's comfort level (Carnahan et al., 2011). These factors are continuously impacted based on the student, text, and the reading experience. This model of reading differs from Gray's model in that the factors are not considered as developing in a hierarchical manner. However, similar to Gray's model, if all the factors are in place a reader is able to apply higher level thinking skills to evaluate, make judgments, and respond to text leading to more fully developed comprehension.

Much of the research on reading focuses on the process of comprehension and how it develops. The development of effective reading practice, regardless of discipline, and the cognitive processes teachers use has been well documented in the research (Duffy et al.,

1987). An important study of the time, Duffy et al. (1987) demonstrated that the more explicit teachers are in their explanations of the processes for comprehending text, the easier it is for students to do so which leads to successful reading comprehension. Similarly, Taylor, Peterson, Peterson, and Rodriguez (2002) conducted a study to explain teachers' effective reading practice. Their study highlighted that teachers who focused on how they were teaching reading, by including best practice and explicit instruction of comprehension strategies, had positive outcomes related to students' reading achievement in comparison to those teachers that only focused on the what (Taylor et al., 2002).

Research has also shown how effective teachers incorporate more general instructional strategies, regardless of content, in their teaching. For example, elementary teachers that have been identified as accomplished were observed using more small-group over whole-group instruction, had high levels of student engagement, and used more coaching techniques rather than telling techniques when interacting with their students in instructional activities (Taylor, Pearson, Clark, & Walpole, 2000). Moreover, it has been noted in the literature that teacher effectiveness in teaching reading appears to be an important factor when considering positive outcomes for student achievement in reading as well as other content areas such as math, science, and social studies (Marzano, Pickering, & Pollock, 2001).

The importance of teaching reading continues throughout a student's academic career although teachers often contend that by the time students reach middle school they should have acquired the necessary foundational reading skills (e.g., sight word identification, decoding, and fluency) to comprehend text of all kinds (Shanahan & Shanahan, 2008). As Fagella-Luby and Deshler (2008) pointed out, reading is an active

process, which involves language comprehension at the word level as well as using executive processes that lead to reading for meaningful learning. With this in mind, teachers of adolescents need to teach, across all content areas, the integration of reading and language skills to increase understanding of text in all learning situations (Fagella-Luby & Deshler, 2008). Furthermore teachers need to understand the entire reading process from word recognition to successful integration as proposed by Gray (1948).

As students encounter more varied and complex texts, the support for reading becomes more essential. For example, Shanahan and Shanahan (2008) discussed the importance of general education teachers having a good understanding of reading comprehension skills. The reading comprehension processes such as understanding of text organization, inferring the author's purpose, and the ability to use critical thinking skills to develop responses to reading material should be developed by the end of middle school for typically developing youth. The advancement to understanding disciplinary literature or content area materials, typically expository text, requires students to generalize comprehension skills already learned enabling them to read and understand content area text (Shanahan & Shanahan, 2008). An ever present problem for students as they move into reading expository text is that the reading skills needed to comprehend this higher-level text are often not taught in content area classrooms, leaving the lower-functioning students to struggle with comprehension (Shanahan & Shanahan, 2008).

To continue the development of reading skills into the middle grades for both general and special education students, it is important to examine effective teachers of reading and research-based reading comprehension strategies for students who struggle in this area. It is also important to study the literature regarding the inclusion of reading

strategies in middle school content area classrooms. If general education middle school teachers had a better understanding of these areas, the increased academic demands that students face as they move into the middle grades could be met with less frustration and enhance the learning experiences of all students.

Reading Across the Curriculum

The importance of identifying reading strategies that middle school general education teachers can use in their content area classes is documented in the literature by both research studies and literature reviews. It is a common expectation of middle school teachers that the students in their classrooms, regardless of their ability, should be able to read the text and construct meaning from the readings to develop knowledge about a particular topic being studied (Pedrotty-Bryant, Linan-Thompson, Ugel, Hamff, & Hougen, 2001). In addition, students will need to use the information they have learned from their readings to complete activities, projects, and tests. Given that, reading comprehension of the content area text is necessary for successful engagement with the topics being studied. For some students, the strategies they use to complete readings and activities in the content area classroom are well developed before they enter middle school, but for other students it will be the responsibility of the content area teacher to help their students develop reading skills. This responsibility requires knowledge on the part of the content area teacher in regards to literacy strategies, in particular reading comprehension strategies that may need to be taught for a specific content-area. That knowledge could be developed through a teacher's preservice preparation, through professional development, or experientially based in their own practice.

Content area teachers, especially those that teach social studies, science, and mathematics, may need specific opportunities to develop the use of effective comprehension strategies in their classrooms. Teachers often note that comprehension is an area that some students have difficulty with in their content area classroom and the importance of the development of comprehension strategies within their content area classes (Pedrotty-Bryant et al., 2001). Given the preparation that content teachers often receive with an emphasis on disciplinary content knowledge, evaluating teacher knowledge and use of content area reading strategies needs to be considered (Fritz, Cooner, & Stevenson, 2009; Nichols, Young, & Rickelman, 2007). When time is devoted for the development of research-based reading comprehension strategies at both the teacher preparation level as well as inservice teacher professional development level, positive attitudes about including reading comprehension and other literacy strategies in content area teaching have been noted (Fritz et al., 2009). In other words, teachers value strategies that support student comprehension.

Determining the extent that middle school content teachers are familiar with reading strategies based on their specific content area taught is especially important (Nichols et al., 2007). The identification of reading strategies that are chosen most for use by different content teachers will help formulate professional development that may be worthwhile and useful in specific content areas. Recommended professional development topics include both reading and writing strategies that the teachers can integrate into their daily content area instruction. Some of the literacy strategies that studies found middle school content teachers were most interested in were: question-answer relationship, literature circles, graphic organizers, reader response, and journaling (Nichols et al., 2007).

The aforementioned strategies are all important for developing the comprehension of content area text and topics.

In addition, to content area teachers' interest in supporting comprehension, there is evidence of success when using some of these reading strategies (e.g., question-answer relationship, graphic organizer) in content area instruction. Fagella-Luby, Schumaker, and Deshler (2007) found that using learning strategies such as self-questioning completed before reading, story-structure analysis used during reading, and summary writing completed after reading increased the comprehension of content area text. However, it may not be sufficient to use a comprehension strategy, research-based or not, but more important to examine the way the strategy is taught, practiced, and reinforced with appropriate materials and feedback from the teacher or grade level peers. Teachers need to include demonstration and modeling, teacher-guided practice, cooperative peer practice, independent practice, and review when embedding and teaching reading comprehension strategies in their content area instruction (Fagella-Luby et al., 2007). These pedagogical skills may need to be acquired through focused professional development opportunities for teachers that may not have had this kind of emphasis in their preservice teacher training or in other professional development.

In this age of standards and high-stakes assessment content teachers note that teaching specific reading comprehension strategies can be difficult to include in their instruction. Barry (2002) found that teachers reported that the more time it takes to teach and model the reading comprehension strategies, the less time they have to teach required content area material. At the same time content teachers contend that teaching reading comprehension strategies within their disciplines increased the comprehension of content

area material (Pedrotty-Bryant et al., 2001). Another barrier noted by the teachers related to the confidence teachers have in using the strategies (Barry, 2002). Teachers did not always feel confident in their teaching and use of the comprehension strategies given that their teaching training was geared to expertise in content rather than reading pedagogy. These understandings are important to consider as districts and schools move ahead with their school-wide initiatives and professional development opportunities related to reading across the curriculum.

Students with Disabilities and Content Area Instruction

An important area to investigate related to reading across the curriculum and inclusion of students with disabilities is the research that focuses on developing comprehension strategies in content areas for students with disabilities. This line of research mostly has focused on sharing teaching practices that teachers have used in the content areas and the impact those practices have had on students with disabilities such as learning disabilities (Cawley, Hayden, Cade, & Baker-Kroczynski, 2002; Mastropieri et al., 2006; Simpkins, Mastropieri, & Scruggs, 2009). The research is very limited in the number of studies done that included students with special characteristics, such as autism spectrum disorder (ASD).

Matropieri, Scuggs, and Graetz (2003) studied the literature relating to reading comprehension strategies that benefit secondary students with learning disabilities. Their review of literature included research studies and reading skills specifically related to content areas. They found that reading strategies used to build reading comprehension that are effective with elementary age students can be equally effective for adolescents with learning disabilities (Mastropieri et al., 2003). Equally as important is that,

particularly in social studies courses, including strategies like mnemonics and graphic organizers to build comprehension increased the learning of the content being taught (Mastropieri et al., 2003). However, as this research highlighted, there appears to be a gap related to middle school teachers and their use of reading strategies used to build comprehension in content area classrooms.

There are a number of comprehension strategies that have proven to be highly successful for students with disabilities. For example, successful research-based strategies include incorporating hands-on activities, game-like activities, as well as using teaching tools like graphic organizers and computer assisted instruction (Bulgren, Lenz, Schumaker, Deshler, & Marquis, 2002; Kim et al., 2006; Mastropieri et al., 2006). Scruggs, Mastropieri, Berkeley, and Graetz (2010) concurred that using reading strategies such as graphic organizers and vocabulary related mnemonics increased comprehension of the content being taught. Lastly, Mastropieri et al. (2003) concluded that teacher attitude does have an effect on the implementation of reading strategies. The more positive attitude the teachers had about using comprehension strategies in the content area, the more likely it would lead to an increase in learning for the students.

Overall, limited research has been conducted on specific reading comprehension strategies in middle school, specifically used by social studies teachers to develop comprehension of social studies content. The research studies examined shared commonalities in that most of the studies included students with learning disabilities and involved the use of graphic organizers as a comprehension strategy to develop understanding of the content. Beyond those two variables, the research or lack thereof suggests that there is a gap in the area of reading comprehension strategies that benefits

and develops comprehension for students with other disabilities, such as ASD, at the middle school level.

Students with ASD and Reading Comprehension

The IDEIA (2004) amendments brought a renewed effort to provide access for students with disabilities to the general education curriculum. Students with ASD are a group that is often included in general education classrooms (N = 370, 000) (30th Annual Report to Congress on IDEA, 2008 for complete data); however, it is sometimes evident that consideration is not given to this group of students' strengths and needs. Specifically students with ASD need support in both deeper-level comprehension as well as reader-response to text they are reading.

Students with ASD that are higher functioning or have Asperger Syndrome are often able to answer factual comprehension questions, but have more difficulty with strategies that require higher level thinking such as inferring or interacting with the text (Lanter & Watson, 2008). In other words, reading comprehension that involves more factual understanding may mask their inability to draw inferential or deeper-level meaning from text. Reading strategies identified to develop some of the comprehension skills that require deeper understanding have been identified as mnemonics, graphic and spatial organizers, connections with prior knowledge, building extensive background knowledge, teaching how to monitor text, and using higher level questioning techniques (Hart & Whalon, 2008; Lanter & Watson, 2008).

In addition to support for deeper comprehension, students with ASD need additional support for responding to text. Carnahan et al. (2011) suggested that cognitive processes such as Theory of Mind and executive function contribute to the reading

comprehension difficulties students with ASD have. Theory of Mind requires someone to understand the feelings and perceptions of another, realize those feelings are different from your own, and understand that feelings often influence actions (Firth & Firth, 2006). Executive function is the ability to self-monitor along with planning and organizing one's thoughts (Atwood, 2008). Because these cognitive processes are weak in students with ASD (Carnahan, Williamson, & Christman, 2011), understanding different perspectives, understanding the "big picture," identifying the main idea and making inferences, and organizing information for a given purpose while reading could prove difficult for students with ASD (Carnahan, Williamson, & Christman, 2011). The aforementioned are examples of higher-level reading skills on Gray's model that could definitely impact the comprehension of text that is being read in content area classes, especially in the context of a social studies classroom that typically includes students with ASD.

Unfortunately there is a lack of studies related to students with ASD in middle school and secondary content area classes and their ability to comprehend content area text. But, we can make a connection between the literature that is available related to reading comprehension skills in the content areas and other disability populations and students with ASD. This is an area that needs further development in the research to ensure that students with ASD have the access to the curriculum that is rightfully theirs.

Summary

There is a need for understanding how middle school content area teachers are attending to reading comprehension skills within their classes and meeting the needs of their students. The importance of different types of instruction, such as explicit instruction of reading strategies within the content curriculum, is an area that has been shown to

improve the reading skills and understanding of the content for all kinds of learners (Cawley, Hayden, Cade, & Baker-Kroczynski, 2002; Mastropieri et al., 2006; Simpkins, Mastropieri & Scruggs, 2009), yet little is known about how or whether content area teachers, especially at the middle level, implement such strategies. Since we know from the legislation, NCLB (2000) and IDEIA (2004), that teachers are accountable for all learners and what they are learning in their classrooms, it seems important for teachers to include evidence-based practices in the literacy area, particularly for reading comprehension.

We know that effective teachers of reading and other content areas provide highly engaging activities that focus on the executive processes and teaching strategies for comprehension of disciplinary text (Duffy et al., 1987; Shanahan & Shanahan, 2008). Some skills such as recall of nonfactual information, drawing conclusions, and making judgments, all necessary for comprehension, prove to be difficult for students with ASD (Griswold, Barnhill, Smith-Myles, Hagiwara, & Simpson, 2002). With more students with disabilities, particularly students with ASD, being educated in general education classrooms, the concern continues to be how effectively general education teachers use practices that are effective for inclusion (Burstein, Sears, Wilcoxen, Cabello, & Spagna, 2004). In addition, the argument can be made that reading comprehension strategies that students with ASD need should be provided throughout a student's school day, including content areas such as social studies classes (Roberts, Torgesen, Boardman, & Scammaca 2008). Improving our knowledge of general educators' teaching practices in relation to reading comprehension strategies necessary to include students with ASD will help provide them with greater access to the general education curriculum.

Purpose of the Study

The purpose of this study was to describe the perceptions of general education middle school social studies teachers related to their teaching practices and the inclusion of students with Autism Spectrum Disorder in their classrooms. More specifically, an in-depth exploration of the teachers' beliefs about their planning and teaching practices, assessment strategies, and incorporation of reading strategies was conducted. The primary research question was:

What are the perceptions of general education middle school teachers related to their teaching practices for students with ASD who are included in their social studies classrooms?

Three sub-research questions considered in this research were:

1. How do these teachers report that they incorporate reading comprehension in the context of teaching social studies?
2. What specifically in relation to planning and teaching do these teachers report that they incorporate to attend to students with ASD?
3. How do these teachers report that they assess all students' outcomes to determine comprehension of social studies content?

Chapter II

Review of Literature

This review of literature provides support for and advances the theoretical knowledge of the teaching practices that general education middle school social studies teachers use to include students with autism spectrum disorder (ASD) in their classrooms. First, the concepts of teaching practice, reading comprehension, and metacognition as they are used in this study are defined. A discussion of the importance of reading comprehension follows along with connections to metacognition difficulties for some students. Then the literature review examines content area teachers' perceptions of using reading practices in their classrooms, reading across the curriculum, and the impact for students with disabilities. Lastly, the literature related to the advancement of reading comprehension strategies of expository text with students with ASD and other mild disabilities is explored.

Definition of Terms

Teaching practice*.* The term teaching practice is used in this study to describe teachers' methods or teaching strategies that have been chosen and are implemented during instruction of specific content or concepts to engage students in learning (Marzano et al., 2001). Teaching methods as defined by Borich, (2007) are " strategies a teacher uses when presenting lessons to establish lesson clarity, instructional variety, and engagement with the purpose of meeting specific lesson objectives". Some examples of teaching methods or teaching practices are explicit teaching such as class demonstrations or modeling, strategic instruction with recitation, and peer learning.

Reading comprehension. Reading comprehension as defined by Harris and Hodges (1995) involves interactions between the reader and the text to construct meaning while intentionally thinking about what is being read. Findings by the National Reading Panel (2000) also stated that readers comprehend text when they are able to construct meaning and relate it to personal experiences and knowledge as well as making mental representations of what is being read. The literature suggests that teaching students to construct meaning and make mental representations by using cognitive strategies enhances a student's ability to comprehend all kinds of text (NRP, 2000).

Metacognition. A great deal of the reading research has been dedicated to a student's ability to monitor their comprehension through metacognition (U. S. Department of Education, Putting Reading First, 2001). Putting Reading First (2001) defines metacognition as "thinking about thinking." Metacognitive skills that help students comprehend what they are reading include tasks such as monitoring understanding, adjusting speed while reading, and "fixing up" any comprehension problems or misunderstandings as they occur (U. S. Department of Education, Putting Reading First, 2001). A reader who struggles, including those readers who have been identified as having mild disabilities, fail to use these strategies because they lack the strategies to identify and then fix their comprehension misunderstandings (Roberts et al., 2008). This poses a problem for students with mild disabilities (i.e., learning disabilities, autism spectrum disorder, and cognitive delay) who experience metacognitive difficulties as they are expected to comprehend and keep up with the content in their grade level inclusive classrooms.

Reading Comprehension and Students with Disabilities

It is unlikely that anyone would dispute the importance of children learning how to read. It has been documented in the research that early intervention for literacy learning and skills increases the chance for becoming literate (Snow, Burns, & Griffen, 1998). At some point in a child's educational experiences the focus in reading changes from instruction in phonology and alphabetics, the *learning to read* skills, to instruction in vocabulary and comprehension, the *reading to learn* skills. As children move into the intermediate grades in school, the demands for reading more difficult text such as the expository text in content area materials becomes a central focus of the literacy demands (Blanton, Wood, & Taylor, 2007). Coupled with the demands of meeting learning standards and teacher accountability through high-stakes testing, teachers often feel the pressure of covering all the content and the task of teaching the *reading to learn* skills may be left behind. *Reading to learn* skills, which would be identified on Gray's model as step three and step four (see Figure 1), include activating prior knowledge to make connections, previewing text, responding to text, generating questions about reading, and categorizing information (Gray, 1948).

There has been significant research related to the development of reading comprehension skills in students with learning disabilities. When students with learning disabilities are taught how to use metacognitive strategies, comprehension levels may increase (Sencibaugh, 2005). Many studies have been done evaluating the use and self-monitoring of multiple comprehension strategies particularly with content area text (Gersten, Fuchs, Williams, & Baker, 2001). Sencibaugh (2005) also concluded that the evidence from research shows that students with learning disabilities can learn cognitive

strategies such as self-questioning and summarization that lead to significant performance gains in the area of reading comprehension. These very important findings related to metacognition and the use of strategies and comprehending text for students with learning disabilities are important for other students with mild disabilities, in particular students with autism spectrum disorder (ASD). Students with ASD also have difficulties with metacognition, especially in social cognitive tasks, but these difficulties are much less explored in the research (Chiang & Lin, 2007). As we include more students with ASD (*N*=370,000) (The 30th Annual Report to Congress on IDEA, 2008) and expect them to be making progress towards general education goals and indicators (IDEIA, 2004), our knowledge of research-based strategies to increase reading comprehension is necessary.

Metacognitive difficulties: Strategies for increasing reading comprehension. The importance of identifying strategies for increasing reading comprehension skills with students who have metacognitive difficulties has been highlighted in numerous literature reviews and practitioner articles. Snow (2002) noted that within the last 15 years there had been a more focused interest in increasing reading comprehension skills whereas previous to that the focus was on increasing word recognition skills. Ebren (2005), in her review of the literature on reading comprehension instruction looked for practices that have an empirical base for students who have been identified as having a reading disability of some kind. Her examination of the literature found basic skills that need to be included in reading comprehension intervention are background knowledge, word knowledge, vocabulary, conceptual knowledge and text structure. In addition, her study of the research confirmed that successful reading comprehension skills involve using a variety of reading strategies (Ebren, 2005). The different kinds of strategies that can be taught to

increase reading comprehension vary depending on the purpose of the student's reading and might include strategies for "activating prior knowledge, text analysis, self-questioning, visual imagery, and paraphrasing and summarization" (Ebren, 2005, p. 315).

Fagella-Luby and Deshler (2008) provided a summary of the research findings related to reading comprehension skills and instructional conditions for students with learning disabilities who have been noted to have metacognitive difficulties. Their review of the literature focused on adolescents with learning disabilities and the instructional emphasis for such students. They were able to find consistency amongst the research they examined and formulated six findings related to reading comprehension strategy instruction. These findings included (a) reading comprehension increases when the focus is on what good readers do; (b) students with learning disabilities (LD) can be taught to self-monitor, self-question, and summarize with positive results; (c) improvement in reading comprehension for students with LD is evident in both elementary and secondary learners; (d) explicit instruction improves reading comprehension; and (e) strategy instruction that is overt and explicit leads to positive outcomes (Fagella-Luby & Deshler, 2008). The findings were promising in terms of specific interventions that can and should be used with students who are LD as well as other disability populations with similar metacognitive difficulties.

Donahue and Foster (2004) pointed out that reading comprehension to an extent, "involves an understanding of social relationships" (p. 177). This notion is important, particularly for students who may have difficulty with social cognition tasks, such as those with ASD. Both reading comprehension and social cognition require the ability to make inferences as well as use reasoning that is interpersonal in nature (Donahue & Foster,

2004). For some students, particularly those with learning disabilities, using social cognition to understand text may be something that does not naturally happen given the difficulties with social skills these students have (Donahue & Foster, 2004). This idea has implications for students with ASD as well because they struggle in the area of social cognition similar to students with learning disabilities.

O'Connor and Klein (2004) emphasized that most students with ASD have difficulty with reading comprehension, however, the level of comprehension might vary. In addition, it has been noted that students with ASD also have difficulties in the areas of oral language and social cognition skills, both necessary for the comprehension of written text (Griswold et al., 2002). These researchers also stated that students with ASD often have a strength in rote memory skills but struggle in cognition areas such as inferences, problem solving, and distinguishing relevant from irrelevant information (Griswold et al., 2002). This set of skills that link to social cognition may help to explain the difficulties these students, similar to difficulties of students with learning disabilities, have with reading comprehension. Knowing the connections among metacognition, oral language, and social cognition, and understanding the role these cognitive areas have in developing reading comprehension may help educators as they choose strategies that can help strengthen comprehension skills.

Reading Skills Across the Curriculum

Teachers' perceptions of using reading practices. It is well documented in the literature that to continue the development of reading comprehension skills teachers need to consider using different tools or methods such as graphic organizers or strategic instruction in content area classrooms (Pedrotty-Bryant et al., 2001). In addition, research

has shown that middle school content area teachers are prepared in a variety of different programs and may have discipline-specific expertise and lack knowledge of how to develop comprehension or use reading strategies in their content area instruction (Nichols, Young, & Rickelman, 2007). The following research studies describe how literacy skills and reading comprehension strategies can be developed in the content areas.

The development and use of reading strategies with a focus on reading comprehension for middle or high school teachers through preservice preparation or professional development provided by districts or schools is an area that has been studied. Fritz, Cooner, and Stevenson (2009) described the inclusion of a specific literacy course for secondary education majors using a university/public school partnership model. The course was developed and taught collaboratively by the university professors and local junior high content teachers. In conjunction with the course, in which research-based strategies (i.e., prereading vocabulary strategies, graphic organizers, note-taking methods) were taught and modeled, the preservice candidates were expected to implement the strategies learned in a field experience opportunity at the local junior high school. The results indicated that once taught how to incorporate reading comprehension strategies in content area classrooms, the teacher candidates felt positively about using them and intended to do so (Fritz et al., 2009).

In contrast, Nichols, Young, and Rickelman (2007) studied inservice middle school teachers, evaluating their knowledge and use of content area reading strategies. Their intent was to determine the extent that middle school content teachers were familiar with reading and writing strategies and if specific content area teachers chose certain strategies over others (Nichols et al., 2007). The middle school teachers helped formulate

professional development by infusing reading skills they felt useful in their content areas. The professional development topics included both reading and writing strategies that the teachers would include in their daily content area instruction. Some of the strategies noted that teachers were interested in learning were all related to comprehension of content area material and topics, e. g., question-answer relationship, literature circles, graphic organizers, reader response, and journaling (Nichols et al., 2007). It is also noteworthy that teachers from different disciplines or content areas find different reading strategies important based on skills developed in specific content area (Nichols et al., 2007). For example, English teachers felt guided reading practices were important, math teachers reported 3-minute pause and reflect was an important strategy to teach and use, and lastly science teachers identified brainstorming as an important reading strategy (Nichols, et al., 2007). Nichols et al. (2007) and Fritz et al. (2009) highlighted that different content area teachers may use and develop different reading strategies based on their goals and the purpose for reading specific content area materials.

To better understand inservice teacher practice, Pedrotty-Bryant et al. (2001) interviewed middle school teachers about reading strategy use in their classrooms. A variety of strategies across content areas were mentioned. Teachers used journaling, pictures to enhance vocabulary understanding, background knowledge, predicting, reflective questions, and making connections (Pedrotty-Bryant et al., 2001). In the interviews all of the teachers noted that comprehension was an area that some students had difficulty with in their content area classroom and noted the importance of the development of reading comprehension strategies. The teachers also explained that using specific reading comprehension strategies, such as partner reader and the collaborative

strategic reading process, were different and sometimes difficult to include in instruction, but that teaching reading comprehension strategies within the content areas did increase the comprehension of content area material (Pedrotty-Bryant et al., 2001).

The success of using reading comprehension instruction in content areas is evident throughout the research literature. For example, Fagella-Luby et al. (2007) investigated using embedded learning strategies to increase reading comprehension in a heterogeneous ninth grade high school classroom by completing an experimental study. The researchers investigated the use of this strategy routine on student reading comprehension levels, using the content area reading material. The learning strategy routine included (a) self-questioning that the student completed before reading; (b) story-structure analysis used during reading; and (c) and summary writing the student completed after reading. In addition, the strategy routine included a four-phase pedagogy of instruction that was implemented on different days. The pedagogy included (a) demonstration and modeling; (b) teacher-guided practice; (c) cooperative peer practice, and (d) independent practice and review (Fagella-Luby et al., 2007). The embedded learning strategy routine proved to have more effect in developing the comprehension of content text than just using the separate research-based strategies (Fagella-Luby et al., 2007). It may not be enough to just use a literacy strategy, research-based or not, but more important to examine the way the literacy strategy is presented, practiced, and reinforced with appropriate materials and feedback from the instructor or grade level peers.

Lastly, it is important to consider the results of a study done by Barry (2002) to emphasize the importance of teacher perceptions of reading strategies. Barry's study consisted of a survey completed by middle and high school content teachers representing

social studies, English/language arts, math, science, foreign language, geography, gifted, art, and music. The survey consisted of a list of strategies the participants might use in their content area class. The participants were required to check the strategies they use and then rate them as not effective, effective, or very effective (Barry, 2002). The participants were also asked to indicate the strategies that they would recommend other content teachers to use. Her results showed that the social studies and English teachers were using literacy strategies the most (Barry, 2002). Some of the strategies that were recommended for use by the content teachers were graphic organizers, vocabulary activities, writing, and anticipation guides (Barry, 2002). Other strategies that were mentioned but were not used very often were question-answer relationship and directed reading thinking activity (Barry, 2002).

An important variable that was revealed from the results of Barry's (2002) survey involved the determination of barriers for implementation of reading strategies. A common barrier amongst the teachers, regardless of the content area they taught, was the time it took to teach and plan for implementation of reading strategies. Barry (2002) noted that the teachers commented that the more time it took to teach and model the strategies less time was available to teach required content area material. Another barrier noted by the teachers relates to the confidence teachers have in using the strategies due to preparation focusing on the content area as opposed to reading (Barry, 2002). If teachers are not confident with the strategy, it is likely they will not use it in their teaching (Barry, 2002). The results of Barry's survey can prove very useful to teacher educators or professional development coordinators when planning for training of reading strategies to use in the content areas. This information is very useful for teacher educators as they

develop their literacy courses for middle and secondary teachers and even elementary teachers. Teacher educators can use this information to develop reading strategies that they teach in content area methods courses and they can also use the information to address the barriers as well.

Reading across the curriculum – students with disabilities. Just as there have been studies that have demonstrated the effective use of reading strategies in general education content area classrooms, there is also a body of research that focuses on developing reading strategies in content areas for students with disabilities. The research is very limited in the number of studies in relation to the type of disability that is represented in the participant sample. Most of the research in this area has focused on students with learning disabilities. For example, no studies were found that included developing reading skills for students with ASD in content area classes. Therefore, the existing research at the middle school and high school levels, which primarily focuses on students with learning disabilities, is reviewed and connections are made to students with ASD.

Two studies and a literature review were found that are directly related to developing reading skills in content area classes for students with disabilities. The first study took place in both middle school and high school social studies or science classrooms and included 107 students with diverse abilities, including students with learning disabilities (Bulgren et al., 2002). The experimental design consisted of treatment groups and control groups who were learning the same social studies or science content. A teacher who was working with the treatment groups was taught how to use the concept comparison table which is a graphic organizer developed by the University of Kansas

(Bulgren et al., 2002). The graphic organizer was used as students were learning about the content either by direct teacher instruction or by reading the text. Either way, the graphic organizer was filled out in conjunction with teacher modeling and discussion. The control group had traditional teacher led lecture-discussion without the aid of a graphic organizer. The investigators evaluated students' understanding of the content they were learning and if the teachers could deliver the instruction using the graphic organizer with fidelity based on how they were trained (Bulgren et al., 2002).

Results of both parts of Bulgren et al.'s (2002) study were positive. The first part of the study, looking at whether a diverse group of students, including students with learning disabilities, could increase their understanding of content area material with the use of the graphic organizer, revealed positive results. The students who benefited the most were the students with learning disabilities and those that were learning English as a second language (Bulgren et al., 2002). The second part of the study provided positive evidence that general education teachers could learn a literacy technique and a new way of delivering instruction based on their own explicit instruction in the technique. These results confirm the notion from the previous section that professional development is important for developing reading skills for content area teachers and that professional development can be successful for learning the reading skills.

In a second study, Kim et al. (2006) investigated the use of a computer-assisted program to develop reading skills in a content area classroom in middle school. For this study, the use of a computer software program, Computer-Assisted Collaborative Reading (CACSR), was used as a different way for students to interact with text. The assumption in using the software was that the interactive environment would help develop the

comprehension of expository text materials (Kim et al., 2006). In this study an experimental design was used. The treatment group had sixteen students participating and the control group had eighteen students participating; all the students were enrolled in middle school language arts classes for students with reading difficulties. The students in the treatment group were taught to use the CACSR program in three phases: (a) first an overview of the program was provided; (b) then they learned how to use the program; and (c) they were taught how to use the program to actually learn new information. The students participated in those phases over the course of seventeen sessions. The CACSR program taught students how to preview text, how to click and clunk the text, how to work on getting the gist of the text, and how to wrap up with text with a summary. The program gives specific steps for each phase, shows a demonstration, and then requires some guided and independent practice using the strategies. While learning how to use the computer program, a researcher guided the students in a step-by-step fashion through all the phases. The control group of students received fluency instruction in a classroom in which they read short timed passages with a partner to determine fluency rate. Vocabulary instruction was also implemented with the control group.

The results of Kim et al.'s (2006) study showed that the experimental group outperformed the control group on passage comprehension passages. This not only helps to verify that specifically teaching literacy strategies in a content class will develop comprehension but it also adds the component of computer assisted instruction as a viable means to developing reading skills. The researchers also interviewed the students and teachers on their perceptions of the CACSR intervention. Both the students (12 out of 16) and the teachers (2 out of 2) reported that the CACSR program was an effective means for

instructing reading skills with content area material (Kim et al., 2006). The four students that did not feel CACSR was effective mentioned that the computer program was "boring" (Kim et al., 2006).

Matropieri, Scuggs, and Graetz (2003) conducted a literature review study of reading comprehension strategies that benefit secondary students with learning disabilities. The review of literature included research studies and reading skills specifically related to content areas. One of the studies revealed that reading strategies used to build reading comprehension that are effective with elementary age students can be equally effective for adolescents with learning disabilities (Mastropieri et al., 2003). That finding is an important one, as there appears to be a gap related to middle school teachers and their use of reading strategies to build comprehension in their content area classrooms. Another finding of the literature review was that, particularly in social science courses, including strategies like mnemonics and graphic organizers to build comprehension increased the learning of that content (Mastropieri et al., 2003).

In a meta-analysis on special education interventions influencing learning in secondary content classes, Scruggs, Mastropieri, Berkeley, and Graetz (2010) found that using reading strategies such as graphic organizers and vocabulary-related mnemonics increased comprehension of the content. They concluded that teacher attitude does have an effect on the implementation of reading strategies. The more positive attitude the secondary teacher had about using a comprehension strategy in the content area, the more likely it would lead to an increase in learning for the students.

The aforementioned literature focused on specific reading strategies content area teachers have used to develop comprehension of the content for their students. These

studies were completed using students with and without disabilities that were in general education middle or secondary content area courses. The research studies had some commonalities in that many of the studies involve the use of graphic organizers as a literacy strategy to develop comprehension of the content (Scruggs et al., 2010). These studies show there is research in the area of reading skills across the curriculum for students with disabilities; however, missing from that research are students with ASD and there is a need for further research with this population.

Summary of Reading Across the Curriculum

Based on this review the implementation of different kinds of instruction such as explicit instruction of reading skills within the content area needs more attention. The studies on teacher perceptions of using reading comprehension skills within the content areas showed that these teachers are not used to teaching comprehension skills but need to consider it (Barry, 2002; Nichols et al., 2007). Research regarding reading across the curriculum and students with disabilities demonstrated that when time is spent in content area classes, where students with disabilities are included, the development of comprehension strategies leads to positive results in the class (Kim et al., 2006; Mastropieri et al., 2003). Some of the strategies that proved successful in teaching the content to students with disabilities were using graphic organizers and mnemonics (Scruggs et al., 2010), and computer-assisted instruction (Kim et al., 2006). It is necessary to highlight that there were no studies found in the literature related to this area that included students with ASD. There is definitely a gap in the research when looking for reading across the curriculum and the strategies used to build these skills for students with ASD.

Reading Comprehension and Students with ASD

While trying to obtain a better understanding of reading comprehension interventions and strategies for students with ASD who possess metacognitive difficulties, it is necessary to identify the reading comprehension difficulties with which this population struggles. Nation, Clarke, Wright, and Williams (2006) studied the reading ability of children with ASD. Children age six to fifteen were recruited from a Child and Adolescent Mental Health Clinic in New York City and the surrounding areas. The children (n = 41) that participated in the study ranged in diagnosis of ASD from high-functioning Autism to Asperger Syndrome but had sufficient oral language skills to allow them to read. The students were assessed in the areas of reading accuracy or decoding, reading comprehension, oral language skills, and nonverbal ability.

The results of this study (Nation et al., 2006) showed that the students did more poorly on the reading comprehension evaluations than the reading accuracy evaluations. The mean standard scores for reading accuracy (i.e., word reading, text reading, and non-word reading) were within the normal range. In comparison, the scores for reading comprehension were, on average, one standard deviation below the mean. In particular, the tasks that involved vocabulary related activities and oral language activities reflected the largest degree of impairment.

Nation et al.'s (2006) study provided empirical evidence that students with ASD have decoding ability but have lags in the language and reading comprehension areas. Griswold, Barnhill, Smith-Myles, Hagiwara, and Simpson (2002) also found that with assessment and evaluation of reading skills using an achievement test, students with Asperger Syndrome also score within the average range on basic reading tasks. However,

on reading comprehension and language based critical thinking skills, this population of students experienced significant difficulties (i.e., 1 to 2 standard deviations below the mean).

In addition, a literature review by Barnhill (2001) provided information regarding the reading comprehension difficulties of students with ASD and deficits in metacognition. Barnhill examined the existing literature to understand the academic characteristics of students with Asperger Syndrome (AS). Her examination of the literature revealed that students with AS have strengths in the areas of decoding words and oral expression. In terms of reading comprehension, factual types of questions were easily mastered by students with AS, however inferential types of questions posed great difficulty for this population.

Reading Comprehension and Students with Learning Disabilities

Due to the limited studies with students with ASD, it is also helpful to examine literature reviews that summarize the reading comprehension skills and difficulties of students with learning disabilities who are also known to experience metacognition difficulties. Gersten et al. (2001) examined the research studies in relation to students with learning disabilities and their reading abilities particularly in the area of reading comprehension. Gersten et al. noted that, "most researchers suspect that the breakdowns occur in the domain of strategic processing and metacognition (i.e., students' ability to control and manage their cognitive activities in a reflective, purposeful fashion)" (p. 280).

In a meta-analysis completed by Sencibaugh (2005), which focused on finding studies using reading comprehension interventions that worked for students with learning disabilities, he concluded that the comprehension skills that students with learning

disabilities have difficulty with include understanding vocabulary, making inferences, drawing conclusions, and making predictions. He also noted that these skills are related to metacognition. Comprehension difficulties tend to be very complex and can include difficulties with vocabulary but also difficulties understanding concepts and inferential information presented in texts (Roberts et al., 2008). Given that the vocabulary load tends to be higher with expository text in content areas such as social studies, this finding is important. It is also noted in the literature that in many cases the comprehension strategies are taught but the students have difficulty in applying those learned strategies (Roberts et al., 2008).

Teaching Practices for Reading Comprehension

Difficulties in the areas of understanding vocabulary and answering inferential kinds of questions with regards to reading comprehension reflect some similarities between different groups of students with mild disabilities (i.e., ASD, LD) who possess difficulties with metacognition (Gersten et al., 2001; Roberts et al., 2008). Identifying specific areas of reading comprehension that pose challenges for students with metacognitive difficulties will be very useful for teachers as they begin to develop the interventions for comprehending text and for developing the *read to learn* skills for students as they move into middle school.

In looking at the literature on reading comprehension, there are commonalities in the studies reviewed, related to teaching methods for increasing reading comprehension skills for students with disabilities. The following sections describe teaching methods that could be used to increase the reading comprehension skills of students with autism spectrum disorder. In addition, studies are included to describe strategies used to increase

the reading comprehension skills of students with learning disabilities who also have difficulties in the metacognition area. The description of the literature has been extended to include students with learning disabilities due to the lack of empirical studies in the area of reading comprehension intervention for students with ASD. The gap in the literature is noteworthy and will be explored in more depth later. The studies are grouped according to methodology or instructional tool areas: strategic instruction, explicit instruction, and graphic organizers. These methodologies or instructional tools illustrate different teaching practices that can be used to increase reading comprehension skills in students with mild disabilities such as ASD.

Strategic instruction. Strategic instruction involves teaching students to use learning strategies to reinforce the skills they are learning. Munro-Flores and Ganz (2007) note that individuals with developmental disabilities, which include students with ASD, have difficulty comprehending the text they are reading. They state that reading comprehension is often delayed in students with ASD so investigating strategies that have proven to be effective in this area and with this population is important (Munro-Flores & Ganz, 2007).

Munro-Flores and Ganz (2007) conducted a study using single-subject design to determine the extent that a Direct Instruction Program, teaching learning strategies, has on the reading comprehension skills of students with ASD who have reading delays. The study was carried out in a small private school for students with ASD and other intellectual impairments. The students' ages in the school ranged from elementary age to secondary age, but the four students who participated in this study were elementary students. The students received instruction for twenty minutes a day, in a group format, using a

published direct instruction reading program. The program included detailed instructor scripts used by the researcher to develop inference skills using facts from the stories and skills related to creating and understanding analogies. The skills were taught using explicit instruction, in groups and one-on-one formats and were taught with teacher modeling and demonstration.

The results of the Munro-Flores and Ganz (2007) study were promising. All four students had a marked change in their performance between baseline phase and treatment phase and were also able to maintain their performance of these skills one month after the instruction ended (Munro-Flores & Ganz, 2007). This study produced favorable results in reading comprehension for students on the autism spectrum. If replicating this study, including students with ASD in inclusive settings to determine if learning the comprehension skills in this environment yields similar results would be beneficial.

O'Connor and Klein (2004) also conducted a study focused on reading comprehension skills of students with ASD. The study utilized the repeated measures within-subjects design. O'Connor and Klein note that decoding skills in these students is adequate and reading comprehension may be impaired but not altogether lacking. Their study involved increasing reading comprehension using background knowledge and a cueing system focused on relating the pronouns in the story to their antecedent nouns.

The study (O'Connor & Klein, 2004) involved twenty-five individuals with ASD that were chosen based on the fact that they had moderate to high levels of decoding but lower levels of reading comprehension. Out of those twenty-five students, five students participated in the pilot study and twenty students in the study itself. The students had a mean age of 15.11 and were being serviced for their special education needs in programs

that ranged from self-contained classrooms to general education classes with resource level support. The students were instructed in small group settings and the instruction involved pre-reading instruction related to background knowledge, pronouns and their referents that might appear in the story, and some cloze questions involving vocabulary in the story.

The results of O'Connor and Klein (2004) study showed that the instruction related to the pronoun referents produced positive results and benefited more than half of the students. The effects for the pre-reading questions and the cloze sentences were considerably smaller and did not show statistical significance for improving reading comprehension (O'Connor & Klein, 2004). This study did not address students' ability to independently apply strategies to comprehend text, but it did demonstrate that teachers can assist in the understanding of text by providing some facilitation with text that students are about to read.

Whalon and Hanline (2008) completed a single-subject study that involved the use of strategy instruction to increase reading comprehension of students with ASD. The study sought to discover the relationship between an adapted reciprocal questioning strategy guided by a teacher and the generation of questions and answers by the students with ASD. The participants in the study (n= 3) were elementary aged boys diagnosed with mild autism and had higher nonverbal reasoning scores than verbal reasoning scores as measured on a standardized measure (Whalon & Hanline, 2008). Nine general education peers were also part of the study as they worked as cooperative partners with the boys throughout the study. The boys were first taught the elements of a narrative story using picture cues and modeling. Then the boys and their general education partners were given

another story and examples, with pictures cues, of how to generate and ask questions throughout a story. The researcher provided modeling and demonstration of the skills required to carry out this task. This cycle went on for two days and on the third day of the intervention the groups of children independently (with some verbal prompting by the researcher) generated and asked questions about the stories they were reading. They were provided with a visual checklist of the steps to use while completing their routine of generating and asking questions. The students were not only evaluated on their ability to generate, ask, and answer questions, but also on their ability to ask the right type of question based on the story element identified (e.g., setting = Where did the story take place?).

The results (Whalon & Haline, 2008) were positive and are important in the development of strategy training for students with autism. All the students were able to generate and answer questions during the intervention stage at a higher frequency than the baseline stage. In addition, an important factor related to this finding was that the verbal prompting provided by the researcher was no different for the students with disabilities than for the students without disabilities (Whalon & Hanline, 2008). All the children were given a social validity measure once the intervention was complete and all the children, both children with autism and general education students, felt the intervention was beneficial and enjoyed the collaborative work. Two of the comprehension strategies used in this study, story structure and question generation, are identified by the NRP as instructional methods that should be used in teaching reading comprehension (Whalon, Al Otaiba, & Delano, 2009). This is an important implication by showing that

what works for students without disabilities when developing reading comprehension would work for students with disabilities, and in this case students with ASD.

Explicit teaching methodology. Explicit teaching is a method that can be utilized to teach reading comprehension skills and strategies. Explicit teaching provides guided instruction for students as they learn new skills. Within an explicit teaching method, a teacher would use modeling and demonstration so the student can be guided through hands-on activities and applications.

Hedrick, Katims, and Carr (1999) examined the intervention of implementing a multi-method, multi-level literacy program that was originally designed for students without disabilities. The study involved eight students, average age nine years eight months, who were identified as having mild – moderate mental retardation (I.Q. range 40-76) and were in a self-contained special education classroom with a teacher and two paraprofessionals. The school day was divided into segments so the instruction could be broken up into the different literacy areas. The four literacy segments were 45 minutes each and included a guided reading block, a literature/self-selected reading block, a working with words block, and a writing block. The instruction included and focused developing the skills of communicating with reading and writing, obtaining information through reading and writing, and reading for pleasure. The focus of this study was determining the children's literacy development using a balanced, traditional approach to teaching reading. The students in this study were taught using methods that were similar to methods being used in the general education classrooms and included phonics, basal reader instruction, literature studies and the introduction to the writing process. The

students were assessed periodically to determine if their reading and writing abilities were increasing. The assessments included story retellings and an analytical reading inventory.

The results from Hedrick et al.'s (1999) experimental study were promising as all the students' gains were better than average. All students made significant progress from pretest to posttest, which was measured using the Test of Early Reading Abilities-2, and most of the students progressed about 20% from pre-test to post-test. Not only did the students gain in their concepts about print, they also made gains in their ability to retell a story, discriminate between different sentence types, and in their writing samples. In terms of the reading inventory, all the students made gains in their ability to decode words, and the three students with the highest IQs made progress in the comprehension portion of the reading inventory.

There are some important points to highlight about this study (Hedrick et al., 1999). First, for many years students with mild to moderate mental impairments were only "exposed" to literacy skills related to life skill. The same could be applied to students with ASD (Chiang & Lin, 2007). The students in this study gained in literacy skills after a year of instruction with a program that is similar to what students in a general education might receive. The concept of access to general education curriculum can be confirmed with these results as the literacy program for students with mental impairments used was originally used in general education classrooms and can be adapted to fit the needs of different levels of learners (Hedrick et al., 1999). This study could be replicated to include comparisons of other general education literacy programs with students who have ASD.

Antoniou and Souvignier (2007) conducted an experimental study examining if the use of explicit teaching could increase reading comprehension of students with LD (N = 73)

in fifth-eighth grade. Students in fourteen classrooms were randomly assigned to a treatment group and students in thirteen classrooms were assigned to a control group. The teachers who were working with the treatment group were given a handbook on how to implement the program that involved explicitly teaching cognitive and metacognitive strategies as well as self-regulation techniques. The four reading strategies that were included in the study were thinking about the headline, clarification of text difficulties, summarization of narrative texts, and summarization of expository texts. In addition, the students were given a self-regulation strategy plan with a checklist that they were to complete in a systematic manner as they worked through the procedure. Each strategy was taught as a unit and the self-monitoring strategy was taught along with the unit in an explicit manner that included teacher modeling, supportive feedback for the students, cue cards, and instructive bookmarks.

The results of the study by Antoniou and Souvignier (2007) showed that the students in the treatment group made greater gains in comprehension of the program's content and the use of the reading strategies. In addition, the treatment group outperformed the control group on a reading comprehension measure. This study has great implications for students with LD in terms of benefiting from the implementation of the reading-strategy program. This study could be replicated across disability groups to examine if the explicit teaching of reading strategies has positive effects. It would also be interesting to replicate the study using materials that were being used in content areas (e.g., social studies) to determine if strategies taught with narrative text are also successful with expository text that can sometimes be more difficult to read and comprehend.

Manset-Williamson and Nelson (2005) also studied explicit strategy instruction using an experimental design. They examined the effects of balanced and systematic reading instruction on adolescents with learning disabilities and also studied if the degree of explicitness in reading comprehension strategy instruction led to higher gains in reading comprehension. The students (n = 21) participating in the study ranged from nine-fourteen years of age and all had significant reading difficulties. The difficulties were in the areas of decoding, fluency, and comprehension and all the students were at least 2 grade levels below their expected reading level. The treatment and control groups were taught the same comprehension strategies: prediction, summarization, and question generation. However, the degree to which they were taught was different for the two groups. The control group had the strategies presented all at once and in an introductory format. The treatment group had one strategy presented one at a time and each strategy was taught using a direct instruction format along with providing a rationale and purpose for the use of each strategy. The strategies were explained, modeled, practiced with a partner collaboratively, and practiced independently. A mnemonic device was also created for student to remember and use each of the strategies. The treatment groups were set up as a one-on-one tutoring model, for five weeks, four days per week, for one hour a day. There was also one week devoted to pre and post testing that consisted of a decoding and comprehension measure using the Woodcock Johnson-3 and a fluency measure using a curriculum-based measurement (CBM) probe ranging from 60-110 words.

The findings of the Manset-Williamson and Nelson (2005) study were positive. The students in both groups made gains in reading comprehension as measured by an oral retell evaluation. Additionally, the quality of summaries increased and students were able

to identify more main ideas. Manset-Williamson and Nelson (2005) conclude that balanced and strategic intervention that is explicit in nature does improve the reading comprehension skills of older children with reading difficulties. One limitation of the study however, was that the number of topics and content covered was less for the treatment group receiving the explicit instruction. The researchers could not confirm whether the positive outcomes were due to less topics covered or the explicit instruction.

Graphic organizers. Research shows positive effects when using graphic organizers as a tool to increase reading comprehension. Graphic organizers are visual representations of the content being studied and assist students in their understanding of the content being learned. In addition, graphic organizers can be used to increase recall of information read and learned as well as organize thoughts regarding subject matter.

Bulgren et al. (2002) used strategic instruction along with a graphic organizer to teach a complex science topic in a secondary school. This experimental study was conducted with two groups: a control group (n = 52) and a treatment group (n = 55). Both groups were taught the same science content, however, the control group was taught the content in a traditional lecture-discussion format. The treatment group was taught the content using the same language as the control group but the differing condition was the inclusion of the Concept Comparison Routine Graphic Organizer. The students, who were enrolled in seventh through twelfth grade science classes, ranged from twenty-one high-achieving students, thirty-three normal achieving students, sixteen low-achieving students and thirty-seven students with learning disabilities.

The results of Bulgren et al.'s (2002) study indicated the students who were low achieving and those who had learning disabilities benefited from using this graphic

organizer routine. Students in treatment group that used the Concept Comparison Routine organizer did have significantly better results on a posttest than the students in the control group using lecture-discussion (Bulgren et al., 2002). The results of this study were important because they showed that teachers who teach content area topics and use graphic organizer or content enhancement device are able to meet the needs of many types of learners (Bulgren et al., 2002). However, this study did not identify students with other mild disabilities. It would be beneficial to replicate this study including students with other mild disabilities who exhibit metacognitive difficulties to determine if such a routine and explicit instruction yields the same results.

Another study that involved using graphic organizers to extract, comprehend, and retain content-area information was done by DiCecco and Gleason (2002). Their experimental study involved twenty-four students who were in sixth through eighth grade and were receiving pullout resource level services. These students were randomly assigned to a treatment or control group that either used a graphic organizer or not in the instruction of content. The content that was taught came from the middle school Social Studies text and the treatment group used a graphic organizer while learning the content. There were important relational knowledge statements developed ahead of time and those were included in the treatment group's graphic organizers (DiCecco & Gleason, 2002). Once the graphic organizers were completed, the students in the treatment group were taught to write summary statements about what they were learning. At the end of the social studies unit, the students in both groups were assessed on their knowledge of the content learned using a multiple-choice test. Throughout the unit, the students in both

groups were given fact quizzes and were expected to develop essays about the information they were learning.

Upon evaluating the data, DiCecco and Gleason (2002) found that students in both groups had higher posttest results. However, the treatment group showed significant gains from the control group revealing that the students in the treatment group benefited from using the graphic organizers. There did not seem to be a benefit for recalling factual information, as there was no significant statistical difference on the fact quizzes for the two groups (DiCecco & Gleason, 2002). However, the essays were significantly better for the treatment group using the graphic organizers. It seems that the graphic organizers acted as cues for the relational knowledge that needed to be made through the essay writing (DiCecco & Gleason, 2002).

Understanding the importance for middle grade students to *read to learn* has been noted in preceding paragraphs as an important concept. Gardill and Jitendra (1999) studied the effect of using an advanced story map organizer on story retelling to measure reading comprehension. The six participants in this study were sixth through eighth graders in middle school and were receiving special education resource services for reading and/or language arts. The students were instructed in pairs and a cycle with modeling, leading, and independent practicing was used for the instruction.

Participants read stories from the fifth and sixth grade basal reading text in which the main character experienced some kind of conflict or problem (Gardill & Jitendra, 1999). The students used a story map as they were reading the story to write in story elements and story details. The information they wrote included both explicit information and inferred information. The teacher developed the story map along with the students. Once

the story was completely read, the students were given a ten-question test on the story elements and other key information in the story. In addition, the students were asked to retell the stories that they read. The story retells were analyzed for number of words, word sequences, and sentences per retell. They were also analyzed for certain story grammar elements. Lastly, the students were given a questionnaire to evaluate the usefulness of the story map in regards to their understanding of the story map, their willingness to recommend it to someone else, and what they liked or disliked about it (Gardill & Jitendra, 1999).

When compared to the baseline measures, the results indicated an increase in reading comprehension when the students used a story map procedure (Gardill & Jitendra, 1999). For five of the six students the number of elements of story grammar in the retell increased from baseline to generalization. Overall, the students did find the story map useful in remembering and understanding stories and found it useful and effective. The study continued over a matter of twenty weeks and provides implication for teaching that learning takes time and programming may need more examples and practice.

Summary of Reading Comprehension Strategies for Students with ASD

Numerous studies show positive and significant results for improving reading comprehension of students with learning disabilities with teaching practices such as explicit teaching, strategic instruction, and graphic organizers. Most of the studies reviewed were experimental design studies that resulted in positive findings for the experimental groups regardless of the teaching methodology (Antoniou & Souvignier, 2007; Bulgren et al., 2002; DiCecco & Gleason, 2002; Hedrick et al., 1999; Manset-Williamson & Nelson, 2005). In addition, many of the teaching methods that were

implemented in the studies were practices that are often used in general education classes (e.g., graphic organizers, story maps, question generation) (Bulgren et al., 2002; DiCecco & Gleason, 2002; Hedrick et al., 1999; Gardill & Jitendra, 1999). It is promising that students with disabilities appear to benefit in inclusive settings when general education teachers use those teaching methods.

It is evident from the reviewed literature that there are few empirical studies that demonstrate what the best strategies are for students with ASD to increase their reading comprehension skills. With this identified gap in the literature, researchers can use the results from the studies with other disability populations (e.g., Antoniou & Souvignier, 2007; Bulgren et al., 2002; DiCecco & Gleason, 2002; Hedrick et al., 1999; Manset-Williamson & Nelson, 2005) and literature from effective reading teaching (e.g., Duffy et al., 1987) to explore those strategies that may work for students with ASD who have metacognitive difficulties similar to students with LD.

Conclusion

The literature review opens the door for more research in reading comprehension interventions for students with ASD. Most of the studies identify that students with ASD do have weaknesses in reading comprehension. Only a few studies assess what interventions might work with students with ASD to develop reading comprehension (Chiang & Lin, 2007; Whalon et al., 2009; Whalon & Hanline, 2008). There are many more studies that have been completed with students with learning disabilities in this area dating back to the 1980's. Students with ASD display similar weaknesses in metacognition to students with learning disabilities. The studies that produced favorable results for particular interventions such as direct instruction, self-regulated strategy development, and specific

graphic organizers (e.g., the advanced story map) are certainly interventions that could be tested with individuals with varying degrees of ASD. It could be hard for those working with students with ASD to know exactly what works. In addition, without having a research base, the true potential for a student with ASD may never be tapped.

Another area of needed research is to focus on reading comprehension skills for the success of students with ASD in general education content areas such as social studies classrooms. The studies reviewed focused on methods that teachers could use to develop reading comprehension skills in students with metacognitive difficulties such as ASD and LD. Once students move into the upper elementary grades and middle school, the requirements for independent reading and understanding of that reading, especially for expository material, increases. Future lines of research could include research-based reading comprehension methods to help comprehend expository text that is introduced in social studies textbooks and classrooms. By examining the effects of using strategies and teaching techniques that go beyond narrative text and focus on expository text in the content areas, students with ASD may become more participatory in general education classrooms.

In addition, the NRP (2000) identified specific instructional methods for teaching reading development (Chiang & Lin, 2007). In the area of comprehension alone, seven methods (i.e., comprehension monitoring, cooperative learning, graphic organizers, story structure, question answering and generation, summarization, strategy training) have been identified (Chiang & Lin, 2007). An interesting line of research would be for researchers to examine these reading comprehension methods with students with ASD. Using already identified instructional methods that seem to have validity like question-answer

relationship or graphic organizers would help demonstrate that students with ASD can develop reading comprehension skills in content areas such as social studies. This line of research could serve the purpose for demonstrating how to access the general education curriculum. In addition, research in this area could help develop the understanding of practices that work for students without disabilities can also work for students with disabilities (Browder, et al. 2006). As more students with ASD are being included in general education classrooms, implementing reading comprehension strategies will allow these students the opportunity to be contributing members of the classroom community.

Lastly, it is important to continue to study content area teachers' perceptions related to including students with ASD in their classrooms as well as the use of reading comprehension strategies. By having a better understanding of the knowledge teachers have related to research-based practices as well as their implementation of such practices, it will help identify professional development needs, both at the preservice and inservice levels. The expectation is for teachers to be accountable for all students' learning and a way to develop that accountability is providing both preservice and inservice teachers with the knowledge they need to plan and then implement research-based teaching practices that promote student growth and achievement.

Chapter III

Methodology

The purpose of this qualitative study was to explore the perceptions of general education middle school social studies teachers related to their teaching practices and the inclusion of students with Autism Spectrum Disorder (ASD) in their classrooms. More specifically, an in-depth examination of the teachers' planning and teaching practices, assessment strategies, and incorporation of reading comprehension strategies was conducted. In this chapter the following sections are presented: the research design of the study, setting, recruitment and inclusion of participants, the data collection, and data analysis plan.

Qualitative research, which was the basis for this investigation, involves a naturalistic study of individuals as they engage in meaningful social interactions throughout their lives (Marshall & Rossman, 2006). Researchers study those interactions and ensuing experiences in natural settings to develop a deeper understanding of a concept, topic, or idea. Some important characteristics of qualitative research include an interactive research methodology, a focus on the context of a problem, themes that emerge from data, and an interpretive nature to the data analysis (Marshall & Rossman, 2006). Given these characteristics, an important role of a qualitative researcher is to develop an understanding of what is happening based on the participants' experiences. The researcher's exploration involves studying key experiences by gathering data that consist of the participants' "*words*" as related to their interactions with the central phenomenon (Creswell, 2008). A qualitative approach was used to provide a picture of the reading

practices that middle school social studies teachers used in their classrooms that included students with ASD.

Research Design

The current research was guided by the inquiry approach of grounded theory. "Grounded theory relies on developing a theory that is grounded from data in the field" (Creswell, 2007, p. 79). The concept of grounded theory involves the development of a theory based on common experiences or processes that the participants of the study are experiencing (Strauss & Corbin, 1998). This study utilized multiple in-depth, semi-structured interviews to discover the perceptions of middle school general education teachers in relation to the planning for instruction, and assessment of students with ASD in the context of social studies (see Appendix A for the diagram outlining this study).

The investigator of this study also gathered artifacts or documents that the participants used as they planned, delivered lessons, or assessed. The key to understanding the perceptions of these teachers was to look for relationships amongst the data sets as concepts and categories were compared (Charmaz, 2006). Through this iterative process a theory began to emerge that helps in understanding how general education middle school social studies teachers perceive the inclusion of students with ASD in their classrooms.

Setting

Participants for this study were recruited from suburban middle schools, within one county adjacent to a large Midwestern city. There were forty-two districts in this county with thirty-five districts eligible for this study on the basis of having middle schools. The initial screening for potential sites to recruit participants was based on a list obtained from

the field placement office at a local college with a teacher preparation program. From this list, sixteen districts were self-described as using an inclusion special education service delivery model. The sixteen district websites were reviewed to locate information regarding thirty-one middle schools within those districts. The thirty-one middle school websites were searched for the names and email addresses of 331 social studies teachers. Middle schools with an inclusion philosophy were chosen to increase the likelihood that the general education content teacher had recently taught a student with ASD in his/her classroom. Additionally, the middle school websites were reviewed to determine if reading was an area that was being supported through professional development or through the school improvement plan. Middle schools were targeted if they indicated that improving reading was part of the school improvement plan.

Participants

Participants were 10 middle school (sixth, seventh, and eighth grade) social studies general education teachers. Miles and Huberman (1994) noted that qualitative studies use small numbers of participants because the goal is to study them within a particular context in a more in-depth way. The teachers, all Caucasian, consisted of nine females with years of experience ranging from 3 to 40 years, and one male. Nine of the teachers had been teaching at their current school for at least five years. Three of the teachers were sixth grade teachers, four taught seventh grade, and three taught eighth grade. Eight of the 10 teachers held Masters Degrees with one of the teachers awaiting results of National Board Certification. The teachers held either a K-9 certificate (n = 4) or a 6-12 certificate (n = 6) and one of the teachers had special education certification as well. All teachers had experience teaching students with varying disabilities in their classrooms (e.g., learning

disabilities, ASD, cognitive impairment, ADHD, ED/BD) and all teachers had, at some point in their careers, some reading training (e.g., professional development, graduate courses, preservice reading courses). The teachers' class sizes ranged from 20 – 30 students and most of the teachers taught at least three periods of social studies a day with three of the teachers also teaching a section of language arts (see Table 1 for participant backgrounds).

A flyer outlining the study was sent electronically, within the first couple of weeks of the 2011-2012 school year to the social studies teachers from the 31 middle schools described in the setting section. The flyer identified the purpose of the study, the procedures of participation (including participant criteria), the contact information (phone number and email address) of the investigator, and incentive. The potential participants were offered a $150 Visa gift card for their involvement in this study as a way to increase the likelihood of recruitment. The recruitment flyer was sent three times within two weeks while trying to secure ten participants for the study. It took three weeks to recruit the ten participants.

Table 1

Participant Background

Participant	Years of teaching experience	Grade/ Content Areas	Number of classes taught/day	Average # of students per class	Current Year/ Number of students with ASD *	Degree/ Certificate	Approvals/ Endorsements
T1	10	8 SST	5 SST 1 advisory	25	1	MS +30 K-9	Social Studies
T2	40	7 SST	5 SST	24	1	MS 6-12	Middle School Gifted
T3	20	7 SST	5 SST 1 advisory	24	1	2 MS 6-12	Social Studies
T4	15	8 SST	3 SST	30	1	MS 6-12	Social Studies Middle School Language Arts
T5	6	6 SST/LA	1 SST 4 LA	30	1	BS K-9	Social Studies Middle School Language Arts
T6	24	7 SST	6 SST	20	1	MS +30 6-12	
T7	15	6 SST/LA	1 SST 4 LA	29	6	MS 6-12	Social Studies Middle School Language Arts
T8	10	6 SST	3 SST 1 TAP	27	2	MS K-9 LBS1 (K-12)	Social Studies Language Arts
T9	29	8 SST/LA	1 SST 4 LA	30	2	MS +60 K-9	Social Studies English
T10	3	7 SST	5 SST	26	1	BS 6-12	Social Studies Middle School

Note. BS: Bachelor of Science. LA: Language Arts. LBS1: Learning Behavior Specialist 1. MS: Master of Science. SST: Social Studies. TAP: Teacher Assistance Period

* All participants had students with ASD in past years, number not reflected.

Purposeful sampling was used to determine the participants of this study that met particular criteria (Maxwell, 2005). The inclusion criteria were defined as: currently teaching sixth, seventh, or eighth grade social studies, currently having a student with ASD in their classroom, and had at least one student with ASD in the last three years (2008-09, 2009-10, 2010-11). Once the teachers contacted the investigator with interest in participating in the study, a short screening interview, done through email or phone call, was conducted to determine if they met the inclusion criteria for the study (see Appendix B). The screening interview consisted of three questions:

1. Do you teach general education social studies for sixth, seventh, or eighth graders?
2. Do you have a student with ASD currently in your classroom?
3. Have you had at least one student with ASD within the last 3 school years (2008-09, 2009-10, 2010-11)?

The first ten teachers that contacted the investigator met the inclusion criteria and became the participants.

Once the potential participants met the inclusion criteria (i.e., answered yes to all of these questions) and expressed an interest in participating in the study, the investigator explained the informed consent process according to the approved university IRB. The investigator scheduled the first interview meeting with participants at the time and location of their choice. Each participant was assigned a participant number to ensure anonymity throughout the completion of the study and assured that their participation was voluntary. An email explaining and including the informed consent document was sent to the participant. The participant returned the signed informed consent document at the first interview meeting.

As a researcher it is important to disclose detailed background information about oneself. The investigator of this study has had extensive experience as both a K-12 special education teacher and a teacher educator. The K-12 classroom experiences that the investigator has had include fifteen years working in settings with students with disabilities some of whom had ASD. Ten of the fifteen years the investigator spent as a special education teacher were in an inclusive setting in which time was spent collaborating with content area teachers on reading related topics such as skill level of particular students or necessary adaptations.

The investigator also has been a teacher educator for the past eleven years. The teacher education experiences include teaching methods courses related to evidence-based practices for teaching students with disabilities and reading remediation courses. In addition, the investigator has been a field supervisor for teacher candidates in their student teaching, for both general and special education preservice teachers. As a teacher educator, the investigator has conducted professional development workshops for inservice teachers as well; topics have included best practice for reading development for students with cognitive disabilities.

Data Collection

Interviews and artifacts were used as the data sources that helped develop an understanding of teachers' perceptions of their practice. The two data sources are intertwined in that the information obtained in the interview helped describe the artifact such as why the participant chose it, how it was used, and other relevant information. The artifacts in turn allowed for interpretations to be made about the content provided in the interviews.

Interviews. A main purpose of qualitative research is to develop an understanding of the participant's point of view or perspective about a particular issue (McMillan, 2008). Marshall and Rossman (2006) commented that an interview functions as the main strategy of a qualitative study in that it focuses on the individual as they share lived experiences. Given this information, a semi-structured interview was created for this study. The interview protocol was constructed collaboratively by the investigator, by an expert in the area of inclusion, and by an expert in qualitative research and literacy. These individuals met to discuss the purpose of the study and the literature that framed the study. Research and subresearch questions were developed based on the conceptual framework of this study (see Appendix A). The team worked to brainstorm seven open-ended interview questions (see Appendix A) to inform the research and subresearch questions (Creswell, 2008). In addition, demographic questions (see Appendix C for the interview protocol) were included to accurately describe the sample for this study.

The sixty-minute interview was pilot tested with one science and one social studies teacher and revised accordingly before any actual interviews were conducted with the study participants (Creswell, 2008). Revisions of the interview questions were based on feedback from the pilot interviewees. An interview script (see Appendix C) was developed based on the research questions for this study and focused on the planning and teaching of students with ASD, reading comprehension practices used in the content area taught, and the assessment choices. In addition, questions were asked pertaining to knowledge of reading comprehension strategies and accommodations or modifications that work for students with ASD. Clarifying probes and elaborating probes were also created to obtain

additional information that might be needed for expansion of an idea presented by the interviewee (Creswell, 2008).

A second interview was conducted about three weeks later to allow the investigator time to transcribe and analyze the initial interview transcript. The data were compared and reassembled into a visual model to enhance the understandings that were developing as the initial interviews were analyzed (Creswell, 2007). The second interview allowed the interviewee to share and discuss the artifact brought to the second interview and related information about it with the investigator. The investigator followed up with questions to help clarify some of the initial ideas that were shared by the teacher during the first interview.

Artifacts. Artifacts or documents are considered to be a powerful and valuable source of information for a study. Artifacts might be defined as, "a sample that can be used to demonstrate teaching and learning in a classroom" (Parker-Katz & Hughes, 2008, p. 272). They can be used in a qualitative study as another way for the researcher to gain an understanding about the central concept being studied (Creswell, 2008). In this study, artifacts helped to illustrate the teaching practices the general education content teachers used to meet the needs of students with ASD in their classrooms. The artifacts also helped to describe comprehension strategies and teaching that these teachers were incorporating in their classrooms. They were useful in interpreting the data collected from the interviews.

During the second interview, participants were asked to share examples of lesson materials or assessments that were developed and used during lesson presentations for the student with ASD. They were asked why they chose a particular artifact and what it

showed about their students' learning (Parker-Katz & Hughes, 2008). Criteria for identifying an artifact to talk about during the interviews were explained during the informed consent process and the participants were aware that this would be part of the data collection process. The criteria for the artifacts chosen by the participants included materials that focused on developing students' reading comprehension skills. The artifacts could be student work, activities completed such as units or lessons, or actual teaching tools such as graphic organizers or worksheets (Parker-Katz & Hughes, 2008). Examples of artifacts were shared with the interviewee at the end of the first interview. All participants submitted at least one artifact.

Procedure

The participants took part in two interviews conducted in their classrooms regarding their teaching practices that helped to elicit their knowledge and perceptions of teaching students with ASD in their (inclusive) classrooms. The interviews particularly covered how the participants incorporated reading comprehension strategies into their teaching. The investigator, who served as the interviewer, used strategies such as attentive listening with eye contact, showing respect for the interviewee with a relaxed body posture, and briefing the interviewee both before and after the interview, to establish rapport and ensure that the participant felt at ease to elicit an enriching interview (Kvale, 2007). The investigator sent the topics of the questions to the participant a week before the scheduled interview to allow them time to reflect ahead and be prepared. The investigator also prepared the interviewee with information about the process of the interview such as audio-recording, note taking that may occur, the length of the interview, and a prompt about sharing an artifact.

The interview was recorded using a computer and an audio recording device. As a back up, Garage band was used to create a podcast to ensure that the interview was recorded. The audio recording was important so that the interviewer was giving full attention and eye contact to the participant (Charmaz, 2006). It was also important to ensure that all the information being shared by the interviewee was captured and stored for use in the analysis process. Immediately following the interview, field notes (see Appendix D) were taken to describe the setting, demeanor of the participant, and any documents or artifacts that the participants brought to share (Creswell, 2007). As a part of these field notes, the investigator reflected on the main points learned, reactions of the participant, and any other important information that helped develop a deeper understanding of the teachers' perceptions (Kvale, 2007). The field notes were an important part of the data collection process so that the time spent with the interviewee could be summarized and artifacts reflected upon so as to add information about the overall nature of the interview.

The first interview was transcribed and sent back to each participant within two weeks via personal email. The participant read through the transcript to ensure that the recorded information was correct; this provided member checking. The participant was also informed that any changes that needed to be made to the first interview transcript would be discussed during the second interview.

A second interview was conducted to develop understanding about the artifacts and to gather richer data for the study. The participant shared an artifact(s) and the interview included questions about the artifact(s) chosen by the participant to reflect about. The span of three weeks between the first and second interviews allowed the participants to

reflect on topics discussed at the first interview and note any changes they wanted to make. Hence, the participant was invited to share any additional information or clarification about the interview. The second interview took about 30-60 minutes, depending on what further information and clarification was needed. It was recorded using computer and audio-recording equipment. Within two weeks of completion of the second interview, a copy of the transcript was emailed to the participant for review as a way of securing member check.

Data Analysis

The data were analyzed using several steps; (a) developing codes, (b) assigning the codes to transcript data, (c) comparing and categorizing the codes into themes, and (d) creating visual representations of the identified themes, comparisons, and categories to address the research questions. To prepare for data analysis, the investigator used a transcription company to have the interviews transcribed verbatim with all identifying information about the participant removed. A file was made of each participant's interview transcripts and corresponding field notes and stored for data analysis and coding. The transcripts from the interviews and field notes were read and reread to identify themes or emerging frameworks related to the four a priori categories of (a) teaching practices, (b) planning, (c) assessment, and (d) reading comprehension strategies that middle school content teachers are using (Tashakkori & Teddlie, 1998). The process also allowed for additional coding categories to emerge.

First, the investigator read through the transcribed interviews carefully by looking for conceptual categories of responses while writing down words or phrases that represented these categories, as suggested by Miles and Huberman (1994). Margin notes

and summaries of the field notes from the interviews were reviewed simultaneously with each transcript. The investigator read through the data looking for words and phrases that related to the research and sub-research questions with the following initial set of codes:

1. *Teaching practice* described anything (e.g., activities, instructional tools, materials) the teacher used or did to teach a lesson or unit for ALL students.
2. *Planning* described the process teachers would use to plan a lesson or unit.
3. *Assessment* described the methods (e.g., test, quiz, projects) the teacher would use to evaluate both formatively and summatively of all students.
4. *Reading comprehension* described strategies the teacher would teach within the context of social studies to develop student understanding of the content material students would be reading.

These identified words or phrases were highlighted in the transcripts and tagged with one of the above codes. Four additional codes emerged during the precoding reliability check between the investigator and reliability coder (RC):

1. *Adaptations*
2. *Inclusion*
3. *Collaboration*
4. *Role of Paraeducator*

NVivo software (”NVivo9,” 2011 [computer software]) was used to find additional words and phrases that appeared throughout all transcripts. The words and phrases were similarly highlighted and compared during the coding phase of analysis. The additional three codes were:

1. *Student Characteristics*

2. *Student Response*

3. *Teacher Reflection*

In total, eleven code categories were used (seven emergent codes were used and the four a priori codes) and entered into the NVivo software to help with coding and developing themes in the analysis process (see matrix in Appendix E).

A constant comparison approach was used in the analysis process for coding the data. As described above, data analysis was conducted by reading the interview transcripts and assigning codes to units of the data. The unit of analysis consisted of an idea and the data were coded to fit only one coding category. Codes were fine-tuned by comparing and grouping similarly coded transcripts or field notes with each other to identify and refine themes or ideas that were emerging (Miles & Huberman, 1994). All first interviews were reread until saturation was met, meaning that no new insights, categories, or themes were revealed from the data for coding (Charmaz, 2006). Next, all the second interviews were read and coded using the same process as the first round of data analysis until saturation was met.

Artifacts were analyzed separately by using a three-step process. First, the codes identified for use with the interviews were applied specifically to the part of the interview in which the participant described the artifact, how they used it, and why they chose to share it. Based on these descriptions, the artifacts were organized into categories based on artifact type and use. Artifact categories were then aligned with five of the previously defined codes:

1. *Adaptations* describes an artifact(s) the teacher shared that was an example of something they had adapted for the student with ASD (e.g., quiz/test, study guide, worksheet).
2. *Assessment* describes an artifact(s) the teacher shared that was an example of something they used as an evaluation tool to determine student outcomes (e.g., quiz, project guidelines, exit slip).
3. *Planning* describes an artifact(s) the teacher shared that was an example of lesson plan the teacher had implemented.
4. *Reading comprehension* describes an artifact(s) the teacher shared that was an example of an activity that was developing reading comprehension strategies (e.g., vocabulary journal, text structure, main idea).
5. *Teaching practice* describes an artifact(s) the teacher shared that was an example of an activity the teacher did with his/her students and could include student sample of work.

When assigning codes to the data, there was a balance amongst the amount of responses made for 8 of the 10 participants. Two of the participants contributed less of the coded data but did contribute at least one idea for each code. As the coded interview and artifact data were reviewed and relationships among them considered, themes were categorized and supported. Each code was categorized within the themes and subthemes and the artifacts were connected to the themes for visual evidence and further support of the themes that emerged.

Reliability

An assistant professor in special education with experience in coding qualitative data and current IRB training served as a reliability coder (RC). The RC was trained before the coding began and informed of the purpose of the study, the research questions, and was sent the interview protocol. The investigator met with the RC to explain and develop shared understanding of the de-identified interview transcripts and a prior codes. The two coders practiced and discussed the codes on the first pilot interview transcript to make sure both understood how the codes would be assigned to the data. Based on the discussion, changes were made to make codes clearer and more codes were added to describe new and distinct topics or ideas. Then the second pilot interview was coded using the same process. The investigator and the RC used the number of agreements divided by the sum of number of disagreements and number of agreements multiplying by 100 to calculate inter-rater reliability (Miles & Huberman, 1994). After comparing the codes, the investigator and RC achieved 88% reliability and coding began on the first round of interview data.

After the first round of interviews was complete, 20% of the interview transcripts (*n* =2) were randomly selected for use by the investigator and RC to check reliability of the coding process. An average inter-rater reliability of 84% resulted. The investigator then proceeded to code the rest of the transcripts from the first round of interviews. Once the second round of interviews was completed the same reliability-checking procedure was followed using two transcripts of the second interviews. The inter-rater reliabilities averaged 83%. The investigator then proceeded to code the rest of the second interviews. During both rounds of coding, any disagreements were discussed to further define or expand on the codes so that a clear understanding of each code was developed (Miles &

Huberman, 1994). The investigator and RC continued working to create a shared understanding for the codes that were assigned to the data so that all disagreements in reliability codes were resolved.

Trustworthiness

As the investigator of this study, ethical considerations were an important consideration. Schram (2006) identified four ways for a researcher to develop trustworthiness: posturing oneself, disclosure and exchange, making public the private, and disengaging and staying in touch. This investigator was as transparent as possible with participants by building rapport, establishing boundaries, and sharing information about the study.

Trustworthiness was established in several ways: (a) analyzing the semi-structured interview questions by qualitative and literacy and inclusion experts, (b) self-disclosing the investigator's special education background to the participants, and (c) member checking of the interview transcripts with the participants. To develop the concepts related to this study, the investigator met with a qualitative and literacy researcher and inclusion expert. The meeting started with the investigator identifying what the purpose of the study was and what question and sub-questions were being studied. They identified the best way to answer the questions and then used research to literature outline topics that the question addressed. Next, interview questions were developed based on qualitative methodology, the literature reviewed, and the research questions and sub-questions (see Appendix A). The interview questions were piloted with a middle school science and middle school social studies teacher and revised based on their feedback.

Qualitative research is often thought of as exploratory, which could lead to researcher bias. One way to significantly decrease bias is through reflexivity. Reflexivity involves the researcher's establishing self-awareness related to any biases and critically reflecting on those predispositions (Johnson, 1997). The investigator established reflexivity by sharing personal background experiences as an inclusion facilitator. It is important to share, with the readers of this study, how beliefs about inclusion may affect the research. The investigator made sure that personal experiences and history were transparent so that the data analysis and any emerging theories were not based on the investigator's subjective frameworks. In addition, any of the general ideas related to the concept or phenomenon needed to be put aside so that an analytic and specific theory can emerge (Creswell, 2007). This was done by carefully charting frequencies of the codes, observing which codes had higher and lower frequencies, and by looking for comparisons of these frequencies across all participants.

Use of multiple data sources permitted triangulation of findings during data analysis, which helped to support trustworthiness and reduce threats to validity. Triangulation occurs when different procedures and sources reveal information that coalesces around similar ideas or themes (Johnson, 1997). Also, participants expressed similar or related ideas at different times during their interviews or revealed ideas or thoughts via the artifacts that they share.

Another way by which trustworthiness was increased was by crosschecking the data. This took place in this study by having the participants do member checks of the interview transcripts. Once the interviews were completed, the participants read copies of the transcripts and had the chance to add, clarify, or change any information in the

transcripts. This helped to develop the accuracy of the data that were being collected and interpreted by the investigator.

Chapter IV

Results

The purpose of this study was to describe the perceptions of general education middle school social studies teachers related to their teaching practices and the inclusion of students with Autism Spectrum Disorder (ASD) in their classrooms. The study focused on the teaching practices and reading comprehension strategies that the teachers used within the context of social studies instruction. The teachers discussed their teaching practices, how they assess students' outcomes, and the reading comprehension strategies used in their content area. They also discussed the adaptations they made for the students with ASD. A matrix in Appendix E and Table 2 describe the codes used in the analysis of the transcripts and the categories assigned to artifacts that are discussed in the context of the second interviews. In this chapter, each research question is addressed based on analysis of the interviews of the 10 teachers and the respective artifacts shared by each of them.

Research Question 1: How do these teachers incorporate reading comprehension in the context of teaching social studies?

Teaching reading comprehension was a school-wide priority and initiatives to support and teach reading were present at the schools. Eight out of the ten teachers stated that a current school-wide initiative was occurring in their buildings to improve reading scores of students, including those in general education, English language learners, and students with disabilities. An example of how these initiatives were described by the teachers was:

> Well, because we haven't made AYP [adequate yearly progress], we've had to create programs for reading interventions. That's the biggest thing. We've had extra training like the CRISS [Creating Independence through Student-owned Strategies] strategies for improvement in reading. Things like that.

Another example:

> As a piece to this, social studies as a content has become more and more interested in supporting the school improvement plan in terms of ISAT scores and reading comprehension. This was one aspect of something that we truly, truly focus on. But, on the side, the people who teach American history in this building are passionate about American history. As we become more skill oriented to support language arts, there's a little bit of a road to travel as we get there.

The teachers also shared that they had some responsibility to develop reading skills particularly reading comprehension skills as eight out of the ten teachers commented that improving reading is a building-wide commitment. For example, one sixth grade social studies teacher stated,

> We have the benchmark, which is the Maze test for reading, and we have the CBM [curriculum based measurement] for math. What I do is compare what their Maze scores is, their first one, to their ISAT score to see if they were barely at meets, to see if they were at meets or below. I try to work with these kids, so I'm pulling maybe eight to nine to twelve kids a day just to kind of boost little strategies and work with them.

An eighth grade teacher commented,

> Well, I'm expected to support both the reading and the math. Anytime I throw a chart in to help the kids, and our textbook is filled with quite a bit, I can pull that in. Reading, I do a lot of partner work highlighting things so I focus a lot on reading just in the content area.

Six of the ten teachers commented they had previous professional development in reading in the content areas or some kind of reading strategy training: one teacher had earned a masters degree in reading. Examples of professional development given by the teachers included courses on reading in the content areas, adolescent literature, and CRISS learning strategies with one of the teachers being a CRISS trainer.

Teachers described different reading comprehension skills, practices, and strategies they taught within the context of their social studies instruction. The

teachers talked about teaching reading comprehension skills defined as something that occurs automatically and as a result one comprehends (Harris & Hodges, 1975). They also described teaching comprehension strategies defined as a plan used to improve one's comprehension (Harris & Hodges, 1975). Nine of the ten teachers talked about teaching vocabulary development and main idea identification within the three most frequent skills they consistently taught. Reading comprehension strategies that nine of the ten teachers described teaching were summarization, self-monitoring, and use of text structure. In all, across the 10 teachers, 14 different reading comprehension skills or strategies were identified within the context of social studies instruction (see matrix in Appendix E). However, teachers may not appear to use as many reading comprehension strategies as may seem because none of the teachers described the strategic instruction routines that are necessary when teaching a strategy.

Vocabulary development was a reading comprehension skill that most of the teachers stated they taught on a frequent basis. It was evident that the teachers felt that the students needed to have a good understanding of the terminology related to the social studies content they were teaching. When speaking about how they developed vocabulary, the teachers spoke of using both direct instruction for teaching vocabulary as well as exploratory kinds of activities. Three of the ten teachers also shared that it was common across their grade level to have a bank of words that were taught during the school year. An example of this shared by a seventh grade teacher is,

> Now, I don't want you to be confused and think that I just throw this up there and say okay everybody learn all these words. These were words that we picked out as a department as things that we thought kids should be able to know some important people as well as some important content vocabulary on things that were important.

Another seventh grade teacher commented,

> What I created was a framework, and this is my artifact, understanding the term of culture first, identifying it, and then breaking it down in to a visual so they - I can get a lot of information on one piece of paper and then they can see it. We do this together and participate with brainstorming and having them write the definition and then together coming up with a definition that we can all use.

This teacher commented on the continued importance of vocabulary development,

> In that I also want them to understand that the word characteristics have many meanings, and that when they read social studies content they're going to see these words sometimes, but that the one that I'm going to use throughout the year is going to be characteristics.

Lastly,

> They identify how well they – on a scale, how well they know the word. They do some sort of sketch. It's kind of a four box that the kids have, right, okay. We started doing that with different – we've identified at least 20 words per unit that we're trying to do with the kids and get that.

Main idea was also a recurring comprehension skill that most of the teachers talked about teaching. When teachers shared that they taught main idea, it was common for them to identify that understanding the "big picture" of the topic was critical to success in social studies. The teachers collectively spoke of students being able to pick out the most important idea related to the content or text materials the students were working with. They also commented that main idea was a targeted reading skill in either their school or across their grade level and content area. For example, this teacher said,

> To get more specifically to what you're asking, each department is trying to identify what we can do to help support the reading goal. We have decided that kids struggle with main idea. When you said main idea it was like yeah. We are gonna focus a little more on helping kids find the main idea and using the text book.

Another teacher commented about focusing on main idea,

> ……. they should be able to sort through large amounts of information and to pull out the important things.

Another teacher explained,

> We've done a form of question answer where some nonfiction reading strategies where they have to find the main idea and turn it into a question. I'm sorry, find the main idea, create a statement, turn that statement into a question, and answer the question.

Lastly, related to teaching main idea, this teacher said,

> I'll take a chapter like this and this always starts with what's the main idea, why does it matter? Focus in on the main idea, why does it matter.

As mentioned earlier, the teachers also talked about teaching summarization, self-monitoring, and text structure. As they did when they spoke of vocabulary development and main idea, the teachers explained that they taught these skills not only to increase the understanding of the content but to also develop reading skills. The teachers shared a number of different activities they used to engage their students in learning the aforementioned strategies along with the content. An example for teaching one aspect of text structure as shared by a seventh grade teacher,

> I have them highlight the titles themselves and we read the titles and make sure we all understand it together. If this were to be their homework, a lot of times when I do assign reading homework, it's pure reading. They have to read a title, make a question, answer the question for each title and that's always the reading homework.

Another teacher shared,

> I want you to underline words you don't know – a simple strategy – just underlining what you don't know. I want you to put, and we did this a couple of times, primary sources are the hardest thing we do in this class and so every sentence, if you understand it, smiley face or frowning face. It's as simple as that. "Do you know what's being said here? Do you not?"

And finally,

> We do a lot like reading where the kids get to read together. We do think, pair, sharing. We preview the text before we read it. We look through it. Every time we have the text, there are reading strategies on the very first page of each unit that helps them get into the story and what we're going to be reading.

This teacher described the importance of teaching summarization,

> The summarizing. I was teaching them all year because it's so important. There are so many facts and that whole thing with social studies, and there's so many facts and every sentence has so much breaking down the content.

The teachers also submitted artifacts that were related to reading comprehension skills or strategies. Table 2 provides an overview of the artifact categories and the examples of the artifacts that were submitted in that category. Ten of the 32 artifacts shared by the teachers provide visual evidence to support use of reading comprehension skills or strategies (see Table 2).

Table 2

Artifact Examples

Artifact Category	Frequency	Examples
Adaptations	15	Quiz, graphic organizer, guided notes, visual cues, study guide (all used with for the student with ASD)
Reading Comprehension	10	Vocabulary journal/worksheet, text structure worksheet, main idea worksheet, graphic organizer
Assessment	4	Project guidelines, student sample of authentic assessment, exit slip
Teaching Practice	2	Worksheet, student work sample of class activity
Planning	1	Lesson plan

Among the ten artifacts, six demonstrated reading comprehension strategies related to vocabulary development. Some examples of artifacts depicting vocabulary development

were student-created vocabulary journals and vocabulary matching or definition exploration activities (see Figures 3 & 4). Figure 3 is an example of a vocabulary journal. Students were required to keep a journal of the words they were learning in a notebook. As they were learning the vocabulary the students were given a list of words and they were to find and write the definition for that word. They might also draw a picture or write a story about the words they were learning. The definition exploration activity in Figure 4 demonstrates that the students explored the given definitions to try to determine what vocabulary word might go with the definitions that were listed. The other four artifacts were examples of main idea (n = 3) or text structure (n = 1) strategy development. These artifacts included some reading material students had to read and explore and then either fill out a graphic organizer related to the skill being learned (e.g., main idea, text structure) or complete a worksheet answering questions about the material read. None of the reading strategy instruction shared by the teachers, however, was identified as specifically designed for students with ASD.

Research Question 2: What specifically in relation to planning and teaching do these teachers incorporate to attend to students with ASD?

Teachers use teaching methods that they regard as useful for ALL students in an inclusionary setting. Teachers described reasons for using certain teaching practices, and most often, these rationales were in relation to viewing a particular practice being beneficial for all learners in their classrooms. When teachers talked about their teaching practices, there were several commonalities in the types of activities they described. The most commonly mentioned practice was “hands-on activities” (total of 57 references made in the interview transcripts) to teach social studies. When teachers spoke of “hands-on

activities", they described involving their students in experiential kinds of learning activities. Many of the teachers spoke of participation activities that required the students to be involved with the content in ways other than just reading the text or listening to the teacher lecture. This typically involved physical movement or placement of the students themselves within the context of concepts/ideas being taught. The teachers would teach social studies content by having their students actively engage with the content by acting something out, or by role-playing and simulation, or by incorporating movement, art, or technology. This teacher explained her philosophy on using "hands-on activities",

> The more engaging we can make it the better. The more hands-on we can make reading and the more that they hear things repeated and the more they have to be responsible for the text the better. If we find something that works, we don't necessarily use it for every single thing, but if we find a really challenging section, it helps.

One eighth grade teacher teaching about the Civil War explained,

> 'Cause we start every class period with lining up with [revelry], and the kids all line up, and I have Generals and kids who are in charge. I find the students with autism are so engrossed and involved in it.

Another example of "hands-on activities" from an eighth grade teacher,

> During my Civil War, I teach the Civil War and I teach it as a simulation. I find all of the kids, if you're more involved, hands-on, you're gonna learn it. I have different characters for the students. I have a made up name, I have a background, and things like that.

A seventh grade teacher explained her activity,

> New England was on this side of the room and the southern was the opposite because north, south then the middle colonies were off to the side. The students had to move to – run about the room and so I would say, "I am in a place that is filled, that has mostly African-Americans? Where am I?" Then they have to go to the southern.

Another example of "hands-on activities" was,

> I moved the desks around. I covered them with butcher-block paper. I have placards with pictures of cave art that they are real artifacts that have been found. They're photographs of them. I put them up inside the walls.
>
> They go into the caves. They look at real artifacts, real pictures – pictures of real artifacts and make a hypothesis. What do you think? What does that tell you about those people?

This "hands-on activity" used technology as described by an eighth grade teacher,

> But basically what entailed was we came down to the library for a week. The books are pulled on the different topics. You know they had to do research. They have to write a script. And then basically what it is they have to find pictures, and they input them – this is like a five, should be like a five minute presentation. There's different pictures. They can download music. There's like loaded background music. They write a script. They load the pictures up, and then they have this nice production.

To sum up "hands-on" activities, this seventh grade teacher explained,

> It used to be when I would do notes I could do – most of my students were auditory learners, and they could pick up things real easy. Then I found they were visual learners, and I'm seeing that these kids are more kinesthetic, tactile, and they need more hands-on standing up doing things. We actually act out different ways for the notes on World War I.

Other teaching practices that were described with high frequency across all teachers were use of visuals (n = 27), direct instruction (n = 25), modeling (n = 20), using graphic organizers (n = 14). The teaching practices of discussions, group or partner work, students taking notes, and using the text materials were mentioned at least once in each interview.

When teachers spoke about using visuals as a teaching practice, they described that they used the visuals to enhance the content they were teaching. For example, teachers used video, powerpoint, pictures, and maps to enhance their instruction. The teachers commented that using visuals was a way to engage all the learners in their social studies classrooms. One teacher shared,

> Like we watched the Obama speech. You know I like to see, you know you're really watching it, you're interested. And there's also a thing called the west wing week,

> which actually is every Friday I show. It's kinda what the president's done in the last week. It's like about a six minute video.

Another example of a teacher using visuals,

> When I was using cartography and maps lots of visuals to help them. Lots of pictures, videos that will go along with it, we've even used cartoons. Before we talked about cave art we did that we watched Caveman Catastrophe which is one of those, what is it's something Trio.

Finally, one teacher shared,

> I'm trying to utilize more resources. I'm trying to think of, and this is a screen so it's a pretty big thing that I can utilize. The more visuals I can put in with the text or the more visuals I can have along with what we're doing I think the better.

The teachers also shared that they use direct instruction and modeling regularly as teaching practices. Teachers described direct instruction as teaching their students specific content material based on goals or outcomes for the lesson. An example of this might be when the teachers taught specific information about different battles from history or when they taught the definitions of assigned vocabulary words. They also shared they would give their students specific examples if they needed them. The teachers collectively thought that this was an important part of students' understanding of social studies content. For example, this seventh grade teacher explained,

> I'm like, "Okay, stop, everybody – put everything down, hold on." I make someone explain it to me. Then I say, "Okay, that's not exactly right." We'll talk about it. It's usually a very interactive conversation.

This eighth grade teacher explained how she modeled when she was teaching reading comprehension strategies,

> I wrote down the conclusions that I got from Abraham Lincoln, and then I summarized my conclusions and I wanted them to go back into their reading and to support those conclusions with what Abraham Lincoln actually said, so you're going into the primary source.

An example of how an eighth grade teacher described direct instruction,

> We did take, we took some notes. They had already identified the 13 colonies and so they knew there were 13 of them. I spent some direct instruction time telling them there were three distinct regions. This is who belonged there now let's look at what the differences were.

Another teacher explained,

> I always put up good examples of kids in the past because that raises the bar.

And finally,

> We do this together and participate with brainstorming and having them write the definition and then together coming up with a definition that we can all use.

The last teaching practice that was mentioned with high frequency was graphic organizers. The teachers talked about using graphic organizers in a variety of different contexts. Examples included when teaching about a specific concept, to develop understanding about vocabulary, to categorize and organize the information the students are learning about, and lastly to compare or contrast content that is being taught. In addition, teachers spoke of students completing graphic organizers in whole class activities, in groups or partner activities, or in independent activities. This teacher shared how she used a graphic organizer with the whole group,

> We went into each theme and I started out with location and I gave them a Venn Diagram that I created. It wasn't a regular Venn – they put location in and then moved outward.

Another example was,

> I followed the video, which was also a visual and taught them how to mind map. We used the notes from the video and the textbook to create a mind map of the five themes.

This teacher shared,

> I took them to the lab and they all drew out of a paper bag a name of a famous place and that was the one they were to research. They had a form to do the research on.

As teachers described their teaching practices, they also shared their rationales, with regard to how such practices also served the learning needs of all the students in their classrooms. Nine of the ten teachers referred to using practices that meet the learning needs of all students the most. The teachers explained how they used teaching practices to meet the needs of all learners because they had high expectations for all their students and wanted students, regardless of how they learned, to feel comfortable and successful in their classroom completing the work assigned. This sixth grade teacher referred to this,

> We do whatever we can to make the kids feel successful. If they can show us in any way, shape, or form that they know it, we'll take it.

The teachers used words like "respect" and "building relationships" when talking about the students with autism. It was evident that the social studies teachers were very accepting of the students with autism and created activities that varied in the way they were taught. An example of this was represented by one seventh grade teacher,

> I believe in gifted education for all kids. I don't really start lower or average and then just have my gifted on a different track. To tell you the truth, I go the other way and I learned that from my own kids.

Another spoke of one of her students this way,

> I've also found that often times, if I have a student [ASD] who's very turned on by history, that sometimes it either makes it, from a social level, very good for them because they are seen as the smart kid in class or they can show their strengths in class.

This seventh grade teacher shared,

> How can we help you? How can you be successful? For me as just a social studies teacher, I just really want him to love history. I want that for him. If he could leave here with a love of knowing the story of America, to me that would be the most successful thing of all.

Lastly,

> I love having him in my room. I don't want them to not have him be part of social studies because we change what he's walking out of my room with. I want him to be a part of it because I think that's important for him.

Two important subthemes also emerged from the discussion of teaching practices: how adaptations were chosen and when adaptations were chosen.

Adaptations. The first subtheme supporting how teachers used practices to include students with ASD reflected the decisions to adapt both teaching and assessment practices. This was noted regularly and most often among the subthemes within adaptations. In choosing to make adaptations an important factor was the availability of the special education teacher or paraeducator to make the adaptations. The teachers spoke openly about adaptations that the students with ASD might need in regards to the content that was being taught or the activity that students would be engaged in. As the teachers shared adaptations that had to be made for the students with ASD they specifically talked about who was making those adaptations. Most of the adaptations that teachers spoke of were adaptations that the special education teacher or paraeducator (if they worked with one) would make for the student with ASD. On a few occasions teachers mentioned that they might make an adaptation for a student but all of the 10 teachers made it clear that they relied on the special educator or paraeducator to make needed adaptations. When the teachers spoke of special education teachers or paraeducators making adaptations, it was often within the context of a discussion about collaborating with other personnel in their building. This further supported this subtheme that teachers identified that they used the special educator or paraeducator the most for modifying the teaching practices that they are using. An example of this is represented by this teacher's statement,

> I would pull together any Xerox handouts that I had, talk with [Sue], his aide, and see if she had any suggestions in terms of that.

Another example of this,

> She's got such a great handle on what she's seen throughout his day. She'll make suggestions that I might not even see because of the 28 other people or 31, I forget, it's huge, in terms of how to handle those kinds of things.

The most common adaptation was (a) revised outcomes (*n* = 49). Other adaptations that were mentioned included (b) guided notes (*n* = 23), (c) allowing students to draw or verbalize an answer (*n* = 15), and (d) providing cues for the student (*n*= 15). Eight of the ten teachers spoke of revising outcomes as a frequent adaptation that was made for the students with ASD. Some examples of revised outcomes included learning less information, learning an alternate idea such as being able to identify only the "big idea", completing less work, and simplifying tasks or activities. One of the teachers gave an example of this,

> Maybe he's missing the component of moving to hunt and gather but yes, he gets the idea that they were nomadic people. Maybe the words are different but that's why they don't live in large communities and yeah he gets it.

Another example of revised outcomes,

> We minimized the amount of things they had to fill, so maybe we crossed off half of that, maybe there were only four big things. We picked and chose the major things like the Nile River and then maybe upper and lower Egypt so they knew what they were dealing with.

Another adaptation that was common across the teachers was the use of guided notes. One way the teachers described guided notes was that they would give the students a copy of what they were teaching or talking about in class that day. Another way they described guided notes was as a partially filled-in outline, graphic organizer, or note-taking sheet and the student would have to fill in blanks with the information they were learning about. This seventh grade teacher described the latter,

> I'm gonna talk a little bit about the differences and the similarities between the Constitution and The Articles of Confederation. I probably will use a Venn Diagram and after I give them information we'll fill that in. For [my student], I thought what would be helpful as we talk, giving him a partial filled in – here's one, here's the other, don't worry about the Venn, just know the differences.

Another example,

> We will rewrite notes where maybe they just have to do some closed passages. Where all they have to do is fill in a word here or there. At least then we know they are reading text.

The last two adaptations that were shared by teachers equally were allowing students to draw or verbalize an answer and giving the student cues. Teachers shared that they allowed the students with ASD to provide verbal answers or responses or a pictorial answer (drawn by the student) in place of a response that required writing. For example, if students had to complete a written worksheet or something similar, the teachers allowed the students with ASD to draw or verbalize responses. A seventh grade teacher explained,

> Modification would be the expectation of coloring. The expectation of what does it look like is reduced. As long as they have a picture, I'm not looking for a totally complete picture.

The teachers also spoke of using cues for students with ASD as an adaptation. Some of the cues included pointing to specific answers, giving the first couple letters of an answer, or cuing students with words or pictures or other visual materials. An example of this,

> If it's a writing assignment or a fill-in-the-blank type assignment, they might give 'em little clues or they might point them directly to the place where it is, things like that.

An eighth grade teacher also used this adaptation,

> For most of the notes I had to sit with him and help him include those details. As reluctant as he is, he says it to me and I say, "Now write that down."

Timing of adaptations. A second subtheme contributing to the theme that teachers use practices to meet multiple student needs simultaneously was decision-making and

reflection that preceded the use of adaptations for students with ASD. For the most part, the data indicated that adaptations were based on student response to the activity or in reviewing students' work. Teachers identified that when students with ASD responded with signs of frustration, nervousness, being overwhelmed, or through their facial expressions, they knew the student was having difficulty and they would consider an adaptation for the teaching practice. For example,

> If they're not engaged they immediately are like do-do-do-doot, looking around, seeing what they can do, standing up right up next to me, doing something that is immediately is like okay this one doesn't get it because they're out and about and we need to readjust, talk, figure out what's going on.

Another example,

> Just walking around the room and seeing the smiles and frowns shows me, wow, we don't know, we do know.

Lastly,

> I can kind of tell just when any student is not comprehending just by their facial expression. We like to call it the deer in the headlights because it's just like I have no idea what's going on right now. They start fidgeting. They're not sure what to do. A lot of kids will start to misbehave, fidget a lot in their seats, just be completely off task. Avoidance – any kind of avoidance behaviors just because they are afraid because they don't know what to do.

They also spoke of teacher reflection when reviewing student work as a way they would decide an adaptation was necessary (all ten teachers said they looked at student work to determine if the teaching practice was effective or not). One teacher commented,

> A lot of times you don't know until you get homework coming in and you get to see the different work that's assigned backs up your objectives. That's usually one I can see that the kids got it or doesn't.

Also,

> I could also see in their sheets, boy, [they] are way off. We need to make sure that they're with me or usually what happens is in looking at the sheet, none of them knew New Jersey planning.

Another teacher said,

> One of the big things for me is seeing the end product of the kids. If I see they're all grasping what I just basically threw at them, then I know there was some success.

Over half of the artifacts collected provided visual evidence to support that teaching practices were implemented to meet the needs of all students. These artifacts demonstrated that adaptations for students with ASD were mostly made either by special education teacher or paraeducator and were mostly made after the student had difficulty with a particular assignment. Some of these included adapted quizzes or tests with fill-in-the blank answers, fewer choices for an answer, or a word bank. Other artifact adaptations were simplified directions, activities with fewer steps, examples of answers, and partially filled in note-taking sheets or worksheets. Two artifacts represented teaching practices. These were an example of supplemental reading material in comic graphic novel form that was given to all students, and an example of a student's work to show how he completed an assignment all students needed to complete. Figure 5 provides an example of an adapted social studies quiz, which was a common artifact supporting adaptations with examples shared by three of the teachers.

With only two exceptions, all of the artifacts shared by the teachers were artifacts that were used regularly, year after year. That is, they were not designed in particular for the student with ASD that was currently in the teacher's classrooms, but adaptations that the teacher had previously used with success for similar students. Some examples shared were artifacts that were adapted quizzes with word banks, or fill-in-the-blank worksheets, or guided notes, that a special educator, paraeducator, or the teacher had developed in

previous years. The teachers explained that they saved these adaptations from year to year and they would use these previously created adaptations if they thought they might work with that student when an adaptation was needed.

Teachers do not view planning as a separate process from teaching practices. Planning is an important part of the teaching literature and the teachers were asked specifically to describe their planning process. They did not talk about a distinct planning process and did not seem to plan differently for students with ASD. Two of the teachers did not mention planning at all and the other eight teachers talked about planning infrequently. When teachers discussed planning they did so from the perspective of the curriculum or content of instruction rather than from the perspective of the potential variation among the students. They mentioned planning a unit, or planning as being time-consuming, or that they planned with the "big picture" in mind. For example,

> I think in terms overall generality as a unit. What am I trying to accomplish with this unit with this idea? I start with an essential question. How am I gonna get from point A to point B? What stops I gotta make along the way.

Another example regarding time spent,

> Well, I'm a planning freak, fortunately, so I do take, I do spend probably, I spend two hours a day just planning, alone for the upcoming week. I'm always a step ahead.

Lastly,

> Okay, well when I do plan, yes I do have a big idea and I have one goal per lesson. The kids actually do get to see the goals. I print them out on a weekly basis and so by the end of the week, "you should be able to," and then we actually go back and assess whether or not we felt like we were able to do that.

The investigator specifically asked teachers how they plan knowing that they have a student with ASD in their classroom with specific needs (see question #5 of the interview in Appendix C). Planning was defined for the teachers as the process teachers use when

they are deciding what to teach, how to teach, and what materials they might use. Regardless of the question about planning and that a definition of planning was provided, none of the teachers specifically responded to this question. There was evidence, however, that they indeed thought ahead recognizing that the student with ASD might not be able to complete an activity without adaptations. For example, all ten teachers mentioned working with a special educator or with paraeducators and sharing with them activities or work that would be completed in their classrooms. The teachers spoke of working with the special educator or with paraeducators outside the context of planning for the students with ASD. The teachers and special educator or paraeducator weren't necessarily planning together in a universal way for the student with ASD. Instead, they were seeking advice, getting ideas, and reflecting about the student's work. This example demonstrates how the teacher didn't use the special educator to plan but to seek advice based on reflection post-teaching,

> When you get assignments and you look at it and go okay, this is not like you said. Totally not getting the objectives here, missed it. In that case, I would almost immediately go back to the special education teacher and the assistant and say hey, could you have this kid redo this in guided study or why do you think he was way off? I thought he understood the three documents and see what they have to say. I thought he understood the three documents and see what they have to say.

Similarly, this eighth grade teacher said,

> I think we'll just keep on keeping on and being open to if something is working well, okay, we're going to go with this. If something is not working well then we're going to brainstorm, whether it is by myself, whether it is with the aide and I, whether it is the aide and the special ed teacher and myself coming up with what works well for him.

What the teachers talked about when describing collaboration appeared to be cooperation amongst colleagues on behalf of the student with ASD. For example, the

special education teacher was consulted when the teacher had questions about the student with ASD,

> I do rely heavily on the special ed teacher. I'll say, "This is what I see. This is what I'm expecting. What do you want me to do?"

Another example,

> I show them what I'm doing with everyone else in the room. Do you think they can handle this? Is this too much writing that I'm expecting of them? Then we cut it back or alter it that way. I don't do it by myself.

A final example,

> We get our plans together and then we get all the worksheets and everything to our special ed T.A.'s or our special ed facilitator and they do get ideas. Initially, we plan for the regular ed student with other things in mind. I have a bunch, since I've been teaching that for so long we have a lot of modified things already. They took a look at 'em and see if they'd be suitable for their kids or not.

There was only one artifact that provided visual evidence of the planning process. This artifact was not a lesson plan that was created in collaboration with the special educator or a lesson plan that had considerations made for a student with ASD. It was a lesson plan that showed that varying learning needs were considered. The lesson plan form had been created a few years ago and the teacher continued to use it annually (see Figure 6).

Research Question 3: How do these teachers assess all students' outcomes to determine comprehension of social studies content?

Determining the academic achievement of students is necessary to meet the demands of content area standards and also important to identify if the teaching practices that are being used are meeting the range of needs represented in a classroom (Scruggs et al., 2010). *Assessment* was one of the a priori codes identified in the coding process and was frequently represented across all the participants. The teachers shared that they

assess in both a formative or summative way with the students in their social studies classrooms.

Teachers use different methods of assessment to meet the learning needs of ALL students; and view these broad approaches as meeting the needs of students with ASD. Assessment was defined for the teachers as the way they evaluate their students' outcomes for a lesson or unit. Examples of assessment were also shared with the teachers e.g., tests, projects, quizzes or other daily activities like an exit slip. As the teachers talked about assessment, it was typically in the contexts of inclusion and adaptation*s.* They shared that they evaluated their students in a number of different ways to meet the varying needs. They also shared adaptations that would be made, most often by the special education teacher or the paraeducators (if they worked with one) to the assessments they were using.

The teachers discussed a variety of assessments they used to determine if students were meeting the outcomes for specific topics or activities. All of the teachers used quizzes and tests to evaluate their students' outcomes. Nine of the 10 teachers identified that they evaluated their students using formative assessment procedures most frequently. Some examples of these assessment measures included exit or entrance slips (see below), projects, discussion, and problem-based learning activities. Many of the teachers mentioned that such formative assessments took place on a daily basis. Eight of the 10 teachers also mentioned that they used homework as a way to assess their students' outcomes. An example of this is,

> Some specific things that I use to kind of assess student learning and in his class as well as all other classes, would be homework, looking to see that kids are finishing it, and if they're not finishing it for what reasons. Are they not finishing it because *The Sing-off* was on or something important? Are they not finishing it because they

> don't have support at home and they need additional help? Are they not finishing it because they forgot it, or are not finishing it because they really don't understand it?

This teacher described using homework in this way,

> I like more homework that you have a two or three day gap. I tell them, if this is your good night to do it 'cause your favorite program isn't on, do it tonight so you're early.

Class discussions were also a way for one teacher to assess,

> Another way I assess student learning in a more casual way would be through class discussion. When we talk about something – because we introduce it and then two days later we review it again, and then two more days later we review it again kind of thing just to kind of keep a handle on it. I'm looking for that information.

Another example of how discussion is used for assessment,

> Well, the one thing is, in class discussion. I definitely have to - I call it retrieval. Keep 'em on topic, they don't always have to agree with everybody but keep them from going to some complete different place that doesn't matter.

An example of a project that was used as a formative assessment consisted of a group poster project. Students worked in small groups and each of the students had a distinct responsibility or role that was necessary for completion of the project. This included the student(s) with ASD. The project consisted of a group of students that had to research one of the amendments to the Constitution and create a poster depicting that amendment. The teacher had criteria for the project that the students had received and they did have time in class to complete the project. This was an activity that the student with ASD was involved in with no adaptations other than the teacher strategically chose the group members he was with. A different teacher described a project she assigned,

> Our biggest one comes up with Revolutionary War and so one of the things will ultimately be to create a battle plan, perhaps maybe that is what they choose. Right now we're studying the French and Indian War. They're seeing some early failed battles and so maybe they'll learn that those failed battles won't be the best plan in the end. I'm hoping that they kinda' piece those things together. These are always done as student choice and we usually try to incorporate too when they're

> presented or turned in that the students can evaluate them as well. Students evaluate 'em not just me.

Another teacher described using a game to formatively assess her students,

> Sometimes we'll have a quiz in the middle of the unit. Sometimes we'll play Jeopardy game that goes along with it to see if you're answering it are you answering it the correct way, just keeping an eye on things like that and the activities they are doing.

Lastly, a seventh grade teacher described quizzes that she used for formative assessment,

> I'm a quiz person and I also am an oral quiz person because I feel like oral quizzes are the toughest. I have a journal that I will show you that the kids – we put everything in and you'll see the variety of different evaluation pieces.

She then went on to explain how this was adapted for the student with ASD,

> That really helped student number two [student with ASD] because he would panic on the oral quizzes; but then when I settle him down and he realized that maybe I was only giving him two choices, he could – that's a 50/50 chance. There's success there for him and then the other students, I mean they were all getting A's or B's but that's okay.

When teachers described adaptations they made to the summative evaluation measures, they referred to ways they adapted quizzes and tests. Examples included fewer answer choices, fill-in-blanks, use of word banks, and simplified or shorter tests that may evaluate only one part of what was learned. One teacher commented about summative assessment in this way,

> I personally try to mix it up all the different kinds of assessments that kids have because I'm a crummy test taker and always have been, so I certainly don't want their academic progress to be judged on one moment in time.

Another teacher commented about adaptations on summative evaluations,

> Yes, Yes, less concepts. Like for example when they were looking at cave art and writing notes and hypotheses. The typical child was expected to go into more detail about what they thought it was used for. Whereas one of my autistic kids – if he could say what he thought it was, that was all I wanted.

Again, when explaining the results of their teaching practices, nine teachers made it clear that most often the special educator or the paraeducator (if they worked with one) would adapt these measures for the student. Over half of the teachers explained how they reused tests from year to year that were already adapted for students with disabilities they had in previous classrooms.

Four of the artifacts provided visual data. One of those artifacts was a student sample of an authentic assessment. An eighth grade teacher shared the artifact (a free hand drawing of Abraham Lincoln) and explained that it was an authentic way to show what the student had learned. This teacher allowed students to show in any way about what they had learned about President Abraham Lincoln. The teacher explained that she had given students different examples of what they might do to show their understandings. According to the teacher, the student with ASD in this particular teacher's classroom was very artistic. He drew free hand a very intricate and explicit portrait of the president providing great detail to the facial expression and eyes of the president. The teacher commented how impressive the drawing was and how his general education peers had commented about the student's incredible artwork. The teacher shared that she believed the student had learned something about Lincoln, his character, and the trials and tribulations of his presidency.

Two of the other artifacts were examples of project guidelines or directions for long-term projects students worked on at the end of a unit of instruction. One of the projects was a group project and the other was an activity that students did independently. Both projects represented a variety of different activities that could demonstrate students' knowledge (see Figure 7 for the example of the independent project).

The last artifact was an example of an exit slip that all students completed at the end of the social studies period to demonstrate their understanding of what they had learned in that class on that day (see Figure 8). One teacher explained that she used exit slips by having students tell her something they had learned before they left her classroom. She commented that using the exit slip allowed her to get a quick glimpse of the student's understanding related to the lesson and content that she was teaching. This teacher found this particular method helpful in determining if the student with ASD understood or not,

> …… (exit slips) give me a snapshot of did they get what's going on in the lesson. A lot of on the spot things especially for my students with autism. Because a lot of times that work doesn't come back and no matter how many times you send it home. I know their parents are frustrated, they don't know how to help 'em. A lot of in class on the spot face-to-face things.

Three artifacts representing adaptations were modified quizzes that the teacher had previously used with students with ASD or other disabilities in the social studies classroom. Providing word banks and fill-in-the-blank clues were the adaptations to the quizzes for the students. Chapter 5 will provide a discussion of the findings as well as limitations, directions for future research, and implications for practice.

Chapter V

Discussion

This study aimed at developing an understanding of the reading comprehension strategies middle school social studies teachers reported that they used, as well as their perceptions of their teaching and assessment practices given that they had a student with ASD in their classroom. While a body of research shows that teaching reading across the content areas results in increased achievement for both the general and special education students (Barry, 2002; Kim et al., 2006; Mastropieri et al., 2003; Nichols et al., 2007; Scruggs, Mastropieri, Berkeley, & Graetz, 2010), and much emphasis has been placed on the development of reading comprehension for students with learning disabilities (Antoniou & Souvignier, 2007; Bulgren et al., 2002; DiCecco & Gleason, 2002; Hedrick et al., 1999; Manset-Williamson & Nelson, 2005), there is a lack of studies on students with ASD. Thus, this study contributes to the field by merging content area reading practices and students with ASD to highlight the practices social studies teachers used to develop reading comprehension for these students. Expanding our understanding of using effective reading comprehension strategies to help students with ASD in content area classrooms provides the opportunity to develop appropriate professional development and teacher preparation programs for inservice and preservice teachers. It also helps to understand the needs of both social studies teachers and students with ASD.

Five themes emerged from the data drawn from interviews and artifact(s) collection of ten middle school social studies teachers. The findings suggested that teachers taught a variety of reading comprehension skills, practices, and strategies and used different methods of teaching and assessment they regarded as useful in an inclusionary setting.

The findings also suggested teachers did not view planning as a separate process. This chapter presents an in-depth discussion of the findings, the limitations of this study, directions for future research, and implications for practice.

Teaching reading was a school wide priority and initiatives to support and teach reading were present at the schools.

It has been documented that content teachers are not used to teaching reading skills within their content area and do not feel confident doing so (Barry, 2002; Nichols et al., 2007). The existing literature describes how content teachers are traditionally prepared with a focus on the content area, which contributes to the lack of reading skills being taught in content area classrooms (Barry, 2002; Nichols et al., 2007; Shanahan & Shanahan, 2008). Surprisingly, teachers in this study identified that they were teaching reading skills within their content area. Each teacher in the study shared at least three different skills or strategies they used or taught to develop reading comprehension. The teachers in this study identified they had coursework or attended professional development on the topic of reading in the content areas and such preparation may have elevated their comfort level to teach reading comprehension in their social studies classes. Barry's (2002) study supports this finding in that when time was spent preparing content teachers to use and teach reading comprehension strategies, they would use them and felt confident doing so. Given that the teachers in the current study did volunteer to participate they may have felt more confident about teaching reading comprehension skills or strategies.

With the implementation of the Common Core Standards and the expectation that students need to learn to read within content areas, teachers have had to use their expertise in the content area to help students develop the reading skills necessary for

success (Common Core Standards Initiative, 2011). The teachers in this study may have been impacted by these current requirements and as a result have implemented teaching reading comprehension strategies in social studies. The teachers identified specific professional development their districts had provided to integrate reading into the content areas, e.g., CRISS strategies. Many of the teachers mentioned it was a school-wide effort to increase reading skills and their content area teams had identified specific reading strategies to focus on. Supporting that idea, Shanahan and Shanahan (2008) identify that teaching specific disciplinary reading skills may improve reading comprehension in the different disciplines.

Previous research also notes that content teachers report students' improvement in understanding of content when they teach a reading comprehension strategy (Barry, 2002; Pedrotty-Bryant et al., 2001; Shanahan & Shanahan, 2008). Similarly, studies including students with and without disabilities have shown that reading strategies taught in the content areas increases achievement both in reading and in the content area (Kim et al., 2006; Mastropieri et al., 2003; Scruggs, Mastropieri, Berkeley, & Graetz, 2010). This line of research links teaching reading in the content areas with positive student outcomes. However, it is not clear if the teachers in this study have made that connection since none of the teachers mentioned if teaching reading comprehension strategies have improved their students' outcomes. This area needs to be further explored. The professional development that the teachers talked about may have helped them realize that using reading comprehension skills or strategies is necessary in their content area.

Teachers talked about a range of different reading comprehension skills, practices, and strategies they taught within the context of social studies instruction.

The teachers in this study shared a variety of comprehension strategies they taught in their social studies classrooms. These included: summarization, text structure, predictions, background knowledge, and questioning strategies. These strategies were also presented in previous research on reading across the content areas that have been shown to be effective for increasing comprehension in content areas and with expository text (Bulgren, Lenz, Schumaker, Deshler, & Marquis, 2002; Kim et al., 2006; Mastropieri et al., 2006). The increased attention on *reading to learn* skills or reading across the content areas appears to impact the teachers in this study as they were reporting that they were using research validated comprehension strategies.

The teachers' years of experience may also have impacted their use of research-based strategies. Existing literature supporting this idea notes that influencing factors for instructional decisions include a teacher's experience, their content knowledge, and their pedagogy (Kohler, Henning, & Uma-Wilches, 2008). Most of the teachers in this study had extensive experience with advanced degrees, numerous years of teaching, and many hours of professional development in content area reading strategies. These factors, along with the current trends, may have influenced the teachers to make instructional decisions, such as using research-based strategies that may benefit their students.

Among the range of reading comprehension skills and strategies reported by teachers in this study, vocabulary development and main idea were the most mentioned reading skills. In fact, vocabulary development was consistently mentioned first when the teachers were asked about the reading comprehension strategies taught. Given the heavy vocabulary load in most content area classes this finding is not surprising. Fagella-Luby and Deshler (2008) pointed out that reading involves comprehension of language at the

word level. This corroborates the notion that the teachers in this study felt it was important to explore and teach vocabulary that students would be encountering within activities and as they read the content area material. These teachers also identified teaching main idea as a necessary skill for developing comprehension of social studies material. It was common for the teachers to highlight that they wanted their students, especially the students with ASD, to have an idea of what the content was "all about" or to understand the "big picture". Similarly, Pedrotty-Bryant et al's. study (2001) acknowledged that an important skill in developing comprehension is that students should be able to read text and construct meaning to develop an overall understanding about the main idea of that text. It is important to point out that when asked specifically about reading comprehension strategies taught, the teachers spoke of reading comprehension skills. It appears that the teachers did not have a clear understanding of the differences between reading comprehension skills and strategies, which could impact the development of reading comprehension for the students with ASD.

The teachers reported that they taught the reading comprehension strategies of summarization, prediction, text structure, and questioning. However, the teachers did not mention teaching the strategies using the features of strategic instruction. Occasionally, a teacher mentioned they might model a particular strategy, but the teachers did not describe the strategies being taught in an explicit way or using guided and independent practice. It cannot be determined from this research if the teachers lacked understanding of the differences between skills and strategies, had professional development that presented comprehension skills as strategies, or a conscious decision made by the teachers to partially teach the strategies. As reflected in the research literature for students with

learning disabilities, strategic instruction taught in a routine and repetitive way can lead to positive outcomes in reading comprehension (Bulgren, Lenz, Schumaker, Deshler, & Marquis, 2002; Kim et al., 2006; Mastropieri et al., 2006). Given the similar metacognitive weaknesses for students with ASD (Lanter & Watson, 2008; Nation et al., 2006), it seems important for reading comprehension strategies to be taught with fidelity in these social studies classrooms, to best meet the needs of these students.

Although teachers in this study taught a variety of reading skills and strategies most were lower level reading skills. One consideration is that the vocabulary load in content areas such as social studies tends to be high which might explain the focus on vocabulary development rather than the higher-level skills noted in Gray's (1948) model. To increase the reading comprehension skills for students with ASD, Carnahan et al. (2011) suggests higher level skills such as purposeful reading, recognizing perspectives, and inferential understanding have a focus in instruction. However, these strategies were not highlighted as reading skills taught by the teachers in this study. The potential impact this could have on students with ASD should be considered. For these students, if the higher-level comprehension strategies are not taught, meaningful comprehension of the content might be compromised.

It has been noted that students with ASD have stronger skills in the area of word recognition as compared to reading comprehension (Nation et al., 2006). Other studies have shown that students with ASD generally have strengths in their ability to recall factual details, but struggle when it comes to higher-level comprehension skills, e.g., inferring, responding to the text, understanding different perspectives, and understanding the "big picture" or main idea (Carnahan et al., 2011; Lanter & Watson, 2008). Consistent with

previous literature (Lanter & Watson, 2008; Nation et al., 2006), the teachers in the current study also noted that their students with ASD had a common weakness in seeing the "big picture" of the topic being studied. These teachers appeared to be dedicating more time to teaching vocabulary and main idea and the teachers acknowledged that the students with ASD had success learning the content area vocabulary. Students' success in learning the vocabulary may have been motivating for the teachers to continue this focus. Kohler et al. (2008) concludes that teachers make decisions during and after instruction based on student learning and positive outcomes achieved by the students. The common use of vocabulary development and main idea strategies reported by the teachers in this study supports the existing literature in that the students' positive learning experiences with these strategies may have influenced the decisions of the teachers to frequently teach them.

The teachers in this study were asked to share reading comprehension strategies they taught and within those descriptions the teachers described how they taught the strategies and the materials they used. When examining the strategies, there did not appear to be a consistent practice or tool that the teachers used. The existing research shows that using strategic instruction, explicit teaching, and graphic organizers increases the chance that students with disabilities, specifically those struggling with metacognition such as students with ASD, will comprehend reading materials (Antoniou & Souvignier, 2007; Bulgren et al., 2002; DiCecco & Gleason, 2002; Hedrick et al., 1999; Manset-Williamson & Nelson, 2005; Munro-Flores & Ganz, 2007; O'Connor & Klein, 2004; Whalon & Hanline, 2008). A number of the teachers in the study mentioned they used graphic organizers within their instruction with all learners. However, when talking about graphic organizers the teachers did not specifically mention that they were using them to increase

reading comprehension. Some used a graphic organizer to develop main idea or text structure. Some shared a graphic organizer to show the adaptations made to a reading activity for the student with ASD. The teachers were using an instructional tool (graphic organizer) that has an evidence base for increasing reading comprehension for students with ASD but weren't necessarily teaching students how to use it in a strategic or explicit way.

The other two areas, strategic instruction and explicit teaching, were also mentioned within the context of specific teaching practices when teaching a lesson or unit. Some of the teachers mentioned specific strategies (CRISS) that their schools had adopted and were using across content areas. The idea of explicit teaching was harder to find in the interviews with the teachers, but a few teachers did mention modeling the use of a graphic organizer. Both strategic instruction and explicit teaching prove to be successful methods for teaching reading comprehension strategies for students with disabilities (Antoniou & Souvignier, 2007; Bulgren et al., 2002; DiCecco & Gleason, 2002; Hedrick et al., 1999; Manset-Williamson & Nelson, 2005; O'Connor & Klein, 2004; Whalon, Al Otaiba, & Delano, 2009). Some of the teachers were using strategic instruction to teach reading comprehension but explicit teaching was not necessarily used in the development of the reading comprehension skills. The teachers seemed aware that strategic instruction and explicit teaching were best practice, but they didn't seem to make the connection that they increased the reading comprehension skills of students with ASD. The impact of this on the development of reading comprehension strategies for these students is important to consider as more students with ASD are included in content area classrooms each year.

Classroom artifacts can provide evidence of the teaching and learning approaches that are occurring within the classrooms (Parker-Katz & Hughes, 2008). The teachers in the study submitted artifacts as evidence of teaching reading comprehension strategies. Each of the artifacts demonstrated the focus of developing a specific skill necessary for the comprehension of text or materials for example, a vocabulary exploratory activity. This finding is in contrast to a study done by Parker-Katz and Hughes (2008) who indicated that it was common for teachers' classroom literacy artifacts to address multiple reading skills. However, the finding of the current study showed that the teachers did not acknowledge that they used the reading comprehension artifacts to specifically plan or adapt instruction in the reading area for the students with ASD in their classroom. Similarly, Parker-Katz and Hughes (2008) concluded that it is difficult for teachers to talk about how the artifact could be used to further create specific activities or make adjustments to instruction for certain students.

Teachers used different methods of teaching that they regarded as useful for ALL students in an inclusionary setting.

The teachers in the study spoke of a variety of practices they intentionally used to ensure that all learners' needs were addressed. Scruggs et al.'s study (2010) identified the importance of general education teachers using research-based teaching practices to ensure the learning of all students. The teachers in this study reflected this viewpoint as well, speaking of at least 20 different teaching practices they employed in their daily instruction (see Appendix G). More than half of the teachers spoke of using hands-on activities as the most frequent of their social studies teaching practices. Other teaching practices mentioned in this study were using explicit or direct instruction, graphic

organizers (outside the context of teaching reading comprehension strategies), or other study aids, and peer work.

The findings of this study indicated that the teachers chose teaching practices that they thought would be beneficial to all learners. Mastropieri and Scruggs (2001) also concurred that teachers who think about using effective teaching practices create more successful inclusion experiences for students with disabilities. Teaching practices that benefit all students lead to a more positive classroom environment which can facilitate the learning and engagement of students with ASD in content area classrooms (Hart & Whalon, 2008). The teachers in the study spoke directly about having high expectations for their students with ASD and wanted them to be successful and comfortable with the learning activities, thus using teaching practices they thought would be beneficial for everyone in their classrooms. An important finding to highlight in this study is that the teachers did not mention that they chose teaching practices specific to the learning needs of the student with ASD although they were specifically asked to respond. Mastropieri and Scruggs' (2001) also conclude that using disability-specific teaching practices in inclusive settings is as equally important as using effective teaching practices, which does not appear to be happening with these teachers

The teachers did describe adaptations to the teaching practices they were using for the students with ASD. They spoke of adaptations in terms of *how* they made the adaptations and *when* they made the adaptations. Lee et al. (2006) identified that there is skepticism by general educators that they have knowledge of concrete strategies for providing access to general education curriculum for students with disabilities. The interview data from this study reveal that the teachers acknowledge adaptations need to be

made for the students with ASD. However, the findings did not show if the teachers felt confident making those adaptations themselves. Instead, these teachers appeared to leave the responsibility for making adaptations to others further emphasizing the lack of application Lee et al. (2006) refers to.

Teachers reported that they considered adaptations as a responsive measure. Soukop et al. (2007) described adaptations as a way for students to be more engaged in the class activity. In contrast, the teachers in this study are adapting materials after an activity and when it appears the students have not grasped the content. The engagement of the students with ASD was not explored in this study but should be an area considered for all students when teachers are initially planning. Needing further exploration is the impact adaptations that are made before an activity have on the engagement of the student with ASD.

Previous research also suggests that teachers are skeptical of students with disabilities having access to traditional content area instruction and may not even try inclusive teaching practices (Lee et al., 2006; Soukop et al., 2007). The literature identifies that adaptations are an inclusive practice that provides access to content area instruction. Although the teachers appeared to wait when making adaptations, this did not seem to reflect how they felt about inclusion or using inclusive practices. At least nine of the 10 teachers spoke very positively about the students with ASD in their classroom and thought they definitely needed to be included, mentioning they wanted them to be contributing members in their classrooms. The fact that they made adaptations, regardless of when they made them, also demonstrated that the teachers were committed to the learning of the students with ASD in their inclusive environment.

Teachers in the study reported that the most common method of adapting the content for the students with ASD was to revise their outcomes. This finding is consistent with the conclusion made by Maccini and Gagnon (2006) for special and general education content teachers, e.g., reducing the number of items or ideas that students had to learn or complete. The teachers in this study talked about allowing the students with ASD in their classrooms to learn fewer ideas, learn fewer vocabulary terms, complete fewer steps in a sequence of activities, and in a few cases, complete a task in a different format. Additionally, some of the teachers allowed students to respond in a different format than what was originally planned (e.g., drawing, verbalizing). Allowing students to use an alternative presentation format such as oral presentation to reflect what they know has been shown to have positive effects on student outcomes (Maccini & Gagnon, 2006).

Other common adaptations that were mentioned in this study were providing some cue (visual or verbal) and using guided notes often in the form of graphic organizer. Lee et al. (2006) identified curriculum adaptations that promote the involvement and in some cases progress of students with disabilities in general education classrooms some of which are the same as the teachers in this study described. The adaptations that the teachers reported they used may have on the surface seemed like a cueing or visualization strategy but were actually not. In actuality, the teacher or paraeducator would point to where the student needed to put an answer rather than provide a cue for them to figure out where or how to answer. Another example was fill-in-the-blank items, which only served as a matching activity for the student with letters from words in the word bank partially filled in. The teachers thought they were adapting the content for the students but actually were not. Equally as surprising, there were few adaptations made for students with ASD except

one adaptation made specifically for reading comprehension. It appeared the teachers made adaptations based on convenience of the special educator or the paraeducator or they reused adaptations from year to year. The teachers explained that they would reuse a quiz or worksheet adaptation that had in a previous year been developed for other students that may not have had ASD.

The teachers in this study submitted the most artifacts demonstrating adaptations that were made to a variety of activities. Examples of these were quizzes and tests that had been adapted, activities with simplified directions, and partially filled in graphic organizers that were most often used as guided notes. As mentioned earlier, these adaptations to the artifacts were not necessarily created specifically for the student with ASD presently in the classroom, which is contradictory to what current research recommends (DeStefano et al., 2001; Hart & Whalon, 2008; Mastropieri & Scruggs, 2001). A good use of these artifacts would be to use them as a tool for collaboratively identifying specific individualized adaptations that could prove to be beneficial in lessons and on assessment measures (Parker-Katz & Hughes, 2008).

Teachers do not view planning as a separate process from teaching practice.

The most surprising finding in this study was the lack of discussion about the planning process, which is important for making individualized adaptations and to the implementation of specific reading comprehension strategies. The teachers rarely discussed the planning process, even though they were explicitly asked a question regarding their planning practices in relation to the student with ASD. Not only did these teachers describe very little about their planning practices, but two of the teachers did not mention planning practices at all. Instead of talking about their planning practices, these

teachers shared the teaching practices they used in their classrooms for all students. While it is important for teachers to consider specific learning needs of students with disabilities when planning for instruction, making adaptations, and deciding on assessment options (DeStefano et al., 2001; Hart & Whalon, 2008; Mastropieri & Scruggs, 2001), the teachers did not mention an individualized planning process for the students with ASD. Such a planning process would be beneficial to increase student outcomes and teacher effectiveness (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007). This might include a collaborative planning period with the special educator, developing specific outcomes for the student with ASD based on IEP goals or needs, or identifying barriers within the curriculum or activity before the lesson to apply universal design for learning principles that might engage the student more effectively.

Instead of planning alternatives for instruction based on particular needs of the student with ASD, teachers in this study appeared to rely on the special educator or paraeducator to adapt the activity or assessment measure. The teachers shared that sometimes the adaptations were already created based on previous students with disabilities that may have been in their classrooms. Adaptations were also made, usually by the special educator or paraeducator, based on feedback they received from the student's work. This practice is contradictory to collaborative planning that leads to successful inclusion (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007). DeStefano et al. (2001) found that general education teachers lack knowledge about educational experiences that are beneficial for students with disabilities and often view issues like making adaptations for instruction and assessment as roles of the special

educator. The viewpoints of the teachers interviewed for this study mirror previous research.

With regards to planning, the teachers talked about planning units or planning with the "big picture" in mind. It would seem that teachers might be able to employ the idea of universal design for learning (UDL) as Hart and Whalon (2008) regarded this planning practice as one that promotes the engagement of students with ASD in inclusive classrooms. Hart and Whalon also highlighted that UDL is a planning practice that benefits all students, which was a frequently mentioned idea when the teachers in this study talked about their teaching. However, no teachers made reference to UDL.

Finally, many of the teachers in the study talked of the diminished amount of time to collaborate with the special education teachers. Several teachers mentioned that with the increased building-wide initiatives, both they and the special education teachers were more strapped for time; many of them were now teaching reading, math, and social emotional interventions for struggling students identified within RtI frameworks in their buildings. Some researchers strongly suggest that planning and decision-making need to happen together with both general and special educator to truly have an inclusive experience in which access to the general education curriculum is the priority for the students with disabilities (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007). Unfortunately, the reduced time for collaboration limited planning in a UDL type approach.

One teacher submitted an artifact for planning, but no specific needs of the student with ASD were considered within the planning process, which is contradictory to previous research. Previous studies highlight the importance of considering individual students'

need during the planning process (DeStefano et al., 2001; Hart & Whalon, 2008; Mastropieri & Scruggs, 2001). Furthermore, Parker-Katz and Hughes (2008) concur that discussions based on classroom artifacts (e.g., lesson plans) can be a helpful way to make decisions for teaching content area topics to students with disabilities. Using classroom artifacts would be beneficial for teachers in inclusive environments to reinforce the necessity of collaborative planning as a way to ensure access to general education content (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007).

Teachers use different methods of assessment to meet the learning needs of ALL students and view these methods as beneficial for students with ASD.

The findings of the study indicated that teachers used different methods to assess student outcomes in their social studies classrooms. For example, the teachers used a variety of formative assessments, such as exit or entrance slips, projects, games, discussion, problem-based learning activities and homework. It was common for most of the teachers to mention homework as a formative assessment tool. Marzano et al. (2001) pointed out that homework is a good tool for student practice on a particular skill and provides teachers with important information regarding the skill as a student's outcome measure.

The practice of making specific assessment adaptations for students with ASD did not appear in the teacher reports in the current study, especially when teachers stated that it was common to reuse adapted quizzes and or tests year after year. When the teachers adapted quizzes and tests they used such things as fill-in-blanks, word bank, or simplified and shortened quizzes and tests. However, the teachers did not mention that these were adaptations that were individualized for the students with ASD in their classrooms in the current school year. DeStefano et al., (2001) emphasize the importance of maintaining

individuality when making decisions regarding assessment adaptations. Mastropieri and Scruggs (2001) also stress the importance of specific adaptations for achieving a successful inclusive classroom. The literature highlights the need for teachers to target adaptations for the specific learning needs of individual students with disabilities. Using the existing research as a guide, the teachers in this study might enhance the assessment opportunities of the students with ASD in their classrooms if they considered individual learning needs in more detail.

As mentioned earlier, the teachers in this study appear to rely on the special education teacher for making assessment adaptations for the students with ASD. Research by Maccini & Gagnon (2006) indicated that special educators make more adaptations than general educators on assessment measures, which was similar to what the teachers in this study reported. The teachers collectively reported that it was common for them to give the materials such as the classroom tests to the special educator for them to adapt. Not only did the teachers in this study talk about the special educators making the assessment adaptations, one of the teachers went to the special educator during the interview to retrieve examples of the assessment adaptations that had been previously made.

Limitations

Several limitations related to the transferability and approach need to be considered when analyzing and interpreting the findings of this study. First, participants in the study were homogeneous, which could limit the transferability of the findings. The small group of participants consisted of mostly females (n = 9) and all of the participants were White. Some of the participants did work in schools with student populations that represent diverse cultures (e.g., 70% Hispanic in one school, 13% African American in one school) but

other participants worked in schools where students were mostly White and located in suburban middle-class neighborhoods. Lastly, most of the participants had advanced educational backgrounds and many years of experience, which may have also led to a limited perspective.

The approach of this study needs to be considered when interpreting the findings. The interview of the teachers represented a measure of self-report. The teaching practices shared by the teachers could not be completely validated as the investigator did not observe these teachers during classroom sessions to determine whether teachers' interviews were congruent with their classroom practices. It is important to take into account that the teachers might have measured their words and shared what they thought the investigator wanted to hear. Another consideration when interpreting the findings is the notion that the participants volunteered for this study. These participants knew the purposes of the study and may have felt confident with the practices they were using in an inclusive environment.

Finally, the investigator's bias in favor of inclusive environments might influence the interpretation of the findings. This interview study investigated the perceptions related to including students with ASD in general education classrooms. It is important that the data were not aligned with the investigator's beliefs as the themes began to emerge and that the teachers' perceptions and viewpoints were presented as their original thoughts (Creswell, 2007). Although the analysis of the interviews completed by special educators and not general educators might potentially bias the interpretation of findings, member checks of the interviews by the participants to ensure that the transcripts accurately depicted what

was said during the interview (Miles & Huberman, 1994) and reliability checks during the data analysis might reduce the bias to minimal.

Directions for Future Research

Findings from the perceptions and viewpoints of the middle school teachers who participated in this study point to several directions for future research. First, interviewing teachers with different demographics and backgrounds will help to expand the limited research on content teachers who work w ith students with ASD. The participants in the current study were from middle-class suburban middle schools. The schools in which the teachers were teaching had extensive experience with an inclusion service delivery model. Recruiting teachers who work in urban areas, high-needs schools, and with more diverse learners would add a different perspective and contribute to the needed research area. Interviewing teachers who have had little inclusion experience, teach in elementary or high school settings, or who teach in a different content area would also be beneficial. In addition, interviewing special education teachers or the paraeducators who are working with the students with ASD in the same general education content area classrooms might add a completely different perspective and broaden the results. Given that collaborative planning between special educators and general educators leads to a more inclusive experience for students with disabilities (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007), considering the viewpoints of both disciplines would add to the findings. Lastly, examining the teachers' background in reading might help explain whether preparation in reading influences content teachers' use of teaching reading comprehension strategies. Developing questions that probed deeper into the number of hours and contents/topics/formats of professional development or course work the

teacher has had and specific questions related to knowledge gained as a result of professional development would also add valuable interview data. Since so little is known about teaching reading comprehension strategies to students with ASD traditional professional development might not help. It would be useful to find out what questions the teachers have to develop more targeted professional development.

Second, future research should include observations of the teachers along with the interviews to validate actual classroom practices. The observations would add to the story about the practices participants used to develop reading with students with ASD. It would be expected that research would validate what the teachers share in their interviews, however, the observations might also highlight what is lacking in teachers' practice to better plan professional development opportunities.

Lastly, if this study were replicated, it would be important to review the content and format of the professional development in reading that the teachers have participated in. This would allow the investigator to understand if the teachers transferred knowledge of research-based practices into classroom practices or if the teachers are not prepared with research-based practices because the professional development didn't address the needs of students with autism. The teachers in this study did not share much information about teaching practices specific to the students with ASD in their classrooms. Reviewing the professional development on teaching students with disabilities would also allow us to understand the teaching practices general education teachers have received. Given that professional development is the main source for teachers to advance research-based practices, it would be imperative to continue to explore this area as a means to strengthen

the educational experiences student with ASD are receiving, particularly related to their reading comprehension skill development.

Implications for Practice

The findings of the study indicated that teachers report the use of lower-level reading strategies, little focus on students with ASD during planning and making adaptations, and lack of collaborative planning between the social studies teachers and the special education teachers. Constant use of lower-level reading strategies indicates the need of providing teachers with specific professional development opportunities that address the use of different levels of reading comprehension strategies for students with ASD. According to previous research, the most beneficial professional development would be to create opportunities that focused on developing reading comprehension specifically for students with ASD within the context of social studies curriculum (Chiang & Lin, 2007; Hart & Whalon, 2008; Whalon, Otaiba, & Delano, 2009). While most of the teachers in this study held high expectations for and positive attitudes toward their student with ASD, advancement in teaching reading comprehension strategies for the content teachers promotes the opportunities of students with ASD to access general education curriculum.

Given the current structure of their school day and other mitigating factors, the teachers did not individualize the instruction to increase reading comprehension skills in the student with ASD. Providing professional development that focused on the specific characteristics and learning needs of students with ASD might be useful. The professional development should also include strategies the teachers can use to individualize instruction once it has been determined exactly what is needed. Structuring these opportunities to be as interactive and hands-on as possible could help bridge what these

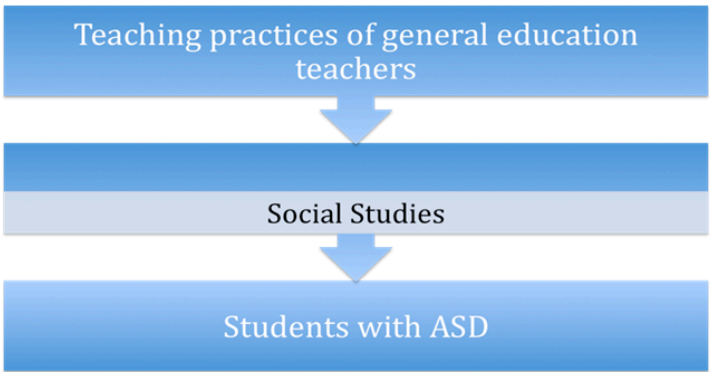
teachers are learning to their practice. Using real-life examples and demonstrations might help to generalize these newly learned strategies for the content teachers.

Having professional development opportunities that include both special and general education teachers as well as paraeducators, would also further the chances that these teachers could plan in a more universal way and possibly give these teachers a chance to truly collaborate about the curriculum and the students with ASD. Regular collaboration among key personnel has been shown to promote positive student outcomes (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007). Another consideration for implementing collaborative planning efforts would be to increase teacher effectiveness (Burstein et al., 2004; DeStefano et al., 2001; Lee et al., 2006; Soukop et al., 2007). Opportunities for the teachers to practice collaborative planning include how to use universal design for learning and how to do so with another professional. Allowing the teachers to work together during the professional development, actually planning together and using strategies that have been learned might increase the chances they use them in their everyday teaching. Related to that, Parker-Katz and Hughes (2008) recommended including in professional development a review of classroom artifacts as way to examine current practice, student outcomes, and revisions to day-to-day instruction, which could lead to universal planning. By examining classroom artifacts, it could help teachers determine what they need to do differently next time related to the planning and inclusion of reading comprehension strategies for specific students with ASD.

Given the current belief that all teachers are teachers of reading, higher education institutions need to consider how content area teachers are prepared. Traditionally,

preservice preparation for content teachers has been focused on the content area without reading comprehension practices. Although teachers in the current study used a variety of reading comprehension strategies, focus on the use of lower-level skills highlights the need to include coursework that emphasizes the *reading to learn* skills for higher-level comprehension (e.g., reader-response, problem-solving, connections to personal experiences) (Carnahan et al., 2011; Gray (1948) rather than the just lower-level *learning to read skills* such as basic comprehension and vocabulary development. In addition, preservice teaching preparation for general education teachers needs to include the idea of universal design for learning, collaborative planning with special education staff, and research-based practices for students with disabilities. Reconstruction of professional development and preservice teacher preparation in reading research ensures that middle school content teachers can continue to develop the necessary skills for all their learners and make specific adaptations for students with ASD.

Appendix A



Primary Research Question:

What are the perceptions of general education middle school teachers related to their teaching practices for students with ASD who are included in their social studies classrooms?

Sub-Research Questions	Topics	Data sources
1. What specifically in relation to planning and teaching do the teachers incorporate to attend to students with ASD?	Plan Lesson Lesson/Plan	**1.1** Tell me about how you plan your lesson/unit knowing that you have a student with ASD in your class. **1.2** Can you walk me through a recent lesson/unit and tell me about how you planned, who was involved, what materials you used, etc with attention to what you needed to plan to make sure that the student with ASD would learn? **1.3** How did that lesson go? What would you change if you were to do it again given what you know about students with ASD?
2. How do the teachers incorporate reading comprehension in the context of teaching social studies?	Plan Lesson	**2.1** What kinds of accommodations/modifications are used to help students with ASD comprehend what you are teaching? **2.2** When students with ASD don't get (or comprehend) what you're teaching what do you do?
3. How do the teachers assess all students' outcomes?	Assessment Assessment	**3.1** In relation to your unit or lesson, what do you think your students learned? (General education students and student with ASD) **3.2** How do you know that the lesson has "worked"? How do you evaluate your students' learning?

Appendix B: Screening Questions

1. Do you teach general education social studies for sixth, seventh, or eighth graders?
2. Do you have a student with ASD currently in your classroom?
3. Have you had at least one student with ASD within the last 3 school years (2008-09, 2009-10, 2010-11)?
4. Are you willing and available to complete interviews during the next 3 month time frame?

Appendix C: Interview Protocol

The purposes of this interview includes the following: learning about general education social studies teachers' practices as related to students with ASD, and learning how you plan, teach, and assess for all your students. This information that you are sharing will help to inform the field because few studies have investigated how teachers include students with ASD in Social Studies.

1st Interview

Directions: The interview will take 60 minutes. During this time, I will be audio taping via the computer and this hand held audio recorder for back up. There are three sections to the interview that focus on a recent unit you taught and the planning that went into the unit, how you incorporated reading into your content teaching, and how you assessed your students' outcomes. You will also share the artifact/s you brought but we will be talking more about these artifacts at the second interview. The information you share with me is confidential and you or your students' identifying information will not be shared.

I'll begin by asking you a few general questions about your teaching position.

1. Tell me about your current teaching position by including:
    a. What is the highest degree, type of certificate (6-12 or K-9), and the endorsements you have,
    b. How many years have you been teaching,
    c. How long have you been teaching at this school,
    d. What is the grade and content area you teach and disability population in your class?
    e. What is your background in reading?

2. Describe for me the school you are working at by telling me:

    a. The size (how many students overall) – and how many students in your classes (on average)

    b. The diversity amongst the students - including culture, language, ability

    c. How many classes a day you teach

    d. School improvement initiatives currently being implemented at your school

We will switch the focus now to talk about your planning and teaching particularly related to the students in your classroom that have ASD?

Let's begin by telling me about your student with ASD?

3. What are the academic characteristics of this student?

    a. Can he/she decode the text or materials you are using at grade level?

    b. What are some of the difficulties this student/s has with comprehending the text (e.g., main idea/details, vocabulary, cause/effect relationships, etc.)

4. What are some other characteristics this student has?

    a. Behavioral issues

    b. Social issues

    c. Communication issues

5. Tell me about how you plan your lesson/unit knowing that you have a student with ASD in your class.

Probe: Be as specific as you can. What is your typical process for planning – when and how does it occur? How long does it take?

6. Can you walk me through a recent lesson/unit and tell me about how you planned, who was involved, what materials, etc. with attention to what you needed to plan to make sure that the student with ASD would learn?
7. How did that lesson go? What would you change if you were to do it again given what you know about students with ASD?

Probe: Was the lesson successful in terms of your expectations for the students? Did you have to make any changes on the spot? Were the students with ASD engaged – how did you know?

The next questions focus on how you incorporate reading comprehension strategies within the context of the content you are teaching.

8. What reading comprehension strategies do you routinely include in your social studies instruction and why those?
9. What kinds of accommodations/modifications are used to help students with ASD comprehend what you are teaching, both oral and written text?

Probe: Do you have an example of some of the work you've had to modify? How was it changed? Did the changes work for the students with ASD?

10. When students with ASD don't understand (or comprehend) what you're teaching what do you do?

Probe: How do you know when students do not comprehend?

We'll now focus on how you assess your students' outcomes.

Begin by telling me about how your general education students responded to your lesson and what your assessments revealed about their learning -

11. What do you think your students learned?

Probe: Now tell me about the students with ASD.

12. How do you decide that the lesson has "worked"? or How do you evaluate your students' learning?

Probe: What is some of the evidence you have or use to help you evaluate your student learning?

Thank you for your time. Over the next week, I will be reviewing our conversation and summarizing it in a transcript form. I will then be in contact with you by calling you with any questions I might have for clarification. Then I will send you the summary transcript of our conversation via email for you to review. We will also set up a second interview so that we can continue our conversation. At that time if you feel any additional information needs to be added you can do so or if you feel any of the information needs revising those changes can be made. This shorter follow-up interview will be conducted to add any information and to make those revisions.

2nd Interview

Purpose: The purpose of this interview includes the following: learning about general education social studies teachers' practices as related to students with ASD, and learning how you plan, teach, and assess for all your students by clarifying or adding information from interview 1. Another purpose of this interview is to examine the artifact/s you have brought and to discuss how the artifact/s help understand how students with ASD comprehend the content you are teaching.

Directions: The interview will take 30-60 minutes. During this time, I will be audio taping via the computer and this hand held audio recorder for back up. The focus of this interview will be to clarify or add any information from the first interview. In addition, we will be discussing the artifact you have brought to share. The information you share with me is confidential and your identifying information will not be shared.

Let's start by reflecting on interview 1.

1. In the previous interview you mentioned (insert statement) can you expand on what you meant by that?

We will move into discussing the artifact you brought.

2. Explain the artifact you brought.
3. How did you use this artifact?

Probe: Tell me about the context for using this artifact. What decisions were made that led to the use of this artifact? Were there adjustments or accommodations that had to be made to this artifact before you used it? If so, who made those adjustments or accommodations?

4. What does the artifact show about the reading comprehension abilities of students with ASD in your classroom?
5. Are there changes you would make to this artifact for the next time you use it?

Thank you for your time. Over the next week, I will be reviewing our conversation and summarizing it in a transcript form. I will then be in contact with you by calling you with any questions I might have for clarification. Then I will send you the summary transcript of our conversation via email for you to review.

Appendix D: Field Notes/Reflective form (Adapted from Miles and Huberman, 1994)

Participant number: _____
Date: _____
Time: _____

Setting of interview: _____

1. What was the demeanor of the participant – how did the participant react to the questions, body language, facial expressions, verbal exchanges, etc., what kind of follow-up might be needed?

2. What was interesting, relevant, salient, or important in this contact?

3. What was a major issue or theme that stuck out from this contact?

4. Summarize the information from each question that participant shared.

   Question: Information:

5. Describe the artifact the participant brought and the reasons stated for bringing it. What does it show about the students with ASD learning?

6. Remaining or new questions for the next contact with the participant.

7. Final thoughts, reflections related to this contact.

Appendix E: Matrix Analysis Codes, Description, and Frequency

Code	Description	Sample
Teaching Practice	Hands-on-activities, visuals, direct instruction, modeling, graphic organizers, discussions, group/partner work, note-taking, use of text	*"I moved the desks around. I covered them with butcher-block paper. I have placards with pictures of cave art that they are real artifacts that have been found. They're photographs of them. I put them up inside the walls."*
Adaptations	Revised outcomes, guided notes, drawing or verbalize answer, providing cues, quizzes or test (fill-in-blank, word bank)	*"We will rewrite notes where maybe they just have to do some closed passages. Where all they have to do is fill in a word here or there. At least then we know they're reading the text. Then the key components we'll put in there, or we might just pick the major essential things and they have to look and search or maybe we'll put pictures and they have to match like the ideas to the pictures."*
Student Characteristics	Grade level or above decoding, below level comprehension, social difficulties, emotional outburst	*"He is a high functioning autistic student that is at the high end of the spectrum right now, but whenever you tell him something he takes it very literally…….and you have to break that down because he doesn't understand analogies."* *"He is extremely interested in social studies and so meticulous about stuff to where we were drawing different, like the city and states when we were talking about the ancient civilizations."* *"Social issues, a little more reserved, not as able to make friends as a normal kid……..."*
Assessment	Formative (exit slip,	*"Some specific things that I use to kind of*

	project, game), homework, quizzes and tests	*assess student learning, and in his class as well as all other classes, would be homework ……"* *"I also give quizzes, which is kind of a classic in terms of it's pretty hard to fudge that. We have not had any tests, although we will have a test at the end of the month."*
Reading Comprehension Strategies	Vocabulary development, main idea, summarization, self-monitoring, text structure	*"They identify how well they – on a scale, how well they know the word. They do some sort of sketch."* *"….previewing reading prior to it, summarizing. We've done some reciprocal teaching."* *"… I read – I'll take a chapter like this and this always starts with what's the main idea, why does it matter?"*
Student Response	Frustration, overwhelmed, nervousness, facial expression	*"Sometimes it might be I got frustrated and threw in the towel. Sometimes its I wanted to get it in on time so I didn't care what I put 'cause I had to get it in on time."*
Inclusion	Use of variety teaching methods, high expectations, make students comfortable	*"…. making sure that there's a wide variety of learning modes and methods there."* *"… treating him as much as I can s everybody else and letting him move in and out of that as we see fit."* *"I love having him in my room. I don't want them to not have him be part of social studies because we change what he's walking out of my room with."*
Teacher Reflection	Review student work,	*"To me, it's, 'Are the students – are they*

	feedback from others	*smiling? Are they engaged? Are they doing the bulk of the work?' "*
Collaboration	Plan, modify, relationships	*"..we need to talk about what the expectation is for this guy."* *"… every time I plan something I have a conversation with the special ed teachers who are in charge of these kids."*
Role of Paraeducator	Work with students, modify	*"… one of the TA's actually on the fly, and this wasn't met this was all her, on the fly she drew a picture of land."* *" I've had situations where I've been able to ask the aide, because I've been very fortunate, to take him out and just go over it."*
Planning	Units, "big picture", time-consuming	*"… we've identified that as important and real information and we go from there."* *"I'm planning all the time."*

Note. First three codes constituted 56% of all coding and are the three most frequent codes for 8 of 10 teachers. Description includes the most often mentioned examples.

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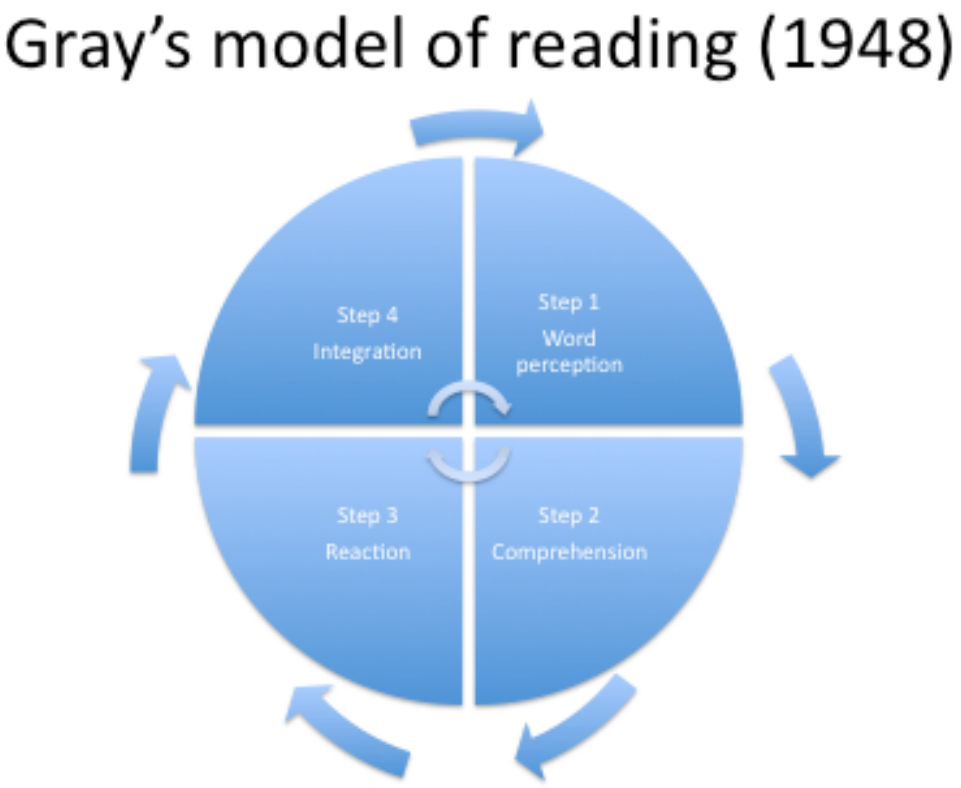


Figure 1

Gray (1948) conceptual model of the reading process as a four-step process. Step 1 is word perception. Step 2 is comprehension or establishing a word as a concept. Step 3 is the reaction to text, making judgment or having an emotionally response. Step 4 is integration of new ideas into a personal perspective.

Factors Contributing to Reading Comprehension (Carnahan, Williamson, & Christman, 2011)

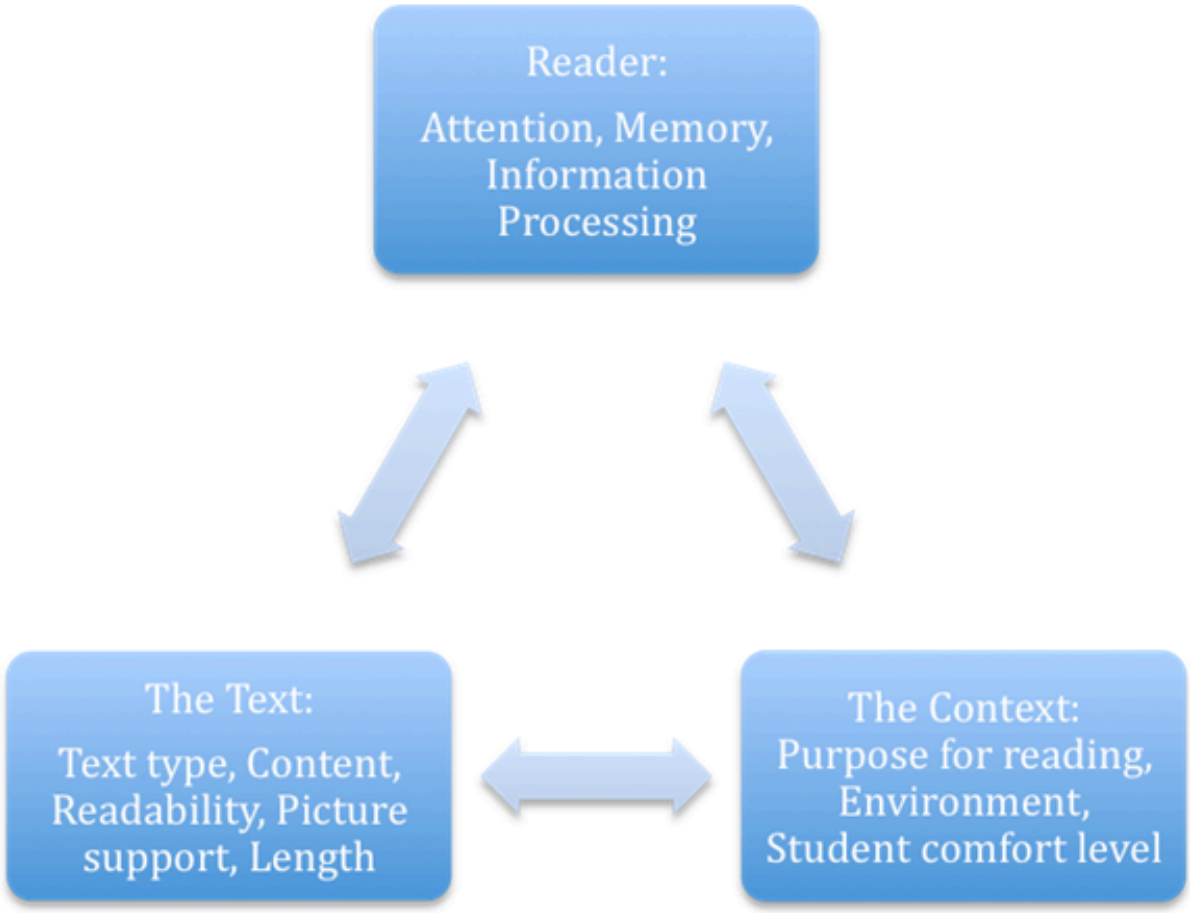


Figure 2

The Reader: Attention, Memory, Information Processing: Planning and Organization, Ability to recognize perspectives of and empathize with characteristics in a story, Background knowledge related to the text, Interest in text topic, Word knowledge

The Text: Text type (e.g., narrative, expository), Content, Readability level (including complexity of vocabulary and sentences), Picture support, Text length

The Context: Purpose of reading, Environmental organization (physical organization, visual supports, group size, etc.), Environmental or internal distraction, Student comfort level

Name #3 Period ____

Word of the Week: WOW!

Vocabulary Term:	Self-Assessment: 1 – 2 – 3 – 4
Definition:	
Illustration:	Connection:
Use the word in a sentence:	

Vocabulary Term:	Self-Assessment: 1 – 2 – 3 – 4
Definition:	
Illustration:	Connection:
Use the word in a sentence:	

Self-Assessment Scoring: 1. I have never seen this word before 2. I've heard of it, but I don't know what it means 3. I think I know what it means 4. I know what the word means in context

Fig 3

Figure 3

Vocabulary Journal

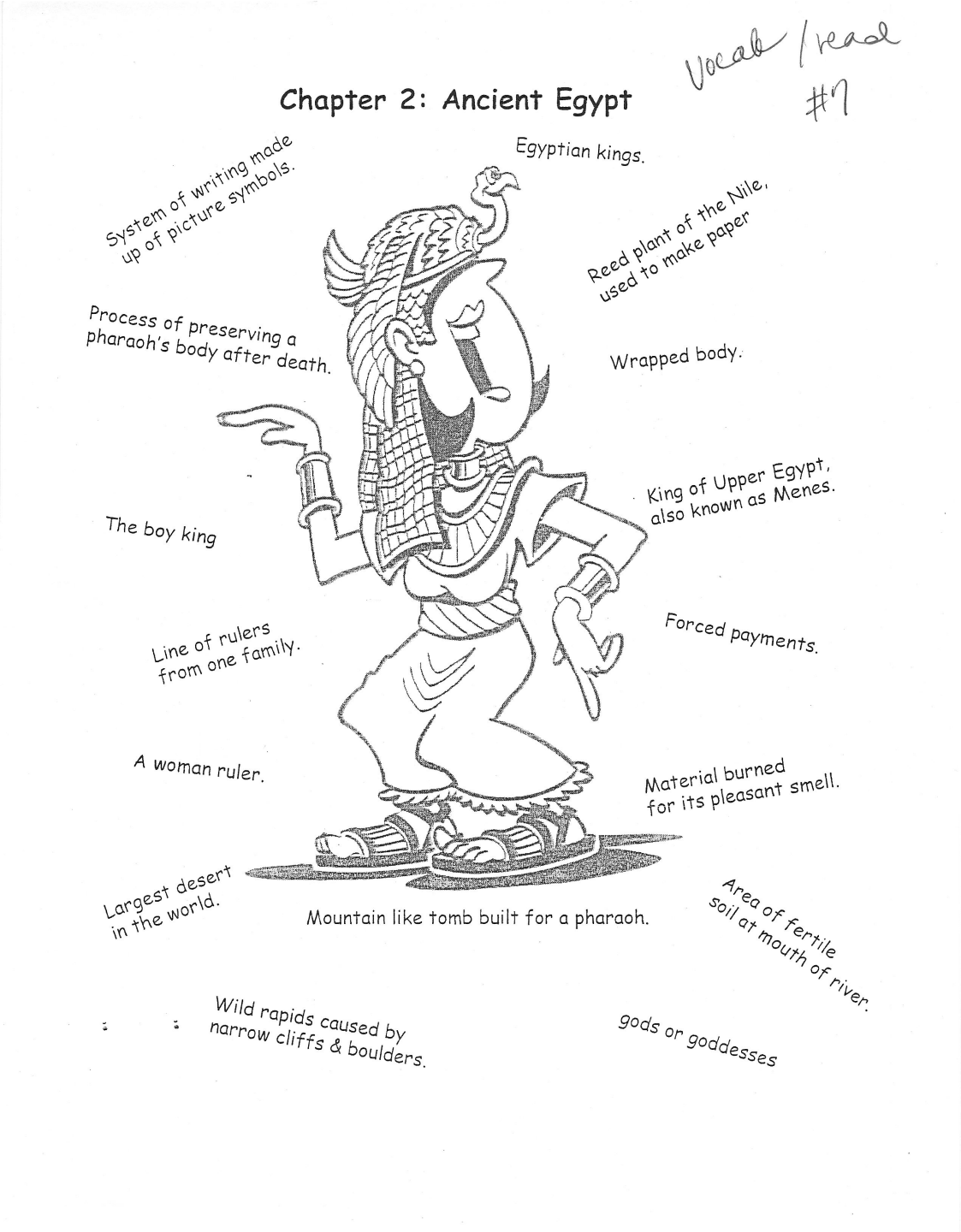
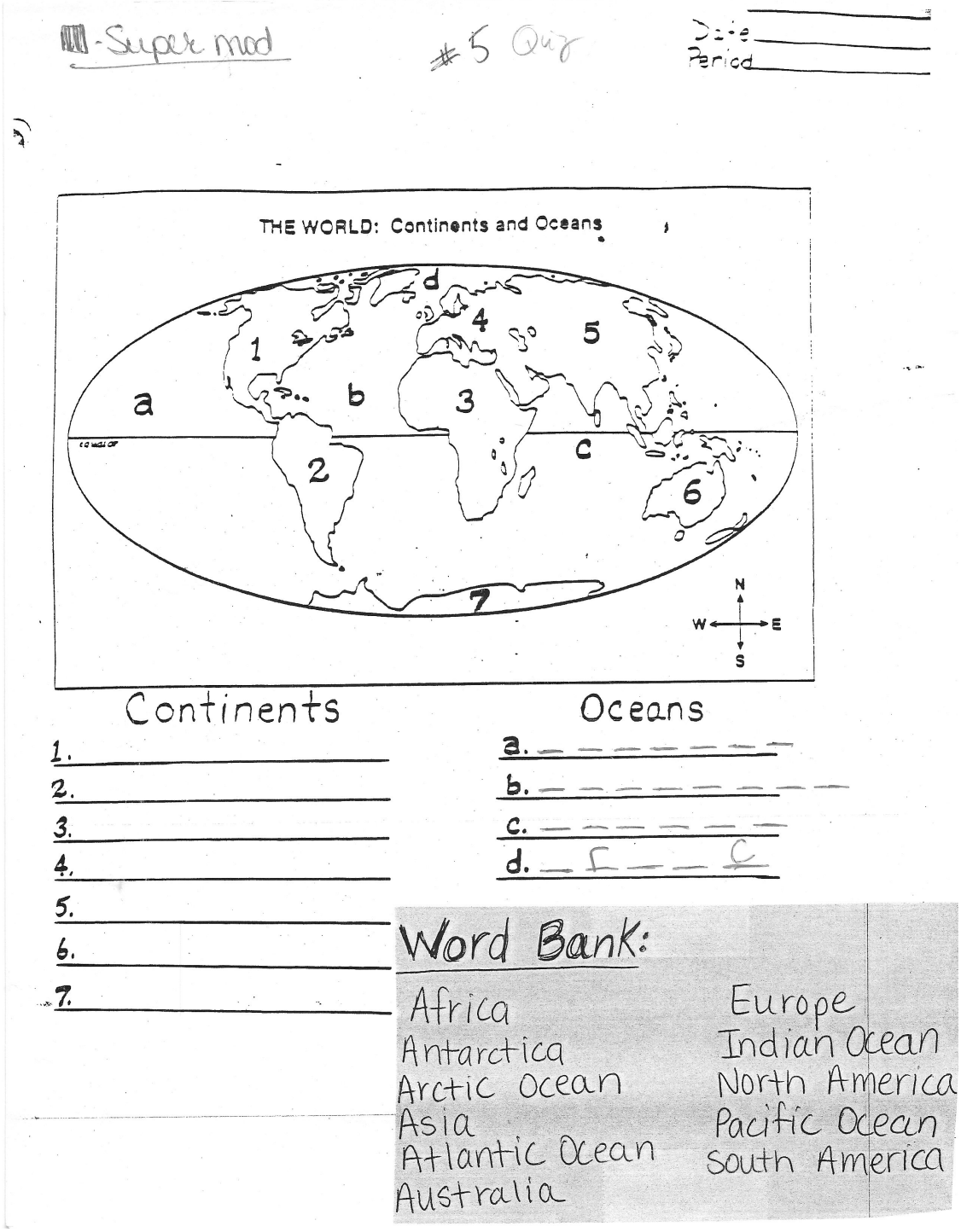


Figure 4

Vocabulary Matching or Definition Exploration Activity



III - Super mod

#5 Quiz

Date _____
Period _____

THE WORLD: Continents and Oceans

a b c d 1 2 3 4 5 6 7

N W E S

Continents

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Oceans

a. _____
b. _____
c. _____
d. _ r _ _ c

Word Bank:

Africa
Antarctica
Arctic Ocean
Asia
Atlantic Ocean
Australia
Europe
Indian Ocean
North America
Pacific Ocean
South America

Figure 5

Adapted Social Studies Quiz

Themes of Geography in the Newspaper Grade 7

[redacted]

Educational Objective:

- Students will demonstrate knowledge of the Five Themes of Geography; Location, Place, Human/Environment Interaction, Movement, and Regions.
- Students will make connections between content learned and examples found in the newspaper.

Materials Needed:

- *Chicago Tribune* newspaper, 2 issues per group (5 total)
- Construction paper, 1 piece per group
- Scissors, glue, markers

Anticipatory Set: (2 minutes)

Hello 6th hour! We have a really fun activity planned for you today, one that will get you thinking, let you use your artistic abilities, and is sure to get you a little bit messy! You can't have fun without getting a little messy though, right? Today we will be working together cooperatively in groups to explore the five themes of geography in a little more depth and we will be using the newspaper to help us along the way. Before we begin, I have some instructions for you, we will review a little bit to get you thinking, and then you will be on your merry way!

Sequence of Activities:

1. The instructor will begin by reviewing the five themes as discussed in class by showing theme posters.
2. Instructions will be given:
   -Students are to work together in groups of 5 or 6 (chosen by the instructor) on finding examples of their assigned theme in the newspaper.
   -Students will arrange their examples on their posters and be ready to share them with the class when the time comes.
3. An example will be provided to them, made from old newspapers to give them ideas for their own posters.
4. The instructor will then model "previewing" the newspaper (reading headlines and examining pictures next to captions) and looking for clues in the text.
5. Students will elect one person from each group to go get supplies and they will begin the activity. (10 minutes)
6. Students will work on their posters (15 minutes), than come back together for big group discussion and showcasing of their work. (10 Minutes for discussion, 5 minutes for clean-up)

Figure 6

Lesson Plan

Questions to Ask:

1. How does understanding the five themes in Geography help us to make sense of the world around us?
2. What did you learn about the newspaper? What were your impressions?
3. How difficult was it to find these examples in everyday life?

Assessment:

Assessment will be judged on completion of their poster as well as participation in the group activity.

Conclusion and Summary:

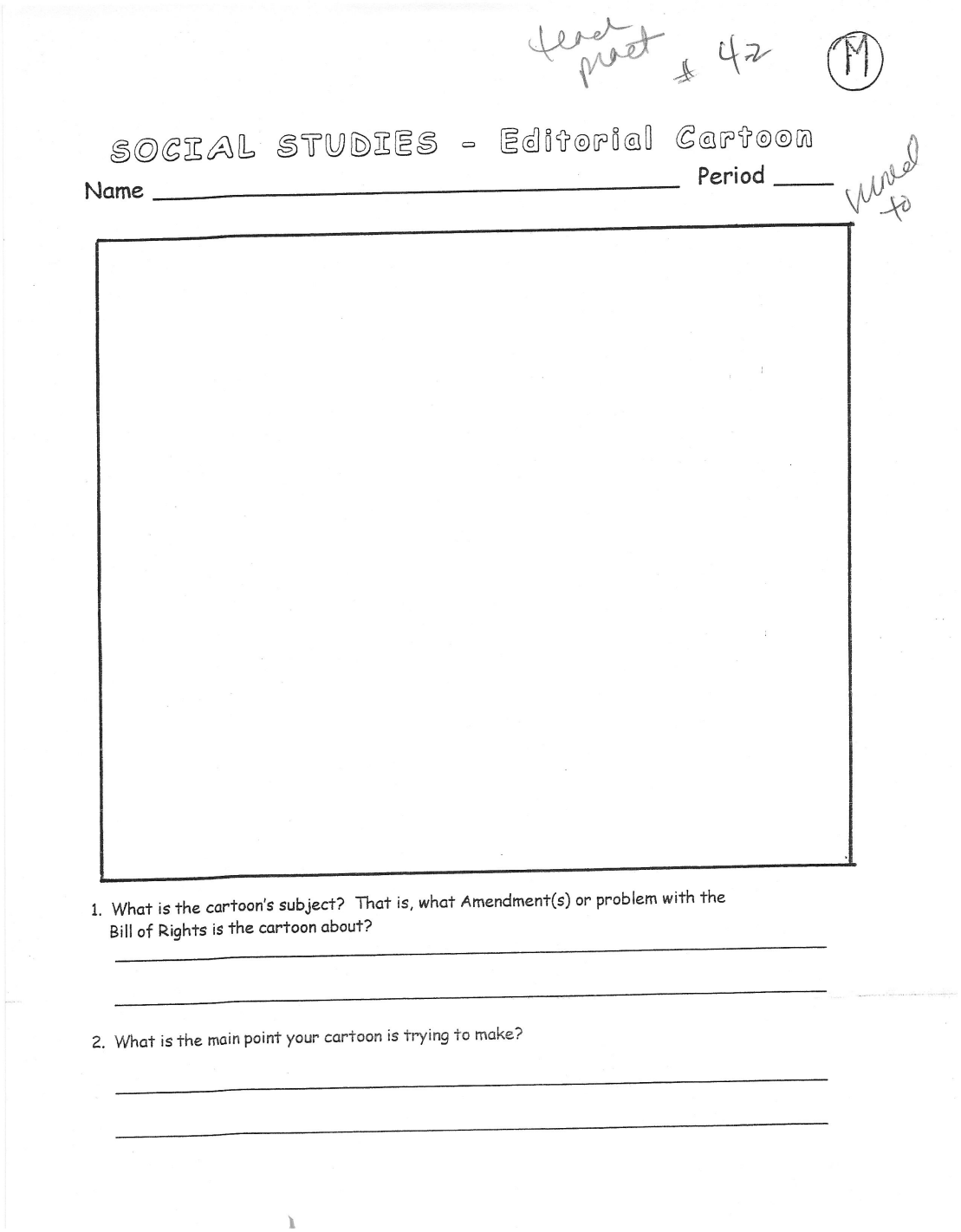
As you can see from the clippings that your classmates have shared with you, the five themes are used by everyone in the world and in a variety of different ways. It is by using these themes, that we classify objects in our world and create a common terminology used by all. This is a theme that is of great importance to Geographers as they study the earth and the people who live here. Throughout the year we will be revisiting it over and over.

Evaluation and Reflection:

How did the lesson go? Did my students accomplish the objectives set forth for them? Did the activity run smoothly or were better instructions needed? What can I do better next time I teach this lesson?

Figure 6 (continued)

Lesson Plan



teacher project # 42 (M)

SOCIAL STUDIES - Editorial Cartoon

Name _____ Period _____ Moved to

1. What is the cartoon's subject? That is, what Amendment(s) or problem with the Bill of Rights is the cartoon about?

_____

_____

2. What is the main point your cartoon is trying to make?

_____

_____

Figure 7

Independent student project

#5

Exit Slip

Today in class we discussed....._____

_____

I learned....._____

_____

Exit Slip

Today in class we discussed....._____

_____

I learned....._____

_____

Exit Slip

Today in class we discussed....._____

_____

I learned....._____

_____

Figure 8

Exit Slip

VITA

Lisa Burke

Elmhurst College

Department of Education

Assistant Professor, Special Education

EDUCATION

Ph.D. Special Education, 2008 - 2012, University of Illinois at Chicago

Master of Science in Education, 1988, Northern Illinois University

Bachelor of Science in Education, 1985, Northern Illinois University

PROFESSIONAL EXPERIENCE

9/09 – present Graduate Assistant, University of Illinois at Chicago

Grant: Special Teachers and Exceptional Pupils = Urban Promise

Responsibilities:

Served as advisor to Master's Degree students enrolled in the program

Created quarterly project newsletters and CPS partner newsletters

Created and held professional development opportunities for CPS partners and for alumni of the grant program

Maintained databases for the grant project

Maintained paperwork involved with grant project

Conducted interviews of alumni from the program

Transcribed interviews and maintained database for the interview

9/01- present Assistant Professor of Special Education, Elmhurst College, Elmhurst, IL

Courses taught for Illinois State Certification or approval

SPE 200 Introduction to Teacher Education

SPE 250 Introduction to Instruction and Curriculum Planning

SPE 316 Literacy III

SPE 370 Portfolio Seminar II

SPE 440 Diagnosis and Remediation of Reading Difficulties

SPE 434 Academic Curriculum/Instruction/Assessment

SPE 438 Functional Curriculum/Instruction/Assessment

Departmental Responsibilities as Assistant Professor of Special Education

- Special Education Advisory Council, 2002-2009
- Coordinator of Field Experiences for Special Education 2002-2005
- Program Coordinator of Special Education 2005-2009
- Coordinator of Special Education Minor 2008 - present
- Advising students applying for admission to Elmhurst College with special education as a major or a minor.
-

8/90-6/01 Special Education Teacher (K-6), West Chicago District #33, West Chicago, IL

Worked as a Learning Disabilities Resource Teacher using the Collaboration/Consultation Model for delivering services and also worked as an Inclusion Facilitator for students with mild-moderate disabilities.

8/85-6/90 Special Education Teacher (K-8), Cicero District #99, Cicero, IL

Taught students with moderate to severe disabilities in a self-contained setting and also worked as a Learning Disabilities Resource Teacher.

HONORS AND AWARDS

Presidential Award for Excellence in Teaching, Elmhurst College, 2008

Nomination, Presidential Award for Excellence in Teaching, Elmhurst College, 2003 and 2006, 2008, 2010

Honor an Educator Award, Kappa Delta Pi, 2003 and 2005

Those Who Excel, Illinois State Board of Education, 1996

Kappa Delta Pi, International Honor Society in Education, 2003 – present

PROFESSIONAL AFFILIATIONS

Council for Exceptional Children

- Division of Autism and Developmental Disabilities
- Division of Learning Disabilities
- Teacher Education Division
-

PROFESSIONAL CONTRIBUTIONS

Scholarly Presentations:

Burke, L., Servilio, K., & Doty, L. (2010, November). *How Should We Prepare Special Education Teachers: A Study Focused on Key Assessments.* Critical Questions in Education Conference: Chicago, IL

Servilio, K., Burke, L., & Doty, L. (2010, November). *How Should We Prepare Special Education Teachers: A Study Focused on Key Assessments.* TED Conference: St. Louis, MO.

Burke, L. (2010, April). *Reading Comprehension Strategies for Students with ASD.* CEC Convention: Nashville, TN.

Burke, L. & Doty, L. (2010, April). *A Glimpse into the life of Twice – Exceptional Student.* CEC Convention: Nashville, TN.

Burke, L., & Doty, L. (2009). *An Inclusive Postsecondary Education Opportunity: Elmhurst Life Skills Academy (ELSA)*. CEC Convention: Seattle, WA.

Professional Consultative Workshops:

Burke, L. (2010, September, October, November). *Literacy for Students with Cognitive Disabilities.* Maine Township Special Education Teachers: Park Ridge, IL.

Burke, L. (2010, April). *Literacy Learning Centers.* Induction Workshop for CPS Teachers: University of Illinois at Chicago, Chicago, IL.

Burke, L. (2010, February). *Virtual Fieldtrips.* Induction Workshop for CPS Teachers: University of Illinois at Chicago, Chicago, IL.

Burke, L. (2010, January). *Inclusion: Working with your team.* Workshop for Teachers: Addison, IL.

Burke, L. (2009, November). *Differentiating Writing Instruction and Activities.* Workshop for CPS Teachers: University of Illinois at Chicago, Chicago, IL.

Burke, L. (2009, October). *Inclusion.* Workshop for Para-educators: Addison, IL.

Burke, L. (2009, September). *Writing in the Content Areas.* Workshop for CPS Teachers: University of Illinois at Chicago, Chicago, IL.

Burke, L. (2008, March). *Working with Students with Autism.* County-wide Institute for Teachers and Para-educators: Naperville, IL.

Burke, L. (2006, March). *Working with Students with ADHD.* County-wide Institute for Teachers and Para-educators: Naperville, IL.

Burke, L. (2005, March). *Progress Monitoring and Data Collection.* County-wide Institute for Teachers and Para-educators: Naperville, IL.

Publications:

Scholarly:

Burke, L. & Baille, S. (2011). Literacy centers: A way to increase reading development. *Academic Leadership Online Journal, 9*(3).

Brannon, D., Fiene, J., Burke, L., Wehman, T., Jares, D., & Young, M. J. (2010). Meeting the needs of new teachers through mentoring, induction, and teacher support. *Critical Issues in Teacher Education, 17,* 62-67.

Wehman, T., Jares, D., Brannon, D., Fiene, J., Young, M.J., & Burke, L. (Fall 2009). Designing reflective practice teacher support groups: What teacher preparation programs can do to help support and retain new teachers. *ACI Online Journal.*

Fiene, J., Wehman, T., Brannon, D., Jares, D., Burke, L., & Young, M.J. (2009). Mentoring new teachers: What teacher education programs can do to help. *English Journal, 98(6),* 92-94.

Burke, L., Fiene, J., Young, M.J., Meyer, D. (2008). Understanding the why behind the how in reading instruction. *The Educational Forum*.

Professional

Burke, L. (2010). It's a Wrap. *Special Teachers and Exceptional Pupils = Urban Promise Newsletter, 4(4).*

Burke, L. (2010). Curriculum based measurement and progress monitoring. *Special Teachers and Exceptional Pupils = Urban Promise Newsletter, 4(3).*

Burke, L. (2009). Writing across the curriculum. *Special Teachers and Exceptional Pupils = Urban Promise Newsletter, 4(2).*

INSTITUTIONAL/DEPARTMENTAL SERVICE

- Graduate Education Committee - 2011
- Board of Trustees – Alumni Committee – 2009-2011
- Cooperating Teacher Newsletter Committee – 2009-2011
- Department of Education Student Performance Review Committee – 2009-2011
- Student Affairs Council 2007-2009 – Chair: Spring 2009
- Committee on Committees 2007-2009
- Thaskala Committee, 2005-2006
- Student Government Association, 2004-2005
- Student Review Process Committee, 2003-2004
- Faculty Advisor/Student Chapter of Council for Exceptional Children, 2003-present
- First Year Advising Program, Fall 2003-2009
- Judicial Appeals Board, 2003-2007
- Special Education Advisory Council, 2002-2009
- Advising Education Majors, 2001-present, 25 advisees/year