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Elementary General Education Teachers' Knowledge of and Experience Teaching Students with Disabilities in Science and Social Studies

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COLLEGE OF EDUCATION

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Abstract

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EdS, Piedmont College, 2006

MHRD, Clemson University, 1998

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

In Grades 3 to 5 at a suburban southeastern elementary school, the percentage of students with disabilities (SWDs) who do not meet state standards in science and social studies is greater than that of their nondisabled peers. To address this disparity, district administrators required that proficiency ratings increase for SWDs without providing general education (GE) teachers with training. A qualitative bounded case study was used to understand how GE teachers constructed their knowledge of and met SWDs instructional needs and to understand GE teachers' needs as they worked toward meeting the district goals. Piaget's constructivist learning theory served as the conceptual framework for this study. A purposeful sample of 6 GE teachers, 2 each from Grades 3-5 whose classrooms included SWDs, volunteered to participate in open-ended interviews. Qualitative data were analyzed using provisional coding and pattern coding. A primary finding was that the participants identified teacher collaboration and professional development necessary to accommodate SWDs in the GE setting. This finding led to a recommendation that school leaders provide ongoing professional development for GE teachers as well as ongoing opportunities for collaboration between GE and special education teachers. These endeavors may contribute to positive social change by providing GE teachers instructional strategies and accommodations for meeting the learning needs of SWDs to increase the number and percentage of SWDs who meet the state standards and district goals in science and social studies.

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Dedication

This research is dedicated to all of the special educators who work tirelessly to support students with disabilities in an effort to close the achievement gap and to all of the general educators who take the time to understand and act in the best interests of students with special needs.

Acknowledgments

I would like to extend a very heartfelt thanks to my mother, who inspired me to teach students with disabilities by exposing me to the world of special education at such a very young age. As a bus driver and paraprofessional of students with disabilities for 30 years, you taught me that SWDs are unique, and you helped me understand how these children used their strengths to minimize their weaknesses. Mom, thanks for the prayers and the weekly inspirational quotes. The quote that resonated with me the most is by Harriett Tubman, who said, “Every great dream begins with a dreamer. Always remember, you have within you the strength, the patience, and the passion to reach for the stars to change the world.” Latasha, my best friend who is just like a sister, was instrumental in helping me to maintain the motivation to complete this chapter in my education successfully. You understood every phase of my journey and why I spent many weeknights and weekends pouring myself into a study that would open the eyes of many to the day and life of SWDs in the elementary classroom. I want to thank my phenomenal colleagues for their continued support and inspiration. I admire your dedication to teaching SWDs in the general education setting. Your perseverance and ability to meet challenges inspire me to continue to seek innovative approaches to improve student learning. Having Dr. Salina as a mentor and collaborator has been a surreal experience. It was a blessing to be graced with her guidance and wisdom during my doctoral journey. I’m forever grateful to God for placing her in my life to help me to accomplish a once-in-a-lifetime dream! I also would like to thank Dr. Seymour and Dr. Howe for their guidance and insightful advice.

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Section 1: Introduction to the Study

Introduction

Students in Grades 3 to 5 experience increasing academic demands across subject areas, including science and social studies (Jeong, Gaffney, & Choi, 2010; Sanacore & Palumbo, 2009). The expository text of science and social studies textbooks is filled with complex content that is unfamiliar to many students (Dexter & Hughes, 2011; Hedin & Conderman, 2010; Ness, 2011; Neuman & Roskos, 2012). Students in these upper elementary grades often are expected to acquire content knowledge of science and social studies concepts through instructional strategies that explicitly require the use of the expository textbook presentations (Bryce, 2011; Jitendra, Burgess, & Gajria, 2011; Swanson, Edmonds, Hairrell, Vaughn, & Simmons, 2011).

Teachers' use of expository textbook instruction during science and social studies is overwhelming for many students, particularly for students with disabilities (SWDs) (Dexter & Hughes, 2011; Hughes & Parker-Katz, 2013; Scruggs, Mastropieri, Berkeley, & Marshak, 2010). The complexities of expository text make it difficult for SWDs to acquire content knowledge from social studies and science text because the lessons comprise abstract content and technical vocabulary (Bulgren, Graner, & Deshler, 2013; Mason & Hedin, 2011; Seifert & Espin, 2012; Vaughn et al., 2013). Students with disabilities also have difficulty acquiring content knowledge from science and social studies texts because (a) many textbooks are written above their reading ability (Mason & Hedin, 2011; Scruggs, Brigham, & Mastropieri, 2013), (b) SWDs are unclear about the organization of the text (Swanson et al., 2012), and (c) SWDs are unable to connect their

background knowledge of concepts to new knowledge (Therrien, Taylor, Hosp, Kaldenberg, & Gorsh, 2011; Therrien, Taylor, Watt, & Kaldenberg, 2014). These problems contribute to the challenges facing SWDs as they try to interpret and comprehend expository content.

In Georgia, all students who are integrated into the regular classroom setting in Grades 3 to 5 are required to participate in the science and social studies criterion-referenced competency test (CRCT) assessments, which measure students' science and social studies content knowledge and their application of that knowledge (Georgia Department of Education [GaDoE], n.d.). Many SWDs in a suburban school are not achieving the state standards on Georgia's CRCT in science and social studies (Governor's Office of Student Achievement, 2014).

Local School Results for SWDs on the CRCT

Local school data from the last 3 years (2011-2013) showed that a higher percentage of SWDs did not meet expectations on the CRCT science and social studies content knowledge assessments at the local school level when compared to nondisabled peers in Grades 3 to 5. Table 1 displays a comparison of the scores of SWDs to those of their nondisabled peers in Grades 3 to 5 who did not meet expectations on the CRCT science and social studies assessments.

Data in the table indicated that this problem was persistent in Grades 3 to 5 at the local level. The CRCT data from the 2013 school year also indicated that the largest achievement gap among SWDs and nondisabled peers was in social studies and science. Local school administrators pointed out in the local school plan for improvement (LSPI)

for the 2013-2014 school year that general education (GE) teachers should address the disparity in science and social studies test scores for SWDs. One of the LSPI goals for the 2014 school year was that 100% of SWDs would meet or exceed standards in social studies and science.

Table 1

2011-2013 Local School Comparison of CRCT Science and Social Studies Results for SWDs and Nondisabled Peers

CRCT content knowledge assessment and year tested	Total no. of SWDs tested	% of SWDs who do not meet expectations	Total no. of nondisabled peers tested	% of nondisabled peers who do not meet expectations
2011 CRCT				
Grade 3	21	43%	161	7%
Science	21	43%	160	6%
Social studies				
Grade 4				
Science	32	25%	173	8%
Social studies	32	22%	169	5%
Grade 5				
Science	29	59%	175	5%
Social studies	29	59%	173	6%
2012 CRCT				
Grade 3				
Science	12	50%	172	3%
Social studies	12	50%	171	5%
Grade 4				
Science	27	37%	164	2%
Social studies	27	30%	162	1%
Grade 5				
Science	33	33%	194	5%
Social studies	33	33%	192	7%

Table Cont'd

CRCT content knowledge assessment and year tested	Total no. of SWDs tested	% of SWDs who do not meet expectations	Total no. of nondisabled peers tested	% of nondisabled peers who do not meet expectations
2013 CRCT				7%
Grade 3	8	Too few students	174	3%
Science	8	to report	173	
Social studies				
Grade 4				
Science	7	Too few students	171	2%
Social studies	7	to report	170	2%
Grade 5				
Science	24	50%	161	6%
Social studies	24	46%	158	2%

Note. From the Governor's Office of Student Achievement. (n.d.) K-12 Public Schools Report Card-Georgia Tests. There must be a minimum of 10 SWDs in a grade level in order to report the CRCT test data to the state.

To address student achievement in social studies and science, the LSPI for the 2014 school year included instructional performance expectations of GE teachers to increase the academic performance in these subject areas for all students, including SWDs. These instructional expectations for social studies were to (a) bridge essential understanding about the past to contemporary events, (b) assist students in understanding the nature of historical inquiry, (c) encourage the consideration of multiple perspectives on events, and (d) engage students in speculation about the known and unknown motives and actions of historic figures. The LSPI instructional expectations for science were to (a) provide opportunities for students to design and conduct experiments using the scientific method; (b) teach students how to collect evidence; (c) formulate explanations based upon the collected data; (d) create a problem-solving environment and guide students through problems; (e) ask students for evidence in discussion and challenge them without dismissing it; (f) provide engaging activities demonstrations, discussions,

and experiments that promote understanding; and (g) use content vocabulary in writing and speaking.

Description of the Local Site

Total student enrollment at the local study site school for the 2014 school year was 1,205 students. Five hundred and forty students were enrolled in Grades 3 to 5, and the average class size was 25 to 28 students, with the maximum being 30. Total student numbers in the GE setting at the local school were as follows: 183 in Grade 3, 185 in Grade 4, and 172 in Grade 5. There were 36 SWDs in the GE setting at the local school, with 15 in Grade 3, 12 in Grade 4, and nine in Grade 5, respectively (Great Southern Schools [GSS], 2014).

Table 2 shows the professional background of each teacher who participated in the study, along with the distribution of SWDs at the local school in Grades 3, 4, and 5. Administrators' decisions to integrate SWDs into the GE classrooms were not based solely upon whether or not the GE teachers had special education certification; rather, the decisions also were based upon years of experience and the desire of the teachers to work with SWDs.

Fifty-eight teachers were employed at the local site at the time of the study. Eight teachers held a bachelor's degree, 30 held a master's degree, and 20 held a specialist degree. Seven teachers had 1 to 5 years of teaching experience, 21 teachers had 6 to 10 years of experience, and 30 teachers had 11 to 15 years of experience. There were 21 GE teachers of Grades 3 to 5, with seven teachers at each grade level. One teacher from each grade level was certified in GE and special education (GSS, 2014).

Table 2

Distribution of SWDs at the Local School in Grades 3, 4, and 5

Teacher	Certification in GE and special education	Grade	Certification level	No. of years of teaching experience	Total no. of students in class	No. of SWDs in class
Teacher A	No	3	T5	5	24	1
Teacher B	No	3	T5	32	22	4
Teacher C	No	3	T5	14	23	4
Teacher D	No	3	T5	10	22	3
Teacher E*	Yes	3	T5	9	23	1
Teacher F*	Yes	4	T6	10	22	4
Teacher G	No	4	T5	7	28	1
Teacher H	No	4	T6	16	24	1
Teacher I	No	4	T6	20	25	1
Teacher J	No	5	T6	12	23	7
Teacher K*	Yes	5	T6	23	25	2

Note. *GE teachers dual certified in early childhood and special education were excluded from the study. Certification level: master's degree (T5) and specialist degree (T6).

The climate of the school during the study was very positive, and there were multiple opportunities for adults to support each other. For example, I noted that the local site had a supportive Parent-Teacher Association (PTA) whose members volunteered at the school. The school had a PTA volunteer sign-up page for parents who wished to help at school functions. The local school had a Half-Hour Hero program each day, during which time parents could help students with classroom assignments. Groups of teachers from each grade level would meet with administration every Monday to collaborate and discuss instructional topics. Teachers would meet to discuss and share ideas to improve instruction. Administrators would discuss the importance of using data to guide instructional decisions. These collaborative meetings were an ideal time for

administrators to discuss the academic performance of SWDs in Grades 3 to 5 throughout the school year (GSS, 2014).

The local school continues to serve a diverse group of students from various socioeconomic backgrounds**.** However, the learners in Kindergarten to Grade 5 at this local school were not identified as educationally disadvantaged based upon the percentage of children qualified to receive free or reduced-price (school) meals. As the result of not qualifying for the educationally disadvantaged status, the school in this study was not identified as a Title 1 school for the 2013-2014 school year (GSS, 2014).

Brief Description of the Local School District

Great Southern Schools (GSS), a suburban district located in the metropolitan area, is a large school district in Georgia. Great Southern Schools has 20,000 employees and serves more than 168,600 students. It is the largest employer in the county and one of the largest employers in Georgia. Great Southern Schools has 132 schools: 77 elementary schools, 26 middle schools, 19 high schools, and four charter schools. Of these 132 schools, 56 schools meet the criteria to be designated Title 1 schools in the district for the 2014 school year. Specifically, of these 56 schools, 38 are elementary schools, 10 are middle schools, and eight are high schools.

Nationwide CRCTs in Science and Social Studies

Currently, no nationwide standardized content knowledge assessment data for SWDs in social studies and science at the elementary level are available (Fitchett & Heafner, 2010; Winters, Trivitt, & Green, 2010). However, Fitchett, Heafner, and Lambert (2014) pointed out that 12 states have adopted standardized assessments of

social studies and science knowledge at the elementary level; a decade ago, 30 states assessed science and social studies. Teachers in states that have decided to assess science and social studies content knowledge have chosen to devote more time to instruction than teachers in states that have not chosen to participate in standardized testing (Heafner & Fitchett, 2012; Milner, Sondergeld, Demir, Johnson, & Czerniak, 2012; Pace, 2011; Winters et al., 2010).

Common Core Curriculum Standards

School districts across the United States are in the process of implementing the new national standards-based curriculum, Common Core State Standards (CCSS), for students in Kindergarten to Grade 12. Haager and Vaughn (2013) noted that although the developers of the CCSS outlined the academic expectations to guide instruction for students in all subjects, the guidelines gave teachers little guidance in meeting the needs of SWDs to improve their academic achievement so that they also could meet the CCSS.

Georgia recently adopted the Common Core Georgia Performance Standards (CCGPS), a new standards-based curriculum that provided teachers with guidelines explaining what all students, including SWDs, should learn at each grade in core subjects such as science and social studies. These new standards demanded more emphasis on grade-level complex text, academic vocabulary, and students' acquisition of content knowledge from expository text (Neuman & Roskos, 2012; Scruggs et al., 2013). One of the most significant revisions in the new standards was the increased expectation that students at the elementary level would be able to understand expository text (Haager & Vaughn, 2013; Shanahan, 2012).

Individuals With Disabilities in Education

The federal guidelines of the Individuals With Disabilities in Education Act of 2004 (IDEA) were established to help educators to determine how SWDs should be educated in the GE classroom setting. According to IDEA, instruction for SWDs should be outcome based so that the students could make satisfactory progress in meeting the grade-level standards required by the GE curriculum (Bulgren et al., 2013; McLeskey, Waldron, & Redd, 2012). The statutes outlined in IDEA required SWDs to be educated with nondisabled peers as much as possible. The enactment of IDEA supported federal guidelines stipulating that SWDs must have access to a free and appropriate education (McKeown, Beck, & Blake, 2009).

In summary, the most disappointing test scores for the local school during the 2011-2013 school years were in science and social studies. For the SWDs in this setting, the scores were even more disappointing. As a result, the district decided to focus on these content areas by requiring that 100% of SWDs achieve proficiency ratings. How this goal was to be accomplished was not made clear to teachers and administrators, but it was clear to all personnel in the district that the guidelines of IDEA had to be met. Within the LSPI document is a list of suggestions for GE teachers and students. It was unclear how the CRCT scores would improve for SWDs in this district, where the majority of teachers are not certified in special education. I was interested in learning about the

experiences of GE teachers as they worked with SWDs in reaching the goals of the LSPI in social studies and science.

Problem Statement

Over a 3-year period (2011-2013), SWDs exhibited low achievement in science and social studies, indicated by their scores on CRCT content knowledge assessments, as outlined in the LSPI at a suburban elementary school (GaDoE, n.d.; Governor's Office of Student Achievement, 2014). The LSPI expectation was and remains that 100% of SWDs will meet or exceed proficiency on the CRCT science and social studies content knowledge assessments.

I conducted this study to explore GE teachers' knowledge of and experience teaching SWDs in science and social studies. To address this problem, I explored how the GE teachers constructed their knowledge about the learning needs of SWDs in science and social studies, how they addressed SWDs' learning in their classrooms, what problems they encountered as they accommodated the instructional needs of SWDs, and what the teachers' own needs for support were as they worked toward meeting the goals of the district in science and social studies content learning of SWDs. The results of this exploration might provide insight that could lead to the design of effective professional development for GE teachers in the area of teaching science and social studies content area reading and/or to further research as a follow-up to this study.

Nature of the Study and Qualitative Research Questions

I conducted this qualitative case study to explore GE teachers' experiences in accommodating the needs of SWDs' learning in the science and social studies content

areas. Four research questions guided this study:

1. How do GE teachers construct their knowledge about the learning needs of SWDs in science and social studies?
2. What are GE teachers doing in their classrooms to accommodate and improve the academic achievement of SWDs in science and social studies?
3. What difficulties do GE teachers face in the classroom as they accommodate and help SWDs to improve in science and social studies?
4. What are GE teachers' perspectives of the support that they need to better serve the needs of SWDs in science and social studies?

I used a qualitative case study approach to conduct my research. For the purposes of this study, I defined SWDs as students who had individualized education program (IEP) goals and objectives and who participated in science and social studies instruction in the GE setting. A purposeful sample of six GE teachers of students in Grades 3 to 5 who were teaching at least one SWD in the GE classroom participated in the study. I excluded two groups of teachers from my study, namely, special education teachers and GE teachers who had certification in special education. I collected the data through in-depth interviews. A detailed discussion of the qualitative methodology is provided in Section 3.

Purpose of the Study

The purpose of the study was to explore GE teachers' knowledge and experience teaching SWDs in science and social studies, how they addressed SWDs' learning in their classrooms, what problems they encountered as they accommodated the needs of SWDs,

and what the teachers' own needs for support were as they worked toward meeting the goals of the district in the science and social content learning of SWDs. Many studies have been conducted to understand the needs of SWDs in content area reading. I will discuss these studies in the literature review in Section 2. Far fewer studies have been conducted on GE teachers' perceptions of how to meet the content knowledge acquisition needs of SWDs in science and social studies at the elementary level (Berkeley, Marshak, Mastropieri, & Scruggs, 2011; Bulgren, Marquis, Lenz, Schumaker, & Deshler, 2009; Halvorsen et al., 2012; Jeong et al., 2010; Ness, 2011).

Conceptual Framework

A constructivist perspective helped me to examine how the GE teachers who participated in this study constructed their understanding of SWDs' learning in their classrooms. Constructivism is a theory of learning that emphasizes the active construction of knowledge. From a constructivist viewpoint, learning occurs when individuals integrate new knowledge with existing knowledge (An, 2013; Little & Box, 2011; McLaughlin, 2012). Teachers construct knowledge from their individual and collective experiences.

The development of the self into a self-directing, inquiring, and reasoning human being is central to education (Dewey, 1916). Effective teachers share experiences and analyze them critically for improvement. In other words, when teachers collaborate to share thoughts and experiences, they transfer that knowledge into a context that they can understand (García, Pearson, Taylor, Bauer, & Stahl, 2011). Teachers then integrate new knowledge with existing knowledge to design instruction. Teacher reflection might occur

during or after teaching to determine the effectiveness of the instructional strategies used. Effective teachers engage in reflection when they think about ways to redefine goals and to vary, expand, or redirect their approaches in the future. Hence, teachers contribute to the evolution of education theory and practice by determining whether their instructional approaches are successful or need to be altered, improved, or discarded (Shymansky, Wang, Annetta, Yore, & Everett, 2012).

Schema theory is consistent with a constructivist perspective because of the emphasis on the central role of individuals' activity in learning. For instance, in schema theory, teachers actively construct and revise their schemas as they learn content and professional knowledge. Teachers are not passive recipients of information; instead, they actively connect it with previously assimilated knowledge and make it their own (An, 2013; Chao, 2010).

If Dewey (1916) contributed to the emergence of constructivist thought, Piaget (1964) is credited with expanding current understanding of learning ways that support and contribute to constructivism. Knowledge is not a static body of information that is passed on to learners (Piaget, 1964; Porcaro, 2011). Knowledge is the continual construction and reorganization of information, with the learner taking responsibility for this process (Shymansky et al., 2012). For example, as teachers become more experienced, they develop new cognitive structures, or schemas, that are more sophisticated (Carlson & Weidl, 2013; Farrell, 2012). These schemas allow teachers to make sense of more complex knowledge in order to reflect upon experiences and formulate complex structures of thought.

Operational Definitions

Comprehension: The reader's ability to interpret the print text correctly and construct meaning from the text. A child's prior knowledge, cultural background, and social background affect reading comprehension (Mason, Meadan-Kaplansky, Hedin & Taft, 2013).

Content-centered comprehension instruction: Teachers' use of materials such as graphic organizers (GOs) and comprehension guides to help make text comprehensible to students (Dexter & Hughes, 2011).

Criterion-referenced competency test (CRCT): An assessment indicating students' scores based upon mastery of course content. In this type of assessment, it is possible for all participants to receive the highest score, regardless of how many students achieve the top score (Gotch & French, 2013; Huggins & Elbaum, 2013).

Graphic organizers (GOs): Tools that illustrate relationships among various ideas in visual form, including sequence, time lines, character traits, facts and opinions, main ideas and details, and differences and similarities; particularly helpful for visual learners (Dexter & Hughes, 2011).

Individualized education plan (IEP): A legally binding plan that identifies a student's learning needs and establishes goals and objectives to strengthen areas of weaknesses so that the student can be successful academically. The stipulations of the Individuals With Disabilities Education Improvement Act (IDEIA) of 2004 required schools to make accommodations or modifications to give SWDs accessibility to the core curriculum and opportunities, as much as possible, to participate with nondisabled peers

(McLeskey, Landers, Hoppey, & Williamson, 2011; Swanson & Vaughn, 2010).

K-W-L (Know-Want-Learn): A three-step cognitive procedure that teachers can use to increase student comprehension, recognize prior knowledge, predict new types of information to be acquired from reading, and review what is learned from reading. In Step 1, defined as what students want to know (K), students anticipate or predict what they will learn about the topic. In Step 2, defined as what students want to learn (W), students anticipate or predict what they will learn about the topic and write it down. In Step 3, defined as what students have learned (L), students write down what they learned from reading (Williams et al., 2014).

Least restrictive environment: A legal term from IDEA requiring that SWDs be educated in the GE classroom as much as possible and be from nondisabled peers as infrequently as possible (McLeskey, Landers, Williamson, & Hoppey, 2012).

Local school plan for improvement (LSPI): Administrators at each local school in the GSS District, a pseudonym, collaboratively create LSPIs that include targeted goals based upon students' achievement test results. Data are used to determine areas needing improvement and identify specific annual objectives that are measurable. Educational stakeholders at the local school level then determine how to use research-based strategies to achieve these goals, using flexibility as needed.

Scaffolding: The teacher support necessary for children to accomplish tasks or achieve goals that they could not accomplish on their own. Ultimately, as children become more proficient or capable, the scaffold is withdrawn (McLaughlin, 2012; Ness, 2011).

Schema: A group of interrelated ideas or concepts. The more extensive the schema for any topic (e.g., cooking, boating, or dogs) is, the more easily individuals will be able to learn new information about that topic. The schema theory also suggests that without existing schemas, it is difficult to learn new information (Little & Box, 2011; Parsons & Ward, 2011).

Student-centered comprehension instruction: Teaching students how to use specific comprehension strategies independently (McKeown et al., 2009).

Student with disabilities (SWDs): According to IDEA, a student with a disability is "a student evaluated as having mental retardation, a hearing impairment (including deafness), a speech or language impairment, visual impairment (including blindness), a serious emotional disturbance, an orthopedic impairment, autism, traumatic brain injury, multiple disabilities, a specific learning disability, deaf-blindness, or other health impairment, and who, by reason thereof, needs special education and related services" (U.S. Department of Education [USDoE], n.d.).

Furthermore, the standardized testing data reported in this study came from SWDs deemed capable of learning in the GE setting and meeting the goals of the LSPIs, as identified by their special education eligibility reports and IEPs. However, other SWDs with moderate and severe cognitive disabilities receive academic instruction in the special education setting. Although these students are excluded from CRCT standardized testing, they participate in Georgia alternative assessments (GAAs) that measure their academic achievement. For the purposes of this study, I defined SWDs as students with IEP goals and objectives who participated in science and social studies instruction in the

GE setting.

Text structure: The organizational patterns found in textbooks. Teachers can support student comprehension by teaching them about text structure and using structures in expository text to help students to organize information (Akondi, Malayeri, & Samad, 2011).

Venn diagram: A visual display that teachers can use to teach students about text structure or ways to organize information (Mahdavi & Tensfeldt, 2013).

Researcher Bias, Assumptions, Limitations, and Delimitations

Researcher Bias

The biases that I brought to the analysis of the data were the result of my being a special education teacher. I brought to the study all of my knowledge and beliefs as a special education teacher:

1. I believe that SWDs can achieve proficiency on the standards in science and social studies when they are provided with accommodations.
2. I hold a bias that SWDs can be accommodated to learn in the GE classroom.
3. I believe that SWDs in the GE setting can acquire the content knowledge needed to demonstrate that they understand science and social studies concepts.

Assumptions

I assumed that the following statements were true regarding the GE teacher participants:

1. The GE teachers integrated comprehension strategy instruction during science

and social studies for SWDs in the GE setting.

2. The GE teachers' responses were accurate and fully described their perceptions.

Limitations

Because of the nature of the qualitative design of the study and the sample size, this study had the following limitations: (a) The findings cannot be generalized to a larger target population on the basis of this one study of a single school in one geographical area, and (b) the interviews provided teachers' self-reported data, which might not have been accurate representations of their practices.

Delimitations

This study was delimited to the following:

1. All special education teachers in Grades K to 5 were excluded.
2. Any GE teachers of children Grades 3 to 5 who did not have at least one SWD in their classroom setting were excluded from this study.
3. I did not evaluate the instructional effectiveness of GE teachers.
4. I did not examine SWDs' ability to read science and social studies text.
5. I did not evaluate SWDs' learning of science and social studies content.

Significance of the Study

SWDs in Grades 3 to 5 have achieved significantly lower scores than nondisabled peers on the state-mandated science and social studies CRCT content knowledge assessments. Researchers have indicated that although SWDs who are capable of learning the standards are being integrated into the GE classroom setting, they remain a traditional

underachieving subgroup (Bulgren et al., 2013; Mason & Hedin, 2011; Ritchey, 2011; Scruggs et al., 2013). This study might provide a more in-depth understanding of the ways in which GE teachers can provide instructional accommodations in social studies and science for SWDs in the regular classroom setting. The results also might encourage GE teachers to consider how well they are meeting the content knowledge acquisition needs of SWDs to improve the students' achievement in science and social studies. The results might provide useful information to public school district stakeholders who are seeking ways to provide GE teachers with the support that they need to increase SWDs' academic achievement in science and social studies.

Social Contributions

Because the world of tomorrow will be led by the children of today, including SWDs, it is vital that young children be encouraged to be concerned about the future and understand that they can shape that future according to their own goals and aspirations (Borman, Danzig, & Garcia, 2012; White, 2013). Teachers can be agents of change by becoming more effective problem solvers and by ensuring that students meet the curriculum standards successfully (Borman et al., 2012; Farrell, 2012). The findings that emerge from this study might encourage educators to reflect upon the ways in which they think about their students and the low achievement of SWDs (Johnstone & Thurlow, 2012; McLeskey et al., 2011). The findings also might provide GE teachers with insight into ways that they can improve their instruction by focusing on what they can change to promote equity in teaching SWDs. The intention is that this information can be used to design professional development for teachers that meet their specific needs. The primary

goal of social change is to improve the professional education of the GE teachers who are tasked with providing the SWDs in their classrooms with equitable education in science and social studies.

Summary

In Section 1, I introduced the study by describing the local site and the school district, explaining the national assessments in science and social studies at the elementary level, and presenting an overview of the impact of the CCSS on SWDs. I also discussed the local problem and the rationale for exploring how GE teachers understand the low achievement of SWDs in science and social studies. Local school data over a 3-year period supported the low achievement of SWDs on standardized science and social studies content knowledge CRCT assessments when compared to their nondisabled peers. The constructivist theory, including schema theory, was the conceptual framework used to guide this study. I concluded Section 1 by discussing the significance of the study and its implications for social change.

Section 2 is a review of the literature. It includes the following topics for discussion: (a) a brief history of IDEA (2004) regarding the integration of SWDs into the GE classroom, (b) best practices for accommodating SWDs in the GE classroom setting, (c) characteristics of content area text and instructional strategies to improve SWDs' comprehension of science and social studies concepts, and (d) best practices in teaching content area reading to SWDs. The research design and methodology (i.e., participant selection, data collection procedures, and data analysis) are discussed in Section 3. I

present the results of the data analysis in Section 4. Section 5 includes an interpretation of the findings and recommendations for future research.

Section 2: Literature Review

Introduction

The purpose of the study was to explore GE teachers' knowledge and experience teaching SWDs in science and social studies, how they addressed SWDs' learning in their classrooms, what problems they encountered as they accommodated the needs of SWDs, and what the teachers' own needs for support were as they worked toward meeting the goals of the district in the science and social content learning of SWDs. In this section, I described current evidence-based practices for providing accommodations to SWDs in the GE classroom, instructional strategies used in the content areas, and best practices for teaching SWDs in the content areas. Although there has been an abundance of research on teachers' perceptions of teaching and accommodating SWDs in various content areas at the middle and high school levels, this same research at the elementary level has been scarce. To address this gap, I explored the following topics in my search for relevant literature: (a) the history of IDEA and inclusive classrooms, (b) ways to accommodate SWDs in the GE classroom, (c) characteristics of content area text and reading comprehension, (d) research related to content area reading instruction in science, and (e) research related to content area reading instruction in social studies.

I obtained relevant literature for this study from several education databases: SAGE, ProQuest, Teacher Reference Center, and Education Research Complete. I used the following search terms to locate peer-reviewed journal articles related to this study: *schema theory*, *instructional accommodation and SWDs*, *scaffolding*, *special education and IDEA*, *student achievement and IDEA*, *SWD and social studies*, *SWD and science*,

learning disabilities, *content area reading and elementary*, *SWD and explicit teaching*, *explicit teaching and social studies*, *explicit teaching and science*, *reciprocal teaching and science*, *reciprocal teaching and social studies*, *content area reading and SWDs*, *content area reading and science*, *content area reading and social studies*, *expository text*, and *teachers' perception and inclusion.*

History of IDEA and Inclusive Classrooms

Since the inception of IDEA, formerly known as the Education for All Handicapped Students Act (EHA), the statute has been ratified on numerous occasions over the last 40 years (USDoE, n.d.). According to McLeskey, Landers, et al. (2012), the overarching theme of these amendments was twofold: (a) Federal policymakers amended IDEA to ensure that SWDs were included with nondisabled peers as much as possible in the GE setting, and (b) federal policymakers also amended IDEA to ensure that SWDs who are deemed capable of learning the curriculum participate in the same state assessments as their nondisabled peers. Following is a history of IDEA and inclusive education for SWDs, as well as the federal laws that were implemented to monitor the academic achievement of SWDs in the GE classroom.

Education for All Handicapped Students Act 1975

The trend to integrate SWDs into the GE classroom began in the 1960s and led to legal actions in the 1970s. The EHA was the first law to clearly define the rights of disabled students to free and appropriate public education (McLeskey, Landers, et al., 2012; USDoE, n.d.). The passage of EHA by Congress in November of 1975 was the result of many years of litigation and state legislation to protect and promote the civil

rights of all SWDs. This federal law required states to provide a free and appropriate education for all SWDs.

Individuals with Disabilities Education Act 1990

The EHA was amended in 1990 by IDEA (McLeskey, Landers, et al., 2012). More importantly, IDEA replaced the term *handicapped* with *disabled* and expanded educational placement options for SWDs (USDoE, n.d.). This law required states to develop procedures for educating every SWD in the least restrictive environment, meaning that states had to provide SWDs with an education in settings that were as normal as possible.

Advocates of inclusion asserted that SWDs could benefit socially and academically from involvement with their nondisabled peers. They also contended that SWDs should be educated with their nondisabled peers in their regular home school districts, even if doing so called for changes in educational requirements, special aids, services, and training or consultation for GE teachers. IDEA and its amendments of 1990 replaced the EHA and its amendments of 1974.

Individuals with Disabilities Education Act 1997

Because special education is an integral part of the U.S. public education system, SWDs were included in the concerns expressed by federal policymakers for higher standards (USDoE, n.d.). The argument was that academic expectations had been too low for SWDs. Federal policymakers asserted that SWDs should be expected not only to learn the general curriculum but also to perform at a level comparable to that of nondisabled students on assessments of progress (McLeskey et al., 2011). Moreover, reformers argued

that no school or state should be allowed to avoid the responsibility of demonstrating that its SWDs were making acceptable progress in the GE curriculum (McLeskey & Waldron, 2011).

The IDEA and its amendments of 1997 replaced IDEA and its amendments of 1990. These reforms involved setting standards of achievement for SWDs that were measured through standardized tests or other assessment procedures. In the 1990s, state and federal policymakers became concerned about what they perceived as a general decline in SWDs' educational achievement (McLeskey, Landers, et al., 2012). As a result of their concerns, federal policymakers emphasized standards-based reforms (McLeskey et al., 2011).

The reformers felt that teachers' expectations of SWDs were too low and that all SWDs should be held to higher standards of performance. The standards-based reform movement of the 1990s included a heavy emphasis on access to the GE curriculum by SWDs (McLeskey, Landers, et al., 2012). The curriculum for SWDs was frequently different from the GE curriculum. Failure to teach SWDs the same curriculum was interpreted as an indication that the expectations for SWDs were lower, resulting in their low achievement and failure to transition successfully to adult life.

Because SWDs were not often included in statewide or national assessments of educational progress, little information about how SWDs were progressing compared to their nondisabled peers was available (McLeskey, Landers, et al., 2012). The standards-based reform movement of the 1990s resulted in reform designed to include SWDs in

national and state assessments of educational progress. The 1997 amendments of IDEA required the inclusion of SWDs in assessments (USDoE, n.d.).

Individuals With Disabilities Education Improvement Act 2004

The IDEA of 2004 was enacted by Congress and signed by President George W. Bush. The act reauthorized and made significant changes to an earlier version of IDEA. IDEA, as amended by the IDEIA of 2004, was intended to help SWDs achieve higher standards by (a) promoting accountability for results, (b) enhancing parent or guardian involvement, (c) using proven practices and materials, and (d) providing more flexibility and reducing paperwork burdens for states and local school districts (Lee, Soukup, Little, & Wehmeyer, 2009; Whalon & Hart, 2011). Enactment of this law gave lawmakers the opportunity to make improvements to the current regulations that would strengthen the federal effort to ensure that every SWD had available a free and appropriate education that was of high quality and was designed to achieve the high standards reflected in the Elementary and Secondary Education Act of 1965, as amended by the No Student Left Behind Act of 2001 and its regulations (McLeskey, Landers, et al., 2012). IDEA and its amendments of 2004 replaced IDEA and its amendments of 1997.

Least Restrictive Environment

According to IDEA, SWDs should be educated with nondisabled students as frequently as possible. Historically, SWDs were pulled out of GE classrooms and placed in self-contained classes (McLeskey et al., 2011; McLeskey, Landers, et al., 2012). Least restrictive environment is based upon the premise that placing SWDs with nondisabled

peers results in improved academic and social development for SWDs and reduces the stigma associated with being educated in segregated settings.

McLeskey, Landers, et al. (2012) noted that the key to the success of SWDs in the GE classroom lies with the GE teachers. Factors that deserve consideration include the teachers' attitudes about having SWDs in the classroom and their judgments of the students' capacity to make academic progress. GE teachers have an enormous responsibility, so it is important that they receive preparation and useful support (Brigham, Scruggs, & Mastropieri, 2011; Bulgren et al., 2013; McLeskey & Waldron, 2011; McLeskey, Landers, et al., 2012).

De Boer, Pijl, and Minnaert (2010) pointed out that the attitudes of many GE teachers toward the inclusion of SWDs have been less than enthusiastic. In a synthesis of research published over the last 10 years, they found 26 studies about GE teachers' views on integrating SWDs into their classes. The majority of those studies indicated that the GE teachers had neutral or negative views about inclusive education. The GE teachers in those studies perceived that they lacked the skills, training, and resources to teach SWDs.

Inclusion of SWDs into the GE classroom has been a topic of controversy for decades (Eisenman & Ferretti, 2010; McLeskey, Landers, et al., 2012). The federal guidelines of EHA (1974); IDEA (1990, 1997); and IDEIA (2004) were established to emphasize importance of giving SWDs access to the GE curriculum, being educated with nondisabled peers as frequently as possible, and participating in local and standardized assessments (McKeown et al., 2009). These government regulations compelled teachers to adapt to change in order to meet the diverse needs of all students. The ratification of

IDEA was influential in increasing the number of opportunities for SWDs to be educated in the GE classroom. These mandates also increased teachers' accountability for monitoring the progress of SWDs (Bulgren et al., 2013; McLeskey, Landers, et al., 2012).

Accommodating SWDs in the General Education Classroom

Teachers seek instructional accommodations that foster the learning and management of diverse learners (Swanson et al., 2011). Several researchers (e.g., Berg & Wehby, 2013; Brigham et al., 2011; Ciullo, Falcomata, & Vaughn, 2014; Haager & Vaughn, 2013; Therrien et al., 2011) have noted the importance of identifying accommodations that are reasonable to ask of teachers to help SWDs to access the GE curriculum in the inclusive classroom setting. Lee et al. (2009) used multiple observations to investigate the teacher variables that contributed to SWDs gaining access to the GE curriculum. They found that SWDs demonstrated higher achievement during teacher-directed activities than during seatwork activities. Lee et al. also noted that SWDs were more engaged in their learning when the teachers planned student-directed activities that involved working in cooperative learning groups with classroom peers. When SWDs are included in the GE setting, modifications or accommodations to the curriculum can give them access to content-level material (Ciullo et al., 2014; McLeskey & Waldron, 2011).

Swanson et al. (2011) asserted that elementary teachers in the upper grades encounter barriers to making content area text accessible to their students that are the result of the lack of an explicit connection between content area text and cognitive strategies. Ciullo et al. (2014), however, emphasized that strategies are available to make

expository text accessible for SWDs at the elementary level. Table 3 displays the recommendations that several researchers have made (Jitendra & Gajria, 2011; Mason & Hedin, 2011; McGinnis, 2013; Swanson et al., 2011) regarding best practices in providing instructional accommodations for SWDs in the GE setting. These best practices are organized according to accommodations involving instructional delivery, interactive instruction, and student performance.

Table 3

Types of Accommodations for SWDs in the GE Classroom

Instructional delivery accommodations	Explicit instruction accommodations	Student response accommodations
Clarify or simplify written directions Segment assignments into manageable parts Provide additional practice activities	Explicit teaching before, during, and after instruction	Change student response mode Encourage use of GOs Provide a peer tutor, work time flexibility, multiple opportunities for practice, and work samples

Note. GOs are graphic organizers

Accommodations for Instructional Delivery

Most students, including SWDs, spend a large portion of the school day using instructional materials such as textbooks. Most instructional materials give teachers few activities or directions for teaching a large class of students who learn at different rates and in different ways. Several material accommodations can enhance the learning of SWDs (Ciullo et al., 2014; Swanson et al., 2012; Therrien et al., 2011), including clarifying or simplifying written instructions, presenting a small amount of work, and providing additional practice activities.

Clarify or simplify written directions. Textbook directions are written in paragraphs that contain many words. This amount of text can be overwhelming for some students, especially SWDs. Teachers can help by underlining or highlighting significant parts of the directions. Rewriting the directions also is a helpful strategy (Ciullo et al., 2014; Feiker-Hollenbeck, 2011).

Segment assignments into manageable parts. Teachers can reduce students' workload by segmenting assignments into smaller tasks for SWDs who are anxious about the amount of work to be done to complete assignments (McLeskey & Waldron, 2011). This technique prevents students from becoming discouraged by the length of assignments and the amount of text or material that they might need to complete these assignments. Teachers also can reduce the amount of work when it appears redundant. For example, they can request that students complete only odd-numbered problems or items that are marked (e.g., with an asterisk), or they can provide responses to several items themselves and ask students to complete the rest.

Provide additional practice activities. Some materials do not provide enough practice activities for SWDs to acquire mastery of selected skills (Mason & Hedin, 2011; McLeskey & Waldron, 2011; Therrien et al., 2011). Teachers then must supplement the material with practice activities. Recommended practice exercises include instructional games, peer-teaching activities, self-correcting materials, and additional computer software programs (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013).

Accommodations for Explicit Instruction

The task of gaining students' attention and engaging them in their learning requires many teaching and management skills. Teaching activities and interactions should provide successful learning experiences for each student. GE teachers can apply explicit instruction to accommodate SWDs in the GE setting. Many teacher textbook guides do not cue teachers to use explicit teaching procedures, so they must adapt materials to include these procedures. Table 4 displays the best practices that Swanson et al. (2011) recommended for teachers to accommodate SWDs in the GE setting before, during, and after instruction**.**

Table 4

Best Practices for Accommodating SWDs in the GE Setting: Explicit Teaching

Before instruction	During instruction	After instruction
Determine lesson objective Discuss preskills using an anticipation guide or an advance organizer	Introduce the skill Provide guided practice Correct errors/Provide feedback	Monitor independent practice Review skills Repeat directions Use step-by-step instructions Use mnemonic instruction

Swanson et al. (2011) recommended several accommodations that teachers can apply to explicit teaching within their lessons before instruction, during instruction, and after instruction (Ciullo et al., 2014; Haager & Vaughn, 2013). An explanation of each accommodation follows.

Before instruction. The purpose of explicit teaching before instruction is for teachers to build students' background knowledge by previewing lesson objectives to establish the purpose of reading (Pilonieta & Medina, 2009). Before instruction, the

teachers share the lesson objectives and might even present an advance organizer to students so that they can draw upon their previous knowledge about the topic (Whalon & Hart, 2011). The use of an advance organizer (e.g., K-W-L charts, Venn diagrams, etc.) encourages students' prereading thoughts about the topic, activates this knowledge, and shows how information is organized in the students' minds. An (2013) stated that more prior knowledge helps readers to understand and remember; however, prior knowledge must be activated to improve comprehension.

During instruction. The purpose of explicit teaching during instruction is for teachers to guide students' reading comprehension based upon the purpose of the lesson (Andreassen & Bråten 2011; Feiker-Hollenbeck, 2011). Comprehension can be improved when teachers use directed reading and thinking activities that involve asking students questions to guide them to apply their background knowledge to answer questions (Berg & Wehby, 2013; Mason & Hedin, 2011). During instruction, after the teachers discuss what students will learn, the teachers scaffold instruction by providing students with guided practice (Andreassen & Bråten, 2011). Teachers provide feedback by correcting students' errors and preparing them for independent practice. Teachers also can provide students with GOs, such as outlines, charts, or blank webs, to fill in during the lesson. These organizers can helps students to listen for key information and see the relationships among concepts and related information.

After instruction. The purpose of explicit teaching after instruction is to help students to organize and remember information through activities such as art, maps, or summaries and to use the information to report, make a video, or publish (Andreassen &

Bråten, 2011). After instruction, teachers employ the following strategies to ensure students' understanding and learning (Berg & Wehby, 2013; Swanson et al., 2011; Therrien et al., 2011): (a) During Phase 1, teachers monitor independent practice; (b) during Phase 2, teachers review skills at the end of the lesson and repeat directions for students who had difficulty following directions; and (c) during Phase 3, teachers provide students with GOs or assignments that help them to organize the information just learned. Teachers use step-by-step instructions and teacher keyword mnemonic devices.

During Phase 1, after explicit teaching instruction, teachers monitor independent practice by circulating throughout the room and providing feedback to students. Students are then given opportunities to review skills, if necessary (Dunlosky et al., 2013). Teachers become facilitators who circulate around the room; answer questions; or clarify concepts, vocabulary, or meaning when necessary.

During Phase 2**,** after explicit teaching instruction, teachers repeat directions and ask students who had difficulty following directions to repeat the directions in their own words (Berg & Wehby, 2013; Pilonieta & Medina, 2009). Students can repeat the directions to peers when teachers are unavailable. Therrien et al. (2011) recommended use of the following accommodations to help SWDs to understand directions: (a) Segment multiple directions into subsets, (b) simplify directions by presenting only one portion at a time, (c) present information visually and orally, and (d) clarify written directions by ensuring that students can read and understand the words in sentences.

During Phase 2, after explicit teaching instruction, teachers use step-by-step instructions to guide students to independent practice of the skills that were taught

(Brigham et al., 2011; Feiker-Hollenbeck, 2011). Teachers can present difficult information in small, sequential steps. This process helps students with limited prior knowledge who need explicit or part-to-whole instruction. For example, comprehension strategies (e.g. summarizing, inferencing, and predicting) are effective when teachers guide students by introducing examples using short text passages (Afflerbach, Pearson, & Paris, 2008; Keene & Zimmermann, 2013; Thornley, Selbie, & McDonald, 2011).

During Phase 3, after explicit teaching instruction, teachers use keyword mnemonic devices to help students to remember key information from the lesson. Because students have different ways of learning, a combination of approaches and teaching strategies are needed to meet the needs of SWDs (Feiker-Hollenbeck, 2011; Scruggs et al., 2010; Therrien et al., 2014). For example, teachers can use this mnemonic method to support retention of key ideas or teach the meaning of new vocabulary words.

Brigham et al. (2011) and Therrien et al. (2011) supported the use of mnemonics, a memory-enhancing technique that relies strongly upon visual images. The method has three steps:

- Recoding is used to change vocabulary words into keywords that sound like part of the vocabulary words and are easy to create visual images from.
- Students are taught the concept of relating by integrating keywords with their definitions. Relating is done by treating words as pictograms and making interactive associations to the meanings of the keywords.
- Teachers teach the concept of recalling definitions of keywords by requiring students to demonstrate an understanding of the keywords.

Scruggs et al. (2010) found that teachers who used keyword mnemonic instruction teaching vocabulary words to SWDs had results showing that the students had higher levels of recall and comprehension than a rehearsal condition. Students were shown mnemonic pictures for new vocabulary words in which the keywords were pictured interacting with their definitions in drawings. In addition, when using the keyword method, teachers can enhance fluency and application by presenting practice exercises that require students to use the new words in written sentences and in oral communication (Little & Box, 2011; McLaughlin, 2012).

Accommodations Involving Student Performance

Students with disabilities vary in their ability to give oral presentations, participate in discussions, and so on. They also vary in their ability to process information presented by teachers in visual or auditory formats. McLeskey and Waldron (2011) suggested that the following accommodations involving modes of reception and expression be used to enhance SWDs' performance in the GE setting:

- Change response mode. For students who have difficulty responding using fine motor skills such as handwriting, the response mode can be changed to underlining, selecting from multiple choices, sorting, or marking. Students who have problems with their fine motor skills can be given extra space to write answers on worksheets or can be allowed to respond on individual dry erase boards (Swanson et al., 2011).
- Provide a peer tutor. Teachers pair peers with different ability levels to review

their notes, study for tests, read aloud to each other, or conduct laboratory experiments. Integrating peer-mediated learning has demonstrated promising outcomes for SWDs in the GE setting (Scruggs et al., 2013).

- Provide work time flexibility. Students who work slowly can be given extra time to complete written assignments (Swanson et al., 2011).
- Provide multiple opportunities for practice. Students might require different amounts of practice to master skills or content. Many SWDs need additional practice to learn science or social studies vocabulary concepts at a fluency level (McLeskey & Waldron, 2011).
- Display work samples. Samples of completed assignments can be displayed to help students to see and understand the expectations and plan accordingly.

All of these accommodations provide a framework for helping SWDs to achieve in the GE classroom setting. Keene and Zimmerman (2013) explained the importance of integrating comprehension strategies in the content areas, as did Swanson et al. (2011), and they also emphasized teachers' role in using scaffolding to develop the background knowledge of students. According to Ness (2011), students should gain proficiency in comprehension at all levels related to recalling literal information; making inferences; and analyzing, synthesizing, and evaluating what has been learned. Effective teachers teach children how to think beyond the information and ideas required for the immediate lesson. Questions developed using any of the comprehension levels remain a standard way of helping students to think through subject matter at increasingly higher levels of

comprehension (Afflerbach et al., 2008; Ahmadi & Gilakjani, 2012; Bulgren, Marquis, Lenz, Deshler, & Schumaker, 2011; Conley, 2008; Ness, 2011).

Characteristics of Content Area Text and Reading Comprehension

Content area reading at the elementary level requires text-based instruction, which could present instructional challenges for teachers because of the abstract concepts, difficult technical vocabulary, and lack of organization of text that does not promote reading for understanding (Bryce, 2011; Halvorsen et al., 2012; Hedin & Conderman, 2010; Jeong et al., 2010; Sanacore & Palumbo, 2009). Researchers have suggested that comprehension is important to the successful acquisition of expository content knowledge by students, including SWDs (Berkeley, Marshak, et al., 2011; Gauthier & Schorzman, 2012; Jitendra & Gajria, 2011). However, other researchers have found that teachers' use of expository text to teach comprehension is not occurring in the elementary classroom, even though students are expected to acquire content knowledge from expository text and apply higher levels of comprehension (Berkeley, Mastropieri, & Scruggs, 2011; Johnstone & Thurlow, 2012; Vaughn et al., 2013; Wanzek et al., 2013). Hence, educators who consider SWDs' schemata by being flexible and methodical are effective in teaching comprehension strategies that promote content knowledge acquisition (An, 2013; Ness, 2011; Shanahan & Shanahan, 2008; Solis et al., 2012).

Andreassen and Bråten (2011) combined the use of observations and questionnaires in an intervention study to identify the ways in which a sample of GE teachers of students in Grade 5 explicitly taught reading comprehension strategies. Their study focused on how the teachers explicitly taught four evidenced-based comprehension

strategies: predicting, questioning, clarifying, and summarizing. They found that over a 5-month period, the students' application of deep level of comprehension strategies aligned with the GE teachers' activation of the students' background knowledge. They recommended that future researchers focus on evaluating the efficacy of the teachers' implementation of comprehension strategies in the content areas.

Ciullo et al. (2014) argued that focusing solely on teachers' responsibility to develop students' comprehension skills overlooks the deeper issue of teachers' selection and application of techniques to explicitly teach comprehension strategies that will help students to acquire the content knowledge necessary to understand expository text (Hughes & Parker-Katz, 2013; Leko, Mundy, Kang, & Datar, 2013; Wanzek et al., 2013). Haager and Vaughn (2013) acknowledged that teachers should not only assign expository tasks to students but also select and model effective comprehension strategies to help students to understand the expository text structures commonly found in content area textbooks (Harvey & Goudvis, 2013; Keene & Zimmermann, 2013; Mahdavi & Tensfeldt, 2013; Vaughn et al., 2013).

In supporting the content knowledge acquisition of SWDs, GE teachers must determine how SWDs can master the content of the science and social studies curriculum while simultaneously helping these students to develop important critical-thinking skills and strategies (Ciullo et al., 2014; Scruggs et al., 2013; Swanson et al., 2011; Therrien et al., 2011). Students need to learn and develop their comprehension strategies to acquire meaning from complex and abstract content. The closer the content is to students' personal experiences or a familiar subject, the more capable they will become at

anticipating what words might be used based upon the text structure (Akhondi et al., 2011; Carlisle, Kelcey, Berebitsky, & Phelps, 2011; Risko, Walker-Dalhouse, Bridges, & Wilson, 2011).

Text Structure

Text structure is the organizational pattern commonly found in social studies and science text. Students who are aware of and understand text structure can monitor their own comprehension and summarize what they have learned (Akondi et al., 2011; Williams, Stafford, Lauer, Hall, & Pollini, 2009). Hughes and Parker-Katz (2013) contended that teachers can scaffold students' comprehension of textbooks by teaching text structure, the eight types of structure found in expository text:

1. Simple listing: A collection of related facts or ideas, sometimes presented in order of importance. An example is the presentation of different societies in a social studies text list (Dymock & Nicholson, 2010).
2. Description. An explanation of traits, functions, or properties. For instance, a social studies text might describe the traits of Americans who expanded the rights and freedoms of people in a democracy (McKeown et al., 2009).
3. Explanation of concepts. An introduction of a new concept. For instance, in a chapter on the democratic heritage of the United States, the concept of democracy could be presented with an explanation of the ways in which beliefs and ideals influence the social, political, and economic decisions of society (Hughes & Parker-Katz, 2013).
4. Definition or example. Similar to explanation of concepts: Terms are

introduced, and examples are provided. In a social studies text's explanation about the rights of workers in the United States, phrasing such as natural (land), human (labor), capital (capital goods), and entrepreneurship (used to create goods and services) might be defined as the four types of productive resources in the U.S. economy (Jitendra & Gajria, 2011).

5. Sequence or time order. A series of events that occur in a particular order. An example is a discussion of the War of 1812 and a description of the causes and events leading up to the war, including the burning of the Capitol and the White House (Swanson et al., 2011).
6. Compare and contrast. A description of similarities and/or differences between or among two or more things. An example would be information and explanations of the Bill of Rights, the Declaration of Independence, and the Constitution in a unit about American citizenship (Miller & Veatch, 2010).
7. Cause and effect. A description of events and their causes or consequences. Often, a single cause will have more than one effect, and a single event might have more than one cause. An example is a discussion about the American Civil War and how the location affected some of the major battles of the war (Akhondi et al., 2011).
8. Problem solution. Similar to cause and effect, except the outcomes are the result of a perceived need or a solution to a perceived problem. An example is an explanation in a social studies text of how Freedman's Bureau was passed after the civil war in response to abolishing slavery (Dymock & Nicholson,

2010).

It should be noted that even though multiple types of text structures are used in textbooks, essential content often is presented by one type of text structure. When teachers help students to learn complex text structures such as compare and contrast, cause and effect, and problem and solution, all students learn deeper levels of comprehension (Jitendra et al., 2011; Lindo & Elleman, 2010; Mason & Hedin, 2011; Swanson & Vaughn, 2010).

Text Enhancements

Research on learning has led to an increase in the number of studies on the ways in which teachers can present information in the content areas that is sensitive to students' different learning strategies. When teachers present information in ways that help students to organize, understand, and remember it, the effect of ineffective or inefficient strategies can be minimized (Berkeley, Mastropieri, et al., 2011; Jitendra et al., 2011). Teachers can select enhancements for use during presentations to meet specific learning goals and then teach students how to use such enhancements successfully. For example, to help students to understand something unfamiliar and abstract, teachers might use an analogy to something that is familiar and concrete (Scruggs et al., 2010) so that students can view the relationship between the two concepts. Use of this method makes new concepts meaningful to students. Content enhancements enable teachers to help students to identify, organize, comprehend, and retain critical content information (Bulgren et al., 2011; Ehren, Deshler, & Graner, 2010).

Text enhancements are the most effective when educators plan and use teacher-directed activities to help students to learn how to use the strategy (Dexter, Park, & Hughes, 2011; Mason & Hedin, 2011). Teachers might consider using text enhancements to help SWDs to comprehend social studies text for the following reasons: (a) illustrate visual representations of facts and concepts, (b) highlight the relationship between new facts and previous information, and (c) teach vocabulary instruction from social studies content (Curcic, 2011; Dexter et al., 2011; Hughes & Parker-Katz, 2013; Jitendra et al., 2011).

Graphic Organizers

Graphic organizers (GOs) are visual representations that can be used to teach text structure. During science and social studies, teachers might consider using GOs to help SWDs to demonstrate knowledge through any of the following cognitive strategies: (a) classify information or objects according to size, shape, texture, and so on; (b) compare information, such as comparing two objects, texts, or pictures using a Venn diagram; (c) order information, such as by listing events in chronological order; and (d) interpret information by using and interpreting charts, tables, graphs, maps, and so on, in the acquisition of knowledge. These cognitive learning strategies support SWDs' development of content-related language and learning skills, and the construction of academic knowledge (Ciullo et al., 2014; Dexter & Hughes, 2011; Nixon, Saunders, & Fishback, 2012).

Considering that GOs can be used to guide and even improve comprehension, teachers' selection and use of GOs can lead to significant gains in student comprehension

and can be useful in helping students to organize information and visualize their thinking (Berg & Wehby, 2013; Dexter et al., 2011; Jitendra & Gajria, 2011). For example, teachers can use GOs to help students to comprehend expository content to manage and organize information (Mahdavi & Tensfeldt, 2013; Williams et al., 2009). Specifically, teachers can use GOs as an instructional strategy to help students to organize (a) visual representations of facts and concepts, (b) new facts and previous information, and (c) compare-contrast information. Likewise, the difference between more capable and less capable learners is not the quantity of information that the more capable learners gain, but the ability of all learners to acquire and apply the information (Jitendra et al., 2011; Stricklin, 2011; Swanson et al., 2011).

Results of Dexter and Hughes's (2011) study of comprehension strategy instruction conducted in upper elementary classrooms revealed that moderate to large gains favored the use of GOs in science and social studies. They concluded that teachers might use scaffolding of GOs to (a) brainstorm at the beginning of a lesson or a unit to determine what students already know, (b) provide reading assignments for students to organize and capture information when watching a particular video, (c) help students to chronicle sequences of events or processes, (d) help students to relate new information to prior information, (e) check for understanding, (f) teach summarizing skills, and (g) provide culminating assessments (Jitendra & Gajria, 2011).

Teachers can scaffold the use of GOs by providing students with multiple opportunities to practice with a full range of content. Mahdavi and Tendsfeldt (2013) explained that teachers should begin scaffolding by modeling how GOs can be used with

uncomplicated content (Akhondi et al., 2011; Dexter & Hughes, 2011; McKeown et al., 2009; Williams et al., 2009). Dexter and Hughes (2011) supported the claim that teachers' use of GOs can help students to understand relationships between and among the complex and abstract concepts in textbooks. First, students learn the process of using GOs through teachers' guidance. Then students gradually work to use GOs independently across other topics in social studies and science (Jitendra & Gajria, 2011). The main goal of scaffolding is that students will be able to use any strategies without further need of instruction in those strategies (Parsons & Ward, 2011).

Considering that SWDs consistently perform considerably below their peers on CRCT standardized testing in science and social studies, GOs might be used to support their content knowledge acquisition of grade-level expository text (Berkeley, Mastropieri, et al., 2011; Bulgren et al., 2013; Johnstone & Thurlow, 2012; Seifert & Espin, 2012; Therrien et al., 2011; Wanzek et al., 2013). Teachers' use of such comprehension strategies as activating prior knowledge, creating GOs, and asking questions needs to be adapted to the learning needs of SWDs in the content areas (Bulgren et al., 2011; Jitendra & Gajria, 2011; Mahdavi & Tensfeldt, 2013; Nixon et al., 2012).

In summary, instruction in the content areas can be described in terms of the need for instructional strategies that develop students' vocabulary and comprehension skills. Because these skills facilitate the learning of subject matter, they might be thought of as instructional tools (McKeown et al., 2009). Explicit teaching strategies can be used to scaffold learning until students obtain and use comprehension strategies with increasing levels of self-sufficiency (Berkeley, Marshak, et al., 2011; Bulgren et al., 2009; Tejero

Hughes, & Parker-Katz, 2013). As students learn and apply comprehension strategies, they also should learn to apply these skills across subject areas with greater independence. When students can generalize and apply learned comprehension strategies in other content areas, their self-monitoring of understanding text also improves. For educators, effective instruction becomes a matter of learning about these strategies as well as how to select and use them as part of instruction.

Research Related to Content Area Reading Instruction in Science

Science textbooks contain text that is primarily technical in nature. Technical terms often are used to explain concepts that some students might not have prior knowledge about. In addition, science text vocabulary often includes Latin and Greek symbols and wording, which can make it difficult for students to acquire content knowledge (Bryce, 2011; Neuman & Roskos, 2012; Seifert & Espin, 2012).

Teacher-directed, text structure instruction can help students at the elementary level to develop comprehension skills in science (Bryce, 2011; Wilson, Grisham, & Smetana, 2009). Williams et al. (2009) examined the efficacy of teacher-directed, text structure instruction in science. They used two measures to evaluate the effects of explicitly teaching the comprehension strategies of compare and contrast, pro and con, and clue words. They found that teachers who combined text structures helped students to shift from using one type of structure (compare and contrast) to another structure (pro and con) to gain experience reading passages that held a variety of text structures. They also found that students learned cue words that helped them to distinguish between the two types of text structures. Williams et al. concluded that it was developmentally appropriate

to teach expository text structure strategies to students at the elementary level and that when teachers supplemented expository text with trade books according to students' reading levels and interests, they reported that students' knowledge and understanding about science topics also improved.

Textbooks often contain information that is lacking in detailed explanations of concepts. Using a model that integrated science and reading comprehension strategies, Vitale and Romance (2012) examined the effect of combining comprehension strategies when teaching science to students in Grades 1 and 2. The researchers found that when teachers used interdisciplinary comprehension strategies in science, the students' capacity for understanding expository content increased.

Bryce (2011) argued that textbooks provide only brief overviews of information, which can result in explanations of abstract information that are difficult for students to comprehend. Bryce used field note observations and student work samples to conduct a qualitative study on the strategies that a sample of GE teachers used to increase students' understanding of information in science textbooks. The results showed that when the teachers discussed text features while attending to specialized vocabulary, preview questions, and comprehension review tasks, students were prepared to learn the content needed to acquire knowledge about unfamiliar science concepts.

Connor et al. (2010) studied the ways in which teachers integrated reading comprehension strategies with science content to support students' learning of science concepts. Connor et al. found that locating expository text with a range of reading levels to supplement science text was the most difficult part of implementing the curriculum.

They argued that many of the textbooks used in the science curriculum were not connected logically to the topics and did not cover the content in depth. They found it encouraging that lower performing students made just as much progress in learning the content as students who had more robust reading comprehension skills. Although more research is needed, Connor et al. reported that implementing an interdisciplinary science and reading curriculum for students was successful.

In regard to research related to SWDs in science classes, Therrien et al. (2011) conducted a meta-analysis to evaluate the efficacy of instructional strategies in science for SWDs. They examined 12 studies and then summarized and categorized them by instructional strategy. Results indicated that the SWDs who were the focus of those studies needed structure within an inquiry science approach and that teachers' use of mnemonic devices improved the SWDs' retention of scientific concepts and content knowledge acquisition. Therrien et al. argued that even though having to develop accommodation strategies for SWDs might be an overwhelming task for GE teachers, providing classroom accommodations might be compatible with science instruction (Scruggs et al., 2013).

In summary, the process of supporting students' reading comprehension development in content areas is ongoing. As teachers engage in the processes of assessment, reflection, planning, teaching, and reteaching, they gain insight into student learning and their own instructional practices (Miller & Veatch, 2010; Shanahan & Shanahan, 2008). Within this spiral process, teachers learn more about their students and can then more readily support student learning. Rather than looking for just one best

instructional practice, teachers can make thoughtful decisions based upon students' needs and the curriculum. To help students to become proficient in comprehending expository text, all educators need to focus on how to choose and use the most appropriate instructional strategies for their students (Miller & Veatch, 2010; Swanson et al., 2011).

Research Related to Content Area Reading Instruction in Social Studies

The language in social studies textbooks is drawn from a wide range of related disciplines, including political science, geography, economics, sociology, and history (Bulgren et al., 2013; Halvorsen et al., 2012). The social studies vocabulary frequently names people, events, and places. Although there are fewer technical terms in social studies than in science, the vocabulary can be difficult sometimes because the terms represent abstract concepts and can be archaic or metaphorical (Vaughn et al., 2013). Teachers can integrate GOs with vocabulary strategies related to the key concepts in social studies. The more difficult the tasks and the deeper the knowledge acquisition expected of students become, the bigger the time commitment from teachers becomes in terms of the development of instructional strategies (Hughes & Parker-Katz, 2013).

Vaughn et al. (2013) conducted an experimental study to determine whether reading comprehension strategies improved Grade 8 students' understanding of social studies content. To compare teachers' delivery of social studies instruction, teachers in the treatment group focused on teaching vocabulary and conducted question-and-answer strategies to guide discussions. Teachers in the comparison condition taught the curriculum based upon textbook instruction.

Teachers in the treatment group used the comprehension canopy (Vaughn et al., 2013) as a scaffolding strategy to guide the purpose of reading and to help students to understand social studies content. Vaughn et al. (2013) found that when teachers conducted comprehension checks (two brief assessments comprising five multiple-choice questions) with students at the end of each unit (i.e., every 10 days), they were able to identify gaps in student knowledge. As a result, the teachers used the information from the comprehension checks to determine how to plan targeted instruction. Another finding from the study was that the students of the teachers in the treatment group significantly performed better than the students of the teachers in the comparison group on all measures of social studies content knowledge acquisition and social studies reading comprehension.

Ormond (2011) applied the three-level guide as a comprehension strategy to help students in a social studies class to understand key ideas in their reading. Ormond found that this strategy encouraged students to use higher order thinking skills. This result was significant because it alerted students to the existence of potentially important ideas that could support their search for meaning in the text. As they read, students looked for ideas featured in the guide. After they finished reading, they used the guide as a departure point for discussion in small groups to compare their reactions to the guide and look back through the text to support their decisions. Teachers could use strategies such as comprehension guides to make social studies or science text more comprehensible to students (Conley, 2008; Shanahan & Shanahan, 2008; Swanson et al., 2012).

As for research related to SWDs in social studies, Ciullo et al. (2014) used a

single-case multiprobe design to examine the effects of GO and explicit instruction in social studies for SWDs in Grades 4 and 5. They found that even though implementing principles of explicit instruction were positive for most SWDs, two of seven SWDs demonstrated minimal gains according to classroom standards. The students successfully acquired the content knowledge, but they failed to apply that knowledge on the test. The results indicated that the academic achievement of the SWDs improved when the teachers incorporated summarization and peer-mediated learning strategies during the social studies class. Ciullo et al. concluded that further research into the instructional strategies that teachers use to help SWDs to comprehend social studies content is needed at the elementary level.

Summary

In Section 2, I reviewed the history of IDEA and the mandated inclusion of SWDs into the GE classroom setting. I discussed evidence-based strategies that teachers can use to implement reasonable instructional accommodations for SWDs in the GE classroom setting. A review of the limited research on the use of instructional strategies to increase the knowledge acquisition and reading comprehension of content area text at the elementary level for SWDs also was presented. Included in Section 3 are details about the research methodology, including justification for using a qualitative design and approach and explanations of the data collection and data analysis processes.

Section 3: Research Method

Introduction

The purpose of the study was to explore GE teachers' knowledge and experience teaching SWDs in science and social studies, how they addressed SWDs' learning in their classrooms, what problems they encountered as they accommodated the needs of SWDs, and what the teachers' own needs for support were as they worked toward meeting the goals of the district in the science and social studies content learning of SWDs. Researchers have established that although SWDs who are capable of achieving required standards are integrated into the GE setting, these students remain a traditional underachieving subgroup (Bulgren et al., 2013; Mason & Hedin, 2011; Ritchey, 2011; Scruggs et al., 2013). I conducted this qualitative study to describe how GE teachers constructed their knowledge about the learning needs of SWDs in science and social studies and the accommodations that the GE teachers in this study made to increase the achievement of SWDs in Grade 3 to Grade 5. Four research questions guided the study:

1. How do GE teachers construct their knowledge about the learning needs of SWDs in science and social studies?
2. What are GE teachers doing in their classrooms to accommodate and improve the academic achievement of SWDs in science and social studies?
3. What difficulties do GE teachers face in the classroom as they accommodate and help SWDs to improve in science and social studies?
4. What are GE teachers' perceptions of the support that they need to better serve the needs of SWDs in science and social studies?

To address the research questions, I used the case study tradition within a qualitative research design to explore and provide an in-depth description of a case within its natural environment. Use of the case study approach allowed me to examine the breadth and depth of the GE teachers' perceptions so that I could better understand their behaviors in a situational context (Hatch, 2002; Merriam, 2002; Yin, 2009).

Selection of a Qualitative Research Design

The purpose of the study was to explore GE teachers' knowledge of and experience teaching SWDs in science and social studies, how they addressed SWDs' learning in their classrooms, what problems they encountered as they accommodated the needs of SWDs, and what the teachers' own needs for support were as they worked toward meeting the goals of the district in the science and social studies content learning of SWDs. The central problem was the low achievement of SWDs who did not meet state standards on science and social studies CRCT assessments of content knowledge as outlined in the LSPI. I chose a qualitative methodology to explore the teachers' perceptions related to the research problem.

Stake (1995) characterized qualitative research as being primarily based upon the collection of nonnumeric data such as words and pictures. Qualitative research, as described by Creswell (2009), is the study of a phenomenon in an open-ended way that has no prior expectations. Hatch (2002) and Merriam (2002) further described qualitative research as openness to adaptive inquiry as (a) the researcher's understanding deepens, (b) the researcher avoids being locked into rigid designs that eliminate responsiveness, and (c) the researcher pursues new paths of discovery as they emerge.

I considered and then rejected using a quantitative methodology because this study focused on the need to understand how GE teachers constructed their knowledge about the learning needs of SWDs in science and social studies, which required a qualitative approach. I did not want to quantify the teachers' perceptions or the academic achievement of the SWDs, so I considered a qualitative methodology more appropriate for this study.

Case Study Approach

According to Merriam (2002), the case study approach facilitates a detailed analysis of one or more cases. Stake (2010) defined a case as a bounded system and supported the use of a case study to emphasize the investigation of a phenomenon within its real-world context. For this study, I defined the GE teachers as the case and the bounded system as the elementary school selected for this study. Because I addressed a problem situated in a bounded system, I selected the case study approach (Merriam, 2002; Stake, 2010) to understand how a sample of GE teachers constructed their knowledge about the learning needs of SWDs in Grades 3 to 5 in science and social studies at one elementary school and how these teachers met the needs of the SWDs in the GE classroom setting.

Alternative Qualitative Approaches

I considered and then chose not to select any other qualitative approaches for this study. I did not focus on describing the culture of a group of people, as in an ethnography approach, or generate theory from data, as in a grounded theory approach (Hatch, 2002; Merriam, 2002). I also did not focus on observing how the GE teachers instructed the

SWDs in their social studies and science classrooms. I was not concerned with studying the lived experiences of classroom teachers, as in a phenomenological study. According to Merriam (2002), phenomenologists assume that there is some commonality in human experiences, and they seek to understand this commonality. The experience often will be more abstract than a literal description of a particular experience (Hatch, 2002; Merriam, 2002; Yin, 2009).

Researcher's Role

I was the only data collector and analyst in this case study. My involvement in the educational profession as a special education teacher for the last 12 years has allowed me to become familiar with researched-based strategies to accommodate the learning needs of SWDs in specific content areas. I am a certified special education teacher with a reading endorsement addendum to my teaching certification. This is my 6th year as chair of the resource department at my local school.

As a resource teacher, I collaborate with teachers and administrators on instructional and student-related matters. I spend time with teachers discussing students, teaching, and learning within the school. I participate in discussions with teachers to find ways to address students' academic problems. My professional relationship with the GE teacher participants did not affect the data collection process because I did not have any authority over them. They considered me a colleague of equal status.

Experiences and Biases Related to the Topic

I controlled my personal and professional biases by using reflexivity to refrain from allowing my personal views and perspectives to affect how I interpreted the data. I

actively engaged in self-reflection about my potential biases and predispositions (Hatch, 2002; Patton, 2002). I also monitored and attempted to control my biases by bracketing my reflections as I analyzed data (Creswell, 2007; Stake, 1995). After I conducted the initial analysis, I used bracketing to identify and then purge my biases.

Ethical Protection of the Participants

As the researcher, I adhered to specific guidelines to ensure that the study was ethically sound. I obtained permission from the school district and Walden University's Institutional Review Board (IRB approval #07-14-14-0140463) to conduct the study; obtained informed consent from the participants before collecting any data; informed the participants that they could withdraw from the study at any time without prejudice; ensured that the participants did not experience any physical and mental discomfort, harm, or danger from being in the study; and explained to the participants how I planned to ensure the confidentiality of their responses and the anonymity of their identities. I conducted this case study with special care and sensitivity to identify and minimize any privacy and safety risks and concerns.

Based upon recommendations made by Patton (2002), I followed the protocol described here:

1. Obtained permission from all participants by providing a description of my study and requesting their participation in the study. I sent a letter of invitation to the selected teachers to request their participation in the study. I placed the letters in the teachers' school mailboxes in sealed envelopes.

2. Protected the participating teachers from any harm by avoiding giving them misleading information or by withholding information.
3. Safeguarded the privacy of the participants and their interview responses to avoid unintentionally placing them in any unfavorable positions resulting from their contributions to the study. I conducted all of the interviews outside of school property or hour so that no one else on staff would know who participated in the study.
4. Used pseudonyms to protect the participants.
5. Kept the data private and confidential by ensuring that only I, and members of the research committee had access to the data.
6. Stored all data and information related to the study on my personal password-protected computer. Paper documents were kept in a locked safe.
7. Will retain the data for 5 years, according to IRB guidelines, after which time I will destroy them.

I established trust and rapport with the participants by (a) explaining the purpose of the study, (b) explaining how I was going to conduct the research, (c) discussing their possible time commitment to the study, and (d) conveying information about all of the elements involved in gaining their consent (Creswell, 2007; Hatch, 2002; Patton, 2002; Stake, 2010). I also collaborated with the participants to establish a systematic way for them to contact me if they had any questions about the process (Hatch, 2002).

Upon receiving permission from my school principal, the district research office, and Walden University's IRB to conduct the study, I took specific steps to recruit the participants:

1. I sent an electronic invitation explaining the purpose and importance of the study to potential participants.
2. I placed an invitation in each potential participant's school mailbox with a cover letter and consent form in a sealed envelope.
3. I sent a follow-up reminder 7 to 10 days later to encourage those who had not yet responded to complete and return the consent form.
4. Participants returned the consent forms in sealed envelopes to my mailbox in the teacher mailroom.
5. I scheduled interviews with the participants outside of school hours at mutually acceptable locations.

Research Context

I conducted this study at a suburban public elementary school in the southeastern region of the United States. The pseudonym for the local site was Great Elementary School (GES).

Participant Selection

I used criterion sampling to gain the study sample of GE teachers of students in Grades 3 to 5 who were not dual certified in early childhood education and special education. Initially, I wanted to interview 10 teachers, so I purposively invited at least two teachers from Grades 3, 4, and 5 to participate in the study, and I chose four other

teachers at random from all of the participants who agreed to participate. For the final study, I interviewed six teachers, two participants from each grade level.

Participant Demographics

I conducted this qualitative case study in a suburban Georgia school district. I invited a purposeful sampling of GE teachers from Grades 3, 4, and 5 to participate in the study. Specifically, I selected teachers from Grades 3, 4, and 5 based upon the requisite selection criteria and randomly selected two more teachers from all potential participants. Six participants took part in this study: two Grade 3 teachers, two Grade 4 teachers, and two Grade 5 teachers. Each teacher participated in one 60-minute semi-structured interview. Across classroom settings in Grades 3, 4, and 5, there was a cumulative total of 28 SWDs for the 2013-2014 school year. Combined, the teachers in this study had 16 SWDs in their classrooms. In Table 5, I identify the teacher participants in the order in which I interviewed them and also provide some background information relevant to their teaching assignments.

Table 5

Summary of Information About Participating Teachers

Teacher	Degree and certification level	No. of years of teaching experience	Total no. of students in class	No. of SWDs in class
Teacher A	Master's (T5)	15	23	4
Teacher B	Specialist (T6)	14	24	1
Teacher C	Bachelor's (T4)	7	25	1
Teacher D	Specialist (T6)	10	23	7
Teacher E	Bachelor's (T4)	11	25	1
Teacher F	Master's (T5)	25	23	2

Data Collection Procedures

The initial phase of data collection required obtaining permission from the school principal to access the teachers. Once I received the signed consent forms, I coordinated a time with each participant to discuss the purpose of the study and provided assurances that I would maintain their confidentiality and privacy. I concluded by scheduling a time to conduct each interview outside of the school property and school hours at a mutual agreeable location.

I used a digital recorder to conduct one in-depth interview with each participant that lasted 45 to 60 minutes. I used the interview responses to generate the data that I subsequently analyzed and synthesized (Rubin & Rubin, 2005; Seidman, 2012). I used an interview protocol (see Appendix A) to focus the discussion and allow the participants to share detailed responses. I asked open-ended questions to build upon and explore the GE teachers' responses to the interview questions. After completing the interviews, I transcribed the responses into Microsoft Word documents and examined all of the transcriptions to identify themes. I then coded the data from the transcribed responses. For data that did not fit the codes, I acknowledged these codes and listed them as discrepant data.

Data Analysis

Data analysis in qualitative research is the cyclical process of organizing the data, classifying the data, categorizing the data, searching for patterns in the data, and synthesizing the data. Stake (1995) described data analysis as the process of creating meaning from raw data. I used Miles and Huberman's (1994) methods for analyzing data

to examine and report on the case in this study. I analyzed the data through a two-cycle process of provisional coding and pattern coding.

Provisional Coding

Provisional coding begins with a master list of codes that a researcher generates prior to conducting fieldwork. I generated the codes in this study from the literature review and conceptual framework to anticipate the codes that could have appeared in the data before I examined them (Miles & Huberman, 1994). According to Miles and Huberman (1994), a "start list" (p. 58) can range from 12 to 50 codes. For this study, during Cycle 1, I used provisional coding to develop a predetermined list of 32 codes derived from the conceptual framework and the review of literature (see Appendix B). I generated 19 codes from a provisional start list of 32 codes and then analyzed the themes that emerged from the 19 codes regarding how GE teachers constructed their knowledge about the learning needs of SWDs in science and social studies, how they addressed SWDs' learning in their classrooms, what problems they encountered as they accommodated the instructional needs of SWDs, and what the teachers' own needs for support were as they worked toward meeting the goals of the district in science and social studies content learning of SWDs.

Pattern Coding

I used pattern coding, as explained by Miles and Huberman (1994), to identify emerging themes and condense large quantities of data into smaller units. I derived pattern codes from the interview data that I collected. Pattern codes were the explanatory codes that I developed from the coded data derived from the interview transcripts. I

conducted pattern coding during Cycle 2 of the data analysis (Miles & Huberman, 1994). The process began with a review of the provisional codes from Cycle 1 so that I could group the codes according to similarity.

Next, I reviewed the data to assign pattern codes to the emerging themes. I then used the pattern codes to find major themes. For instance, I used a pattern code of comprehension strategies to develop a statement describing a major theme or pattern of action. I continued to seek themes and categories in the data that were consistent. I searched for holistic descriptions and themes to connect the data to the findings.

Narrative Report

In qualitative case study research, a narrative report is a detailed description of the relevant findings from each research question. I used Patton's (2002) process of constructing a case study narrative as a guide to write the narrative report. First, I used the coded data from the interview transcriptions to address each research question to discuss the themes and the categories that emerged. Then I identified consistencies among the themes to obtain meanings and information to include in the narrative report. Finally, I completed the narrative report by writing a descriptive story about the case to provide the reader with the information necessary to understand the case study.

Validity and Reliability

Establishing trustworthiness is crucial to ensuring the validity of a study (Patton, 2002). I made the trustworthiness of the findings more valid and reliable by using transcript review and peer debriefing to interpret and explain the data accurately (Creswell, 2009; Merriam, 2002; Stake, 2010). Corroboration of the information related

to the findings was achieved when these different strategies concurred (Miles & Huberman, 1994; Patton, 2002; Stake, 1995).

Transcript Review

The first strategy to ensure reliability and validity was transcript review, which allowed me to obtain feedback from the participants about the accuracy of the interview data. Using transcript review as a form of reliability and validity ensured that I accurately conveyed the participants' viewpoints, thoughts, feelings, intentions, and experiences in the transcripts (Creswell, 2009; Patton, 2002; Stake, 1995). Allowing the participants to recognize their experiences in my transcriptions and giving them the opportunity to suggest better ways to capture their statements strengthened the trustworthiness of the data (Merriam, 2002).

Transcript review was done informally during the normal course of conversation during the interviews and formally after the interviews (Rubin & Rubin, 2005). During the interviews, I verbally summarized and paraphrased the participants' responses to validate and clarify the accuracy of their information. After the interviews, I transcribed their responses to the interview questions. I gave all participants draft copies of their individual interview transcriptions and asked them to verify their accuracy.

Peer Debriefing

I used peer debriefing to ensure the reliability and validity, as well as obtain feedback, about my interpretations of the interview data. According to Creswell (2009), qualitative researchers can use peer debriefing to enhance the accuracy of the participants' accounts. My committee chair reviewed the data and the codes as a peer

debriefer to minimize any threats (e.g., researcher bias) to the validity and reliability of the data. My chair also conducted the peer debriefing process by reviewing the data to ensure that the coding aligned with the data and the findings were credible (Merriam, 2002). I reviewed the data from peer debriefing and reconsidered any coding that my peer debriefer determined did not match. The results of the peer debriefing are acknowledged in the Data Analysis component of Section 4.

Summary

In Section 3, I introduced, explained, and justified the research design, and I restated the research questions. I Included information about the context for the study; my role as the researcher; and ethical considerations needed to gain access to the participants, collect the data, and analyze the data. After describing how I collected and analyzed the data, I explained the details of the narrative report. In Section 4, I present the findings based upon the data analysis. In Section 5, I conclude the study with a discussion of the findings and recommendations for future research.

Section 4: Results

Introduction

Following IRB approval to conduct this study, I began data collection. During the initial phase of data collection, I obtained permission from the school principal to obtain access to the teacher participants. After I received the signed consent forms from the participants, I coordinated a time with each participant to discuss the purpose of the study and to provide assurances that I would maintain the confidentiality of their information. I concluded by scheduling an interview date and time with each participant. I used an audio recorder to conduct one in-depth interview with each participant that lasted 45 to 60 minutes. I invited 10 GE teachers of students in Grades 3, 4, and 5 to participate in my study; six of them accepted the invitation. I conducted the interviews between July 2014 and September 2014 to learn how the six GE teachers constructed their knowledge about the learning needs of SWDs in Grades 3 to 5 in science and social studies and their experiences with meeting the needs of the SWDs in their classrooms. I used the interview protocol to guide the interviews.

After each interview, I transcribed the recordings of the interview responses by typing the interview responses into Microsoft Word. I uploaded and saved the transcriptions on my personal, password-protected computer. I provided the participants with copies of their individual transcriptions in sealed envelopes, and I placed them in their school mailboxes. Then I asked them to check their transcriptions for accuracy and to suggest revisions. Participants returned their transcriptions with suggested revisions and signed off on the documents to indicate their approval. Two participants suggested

revisions to their transcriptions. One participant asked that filler words such as "umm" be removed from her transcription. Another participant added a couple of sentences to clarify the meaning of one her responses. After carefully reviewing their suggested revisions, I accepted all of them.

After each interview, I imported the audio recordings into NVivo v.10 qualitative software. Storing the audio files in a single location allowed me to organize and keep track of the data. Once the process of organizing the data with NVivo was completed, I did not use NVivo further. To organize the data for analyses. I used Excel to create an interview question response matrix that was based upon the participants' responses to the interview questions. The matrix included six tabs inside the Excel spreadsheet, where I entered the responses from the interview transcriptions. For instance, all responses to Interview Question 1 were included in the tab labeled Interview Question 1. I continued this process for Interview Questions 2 to 6. As I was entering the data into Excel, I kept track of the emerging analysis and reflections in an Excel column. This was not the formal data analyses, but it did help me to familiarize myself with the data and to start generating ideas.

Data Analysis

Data analysis in qualitative research is the cyclical process of organizing, classifying, and categorizing the data; searching for patterns in the data; and synthesizing the data. Stake (1995) described data analysis as the process of creating meaning from raw data. I used Miles and Huberman's (1994) methods for analyzing data to examine and report on the case in this study. I analyzed the data through a two-cycle process of

provisional coding and pattern coding. In Cycle 1, I used provisional coding to develop a predetermined list of 32 codes derived from the conceptual framework and the review of literature. I generated 19 codes from a provisional start list of 32 codes.

In Cycle 2, I used pattern coding, as explained by Miles and Huberman (1994), to identify emerging themes and condense large quantities of data into smaller units. I derived pattern codes from the interview data. I conducted pattern coding by analyzing the coded segments of each interview transcript to identify themes. I compared the pattern codes and the provisional codes. From that comparison, I arrived at one final list of codes. Then I examined the final list of codes to search for patterns within the groupings of codes to identify five themes: GE Teachers' Knowledge of SWDs, Classroom Accommodations for SWDs, Challenges in Accommodating SWDs, Needed Resources for Accommodating SWDs, and GE Teachers' Content Area Instructional Strategies. I used the five themes that were generated from data analysis to address the research questions. Table 6 provides a summary of the themes, research questions, and interview questions.

Table 6

Themes, Research Questions, and Interview Questions

Themes	Research questions	Interview questions
1. GE teachers' knowledge of SWDs	1. How do GE teachers construct their knowledge about the learning needs of SWDs in science and social studies?	1. How many SWDs are in your class? Describe what steps you take to learn who they are. Describe what steps you take to learn what they already know about the content you teach.
2. Classroom accommodations for SWDs	2. What are GE teachers doing in their classrooms to accommodate and improve the academic achievement of SWDs in science and social studies?	2. How many SWDs in your class did not meet the standards on the science and social studies CRCT? How did you accommodate these students in your classroom?
3. Challenges in accommodating SWDs	3. What difficulties do GE teachers face in the classroom as they accommodate and help SWDs to improve in science and social studies?	3. What challenges do you face when you are accommodating SWDs in your classroom?
4. Needed resources for accommodating SWDs	4. What are GE teachers' perceptions of the support that they need to better serve the needs of SWDs in science and social studies?	4. What resources do you feel you need to accommodate the learning needs of SWDs in science and social studies
5. GE teachers' content area instructional strategies		5. How do you accommodate each SWD in your classroom as an individual? Describe how you select the comprehension strategies to match the content topic that you are teaching. 6. How do you integrate comprehension strategies to support content knowledge acquisition for SWDs to help them prepare for science and social studies tests?

Theme 1: GE Teachers' Knowledge of SWDs

Research Question 1: How do GE teachers construct their knowledge about the learning needs of SWDs in science and social studies? Theme 1 was generated from GE teachers' responses about how they constructed their knowledge about the learning needs of SWDs in science and social studies. The participants' responses revealed two categories that referred to (a) how GE teachers' received IEP information about the individual SWDs in their classrooms, and (b) how GE teachers constructed their understanding of the learning needs of the individual SWDs in their classrooms (see Table 7).

Table 7

Frequency of Responses to Research Question 1

Participant responses: How GE teachers received information about SWDs	No. of participants*	% of participants
From special education teacher	2	40%
From both parent and special education teacher of SWD	2	40%
From school district online portal	1	20%

Note: *One participant (TB) referred a student for a special education evaluation after the school year began, so the question did not apply to her.

How GE teachers received information about SWDs. Five participants (TA, TC, TD, TE, & TF) received information about specific SWDs in their classrooms from the special education teacher, the district's online portal, or from the parents of SWDs. TA used the district's portal to receive information by reviewing students' IEPs and other information online about the SWDs in her classroom. TC and TD received information about the SWDs in their classrooms by reviewing the students' IEPs that were provided by the special education teacher. TE and TF received information about the SWDs in

their classrooms from the special education teacher and parents. TE and TF were visited by parents who wanted to share specific information about their children.

How GE teachers constructed their understanding about the individual learning needs of the SWDs in their classrooms. Theme 1 also referred to how the participants constructed their understanding of the needs of the SWDs in their classrooms. Although it was important for the teachers to know who the SWDs in their classrooms were, it was more important for them to understand the learning needs of these students (see Table 8).

Table 8

Frequency of Responses to Research Question 1

Participant responses: How GE teachers constructed knowledge of SWDs	No. of participants	% of participants
From standardized test scores	1	16%
From working with SWDs in small group	2	33%
From student verbal and nonverbal cues	1	16%
From developing personal relationships with SWDs	2	33%

TA, who represented 16% of the participants, mentioned that she reviewed SWDs standardized test scores to learn about the learning needs of SWDs. TA constructed her knowledge about the learning needs of her SWD by reviewing students' standardized test scores from the Cognitive Abilities Test (COGAT) to determine their academic weaknesses. Then she used that knowledge to help her decide how to group SWDs for reading instruction. She did not give any specific examples.

TB, or 16% of the participants, provided her SWD with verbal prompts to construct her understanding about the SWD's learning needs. Participant TB constructed her knowledge of about the learning needs of her SWD by providing verbal prompts

while she worked individually with the student during a written assignment. Then she used that knowledge to provide the student with an alternative way to respond to the assignment. For instance, TB used verbal prompts to provide the SWD with immediate feedback whenever the student appeared off task. TB prompted her SWD to advocate for himself by reminding him to ask for help when he did not know the answer or to ask for extra time if he was still thinking about the answer.

TC and TD composed small groups of their SWDs and worked with those groups to construct their understanding about the students' learning needs. TC conducted comprehension checks to determine whether her SWDs were learning the social studies content. TC also used comprehension checks to monitor the SWD's comprehension while she was teaching content. At the end of each unit test, she determined whether the SWD understood the content and whether she needed to reteach the content. TC did not provide an in-depth explanation of how she incorporated this strategy during science and social studies instruction. TD sought out the SWDs' resource teacher and the SWDs' classroom teacher from the previous year when possible to learn information about them.

TE and TF reported developing personal relationships in and outside of the classroom setting with their SWDs to construct their understanding about the learning needs of the SWDs. TE also used her knowledge to provide a student with an alternative way to respond to a test. For example, TE explained that she got to know her SWD by having one-on-one conversations with the student during lunchtime. Through those conversations, she learned about his strengths and weaknesses. She used her personal relationship with him to help him complete a test. She allowed the SWD to tell her about

the topic in a conversational format instead of requiring the SWD to take the test in the traditional written format. TF learned about the learning needs of her SWDs through individual conversations with the students in general and through informal questioning about the content during classroom discussions.

Theme 2: Classroom Accommodations for SWDs

Research Question 2: What are GE teachers doing in their classrooms to accommodate and improve the academic achievement of SWDs in science and social studies? Theme 2 was generated from the participants' responses to the question about the instructional accommodations that they used to improve SWDs academic achievement in science and social studies. From the analysis of Theme 2, I found that the GE teachers adapted their instruction and used differentiated instruction to address the learning needs of SWDs in their classrooms (see Table 9).

Table 9

Frequency of Responses to Research Question 2

Participant responses: Classroom accommodations for SWDs	No. of participants	% of participants
Adapt instruction: Read content aloud	1	16%
Adapt instruction: Adjust assignment	1	16%
Adapt instruction: Increase teacher proximity and one-on-support	3	50%
Adapt instruction: Study guides	4	66%

Teacher adapts instruction. Overall, 83% of the participants (TA, TB, TC, TD, & TF) adapted instruction to accommodate their SWDs. Because the participants referred to a variety of instructional adaptations, I aggregated their responses to determine the patterns within this category in Table 9. Instructional adaptations are accommodations that teachers use to help students to learn the content knowledge of the grade-level

curriculum. TA, who represented 16% of the participants, read content aloud or adjusted the assignments for the SWDs in the class. TA reported that she read all content aloud as an IEP accommodation for her SWDs because she believed that her SWDs needed to hear the information read to him so that he could learn the content. TD adapted an assessment so that her SWDs could demonstrate their knowledge without feeling overwhelmed by the test.

Fifty percent of the participants (TB, TD, & TF) noted that they adapted instruction by increasing teacher-student proximity and providing one-on-one support. TB increased teacher proximity by seating her SWD near her so that she could easily engage in individual consultations with them. TD worked with an SWD who had difficulty writing his ideas because of fine skills motor weaknesses. TD provided one-on-one support by asking the student to dictate ideas while she wrote the responses on paper. TF provided one-on-one support for an SWD who had difficulty with writing. She met with the student every day to help him to produce one piece of writing daily. She also learned that her SWD had a better chance of succeeding on tests when she provided extra time during the assessments.

All of the participants reported that they used study guides in their classrooms for all students. However, 66% of the participants (TA, TB, TC, &TF) used adapted study guides as an accommodation for their SWDs. TA adapted instruction by incorporating pictorial mnemonic devices within her study guide to help her SWDs learn vocabulary. TA asked her students to draw a picture to illustrate the word and then write a sentence

using the word. TA stated that when her students drew pictures and wrote sentences using the words, her SWDs learned the words and could recall the meanings of the words.

TB, TC, and TF provided their SWDs with adapted study guides that had answers for all of the questions. They reviewed the questions and the answers with their SWDs in small groups by asking their SWDs the questions. The SWDs provided verbal responses. TB, TC, and TF provided their SWDs with completed study guides with the answers. However, the participants provided incomplete, fill-in-the-blank study guides for nondisabled students to complete independently.

TE reported that she made study guides accessible to all students in her classroom, but she did not discuss whether she adapted study guides for her SWD. She used a scaffolding note-taking strategy for all of her students. For instance, she taught her students to create note cards for key vocabulary words that were on the study guide.

Teacher use of differentiated instruction. Fifty percent of the participants (TA, TB, & TC) described that they accommodated SWDs by providing differentiated instruction. These participants constructed their understanding of the SWDs' needs and designed instruction based upon their perceptions of the students' abilities. TA designed differentiated reading groups in her classroom. She placed her SWDs who had reading difficulties with nondisabled students who were underachieving in reading. TB selected curriculum-related readers that her SWDs could read. She also worked with her SWD individually by reading aloud to him to ensure that he understood the content. TC grouped her SWDs into small groups during science and social studies, and she used the science and social studies materials to teach reading in the content areas.

Theme 3: Challenges in Accommodating SWDs

Research Question 3: What difficulties do GE teachers face in the classroom as they accommodate and help SWDs to improve in science and social studies? Theme 3 was created from the participants' responses about the difficulties that they faced as they accommodated and helped the SWDs in their classrooms to improve in science and social studies. The participants perceived the following as challenges to making instructional accommodations for SWDs in the GE setting: (a) locating appropriate supplementary content area materials in science and social studies for use by SWDs, (b) differentiating instruction for SWDs in science and social studies, and (c) finding adequate instructional time to provide SWDs with multiple opportunities to demonstrate their proficiency of the curriculum concepts that were taught (see Table 10).

Table 10

Frequency of Responses to Research Question 3

Participant responses: Challenges in accommodating SWDs	No. of participants	% of participants
Locating appropriate supplementary materials in science and social studies	2	33%
Differentiating instruction	3	50%
Creating instructional time to provide SWDs with multiple opportunities to demonstrate mastery	1	16%

Locating appropriate supplementary content area materials in science and social studies for use by SWDs. TB and TC stated that locating appropriate supplementary materials in science and social studies was a challenge to accommodating their SWDs. TB explained that providing her SWD with curriculum-related reading material was a challenge because she had to search for lower level text that had grade-level content. For example, TB mentioned that although she had found a book about

planets at a lower reading level, the content was not detailed enough to teach grade-level curriculum concepts. TC found it challenging to locate social studies materials for her SWD who was performing three grade levels below the reading expectations. She pointed out that many of her SWDs struggled to comprehend the social studies text. The lack of social studies material available for her SWDs made it difficult for her to help them to understand what she was teaching.

Planning differentiated instruction for SWDs in science and social studies. Fifty percent of the participants (TA, TD, & TE) found it challenging to implement differentiated instruction for SWDs who were significantly below grade level. TA worked with an SWD who needed individual assistance on every assignment in the regular classroom setting, making it difficult to provide this assistance and work effectively with the rest of the students in the classroom. She stated that the most frustrating part of her experience was that it took the entire school year for the IEP team to decide how to provide her SWD with the level of support needed to meet learning needs. She reported that by the end of the school year, the IEP team finally decided to place him in a special education program within a small-group setting so that he could receive individualized educational support throughout the school day.

TD stated that the amount of time needed to research instructional strategies to support SWDs was challenging because she had a class of 23 students that included seven SWDs. She reported that experimenting with different strategies until she found a strategy that worked for her SWDs was a time-consuming effort that required a lot of research. TE stated that it was difficult to teach a class of students with a wide range of

abilities (e.g., gifted students and SWDs) because each group of students had specific needs.

Finding adequate instructional time to provide SWDs with multiple opportunities to demonstrate proficiency of curriculum concepts that were taught. TF mentioned that a challenge for accommodating SWDs in the GE classroom was finding the instructional time to provide students with multiple opportunities to demonstrate mastery because she felt that there were few opportunities to do so (e.g., providing ample wait time for SWDs with processing deficits or speech/language disabilities to respond when they wanted to participate in classroom discussions). TF stated that SWDs needed more time to process what she was teaching and that GE teachers were not allowed more time to teach SWDs to ensure that they were proficient in meeting the learning targets.

Theme 4: Needed Resources for Accommodating SWDs

Research Question 4: What are GE teachers' perceptions of the support that they need to better serve the needs of SWDs in science and social studies? Theme 4 was generated from the GE teachers' responses about their perceptions of what resources they needed to accommodate the learning needs of SWDs during science and social studies instruction. The participants stated that they needed (a) appropriate instructional materials, (b) opportunities to collaborate with the SWDs' previous year's GE teachers and special education resource teachers, (c) more instructional time, and (d) professional development (see Table 11).

Table 11

Frequency of Responses to Research Question 4

Participant responses: Needed resources for accommodating SWDs	No. of participants	% of participants
Need for appropriate instructional materials	2	33%
Need for more opportunities to collaborate	3	50%
More instructional time	2	33%
Need for professional development	2	33%

Need for appropriate instructional materials. TA and TC reported needing appropriate instructional materials in science and social studies. TA stated that she had adequate science instructional materials to meet the learning needs of SWDs in the large-group setting, noting, "Well, in science [there is] a lot of hands on in my classroom…so I really feel that I have what I need…I don't feel like I'm lacking in any resources." On the other hand, she felt that she lacked materials in social studies, mentioning that she used her own money to purchase interactive maps for her classroom. TC stated that it would be helpful to have social studies materials appropriate for SWDs' reading abilities because the classroom reading materials for social studies were too difficult for SWDs with reading difficulties to comprehend.

Need for more opportunities to collaborate with colleagues and special education resource teachers. Fifty percent of the participants (TB, TD, & TE) reported needing more opportunities to collaborate with colleagues and special education resource teachers who could help them to accommodate the learning needs of SWDs in the GE setting. TB wanted access to a contact person who could provide her with instructional resources to support SWDs. For example, TB found it helpful when the resource teacher provided her with lower level reading material that she could use with her SWD in the

regular classroom setting. TB appreciated the fact that she did not have to spend time searching for instructional materials.

TD mentioned that dialogue between GE teachers and the special education teacher was needed to accommodate the learning needs of SWDs. TE stated that it would be helpful if someone on staff (e.g., art teacher, music teacher, PE teacher, school counselor, or media center specialist [school librarian]) could teach study skills to help prepare SWDs for upcoming tests.

Need for more instructional time. TE and TF stated that they needed more instructional time to meet the needs of SWDs in the GE setting. TE wanted more one-on-one instructional time with her SWD, and TF specifically expressed that she wanted more time for small-group instruction with her SWDs in science and social studies. TF noted that she already provided small-group instruction for reading and math instruction.

Need for professional development. Thirty-three percent of the participants (TB & TD) reported needing more professional development to help them to support the content area learning of SWDs. TB stated that staff development would provide GE teaching with strategies to support SWDs in the GE setting.

TD stated that ongoing staff development was needed to accommodate the learning needs of SWDs at the local school because some GE teachers might not have taken courses in special education as part of their preservice training. TD recalled taking one course during her teacher preparation program; however, because she had taken it so long ago, she felt that she needed ongoing professional development to improve her ability to meet the learning needs of SWDs. TD also expressed the need for a discussion

component of staff development to support GE teachers who had academic concerns about SWDs. She described the discussion forum as a platform for teachers to brainstorm interventions and strategies to address the academic needs of SWDs. She mentioned that accessible professional development at the local school was important because her family obligations conflicted with opportunities to attend staff development at the district level outside of school hours.

Theme 5: GE Teacher Content Area Instructional Strategies

I generated Theme 5 from the participants' responses about the instructional strategies that they used to teach SWDs science and social studies content. The participants referred to using one or more instructional strategies to improve their SWDs' comprehension of science and social studies content: (a) previews/reviews of vocabulary, (b) activation of students' background knowledge, (c) scaffolding of text feature instruction, (d) use of GOs, (e) provision of hands-on learning activities (experiential learning), and (f) use of text structure instruction (see Table 12).

Table 12

Frequency of Responses for Theme 5

Participant responses: GE teachers' instructional strategies	No. of participants	% of participants
Preview/review vocabulary	3	50%
Activation of students' background knowledge	4	66%
Scaffolding of text feature instruction	2	33%
Use of GOs	3	50%
Hands-on learning activities	2	33%
Text structure instruction	2	33%

Teacher previews/reviews vocabulary. Fifty percent of the participants (TA, TB, and TF) used a preview/review strategy to teach vocabulary in science and social

studies. Participant TA described how she provided her SWDs with multiple opportunities to learn social studies and science vocabulary (e.g., Greek and Latin roots) during her small-group reading instruction. She also used an interactive science workbook to preview and review science vocabulary during small-group reading instruction. TA would read a paragraph with her SWDs, and then they highlighted key words and key ideas as a group to preview and review vocabulary.

TB reported that she previewed science and social studies vocabulary at the beginning of each unit with a quiz, followed by a Discovery Education video for all of her students. First, she would preview seven to 15 vocabulary words at the beginning of every unit with her SWD. The next day, her SWD would work with partners to define and review vocabulary terms. TF posted vocabulary words from the unit on the bulletin board for students to preview. At the beginning of every unit, she posted vocabulary words in large font on the classroom bulletin board so that the students would know the most important words for the unit. She used this technique before the student read the text so that the students would understand the content of what they were reading. The students also would use the bulletin board as a reference to review the vocabulary words during the unit.

Teacher activation of background knowledge. Sixty-six percent of the participants (TB, TD, TE, TF) described how they used activation of students' background knowledge as an instructional strategy in science and social studies. TB used a group discussion to activate students' prior knowledge in science about sound by helping them to recall the different ways they heard things. For example, she explained to

students that sound travels through different media, such as water. She asked the students if they had ever been swimming with friends and had talked to them while in the water. She also explained that sound travels through walls by asking whether the students had ever heard their parents talking in another room.

TD reported that she activated students' prior knowledge about text structure and previewed text for the students to help them to learn new content. Before TD assigned students reading content containing diagrams, she spent time teaching the students how to read diagrams by directing their attention to details of the illustrations and discussing with them how the content and the diagrams interacted to make meaning. TD reported that she liked using the previewing strategy and that she used the prior knowledge strategy on a daily basis to preview content with her students.

TE reported that she used games as a mini-review to help students to activate their background knowledge about previously learned information during social studies. For example, after she taught students about some historical people, she paired students to play a "guess who" game about people from history. Each student in the pair had a label with the name of a person from history taped to his/her back. One student in the pair would give the partner a clue, and the other student would try to guess the name of the person. TE also used picture books and videos to support students' background knowledge in social studies. For instance, she used picture books to introduce a lesson on civil rights. She asserted that her use of picture books and video clips was a form of storytelling that children could understand and learn from.

TF used educational videos to activate students' background knowledge. Specifically, she used Discovery Education videos because they have 5-minute vignettes about different curricular topics. She found these videos particularly helpful for students who had little or no life experiences about the topics that they were expected to learn.

Teacher scaffolds text feature instruction. Thirty-three percent of the participants (TA, TF) described how they scaffolded their instruction about text features. TA designed a textbook walk lesson to teach SWDs how to locate the index and glossary as part of scaffolding text feature instruction. Her SWDs highlighted different features of text in different colors. TA spiraled the text feature vocabulary during science and social studies instruction by prompting SWDs to locate different text features that had been taught previously.

TF reported that she scaffolded text feature instruction for her all students during whole-group reading instruction by teaching them how to locate headings, subheadings, captions, tables of contents, indices, and side bars. Then TF reviewed text feature instruction as a content area reading strategy during small-group reading instruction for her SWDs.

Use of GOs. Fifty percent of the participants (TA, TC, and TD) used GOs as a content area instructional strategy. TA used GOs to teach her students how to use text features to understand information in the text. TC used GOs as a content area reading strategy to teach main idea and compare-contrast, and chronological order reading comprehension skills. TC reported that she primarily used Venn diagrams to help her students to learn compare-and-contrast skills to understand information from science text.

TD used T-charts as a GO to help her students to preview information from science and social studies text. She used previewing as a before-reading strategy to teach students how to predict what they were going to learn in the reading selection. Students would write their predictions and their questions about the topic on one side of the T-chart and then they would read the information. After reading the information, the students would review the T-chart to decide whether their predictions were correct or whether their initial questions had been answered.

Hands-on learning activities (experiential learning). Thirty-three percent of the participants (TA & TF) described using classroom projects, field trips, centers, and role-plays and skits in science or social studies to increase learning in content areas. TA and TF reported that learning became more meaningful to the students when they were engaged in authentic activities.

Classroom projects in science. TA selected a hands-on science experience to teach students about heat/insulation. This experience became the springboard to classroom discussion, analysis, and follow-up activities such as creating a project related to heat/insulation. TA asserted that when students had opportunities to apply their knowledge of concepts to create projects, it improved their understanding of science concepts. Because she found that she did not have time for students to create science projects at school, she had them create their science projects at home. For example, she asked her students to design an instrument to keep ice cubes from melting after she had taught a lesson about insulation. She brought in examples of insulators, such as thermoses, Styrofoam, and coffee cups, and she explained how the insulators kept the ice

from melting. At the end the lesson, she assigned her students to go home and find things around the house that could be used to build an insulator and bring it to school. Then she and the class spent the next 3 days putting ice cubes in the insulators that the students had constructed to determine whose creation could keep the ice cube the longest. At the end of the unit, students displayed their instruments in the hallway for students from other classes to view. TA also reported that during this unit, the students learned vocabulary terms such as conduction and convection.

Classroom projects in social studies. TA described that she created a hands-on learning experience for students in social studies, even though she felt there was limited time during the school day for students to work on them. TA created a hands-on social studies experience about Washington, DC, that became the springboard to discussion, analysis, and follow-up activities such as creating replicas of important buildings in the capital of the United States. She asserted that providing students with hands-on learning experiences gave them opportunities to learn from each other. She stated that she had an SWD who could not read well, but was very good in art and subsequently enjoyed building the replicas. She stated that during the unit, he brought in a 3- or 4-foot replica of the White House that he had built. She displayed his replica in the media center for other students to enjoy. Even though her SWD could not read well, TA provided him with a different opportunity to demonstrate his knowledge about government. He was able to use the replica to explain historical aspects of the replica.

Field trips. TF took her students on an in-school field trip to supplement their learning about their state. Students learned about habitat regions of Georgia from an in-

school field trip in the activity room. During the field trip, students were shown a display of land in its natural form. On the other side of the display, students learned how human population, pollution, and forest fires had affected the land.

TF also took her students on a second in-school field trip to supplement her lesson about rocks and minerals. Students experienced mining for minerals through a sluice mine that had water running through it. The students mined Brazilian ore and took home a full bag of rocks and minerals. After this second field trip, the students did a cross-curricular assignment in math by sorting and graphing information about the rocks and minerals that they had mined. Then the students wrote inquiry-based questions about the graph that they had created.

Learning centers. Thirty-three percent of the participants (TB & TE) used learning centers to provide students with additional practice to master content knowledge in math, reading, science, and social studies. TB varied the content of the centers each day. TE used centers during her reading block that included activities related to science and social studies content. She used readers from the book room with a fill-in-the-blank GO. The students read a section of the reader and completed the related GOs independently. The SWDs worked with peers to complete the GO as needed.

Role-plays and skits. Thirty-three percent of the participants (TE, TF) asserted that their students could be successful learning difficult content when they could visualize what they were studying during a hands-on activity. They used short and simple role-plays to review content knowledge after reading. For example, TE designed a digital study guide and integrated educational videos to prepare students for the reenactment of

the Lincoln-Stevens debate. TF also discussed her use of dramatic role-play to compare voting in ancient Greece to voting in the contemporary United States. After the students rehearsed their role-plays, they dramatized the events described in their social studies textbook.

Text structure instruction. Thirty-three percent of the participants (TB, TD) taught text structure as an instructional strategy to improve students' comprehension of science and social studies text. Participant TB introduced students to text structure by using simple examples from the textbook to teach students how to identify specific structures. TB used the cause-and-effect skill to teach her students about text structure during social studies. She stated that social studies had many cause-and-effect events that she could discuss with her students to support their comprehension of the information. TB started her discussions with prompts such as, "Why do you think this happened?" or "What was the cause of this happening?"

TD reported that she integrated text structure instruction during readers' workshop. She selected articles that included the text structure that the class was studying at the time. She would teach text structure during whole-group or small-group instruction. For example, her lessons about cause-and-effect text structure included reading articles with her students during large-group and small-group instruction. After the students learned the about a variety of text structures, TD would give them a cloze reading assignment in science or social studies. She gave students the opportunity to read the passage and then led the class in a discussion by asking them to identify the text structure

of the passage. TD used GOs to help her students to extract information from the text and organize it in a manner that made sense to them.

Discrepant Cases and Nonconforming Data

The participants in this case study tried to provide instructional accommodations that benefited their SWDs. However, during the analysis, it became evident to me that one participant response did not support any of the themes. For example, when one participant was asked about the ways in which she accommodated her SWDs in science and social studies, she responded, "I think the students in my classroom were naturally very high, and those were two high interest subjects [science and social studies] for them." This statement did not address the question about accommodations for her SWDs.

Evidence of Quality

According to Creswell (2009), validation of the findings occurs through the research process. I used transcript review and peer debriefing to ensure the validity and reliability of the findings. Transcript review allowed me to obtain feedback from the participants about the accuracy of the transcribed responses. Transcript review was done informally during the normal course of conversation during the interviews and formally after the interviews (Rubin & Rubin, 2005). During the interviews, I verbally summarized and paraphrased the participants' responses to validate and clarify the accuracy of their information. After the interviews, I transcribed their responses to the interview questions. I provided the participants draft copies of their individual transcriptions in sealed envelopes that I placed it in their school mailboxes. They reviewed the transcriptions and verified their accuracy by returning them with suggested

revisions or signed off on them immediately to indicate their approval. Only one participant asked for the transcript to be changed. She asked that I remove all the "ums" from her transcript if I quoted her transcript in the published study. I did so.

I used peer debriefing to increase the reliability and validity of the findings, as well as obtain feedback about the transcriptions and analysis of the interview data. According to Creswell (2009), qualitative researchers can use peer debriefing to enhance the accuracy of the participants' accounts. My committee chair reviewed the data and the codes as a peer debriefer to minimize any threats (e.g., researcher bias) to the validity and reliability of the data. My chair also conducted the peer debriefing process by reviewing the data to ensure that the coding aligned with the data and the findings were credible (Merriam, 2002). I reviewed the data from peer debriefing and reconsidered any coding that my peer debriefer determined did not match. The results of the peer debriefing were acknowledged in the Data Analysis component of Section 4.

Summary

In Section 4, I discussed how the GE teachers constructed their understanding of the learning needs of the SWDs in their classrooms. It was important for the teachers to know who the SWDs in their classrooms were, but it was even more important for them to understand the learning needs of these students. These teachers recounted how they constructed knowledge by observing and working with the SWDs in their classrooms.

Some participants constructed their knowledge and understanding of their SWDs based upon information from the SWDs' IEPs, observations, and experiences in the classroom. Then the participants used that knowledge to design instruction that

accommodated SWDs' learning needs. The participants also mentioned the challenges that they encountered accommodating SWDs in science and social studies, and they expressed the need for staff development in meeting the learning needs of SWDs in science and social studies. In Section 5, I interpret and discuss the findings, explain the limitations of the study, present the implications for social change, offer recommendations for future study, and make concluding remarks.

Section 5: Conclusion and Recommendations

Introduction

I conducted this case study to explore how GE teachers constructed their understanding of SWD needs, addressed the needs, experienced problems, attained assistance for themselves, and explained the resources and support that they needed to better meet the needs of SWDs. The problem that spurred this investigation was that for 3 years SWDs were not meeting goals of the district on standardized achievement assessments. I interviewed teachers from grades 3, 4, 5 and specifically asked them about how they accommodated SWDs in their science and social studies classes. In this section, I discuss and interpret the findings that I presented in Section 4, offer recommendations for further study, discuss the implications for social change, and make concluding remarks.

Interpretation of the Findings

Interpretation of Theme 1: GE Teachers' Knowledge of SWDs

Research Question 1: How do GE teachers construct their knowledge about the learning needs of SWDs in science and social studies? I used Research Question 1 and Theme 1 to address how the participants learned that they had SWDs in their classrooms and how they received information about SWDs who were placed in their classrooms for science and social studies. In response to Research Question 1, the participants reported that they received information about their individual SWDs by reviewing the students' IEPs. Although one teacher accessed IEP information about the SWDs in her class through the class list on the school district's web portal, the other participants mentioned

that they received information about the SWDs in their classes with the help of the special education teacher (e.g., resource teacher, speech teacher) and/or the parents. The participants constructed their knowledge about the SWDs by (a) receiving information from the IEPs, (b) consulting with the special education teacher, (c) speaking with the SWDs' GE teacher from the previous year (when possible), and (d) performing informal observations of their SWDs in the classroom setting.

McLeskey and Waldron (2011) pointed out that according to IDEA (2004), SWDs should be educated in inclusive GE settings unless their disability is so severe that it cannot be addressed in the GE classroom with supplementary aids and services. It is important that GE teachers receive information about their SWDs so that they know how to support these students' learning and give them opportunities to succeed in the GE curriculum.

The school provides information for GE teachers about their SWDs on the school district's online portal. The portal provides teachers with online access to their class lists and IEPs, identifying SWDs' exceptionalities and specific IEP goals and objectives. In response to Interview Question 1, only one of the six participants reported intentionally consulting the online portal to find out which students in her classroom were SWDs.

Local school administrators could facilitate teachers' learning about the SWDs in their classes by directing teachers to review the class lists on the portal at the beginning of the school year. Then, the special education administrator and resource teacher could hold a group session with the GE teachers to show them how to locate their SWDs on the district's web portal and how to understand and use the IEP information. This group

discussion would be an opportunity for the special education resource teacher and the special education administrator to collaborate with GE teachers, review SWDs' accommodations and IEP goals and objectives, and address any concerns or questions raised by the GE teachers.

In response to Research Question 1, the participants also reported that they constructed their understanding about the needs of their SWDs by obtaining information from the SWDs' IEPs. Some participants reported that they had opportunities to consult with the special education teachers and the parents who discussed their children's IEPs with them. The participants also revealed that they used general strategies, that is, the same strategies that they used with all of their students, to understand the learning needs of the SWDs in their classes. For instance, TA used COGAT scores, TB attended to SWDs' visual and verbal cues, and TC used comprehension checks in small groups. The participants also reported that they constructed their knowledge of SWDs through classroom observations as well as feedback from the SWDs' parents and previous GE teachers. Only one participant reported briefly consulting with one of her SWDs' teachers from the previous year.

One participant (TD) reported that she did not have enough time to meet with the special education teacher and the previous year's GE teachers about her SWDs. For instance, she (TD) reported speaking with a previous year's GE teacher in passing when she saw her in the hall en route to another location. For some of the participants, the previous year's GE teacher was no longer at the school. Even though it was not always possible for the participants to speak with the previous year's GE teacher, it was possible

for them to speak with the students' special education teachers. Nevertheless, the majority of participants (83%) did not report that they sought out the special education teacher for support. From the participants' comments, I inferred that the special education teachers did not appear to make an effort to seek out the participants.

TB stated:

> if this teacher [……] knows the student better than I do because they've worked with that student previously it would be helpful to know what strategies have worked in the past in particular…don't just hand me the supplemental file [IEP] and tell me to go read it. I'm not trying to be ugly, I'm trying to be politically correct.

TD commented:

> Second biggest problem… is that I don't think that all resource teachers are prepared to support these kids in a regular classroom. As the classroom teacher, I had 24-28 students at one point. So, if I had a couple of students with a reading disability and couple students with a disability in math or writing… So trying to find different things and cycle through them until you find the thing that works for each student can be really time consuming…and if you don't have someone [like a resource teacher] who is really knowledgeable…learning disabilities it makes it really hard [because]… I would often spend a lot of time doing my own research trying to figure out, ok-what are some things that I can do here.

The lack of opportunities for the participants to collaborate with resource teachers was problematic because it made it difficult for the participants to learn more about ways

to accommodate the learning needs of their SWDs. According to McLeskey, Waldron, and Redd (2012), there are ways that the school could facilitate the construction of knowledge about SWDs in the regular classroom setting. One way would be for the school to provide opportunities for the GE teachers, special education teachers, and previous GE teachers to collaborate about SWDs' progress to date, discuss the need for accommodations, and engage in discussions about ways to move the SWDs forward with their learning (Mason & Hedin, 2011; McLeskey, Waldron, & Redd, 2012). In this way, the GE teachers would have additional information about their SWDs that would allow them to better plan ways to meet the learning needs of SWDs in science and social studies (Brigham et al., 2011). For example, a monthly discussion forum led by the special education administrator and special education resource teachers would provide collaborative opportunities to discuss best practices for accommodating SWDs in the regular education classroom.

Interpretation of Theme 2: Classroom Accommodations for SWDs

Research Question 2: What are GE teachers doing in their classrooms to accommodate and improve the academic achievement of SWDs in science and social studies? The participants reported that they provided specialized accommodations (see Table 2) for their SWDs in science and social studies. By law (IDEA 2004), SWDs should be provided not only with access to the core curriculum but also with accommodations according to their IEPs (Brigham et al., 2011; Ciullo et al., 2014; Mason & Hedin, 2011; McLeskey & Waldron, 2011). The participants reported that they differentiated instruction to accommodate all of their students, including SWDs. The

participants made specialized IEP accommodations, such as more time to complete assignments, alternative methods to complete assignments, and/or extended time on tests. The participants also provided instruction for the whole class, and within their instructional time, they tried to ensure that lessons were accessible to their SWDs, such as by providing appropriate reading materials and individual support.

Interpretation of Theme 3: Challenges in Accommodating SWDs

Research Question 3: What difficulties do GE teachers face in the classroom as they accommodate and help SWDs to improve in science and social studies? The participants reported the following challenges when making instructional accommodations for SWDs in the GE setting: (a) locating appropriate supplementary content area materials in science and social studies for use by SWDs, (b) planning differentiated instruction for SWDs in science and social studies, and (c) finding adequate instructional time to provide SWDs with multiple opportunities to demonstrate proficiency of the curriculum concepts that were being taught. The teachers were aware of the challenges that they experienced as they attempted to accommodate SWDs in their classrooms.

Locating appropriate supplementary content area materials in science and social studies for use by SWDs. According to Dexter and Hughes (2011), teachers need to make a variety of appropriate grade-level materials and resources available to SWDs who perform below grade expectations. Even though SWDs might struggle to read and comprehend grade-level text, these students are still required to learn the same content as their nondisabled peers to prepare for district and state assessments in science and social

studies (Bulgren et al., 2013). The participants in my study were responsible for delivering specialized instructional accommodations to meet the learning needs of SWDs in science and social studies. Some participants reported that they found an appropriate reading level text about a science topic from the school library or the local school book room. For example, one Grade 4 GE teacher used the school book room to locate a book about the solar system for one of her SWDs, who was reading at a Grade 2 level. Another participant reported that it was difficult to locate leveled reading texts about social studies for her SWDs who had reading disabilities.

GE teachers, special education teachers, and local school administrators could collaborate with the local school librarian to compile a variety of multilevel science and social studies readers that the GE teachers could access and use to accommodate the learning needs of SWDs. These multilevel readers could be added to the reading book room currently available at the local school to supplement the science and social studies curriculum.

The GE teachers also could use the Internet as a resource to compile a list of online resources to supplement science and social studies content for SWDs. If the teachers had access to multilevel science and social studies textbooks, they could devote more time to planning instruction and less time searching for supplementary materials to address the learning needs of their SWDs. Teachers' use of a science and social studies multilevel book room would allow SWDs to learn the same content from text that is at an appropriate level for them.

Planning differentiated instruction for SWDs in science and social studies.

The results of the study showed that finding the time to differentiate instruction in science and social studies was a challenge for the participants. According Simpkins, Mastropieri, and Scruggs (2008), when teachers are planning to use differentiated instruction, they face two primary tasks. First, they need to plan and implement differentiated instruction for the entire class while also providing accommodations for SWDs. Second, they need to implement the SWDs' IEP accommodations in their classrooms. When implementing differentiated instruction, teachers group students in their classrooms using students' academic performance and need (DeJesus, 2012; Pham, 2012; Simpkins et al., 2008).

Finding adequate instructional time. According to Reis, McCoach, Little, Muller, and Kaniskan (2010), planning time for teachers to assess learners' needs, interests, and readiness levels, as well as design appropriate activities for multiple subjects, is a time-consuming effort. It would be helpful for teachers to plan differentiated instruction collaboratively for diverse learners in multiple subjects (DeJesus, 2012; Pham, 2012; Reis et al., 2010). The participants in my study reported that they differentiated instruction in reading but found it difficult to differentiate instruction in science and social studies because they simply did not have the time to prepare materials and activities, and to access a variety of multilevel text materials to group students by academic ability. The participants reported having the materials to differentiate instruction for reading and math but fewer materials to differentiate instruction in science and social studies. The participants reported that they need more

time to plan for differentiated instruction in science and social studies because they had to search for and locate materials in the content areas.

Interpretation of Theme 4: Needed Resources for Accommodating SWDs

Research Question 4: What are GE teachers' perceptions of the support that they need to better serve the needs of SWDs in science and social studies? The participants reported that they needed instructional time and professional development to serve the learning needs of SWDs in science and social studies.

Instructional time. The science and social studies content that the participants were expected to teach had to be delivered in the instructional time that they had available. Some of the participants reported that it was a challenge to cover the curriculum content in the time provided. At the time of this study, teachers were expected to allocate 120 minutes of science and social studies instruction each day, with 60 minutes for science and 60 minutes for social studies. Within the allotted time, the GE teachers had to differentiate the learning needs of all students as well as provide accommodations to meet the learning needs of their SWDs.

All six participants expressed having difficulty covering the science and social studies curriculum within the available time to teach. The literature has described seven suggestions for teachers to maximize their time when teaching SWDs in the GE classroom:

1. Conduct an orientation to the lesson. Teachers should orient SWDs to a lesson as a first step in teaching it. Teachers should let students know clearly what is expected of them for a particular lesson, relate that expectation to the previous

lesson, and highlight what students should be able to do after they learn the material (Ciullo et al., 2014).

2. Lead the instruction. Teachers should directly lead the instruction by using interactive presentations to model skills, providing guided practice, and providing constructive feedback to SWDs individually or in small groups as appropriate. Teacher-led instruction is the most effective type of instruction for SWDs (Jitendra & Gajria, 2011; Mason & Hedin, 2011; McGinnis, 2013).
3. Visually monitor student behaviors. Teachers should visually monitor each SWDs attention to task. When students are attending to the educational tasks, they will master the material much more quickly and will learn more (Therrien et al., 2014).
4. Monitor instructional outcomes on specific objectives. Teachers should monitor the academic performance of each SWD during a lesson and on a daily basis throughout a series of lessons. This is typically done with some type of chart of academic performance (Feiker-Hollenbeck, 2011).
5. Ask the SWDs questions. Frequently asked questions during a lesson can help students to focus on the task more effectively. Teachers should wait an appropriate time after asking a question and should require several SWD to answer each question. Each SWD response can be considered a product of differentiated instruction that a student has to produce to move through the learning (Berg & Wehby, 2013; Whalon & Hart, 2011).
6. Require regular products from SWDs (e.g., projects, group work, homework,

etc.). When students are required to produce work, they learn more. Effective teachers require regular products from students (McGinnis, 2013).

7. Provide constant and timely feedback to students. SWDs learn much more from corrected errors than from work done incorrectly without an opportunity to correct errors. Thus, teachers should regularly respond to SWDs' work with detailed written or verbal feedback. This feedback would include answering questions in class, addressing errors on homework, and correcting SWDs' class work in a timely fashion (Feiker-Hollenbeck, 2011).

Although these suggestions were specifically meant to benefit SWDs, the suggestions would benefit all students. The problem that GE teachers would face in using these suggestions is finding the classroom time to implement them.

Professional development. Teachers need professional development to acquire and learn to use instructional strategies that might be new to them. Professional development is a way to solve problems and meet teachers' individual needs. McLeskey, Waldron, and Redd (2012) argued that effective staff development includes the following components: (a) exploration of theory through readings and discussions, (b) demonstrations of teaching in the classroom, (c) opportunities to practice under simulated conditions, and (d) coaching and consulting to solve problems and answer questions that arise during implementation. Teachers should have the opportunity to work together to share expertise, provide non evaluative feedback to each other, help each other to master new instructional approaches, adapt teaching models to the needs of

students, and develop and refine their classroom skills (McLeskey, Waldron, & Redd, 2012).

The value of professional development has emerged from several previous studies. Swanson et al. (2012) found that professional development significantly influenced teachers' overall quality of instructional strategies to improve the comprehension and vocabulary skills of Grade 4 students in social studies. McLeskey, Waldron, and Redd (2012) found that providing teachers with professional development on ways to include SWDs in the GE classroom improved the learning outcomes for SWDs who struggled to meet the curriculum standards.

Interpretation of Theme 5: GE Teacher Content Area Instructional Strategies

The participants reported using the same instructional strategies for SWDs that they used for all students in their science and social studies classrooms. All six participants referred to using one or more instructional strategies to improve their SWDs' comprehension of science and social studies concepts: (a) previews/reviews of vocabulary, (b) activation of students' background knowledge, (c) scaffolding of text feature instruction, (d) use of GOs, (e) provision of hands-on learning activities (experiential learning), and (f) use of text structure instruction.

Recommendations for Action

The recommendations that arise from this study are as follows:

Recommendation 1: Because the participants expressed a need for more time to collaborate, communicate, and learn from each other. It is recommended that the local school leaders develop an on-going special education discussion forum for GE teachers

where they could learn from each other and from special education teachers about instructional strategies to address accommodating the learning needs of their SWDs. This forum could be conducted after school hours once a month at the local school for 45 minutes. Teachers would submit their concerns ahead of time to the instructional leader and these concerns could guide the forum discussion. A special education discussion forum would or allow GE teachers to reflect on their practice and identify areas for improvement.

A special education discussion forum would provide GE teachers with opportunities to collaborate, ask questions, seek assistance, and present their concerns about meeting the learning needs of SWDs in their classrooms. Teacher use of a discussion forum could serve as the platform to help teachers find solutions to problems by learning and working together toward a common goal. Teachers can reflect upon their classroom practice by constantly assessing and monitoring their work. This reflection process may help teachers get better at doing what is best for SWDs during science and social studies instruction in their classrooms.

Recommendation 2: Because the participants in the study stated that they would like more professional development, I recommend that the instructional leaders from the local school and district provide a yearly on-going professional development for GE teachers about how to provide IEP accommodations for SWDs. An on-going professional development would provide teachers with opportunities to learn new instructional strategies and accommodations for meeting the learning needs of SWDs. Once teachers acquire new knowledge, they can apply their knowledge of providing IEP

accommodations when differentiating instruction in the classroom for SWDs. The teachers can use the information from the yearly on-going professional development to design the topics for the monthly discussion forum.

Implications for Social Change

This study has the potential to influence school districts and school administrators to provide interventions that would help GE teachers to accommodate SWDs and improve their academic performance as they progress from elementary school through high school. Across the United States, the number of SWDs who dropped out of high school in 2011 was 78,741 (24%); 253,445 SWDs (76%) graduated with a high school diploma (USDoE, 2015a). In Georgia, 3,263 SWDs (40%) dropped out of high school in 2011, and 4,706 SWDs (59%) graduated with a high school diploma (USDoE, 2015b). In Georgia, the graduation rate of SWDs (59%) was lower than the national graduation rate of SWDs (76%). The high school dropout rate of SWDs in Georgia (40%) was higher than the national dropout rate for SWDs (24%). The improvement of GE teachers' ability to accommodate SWDs could result in an increase in the number and percentage of SWDs who graduate from high school in Georgia and become productive members of society.

Recommendations for Further Study

Having a more in-depth understanding about what constitutes best practice for accommodating the needs of SWDs in science and social studies in the GE classroom at the elementary school level is needed. The findings suggest a number of studies that could result in an increased understanding of how GE teachers could better help SWDs to

learn science and social content. For example, experimental studies could be conducted to determine and compare various differentiated instructional models and accommodations for various types of disabilities. It would be helpful to have a larger study at multiple elementary schools to achieve a greater understanding of how GE teachers accommodate SWDs in their classrooms and how they integrate the information from the students' IEPs into their decisions regarding instructional accommodations.

I also suggest that a quantitative survey study be conducted to understand the current levels of collaboration between GE teachers and special education resource teachers at the elementary school level. This type of quantitative study could be used to survey special education resource teachers to obtain their perceptions of the collaboration that they have with GE teachers. Then GE teachers could be surveyed to gain their perceptions of the same issue to determine whether there is a correlation between GE and special education resource teachers in how they collaborate and communicate.

Future researchers could study the impact of professional development for teachers focused on improving SWDs' academic achievement in science and social studies at the elementary school level. The number of SWDs being taught social studies and science in the GE setting continues to rise, but the current state of instruction for SWDs is not allowing many of them to meet the basic levels of performance on national assessments (USDoE, n.d.). Teachers need opportunities for learning by discussing classroom teaching strategies, sharing ideas, planning together, and problem solving. Over time, when teachers collaborate, the result can be continuous improvement in instructional strategies.

Concluding Remarks

The consistent and long-term application of instructional strategies in science and social studies for SWDs who are capable of learning the grade-level curriculum remains a challenge and a goal for local schools. Effective implementation of IEP accommodations to meet the instructional needs of SWDs requires the effort of educators to seek strategies that will promote student learning. McLeskey, Waldron, and Redd (2012) found that the willingness or ability of GE teachers who taught inclusive classrooms to provide specialized IEP accommodations for SWDs was a concern. McLeskey, Waldron, and Redd noted that the results of observational studies and attitude surveys of GE teachers about the inclusion of SWDs in their classrooms were not positive. Although McLeskey, Waldron, and Redd found that the majority of GE teachers supported inclusionary practices, only a minority of them agreed that they had sufficient time, training, or supports to accommodate the learning needs of SWDs effectively. To improve the learning of SWDs in the GE classroom, all stakeholders need to be committed to the effort. For administrators, the challenge is to support teachers' professional development, provide them with access to a variety of instructional materials, and encourage them to implement appropriate accommodations for their SWDs.

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Appendix A: Interview Protocol

Thank you for taking the time to participate in this interview. Your participation in this educational research is really important because the study will lead to greater understanding of the ways in which teachers accommodate students with disabilities (SWDs) in their classrooms and the supports that teachers need to raise the academic achievement of SWDs in science and social studies. When I finish the interviews and transcribe your responses, I will give you a copy of your transcript of the audio conversation and share my notes with you so that you can check their accuracy. This study may be published and/or presented at conferences and professional meetings, but your name will never be mentioned in any documentation related to this study. Do you have any questions about the interview before we start?

1. How many SWDs are in your class?
    a. Describe what steps you take to learn who they are.
    b. Describe what steps you take to learn what they already know about the content you teach.
2. How many SWDs in your class did not meet the standards on the science and social studies CRCT? How did you accommodate these students in your classroom?
3. What challenges do you face when you are accommodating SWDs in your classroom?
4. What resources do you feel you need to accommodate the learning needs of SWDs in science and social studies?

5. How do you accommodate each SWD in your classroom as an individual?
    a. Subquestion: Describe how you select the comprehension strategies to match the content topic that you are teaching? (Note to self: Ask for examples).
6. How do you integrate comprehension strategies to support content knowledge acquisition for SWDs to help them prepare for science and social studies tests? (Note to self: ask for examples).
7. Closing: (Name of interviewee), I'm really grateful for the time and ideas that you shared. I would like to send you a copy of your transcription after I prepare it to ensure that I recorded your responses accurately. Is that fine with you?

Appendix B: Provisional Code List

Provisional codes from conceptual framework	Provisional codes from the literature review
• Schema: background knowledge	• Explicit teaching
• Preservice training	• GOs
• Collaboration	• Text structure
• Planning time allotment	• Mnemonic devices
• Lesson planning	• Instructional accommodations
• Instructional support	• Extra practice for SWDs
• Instructional materials	• Segment assignments in to manageable parts
• Staff development	• Cooperative learning groups
• Curriculum pacing	• Peer helper
• Class size	• Teacher-directed activities
• SWD achievement on science CRCT	• Scaffolding
• SWD achievement on social studies CRCT	• Common core state standards
• Social studies instruction for SWDs	• IDEA and least restrictive environment
• Science instruction for SWDs	• Expository text comprehension
• Constructivism	• Inclusive classroom settings
	• SWD progress in the GE curriculum
	• Content knowledge acquisition

Appendix C: CRCT District and State Comparison Data

The data in the tables compare SWDs subgroup and nondisabled peers who did not meet expectations on the Georgia CRCT science and social studies assessment at the district and state levels. The purpose of these assessments is to measure students' content knowledge of science and social studies concepts, in addition to the application of that knowledge. Data indicated a discrepancy in academic performance among the percentage of SWDs who do not meet standards in comparison to nondisabled peers in Grades 3 to 5.

2011-2013 District Comparison of SWDs and Nondisabled Peers

CRCT content knowledge assessment	Total SWDs Tested	% of SWDs who do not meet expectations	Total nondisabled peers tested	% of nondisabled peers who do not meet expectations
2011 CRCT				
Grade 3				
Science	1,492	33%	10,981	11%
Social Studies	1,487	32%	10,941	9%
Grade 4				
Science	1,591	31%	11,019	7%
Social Studies	1,590	31%	10,913	6%
Grade 5				
Science	1,588	42%	11,060	10%
Social Studies	1,582	49%	11,012	14%
2012 CRCT				
Grade 3				
Science	1,486	35%	10,937	11%
Social Studies	1,481	34%	10,881	8%
Grade 4				
Science	1,692	31%	10,941	6%
Social Studies	1,694	33%	10,884	6%
Grade 5				
Science	1,725	37%	11,083	8%
Social Studies	1,721	39%	11,031	9%
2013 CRCT				
Grade 3				
Science	1,647	36%	11,067	11%
Social Studies	1,644	32%	11,003	7
Grade 4				
Science	1,688	30%	10,949	6%
Social Studies	1,685	29	10,884	5%
Grade 5				
Science	1,781	42%	11,017	9%
Social Studies	1,778	43%	10,948	8%

Note. From the Governor's Office of Student Achievement (2014) K-12 Public Schools Report Card-Georgia Tests

2011-2013 State Comparison of SWDs and Nondisabled Peers

CRCT content knowledge assessment	Total SWDs Tested	% of SWDs who do not meet expectations	Total nondisabled peers tested	% of nondisabled peers who do not meet expectations
2011 CRCT				
Grade 3				
Science	14,317	40%	114,009	17%
Social Studies	14,286	43%	113,654	16%
Grade 4				
Science	14,677	46%	115,095	18%
Social Studies	14,646	48%	114,649	19%
Grade 5				
Science	14,994	53%	114,619	20%
Social Studies	14,962	59%	114,264	25%
2012 CRCT				
Grade 3				
Science	14,280	44%	112,922	19%
Social Studies	14,248	43%	112,578	16%
Grade 4				
Science	14,947	44%	112,044	16%
Social Studies	14,920	48%	111,702	18%
Grade 5				
Science	15,215	51%	114,417	18%
Social Studies	15,186	53%	114,089	19%
2013 CRCT				
Grade 3				
Science	14,719	43%	11,067	8%
Social Studies	14,695	40%	11,003	9%
Grade 4				
Science	14,886	41%	10,949	11%
Social Studies	14,865	43%	10,884	7%
Grade 5				
Science	15,696	50%	112,023	16%
Social Studies	15,675	50%	111,656	15%

Note. From the Governor's Office of Student Achievement (2014) K-12 Public Schools Report Card-Georgia Tests

Appendix D: Sample Interview Transcript

Interview transcript: TD
Date: 7.23.14

Question 1

Me: How many SWDs are in your class? Describe what steps you take to learn who they are?

(a) TD: Let's see…it kind of fluctuated. I think I had between 8 & 10 students with disabilities (SWDs) at one time. Then there was one who was found eligible for a specific learning disability at the end. So, it was between 8 and 10. Well, I mean, the first thing that I did was look at their IEPs, which they [resource teacher] gave me a copy of. Um, I read over those to see specifically what was their disability, and then also looking at the information that describes their strengths and weaknesses. So, that would have been my first step. So, my second step of course- well, I couldn't really talk to the resource teacher because she never worked with these kids before so…but I did talk with their 4th grade teacher a little bit, but you know, there's not a lot of access there so that was limited to running to her in the hall- that sort of thing. So most of my knowledge comes from working with the kids in small groups or working with them one-on-one, whatever the case may be.

Me: Describe what steps you take to learn what they already know about the content you teach.

(b) TD: Science and social studies-and this is actually something I'm changing, but typically in the past what I've done is some type of K-W-L or a protocol to sort of see what the class knows as a whole knew about the science and social studies content. Um, but that wouldn't necessarily be directed at specific students. What I plan to do this year is to actually use pretest and posttest to figure out what they actually know, because what I found is that a lot of my kids with disabilities those are the subjects, specifically science, that they enjoy and know more about because they are interested in it and there are other ways to learn it. But mostly some sort of an informal pre-assessment that was really geared toward whole group but not necessarily the individual- that's what I've done in the past, and I don't think that's the most effective way to do it.

Me: Why do you say that's not the most effective way [whole group] to do it?

TD: Well, because getting it to the class, you can't get to what each individual student knows. Whereas on a pretest, if I were to give a pretest, I can see what

that student knows from the curriculum. It effective. If I want to know specifically what they know, it's [whole group] not going to give me that picture.

TD: Question 2

Me: How many SWDs in your class did not meet the standards on the science and social studies CRCT?

TD: Hmmm, let's see, I can't give you a specific number right now, but it you want, but I can get the specific data from you when I have time to go on the computer-if you'd like, ok?

Me: Ok

TD: So, I can do that, and I can shoot you an email with those specifics. But generally speaking, though, almost all of them mastered the standards. I won't say 100% did, but there were 1 or 2 that didn't. There's not anyone jumping out in the forefront of my mind who didn't meet the expectations on the CRCT for those two subjects. The number may be higher than what I think because of course the first thing I'm looking at is math, and reading, and language arts because those are the key subjects. I was really kind of surprised that more passed this year than what I'm used to seeing.

Me: How did you accommodate these students in your classroom?

TD: Well, I looked for different ways to do it. A lot of our content reading we did during reading workshop so that students had small group instruction for articles that we were reading because they were on grade level. The students who weren't reading on grade level that was there particular area of weakness. I used videos and other computer type technology to introduce them to topics and give them an opportunity to see information about…for example, the battle of Fort Sumter for the Civil War, I would show them a video clip so they would have those visual aids before reading about something or discussing it.

Me: It's kind of like you are activating their background knowledge or their prior knowledge to get them to thinking about the topic.

TD: Right, either activating it or giving them the background knowledge in a different modality so that, you know, especially for the kids who are struggling with reading, they didn't necessarily have to read the information to learn that they already had some background knowledge to help them. And of course you would preview vocabulary - either during reading workshop or science and social studies. I used a lot of like umm…One strategy that I used was a tip chart, which is where you put the term [T] in one column and the information [I] about the term in the second column, and then the P is for picture so that they would have their visual drawing. –And then I'm thinking of something else-oh, in writing, I had a couple of kids with severe writing disabilities and

so when the assessment required writing I would let them dictate to me their responses to me and write the answer for them- umm…and that often shows that shows that the student knew a whole lot more than what was demonstrated if it had be strictly the student writing the answer.

There were even times that I would modify the assessment if I felt like it was necessary, especially in math…umm, I would change the assessment to a fewer number of questions or find different ways just to modify it- not to modify the information so much as just giving them a different way of answering, not overwhelming them with too much. You know it's just depending on each student because some students were stronger than others and some students really had a strong desire to learn whereas I have ___th grade. You start running into kids who have been in special ed so long and have not been held to high standards in so long that they have kind just given up or accepted failure. So that's really hard. It's frustrating when you are trying so hard, trying different strategies, trying anything that you can to get their interest and just to keep running into that brick wall, you know. It's frustrating.

TD: Question 3

Me: What challenges do you face when you are accommodating SWDs in your classroom?

TD: One of the biggest challenges is the motivation of the students and the support of the parent at home because a lot of times these kids , either their parents are probably a lot like their children or they just don't know what to do to help. So that would be like my number 1 biggest problem.

Second biggest problem that I run it to is that I don't think that all resource teachers are paired to support these kids in a regular classroom. As the classroom teacher, I had 24-28 students at one point. So, if I had a couple of students with a reading disability and couple students with a disability in math or writing. You know there's a lot of different things and there's no one size fits all strategy. So trying to find different things and cycle through them until you find the thing that works for each student can be really time consuming…and if you don't have someone who is really knowledgeable, who really understands, say- learning disabilities or you know whatever the case may be, it makes it really hard…umm, for the classroom teacher because you know I would often spend a lot of time doing my own research trying to figure out, ok-what are some things that I can do here. That's difficult when you've got 30 kids. Just because I have kids who are labeled doesn't mean that doesn't mean some of the kids in the class are severe ADHD, or you know, don't have their own difficulties going on. I don't know that every resource teacher is ready. –

My bachelor's degree is in early childhood education and I had one semester course on special ed. That's all I had. I took classes on childhood development and I'm sure we

talked a little bit about disabilities. You know, 1 class on special ed when you are going to have at least 1 or 2 students in your classroom with a disability- I don' t think is enough.

Me: So you are saying the teacher pre-service programs need to prepare teachers for the real world about the kids with disabilities that they may have?

TD: Right. It's not enough. You know, I remember when I went to Iceberg State the program we went through, you know, I had a science teacher and math teacher and so on. What they should have done was not just show us how to teach science or how to teach math but also given us some experience on how to teach a child with a disability, you know? They could have integrated it with the content in order to make it more meaningful and also more memorable.

TD: Question 4

Me: What resources do you feel you need to accommodate the learning needs of SWDs in science and social studies?

TD: Umm…well, again I think comes down for the regular ed teacher, classroom teacher- the link between her and the students should be the resource teacher. And so I think the resource teacher would be key there as far as the day-to-day stuff.
Me: So you mentioned that the resource teacher…having a liaison between the resource teacher and the general ed teacher would be one resource. Can you think of any other resources?

I think we should have more on-going staff development. The other thing that I think to though is…I'm sure that we've had some classes, but I can't think of anything significant about, you know about staff development at the school that really benefited me as far as helping my students, you know. And of course, the county offers staff development. But if you can't go, like I can't go always in the evenings or on the weekends because I have little kids and my husband travels. So if you can't go to those classes, then you are kind of out of luck.

I went to the Instructional strategies conference 2 summers ago and it was phenomenal! Of course most of the teachers there were special ed teachers but I picked up so many strategies that were good for all of my students, not just my special ed kids. I think that you know- umm, even if you have 1 regular ed teacher from each grade level that goes to those things during the summer and come back and give presentations about what he or she saw-is something. It was such a great staff development and I learned so much about my kids and brought so many different strategies back…I enjoyed it immensely.

So I think staff development, especially if teacher preparation courses don't really prepare a teacher for special ed students, there needs to be something more and ongoing and some type of forum so I can sit down and say "You know, I've got this kid [SWD],

this is the problem he ‘s having and I’ve tried everything but it’s not working- what are some other strategies can I try?”

Me: You know, We have collab every Monday at our school. What role do you think that could provide as far as being a resource?

TD: Well I think that should be a great resource, especially like for the last the last 3 years, most of the special ed kids were in my classroom and we didn’t have to have special form because I had a resource teacher right there, until she got pulled last year.- We’ve always had that on-going communication. With the kids being spread out now, I think if we had the resource teacher there during our planning time or had time dedicated or allocated for the questions we had about these students [SWDs]….we spend a lot of time talking about how are we going to get these kids exceeding, we should have specific conversations about kids with disabilities and how are we’re going to get them there [Exceeding expectation].

Me: Like you said, the goal is to exceed, but in my mind as a resource teacher, the goal is to meet [expectations]. Once we get them to meet, then we can talking about exceeding, you know?

TD: Right, but, you know, we don’t have those conversations. We focus more on the kids who can exceed and not enough on the kids who really…I mean we focus on the kids that need to be pushed a little bit harder to meet , but usually the focus is on the general ed kids. I think it’s almost accepted sometimes that kids with disabilities might not meet and I guess each individual teacher has his or her prerogative but as a school or even as a grade level, I don’t see a lot of attention paid to that.

Me: So even at a local school level, umm..having some staff development on instructional strategies [for SWDs] would be ideal. If something like that were put in place, how often would you think, throughout the school year, as a teacher would you be interested in something like that?

TD: Ummm…well right now, we have it set up where we have the 1st Tuesday of every month after school for a faculty meeting and the 2nd Tuesday is for vertical teams. I think that taking one of those days and having it dedicated each month…Initially at least, get the interest built up and the teachers on board and then maybe increase it –but at least once a month …here’s a special forum, if you are having any troubles you can go in …you can do some activities to help with vocabulary building and we’re just going to have a discussion about what are some strategies you are using, what are some strategies you need.

Me: Thanks for sharing those ideas. I had someone to come to me and mentioned, it was not related to special ed, but it was more so related to RTI and how if teachers are not having significant issues with students, they may not have to go to SST often that

year…but the next year they may have a bunch [of students], so they may need a refresher on how to do the RTI documentation. Someone mentioned that it would be ideal to have a refresher once a quarter. Something that is ongoing…you may not have any issues the first 9 weeks, but the second 9 weeks you may have a situation and you have to remember what to do.

TD: Well, not only with that, when this done right before school starts, there's so much going on. You have a lot of information getting shoved in your brain, and if you don't have an immediate need for it, it goes off by itself somewhere.

Me: That's true with just about anything, isn't it?

TD- Yes, it really is. You know, if you don't use that information right away, more than likely it's going to go off…you're going to forget it, you are not going to retrieve it because you didn't attach it to something, so I agree.

TD: Question 5

Me: How do you accommodate each SWD in your classroom as an individual?

TD: As an individual? Umm..well, let's see, one of the things that I do at the beginning of the year during pre planning is I start gathering information about the students, and I do this for all of my kids…um I go look in their perms [files] and see what kind of history they have as far as their report card goes…what their test scores were for the previous year. So I start off building that information and then I have several different types of surveys that I use that help me put a better picture for each student together.

One of them is a general questionnaire asking them what's your favorite subject, your least favorite subject and why, what's hardest for you-which usually tends to be their least favorite. But then I also do umm…I forget what it is called…it took it from umm, I can't remember her name right now because it's been so long since I looked at my book this year. But it's one on project presentations and something else that starts with a P and basically it gives a bunch of different…okay if you have to-- some type of assignment, highlight which ones you like the most and so they are organized by learning styles and so when they are done with that I can kind of identify their learning styles and get a picture of how they like to be assessed or how they like to share what they are learning. I have a notebook that I keep that has all of that information for each individual student and that's where I keep their data, keep any type of pretest, their writing samples, I keep it all in one place so that when I'm looking at each individual student, I've got all of that information right there. –And then I can that in my instruction.

For example, I might use the jigsaw grouping method to give the students an opportunity to gather information with other students who might be stronger at gathering information, make sure that they get the information if we are doing research. But then when it comes time to do a project or a presentation, I will vary that, and have several different ways to

share the information so that I'll put them in that group so that I know that they are having the opportunity [to work on] something that they are strong at or something that they prefer to do versus always doing the same thing….because I mean, it's boring-one, for everyone to sit and watch it, and two it's just not the best way to do things. So, I try to find different ways to use groups, different assessment methods, but a lot of it comes from the beginning of the year, really trying as hard as I can to get to know them so that I have an idea of where they are coming from.

Me: Subquestion 5- Right, ok. So can you describe how you select the comprehension strategies to match the content topic that you are teaching?

TD: Well, a lot of times we have our instructional calendars, and now we have the instructional calendars we are doing as a grade level. We say, ok this is when we are teaching this particular AKS. Umm, so I would start with the standards and look at what comprehension strategies need to be used. And so I'll preview the strategies with them during reading workshop or small group and then use it in science and social studies to read the content, or some time preview the information in reading beforehand and then teach the strategies during science or social studies depending on what works best.

Me: Ok, so do you find that there is a comprehension strategy that is used more science or social studies?

TD: Usually, the strategy that I find the most, that I think works best is activating background knowledge- and actually looking at the text and identifying the structures, the text structures that are there to help the students as readers. I will spend a lot of time looking at diagrams, a lot of time looking at an illustration and talking about it before actually reading so that they got that picture, that visual in their mind and we've already talked about it so they kind of understand what kind of information is to be expected…what they are going to expect to find in the text. That's one that I use almost daily.

I also like doing a T-chart where you can preview what's on the page…especially with non-fiction, science, and social studies. Previewing it, what do expect to find in that reading selection, or what questions you might have. And then going back to that T-chart after reading to see if your predications about the content were correct, or if the questions that you had were answered. I think spending more time on pre reading and post reading is more important than the actual reading time, especially for SWDs because …the reading part is the least important…it's more important that they're gathering information or they can't if they don't do those before and after kind of strategies.

Me: Can you give an example of a topic or unit that you used a comprehension strategy for that lead up to a culminating activity or project to show what they learned?

TD: Let me think…I'm trying to think what we did in science and social studies.

We pretty much start with the Civil War, and we have to back pedal a little bit to build that background information so they understand slavery and the constitution, and why they are important to understand. I'm trying to think….I didn't do a lot of projects in my class this year. They took too long in class to do things , they had a really hard time with time management. I had to manage and break things down into itty bitty chunks for them, and getting them to do things at home. It wasn't just my kids with disabilities, there was something about last year's group that was really kind of strange…not everyone of them but too many students to manage certain things.

But I'm trying to think…we did a lot of cool stuff with World War 1. One of the things we learned about in WW1 was the sinking of the Lusitania as being a cause for WW1. I did a lot of things around that. I wish I had that time to do with every topic because they did so well with it….but I started off with doing a visual reading strategy. We started off with a picture of the Lusitania sinking and I gave them 1 quadrant of the picture at a time. They looked at the picture and wrote about what they saw, what they felt, different things based on the quadrant of the picture. Then when it was all done, we looked at the whole picture together…I'm sorry before we looked at the picture, they made a prediction about what they though the picture was about. Of course it looks like it was the Titanic. So they were all convinced in their minds that it's Titanic. They should have know it wasn't based on some of the things in the picture. It really gave a picture of what happens with these kids, they assume they know something and they don't think about it any further. Using that visual and getting them to focus on the details of the picture was really helpful. As we read about the Lusitania that picture was there in their brain and it really helped them understand what was going on when the Lusitania sank and realizing that it was a lot like the Titanic except that it was sunk by the German u-boats and not by an iceberg.

Me: That definitely sounds like a visualization strategy to support comprehension of a complex topic.

TD-It really is. J. shared it with us at a grade level collaborative meeting and when she showed us the picture. When I first saw the picture, I thought it was the Titanic too. I didn't pay attention to those little details and then when she went through it, I realized what it was. It's cool when you do those things yourself first, and you realize that your students are doing this too. Maybe, you know, taking a step back and kind of looking at how you are teaching and what strategies you're using and doing some of these things so that you realize ok, there all of these things that I naturally assume or that I do- either they don't do it or they do it too, so we've got to correct those behaviors.

TD: Question 6

Me: How do you integrate comprehension strategies to support content knowledge acquisition for SWDs to help them prepare for science and social studies tests? (Note to self: ask for examples).

TD: How do I integrate it…let me stop and think about this for a minute because it all seems integrated to me all of the time…because it was constantly a struggle to make sure that they were reading and understanding- that they were learning how to read non-fiction but were understanding content.

So the best way to describe it as far as integrating content, that would be when were in science or social studies and we would read certain things together or I would break them up into small groups and they would read a section of the text or different things like that. Umm and then really talking about the strategies they were using or even beforehand-use this strategy, use a sticky note to track your thinking and then focusing on the sticky note and their thinking before really talking about the content.

I think the best way to integrate reading , writing, or math strategies is to not just teach it, but then actually applying while you are learning something, but not just always telling them or guiding them through it, but giving them opportunities and asking them "what strategies did you use", what strategies have worked better.

Me: Now, I know in ___th grade you guys really talk about text structure and how do you teach the kids to look for certain text structures to help them understand the content?

TD: Well, that happens…I think it's either at the end of the 1st quarter or the beginning of the second quarter so I spend a lot of time focusing on that in reading workshop. If we are talking about cause and effect, we've read several different articles either in our whole group or in our small group that was cause and effect organized. Once we learned those text structures, whenever we would do a close read in science or social studies, that would be one of the first things that we would do- is okay as you are reading this the first or the second time, be thinking about what you think the text structure is and having a discussion about it..what they find is a lot of time you've got several different text structures within one text or one topic…getting them to realize that this paragraph might be organized this way, but this one is organized differently…and then using graphic organizers to pull the important information and organize it in such a way that makes sense.

Me: Do you think that when there are multiple text structures in a unit- you mentioned sometimes multiple text structure can be within a passage- do you think that lends to the complexity of these kids trying to understand the text?

TD- Umm- yeah, and it definitely serves as a barrier, especially if they don't' realize that there's multiple text structures in a text, depending on what they're reading. But it's also realizing it's not so important to say, "Well this is cause and effect, or this is this" than it is to organize that information in a way that makes sense to you.-That's especially important for students with disabilities because I may organize my information linear and it may be better for them to do it vertical, you know? So getting them to not just do what I'm teaching them and apply it but then to use it to manipulate it on their own. Like

graphic organizers, we teach kids graphic organizers from Kindergarten on, right? You know what, except for writing instruction right before the Writing Test [___grade writing test] it is a rare day for me to see a student actually take notes and use the graphic organizer on their own. I don't know what that is…and that's all kids, not just SWDs, and you would think with SWDs, if something is working for them, you would think they would pick up on that…either they are not developmentally ready for that by ___th grade or that haven't been taught..they don't have that confidence to say "You know what, it makes sense for me to organize this way"…they are not that independent yet.

Me: And too, you know, the curriculum map- you guys have to teach certain skills by a certain time..so like, I know SWD they need time to process and practice a certain skill before moving on to the next.
TD- I don't think we give regular ed kids enough time, let alone SWDs. There's way too much it's just too much sometimes.
I think with the new common core- we have our instructional calendar that says all other things are ongoing but when you've got all these standards that you have to teach each week, it's hard to fit in that ongoing stuff, you know. –And it's really kind of fragmented – the kids learn note taking, and they do notetaking for that unit but they don't do it independently because if you don't have time to go back and review it and pull it out in different ways, they just see it as a 1 time lesson that I know how to do this and we're moving on to the next thing…as opposed to all of those skills working together to help them really understand what they are reading.

Me: How do address that challenge-like you said, you don't have enough time to go back a lot of times because you have to keep moving on to the next thing. Do you have any strategies or techniques that you use to try to spiral some of the curriculum?

TD: I do try to bring it up again in reading groups…when we are doing read alouds or closed reads, I try to bring it up, but that's not a sure fire way to make sure I'm spiraling through everything, you know. – Cause I can't keep it all there, so no, I don't have a strategy in place yet with the new Common Core as far as how do I keep bringing it up. That would actually be a good topic of discussion when we get together as a grade level because it is important- not just for me, but for every teacher.

Me: We just went full force with common core last year [2013-2014] and we've had to revamp the curriculum. And that sounds like that would be um…a school effort…maybe when they are coming in during morning work time, just have some activities where you are spiraling…but that takes time to create those materials and those lessons with the new curriculum.

TD: I think that's where we all are running into a little bit of issues especially when you are in a grade level that doesn't work together very well. That's too much for every teacher to do on their own. Plus it doesn't make any sense, but if you don't have teachers working well together, collaborating, and sharing, then you are not going to have the time

to do those kind of things. I agree with you- morning work is a great time, it doesn't have to be a graded assignment. But if it's something that they can do independently and they are practicing something that they already learned, then they are more likely to engage in it as opposed to putting something on their desk that is busy work, they know it's busy work and you're not going to grade it, you're not going to discuss it.
You know, I see it with the ____ graders, they've got to have a real incentive- and usually their recess is the only thing they work hard for…at least that's been my experience for the last few years, but that sounds more meaningful to me than trying to find a worksheet or a journal entry-write about what you did this weekend, well that gets old after a while.

Me- Yes, it goes back to those authentic tasks, you know, something they can connect to.

Confirmation of review:

I have reviewed this transcript and made the necessary revisions, if necessary.

Participant Name_____

Date_____