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Effective Reading Strategies for Increasing the Reading Comprehension Level of Third-Grade Students with Learning Disabilities

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EFFECTIVE READING STRATEGIES FOR INCREASING THE READING
COMPREHENSION LEVEL OF THIRD-GRADE STUDENTS
WITH LEARNING DISABILITIES

by

Nouf Rashdan Almutairi

A dissertation submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Doctor of Education
Special Education and Literacy Studies
Western Michigan University
April 2018

Doctoral Committee:

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EFFECTIVE READING STRATEGIES FOR INCREASING THE READING
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WITH LEARNING DISABILITIES

Nouf Rashdan Almutairi, Ed.D.

Western Michigan University, 2018

This qualitative study identified the common reading problems that negatively impact reading comprehension of third graders with learning disabilities. It also investigated the effective reading strategies that special education teachers have utilized to improve reading comprehension levels of the students in resource room settings. For the purpose of this study, “effective reading comprehension strategies” are defined as any strategies that have been found by the special education teachers as beneficial for improving reading comprehension levels of third graders with learning disabilities in the resource room setting. Importantly, a particular reading comprehension strategy could be beneficial based on these teachers’ experiences while working with students who have learning disabilities, but it might not have been found to be an effective reading strategy in the literature. Thus, the focus of this research was on determining the effectiveness of using a particular strategy based on teachers’ teaching experiences, rather than strategies only found in the literature.

This study was conducted in five public elementary schools, in mid-size, mid-western cities. The schools met the following criteria: (a) located in the Southwest region of Michigan, (b) within 30 miles of the sponsoring university, (c) 5% or more of the student body certified as having learning disabilities, and (d) have a resource room. The participants were five special education teachers who have (a) a minimum of three-years’ experience in teaching and working

with elementary students with learning disabilities, (b) a learning disabilities endorsement, and (c) a minimum of 3-year experience of delivering reading instruction to third graders in the resource room setting.

The data collection procedure involved semi-structured interviews and document analysis. The special education teachers in this research pointed out that the reading problems that negatively influence reading comprehension of their third graders with learning disabilities include: (a) issues with background knowledge, (b) trouble with fluency, (c) difficulty with informational text, (d) difficulty with making inferences, (e) issues with vocabulary, and (f) low reading level. According to the special education teachers, there are numerous reading comprehension strategies found to be effective to improve comprehension of third graders with learning disabilities. These include graphic organizers, questioning, story mapping, peer-assisted strategy, think aloud, discussing the text with students, and different grouping. The special education teachers informally assess their students' reading comprehension through retelling, questioning, Cloze procedure, having students fill in graphic organizers, and writing activity.

Recommendations for further research include: (a) conducting a study that specifically explores the most beneficial methods to enhance the relationship between special education and general education teachers in order to create a kind of consistency in their strategies while working with students with learning disabilities in both settings, the resource room and the general class room, (b) conducting a quantitative study that investigates the effective reading strategies that special education teachers utilize to improve the students' reading comprehension. Based on the responses of special education teachers' in this current study, a unique survey could be developed as an instrument for collecting the data from participants. The participants could be special education teachers from multiple states or multiple regions within the same state, and (c)

replicating the present study and including a larger sample size that will be collected from more than one region. The results of that replication could support the finding of this study.

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DEDICATION

I dedicate this dissertation to myself as an instructor who is interested in teaching and equipping students who have learning disabilities with research-based strategies in order to improve their academic performance in reading and other academic subjects. Also, this dissertation is dedicated to all special education teachers who are taking the responsibility for teaching reading to students with learning disabilities. In addition, I would like to dedicate this work to all students who have learning disabilities that negatively influence their abilities to comprehend what they are reading.

“Reading is important, because if you can read, you can learn anything about everything and everything about anything.”

Tomie DePaola

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CHAPTER 1

INTRODUCTION

Reading comprehension is a critical learning skill for all students (Clarke, Truelove, Hulme, & Snowling, 2013; Wong, 2011), as it is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (the Rand Reading Study Group, 2002, p. 11). Understanding words’ meaning, analyze the authors points of view and aim for writing and gaining knowledge of new words are all very important reading skills that support reading comprehension (Ruiz, 2015). Students need reading comprehension skills to successfully accomplish the educational goals and expectations, which are required in the classroom settings. For example, having the ability to understand textual information play a critical role in helping learners to quickly locate information that is pertinent to the text, exclude information that is irrelevant to the text, and identify the important information to focus on. Academic success also requires students to be able to understand, analyze, and apply information they gathered through their reading (Clarke, Truelove, Hulme, & Snowling, 2013). The importance of being able to understand written materials increases significantly in all academic areas as students move from one grade to another (Clarke, Truelove, Hulme, & Snowling, 2013; Wong, 2011).

In contrast, not being able to successfully comprehend can prevent students from learning, retaining information that they read, and graduating from school, which will negatively impact different aspects of their lives later on (Hoeh, 2015; Mason, 2004). Reading difficulties negatively impact different aspects of students, including their educational progress, self-esteem, attitudes about reading and learning, motivation to read, career choices, social-economic status and expectation for future reading success (Sloat, Beswick, and Willms, 2007; Woolley, 2011).

Not only is reading comprehension a valuable skill for learning in school, but in order to successfully interact in everyday life, individuals need reading skills to read and understand labels, directions, job application forms, and newspapers (Chatman, 2015). Also, individuals need reading skills in order to be able to have and maintain a job and successfully engage in different daily activities (Hoeh, 2015; Mahdavi, & Tensfeldt, 2013), and live independently (Hoeh, 2015). The need for reading comprehension becomes very critical when thinking about the negative consequences of not being able to read in critical situations. For instance, not being able to read and comprehend dosage directions on a bottle of medicine or caution on a container of dangerous chemicals may put the individuals in a very dangerous situation that threaten their safety and lives (Marshall, n.d.). Those who do not possess the ability to understand what they are reading are put at a disadvantage in every educational and personal life situation (Blair, Rupley, & Nichols, 2007).

When it comes to students identified as having learning disabilities, approximately, 80% experience problems with reading as their primary disability (Gersten, Fuchs, Williams, & Baker, 2001; Stetter & Hughes, 2010; US Department of Education, 2003). Also, difficulties with reading comprehension is one of the most major problems that students with learning disabilities have, which threatens their academic success (Woolley, 2011). The reading problems that negatively impact students' comprehension could include one or more of the following: inappropriately use of prior knowledge, lack of vocabulary, difficulty of reading fluency, limited knowledge of common text structures (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005), difficulty making inferences (Hall, & Barnes, 2017; Jiménez-Fernández, 2015; Sencibaugh, 2007), and unfamiliarity with the appropriate strategy needed to gain meaning from a text (Woolley, 2008). Having one or more of these problems may prevent students with

learning disabilities from comprehending what they are reading and from being successful at the school.

It is especially important to help students with reading difficulties overcome the reading problems that may prevent them from literacy success before they reach the fourth grade. This is because, in lower level elementary grades, students are focused on learning to read, while students beyond third grade are reading to learn (Sloat, Beswick, & Williams, 2007; Clarke, Truelove, Hulme, Snowling, 2013). Failing to solve reading difficulties during students' early grades dramatically increases the likelihood that the reading difficulties will follow them into their adult years (Ford & Opitz, 2008; Samuelsson, Lundberg, & Herkner, 2004). Sloat, Beswick, and Willms (2007) stated that the majority of students who do not master the skills of reading to learn by the end of third grade will never learn to read well, have more difficulties with the grade level curriculum, need ongoing intensive assistance, and perform less than their classmates in reading achievement and curricular knowledge. Thus, the critical role that reading plays in students learning beyond third grade emphasizes the importance of identifying struggling readers in their early grades and providing them with the most appropriate reading strategies (Antoniou & Souvignier, 2007; Sloat, Beswick, and Willms, 2007). "Research strongly supports both the vital role of early identification in the prevention of reading difficulties and the urgent need to teach children to read during the first few years of school so that they can "read to learn" in grade 3 and beyond" (Sloat, Beswick, and Willms, 2007, p. 524).

To avoid most of the long-term negative effects, teachers are required to utilize and integrate reading comprehension strategies in their daily instructional practices in order to increase the reading comprehension level of students with learning disabilities. Although different ways for teaching reading comprehension to students have been investigated by

researchers (Ruiz, 2015), the majority of American students experience difficulties with reading comprehension (Cromley and Azevedo, 2007). Taylor, Pearson, Clark, and Warpole (2000) found that traditional classroom instruction in reading usually does not include many instructions or activities that directly focus on reading comprehension. Therefore, exploring strategies to enhance reading comprehension may help teachers to produce new lessons that can be added to the reading curriculum at different grade levels. Additionally, helping students through teaching them how to effectively interact with written passages, through interactive strategies, allows them to easily recall what they read and obtain meaning from the passage (Ruiz, 2015).

Improving all students' reading skills in order to narrow the reading achievement gap is one of the essential goals of the No Child Left Behind Act (NCLB) and Every Student Succeed Act (ESSA). Closing the gap can be done through requiring and encouraging schools to integrate high standards, high quality instruction, and teaching with research-based material and assessments (International Literacy Association 2016; Richburg-Burgess, 2012). Teaching reading comprehension can be done through explicitly teaching students how to utilize particular strategies in order to improve their reading comprehension skills (Stetter & Hughes, 2010). Several reading comprehension strategies have been administrated as effective tools for improving students' understanding of written materials. These strategies include, but not limited to graphic organizers (DiCecco & Gleason, 2002), collaborative strategic reading (Vaughn et al., 2011), peer-assisted learning strategy (Rafdal et al., 2011), story-mapping (Zahoor & Janjua, 2013), and self-questioning (Rouse, Alber-Morgan, Cullen, & Sawyer, 2014).

Also, numerous classroom-based reading comprehension assessments have been used by teachers to measure the students' reading understanding of academic material as well as measure the effectiveness of a particular instructional method or teaching strategy. That data collected by

classroom assessment provide teachers with an opportunity to (a) develop the most appropriate instruction for students, (b) make a better determination about what lesson would be more effective to teach, (c) determine what supportive material to use during their lessons, and (d) what challenges the students may have. Cloze procedure (Ahangari, Ghorbani, & Hassanzadeh, 2015), informal reading inventory (Burns and Roe, 2011), retelling procedure (Hagtvet, 2003), think aloud (Spinelli, 2012) are some examples of these classroom-based reading comprehension assessments.

Problem Statement

Although reading comprehension is a fundamental skill that all students need for academic and personal success, approximately 80% (US Department of Education, 2003; Lerner, 2003; Gersten, Fuchs, Williams, & Baker, 2001) to 90% (Kavale & Forness, 2000; Vaughn, Levy, Coleman, & Bos, 2002) of students who are identified as having learning disabilities have major problems with reading. These problems may take different forms, such as inappropriate use of background knowledge (Graham & Bellert, 2005), lack of vocabulary knowledge (Clemens & Simmons, 2014), lack of reading fluency (Graham & Bellert, 2005), failure to distinguish between different text structures (Gersten, Fuchs, Williams, & Baker, 2001), and difficulty making inferences (Hall, & Barnes, 2017), which all have negative impact on students' reading comprehension.

Unless students with learning disabilities are helped to improve their understanding of a written text and overcome these problems through the utilization of reading comprehension strategies (Shanahan et al., 2010; Gersten, Fuchs, Williams, & Baker, 2001) in early grades (Spencer, Goldstein, Sherman, Noe, Tabbah, Ziolkowski, & Schneider, 2012; Slavin, Lake, Chambers, Cheung, & Davis, 2009), they will continue to struggle with reading in their later

years (Ford & Opitz, 2008; Swanson, 2000; Guo, Sawyer, Justice, & Kaderavek, 2013; Corcoran, 2005). Also, if not being able to successfully read in early grades prevents students from graduating from school, limits their opportunity to find a job, and to live independently (Bryner, 2008; Hoeh, 2015). Even though they might find a job, the pay rate will be much less when compare to proficient readers (Brault, 2012; National Center for Education Statistics, 2011). Another possible negative consequence of not being able to read is being socially exclusive. (Bryner, 2008; Hoeh, 2015).

In contrast, being able to successfully acquire reading skill in early grades could significantly promotes students' academic success in their upper level grades. Thus, it is very important to address problems in reading comprehension in early grades (Ford & Opitz, 2008; Swanson, 2000; Guo et al., 2013; Corcoran, 2005) through the use of reading comprehension strategies (Stetter and Hughes, 2010). Numerous researchers have emphasized the importance of teaching and equipped students with reading comprehension strategies during their early years (Spencer, Goldstein, Sherman, Noe, Tabbah, Ziolkowski, & Schneider, 2012; Slavin, Lake, Chambers, Cheung, & Davis, 2009). Thus, helping students to become successful readers heavily relies on the experience, knowledge, and effectiveness of their classroom teachers (Chatman, 2015).

Previous research studies on reading comprehension strategies have focused on several themes. For instance, several studies have examined the effectiveness of particular reading comprehension strategies on improving reading comprehension of students with learning disabilities. Taylor, Alber, and Walker (2002) examined the effectiveness of both self-questioning and story-mapping strategies on reading comprehension of elementary students with learning disabilities. The study was conducted in a special education resource room. The findings

indicated that both self-questioning and story-mapping strategies were effective interventions to improve the students' literal and inferential comprehension. Also, Stagliano and Boon (2009) examined the impact of utilizing story-mapping strategy to improve reading comprehension of fourth graders with learning disabilities. Investigators utilized a multiple-probe design across participants to evaluate the influence of using story-mapping strategy to enhance the students' understanding of an expository text. The finding of this study displayed that story-mapping is an effective strategy that helped to improve the students' comprehension of an expository text.

Other studies have examined the influence of using technology on reading comprehension, noting that using technology enhance students' reading comprehension (e.g., Lenhard, Baier, Endlich, Schneider, and Hoffman, 2013; Delacruz, 2014). For instance, Redcay and Preston (2016) examined the impact of using teacher-guided iPad app instruction on the reading fluency and comprehension skills of second graders. The results of that quasi-experimental study indicated that students who were taught through the use of teacher-guided iPad app instructions demonstrated higher score on reading comprehension and reading fluency when compare to students who did not receive teacher-guided iPad app. Some studies have focused on the relationship between students' stance toward reading and levels of reading comprehension strategy use (e.g., Sallabas, 2008; Kırmızı, 2011). The results of these studies displayed that there is a positive relationship between students' attitudes of reading and the using of reading strategies. In other words, students who have positive attitude toward reading tended to utilize reading strategy as an aid to construct meaning of a text.

However, few studies have examined the effective reading comprehension strategies for students who have difficulty with reading in the second and third grades (Gooden, 2012; Williams, 2005). Also, a minimal research attention has been directed toward examining the

effective reading comprehension strategies experienced special education teachers use in order to improve reading comprehension level of lower level elementary students with learning disabilities (Chatman, 2015; Gersten et al., 2001; Reid & Lienemann, 2006; Swanson, 2000).

While a previous qualitative research study has examined the reading comprehension strategies that experienced special education teachers utilized in inclusive settings and self-contained classrooms for second and third grade students with learning disabilities (Chatman, 2015), for the best of my research knowledge there is no study have investigated the effective reading comprehension strategies that special education teachers use to improve reading comprehension strategies for their students with disabilities in a resource room setting.

Therefore, the deficiency that I have identified concerning this researchable problem is that the topic has not been explored with experienced special education teachers who use reading comprehension strategies to teach reading to third graders with learning disabilities in the resource room setting.

Purpose Statement and Research Questions

The purpose of this study was to (a) identify the common reading problems that negatively influence reading comprehension of third graders with learning disabilities and (b) investigate the effective reading strategies that experienced special education teachers have utilized to improve reading comprehension levels of these students in resource room settings.

In this study, I defined the “effective reading comprehension strategies” as any strategies that have been found by the special education teachers as beneficial for improving reading comprehension levels of third graders with learning disabilities in the resource room setting. Importantly, a particular reading comprehension strategy could be beneficial based on these teachers’ experiences while working with students who have learning disabilities, but it might

not have been found to be an effective reading strategy in the literature. Thus, the focus of this research was on determining the effectiveness of using a particular strategy based on teachers' teaching experiences, rather than strategies only found in the literature.

The overarching questions for this research study were:

1. What are the common reading problems that prevent third-grade students with learning disabilities from comprehending what they are reading?
2. What effective reading comprehension strategies do special education teachers utilize in order to improve reading comprehension skills of students with learning disabilities?
3. What are the classroom-based reading assessment tools that special education teachers use to measure the students' reading comprehension growth and determine the effectiveness of these strategies?

Theoretical Framework

The theoretical framework that leads this study is related to the lens of Rosenblatt's (1978) transactional theory. Rosenblatt's efforts have significantly impacted the field of reading comprehension. Her transactional theory has emerged as a challenge to the idea that objective meaning exists only within the print itself (Sanders, 2012; Marhaeni, 2016). Thus, Rosenblatt's (1978) theory stresses that meaning cannot be created in isolation from the reader. According to Rosenblatt (1982), "reading is a transaction, a two-way process, involving a reader and a text at a particular time under particular circumstances" (p. 268). Her description of the reading process is harmonious with the definition of reading comprehension, which is the process in which readers involve in to gain meaning through particular interaction with a text (the Rand Reading Study Group, 2002; Snow, 2002). Both descriptions emphasize the importance of both reader and text

in order to gain meaning of a particular passage. Thus, based on the transactional theory, the process of reading comprehension requires an active transaction between readers, as the heart of the reading process, and the text at a particular time in a specific context in order to obtain meaning of the reading materials (Taylor, 2011; Rosenblatt, 1982; Unrau and Alvermann, 2013).

Rosenblatt emphasized the importance of the interaction between the reader and the text by writing that “a novel or poem or play remains merely ink spots on paper until a reader transforms them into a set of meaningful symbols” (Rosenblatt, 1983, p. 24). In other words, making meaning of a particular passage requires readers to fetch their previous experiences and knowledge to that passage, which facilitate their own understanding (Rosenblatt, 1982; Unrau and Alvermann, 2013). Rosenblatt’s (1978) theory supports the notion that the meaning does not solely exist in the text or in the reader, however; it is produced as a result of a particular interaction between reader and the text (Unrau and Alvermann, 2013; Rosenblatt, 2005; Sanders, 2012). That interaction reflects the reciprocal effect of reader and text in one another to construct meaning of reading (Rosenblatt, 2005). Thus, that meaning is influenced by the reader’s own previous knowledge and stance. Rosenblatt clarified that influence by writing that “the reader must have the experience, must ‘live through’ what is being created during the reading” (1938, p. 33).

By establishing the transactional theory, Rosenblatt has created a different classroom instructional method that enhances the experience between the student and the text. With it, instead of the teacher guiding influence students’ understanding of a text, students have an opportunity to experience reading a text independently, which encourages them to create their own meaning (Sanders, 2012). With this new theory, Rosenblatt contributed to a major philosophical shift in which reading comprehension is looked at as an interactive, constructive,

and comprehensive process that readers engage in while reading rather than viewing the reading process as a product of learning that is measured by teachers (Maria, 1990; Snow, 2002).

Rosenblatt's theory encourages teachers provide instructional supports that smooth the transaction between students and text, as well as supply instructional assistance while students attempt to understand text. When students construct their own meaning of a particular text, the transactional process occurs independently of their teachers and they link to only the passage and the students' previous knowledge and experience. Even though teachers are not a part of that transactional process, they can still provide students with various methods to look at the passage in order to gain meaning, monitor the students' individual responses to the passage, and exchange and discuss ideas of the passages with the students through a way that improve the students' comprehension (Rosenblatt, 1982; 1983).

Transactional theory adopts the notion that the transactional process that students involve with to construct meaning from a passage is unique for each student based on what she/he brings to the text (Rosenblatt, 1978). That means that even though different students read the same passage, each individual student would interpret it differently. That is also true when an individual student reads the same passage once and rereads it again after a period of time. The student tends to understand the same passage differently when he/she reads it a second time. That different interpretations occur due to the student's experience and knowledge gained after her/his first reading, which significantly impacts the students' understanding when he/she reads it the second time (Rosenblatt, 1983). Rosenblatt's (1978) transactional theory emphasized that comprehension of a text occurs when students meld text and past experiences together during the transactional process. That combination is known as the aesthetic stance, in which the students' experience plays a role in enhancing the text while the text improves their experiences at the

same time (Rosenblatt, 1983; Unrau and Alvermann, 2013).

I have decided to use Rosenblatt's transactional theory as a framework to lead my study. That because I have found that her point of view regard reading comprehension matches my own believes. We both acknowledge that reading comprehension requires students to interact with the provided text in order to gain meaning. Also, meaning cannot be gained only from a text itself; thus, through that interaction they need to bring their own background knowledge and experiences to that text. In addition, I believe that teachers play a critical role in facilitating the students' interaction with the text, helping students make a connection between the text and their own previous knowledge through using variety of reading comprehension strategies, which all result in improving the students' reading comprehension.

For this study, I wondered if the special education teachers who are teaching reading comprehension strategies will look at reading comprehension as a process that requires students to make a connection between the text and their own background knowledge in order to gain meaning from that text. Also, I wondered if these teachers will either implicitly or explicitly teach strategy based on Rosenblatt's transactional theory too.

Methods Overview

In this study, I utilized a qualitative approach. According to Creswell (2013), when a researcher seeks deep understanding of a particular problem or issue, a qualitative method is the most appropriate methods of inquiry. To identify and deeply understand the common reading problems that prevent third graders with learning disabilities from comprehending the text well while reading and the effective strategies that experienced special education teachers utilize to improve the students' comprehension level, a multiple case studies approach was used. Case study approach requires collecting detailed information about a specific individual, setting, or

group to allow the investigator to deeply understand the problem under the study (Berg, 2004). Therefore, this study took place in a natural setting where special education teachers teach reading comprehension strategies to third graders with learning disabilities. I conducted this study in five public elementary schools, in mid-size, mid-western cities. The schools met the following criteria:

- 1) located in the Southwest region of Michigan,
- 2) within 30 miles of the sponsoring university,
- 3) 5% or more of the students' body certified as having learning disabilities, and
- 4) have a resource room

More specifically, this research was conducted in the resource rooms where special education teachers implement different teaching practices to improve their students' reading comprehension achievement level or any other private, safe, comfortable place based on the participants' convenience. This study was not conducted during the teachers' instructional time.

The participants were experienced special education teachers who: a) have a minimum of three-years experience in teaching and working with elementary students with learning disabilities, b) have a learning disabilities endorsement, c) and have a minimum of 3-year experience of delivering reading instruction to third graders in the resource room setting. Importantly, I only interviewed teachers, not students, for this study. I also reviewed the students' reading comprehension aggregated scores, based on their classroom assessment without having their real names identified. The data was collected through using semi-structured interviews, follow-up interview, students' aggregated score, and teachers' artifacts and analyzed through using an inductive approach.

Significance of the Study

The current study was important to address the identified deficiencies in the reading comprehension literature and fill a gap in the current knowledge. Also, the findings of this study are very important to me as an instructor who is in charge of future special education teachers' preparation program in Saudi Arabia. I may transfer the reading comprehension strategies that will be identified as useful and effective by the experienced special education teachers in this study to Saudi Arabia in order to help Saudi Arabian teachers to effectively teach reading comprehension to their students with learning disabilities. That transferring could positively improve the students' academic achievement across all academic content areas.

Also, finding of previous research suggested that students who face difficulty with reading in lower grades will continue to struggle with reading in their later grades. Thus, there is a need for conducting more studies to examine the instructional strategies that have been used by experienced special education teachers to improve reading comprehension level for elementary students with learning disabilities (Chatman, 2015; Ford & Opitz, 2008; Gersten et al., 2001; Reid & Lienemann, 2006; Swanson, 2000). In addition, due to the limited studies that have been conducted in Saudi Arabia to examine the most effective reading comprehension strategies for elementary students, conducting this study may contribute to producing some strategies and practices that could be used by both special and general education teachers in order to improve the students' comprehension.

For example, one study was conducted by Alshehri (2014) to examine the effectiveness of using read-aloud strategy on reading comprehension of Saudi students. The study took place in Saudi Arabia during the summer of 2014. The participants were 41 Saudi 5th grade students. Before conducting the intervention, the researchers did observe the students' behavior during the

reading lesson and recorded field notes. Also, a pre-test was administered to all participants to measure their comprehension levels. All the questions in the pre-test were taken from the fifth-grade reading textbook. Also, in order to measure the students' affinity for reading, the researcher conducted a survey with close-ended questions.

In this study, the researcher was in charge of implementing the strategy. He provided the students with an explicit explanation about both reading comprehension and read-aloud strategy. He taught read-aloud to the students daily for two weeks during the reading instructional time. Each session took approximately 20-30 minutes. At the end of the study, the researchers re-measured the students' comprehension through administration of a post-test, which had exactly the same questions as the pre-test. The results indicated that read-aloud strategy positively impacted the comprehension of fifth grade Saudi students. It also helped the students to make a connection between their previous experiences with the texts and share their opinions with others.

Similarly, a study was conducted by Al-Mansour and Al-Shorman (2011) to examine the impact of teacher's storytelling aloud on the reading comprehension of Saudi elementary students. The participants were 40 elementary students who were randomly selected from Al-Riyadh Educational District. Also, the students were randomly assigned to either experimental or control groups. The data about the students' comprehension levels were collected through a pre-posttest for equivalent groups within about one semester period. The 20 students who were assigned to the control group were traditionally taught by their regular teacher. One of the researchers took the responsibility to teach the other 20 students who were assigned to the experimental group. The reading comprehension levels of both groups were measured before conducting the intervention through the pre-test. After the implementation of the storytelling

program, the students' comprehension was measured via the post-test. The findings of this study showed that the storytelling program positively affected the students' comprehensions level on the experimental group. They perform significantly better on the post-test than students who participated on the control group.

In addition, the findings of the present study may be beneficial for new special education teachers who teach reading instruction to elementary graders with learning disabilities in resource rooms setting. It may provide them with a clear explanation of possible effective reading comprehension strategies and practices that have been used by experienced teachers to enhance the students' understanding. Also, conducting this study may also have a positive impact not only on special education teachers, but also on, general education teachers, administrators, students, and parents. The finding of this research may result in developing and fostering a professional relationship between special and general education teachers. It is possible that special education teachers, who will participate in this study, could be interested and willing to share their reading comprehension strategies with general education teachers and provide them with needed support. Thus, these general education teachers can effectively teach reading comprehension to their students with LD in the general classrooms through using the same strategies. The results of this research may provide the administrators with helpful data that could assist them to inform curriculum decisions.

Additionally, the results of this study may contribute in helping elementary students with learning disabilities to acquire reading comprehension efficiency. When special education teachers utilize and put into practice the researched-based strategies that are found to be effective from this study, they could positively impact the students' academic achievement not only on the reading comprehension area but in all other content areas. Additionally, this study may be

important for parents of third graders with learning disabilities. It may contribute to enhance the parents' awareness of using reading strategies with their children in order to improve their understanding of what they read.

Chapter 1 Summary

In Chapter I, I started by providing an overview of the issue under the study, problem statements, the purpose statement, research questions, conceptual framework, methodology overview, and significance of the study. Then, I provided some evidence to support the significance of conducting the study in order to understand the ongoing issue of the reading comprehension problems that third grade students with disabilities face and the effective process and strategies that experienced special education teachers utilized in order to help the students.

The following chapter of this dissertation includes a review of the current literature. Four themes were discussed. The first theme was the definition of reading comprehension and its models. The second theme was the common reading comprehension problems that elementary students with learning disabilities encounter. The third theme was the effective strategies and process that special education teachers utilized in order to improve the students' comprehension level. Finally, I discussed some examples of the classroom-based reading comprehension assessment tools.

CHAPTER 2

LITERATURE REVIEW

The primary goal of this qualitative research study is to (a) identify the reading problems that prevents third graders with learning disabilities from comprehending the text well and (b) discover the effective reading comprehension strategies that experienced special education teachers utilize in resource room settings to improve their students' comprehension levels.

To understand the essence of the present research, a review of relevant literature is discussed in the following sections: (a) reading comprehension skill and models, (b) reading problems that prevent students with learning disabilities of comprehending what they are reading, (c) effective reading comprehension strategies that have a positive impact on students' comprehension levels, (d) and classroom-based reading comprehension assessments that teachers use to assess students' reading comprehension and the effectiveness of these strategies.

Reading Comprehension Skills and Models

Reading is an essential skill that students need to gain in the early grades because it will be the foundation of learning in all academic subjects throughout their education (Cunningham & Stanovich, 1997; Sloat, Beswick, and Willms, 2007). Mastering reading skills before students reach third grade is especially critical because after third grade, students begin to read in order to gain knowledge and learn from the academic content. In addition, students who fail to master reading skills by the end of third grade, have low motivation for learning, behavioral challenges, and low academic achievement (Sloat, Beswick, & Williams, 2007), and are possibly at a risk of not graduating from high school (KIDS COUNT, 2010). However, students who are able to master reading by third or fourth grade have greater possibility of achieving academic success (Foorman, Breier, & Fletcher, 2003). More importantly, while engaging in reading activities,

students need to be able to understand what they are reading.

Reading comprehension is one of the most important components of reading to master. It requires students to move beyond decoding individual vocabulary and statements to constructing a solid understanding of the entire passage (Woolley, 2011). Comprehension is a complex process that requires an active interaction between the students' background knowledge of the context, the purpose of the reading material, and the level of vocabulary and language used by the authors in order to gain meaning of a text (Fountas & Pinnell, 2001; Hollenbeck, 2011; Jones, Hughes, Donahue, Parker-Katz, Talbott, & Tatum, 2012; Pardo, 2004; RAND Reading Study Group, 2002; Snow & Sweet, 2003; Snow, 2002; Woolley, 2011). The process is complex because it requires students to engage in multiple cognitive activities, processes, and skills. These skills involve fluently decoding words, understanding the language syntax, making inferences, using background knowledge, and managing working memory as needed (Fletcher-Janzen, Reynolds, & Vannest, 2013; Hollenbeck, 2011; Kendeou, McMaster, & Christ, 2016; Woolley, 2011). Even a short passage of material requires the reader to have strategic control of when and how to use each of these skills.

The Importance of Reading Comprehension

Students need reading comprehension skills in order to be successful in both academic and personal life. In students' academic lives, reading comprehension is the basis for understanding all the academic content. The importance of reading comprehension increases significantly in all academic subjects as students go ahead through grades. In particular, students need reading comprehension skills to successfully accomplish the educational expectations at school and in the classroom. For example, students are expected to understand what they are reading from multiple sources in order to research topics in different academic areas. Also, being

able to understand what they are reading allows students to quickly locate pertinent information, exclude non-relevant information to the present topic, and identify the important information to focus on. Academic success also requires students to be able to understand, analyze, and apply information they gathered through reading. Also, students need reading comprehension skill to be able to understand and perform their academic assignments. However, without having reading comprehension skills, students cannot accomplish all of that work (Clarke, Truelove, Hulme, & Snowling, 2013; Wong, 2011).

Reading comprehension is also an essential skill that individuals need in order to be successful in their personal lives (Blair, Rupley, & Nichols, 2007). For instance, to be successful, individuals need to understand the basic text that appears in utility bills, housing contracts, career applications, and newsletters (Hoeh, 2015). Also, individuals need reading comprehension skills in order to be able to have and maintain a job and successfully engage in different daily activities (Hoeh, 2015; Mahdavi, & Tensfeldt, 2013). The need for reading comprehension significantly increases when thinking about the negative consequences of not being able to read in critical situations. For instance, not being able to read and comprehend dosage directions on a bottle of medicine or caution on a container of dangerous chemicals can put individuals in a very dangerous situation that threatens their safety and lives (Marshall, n.d.). If not being able to successfully read prevents students from graduating from school, they cannot easily find a job and live independently (Hoeh, 2015). Even though they might find a job, the pay rate will be much less when compare to proficient readers (Brault, 2012; National Center for Education Statistics, 2011). Another possible negative consequence of not being able to read is being socially exclusive (Bryner, 2008; Hoeh, 2015). In contrast, individuals who can recognize what they are reading, can safely live their lives, and continue to gain socially and intellectually (Hoeh

et al., 2015; Marshall, n.d.).

Reading Comprehension Models

There are three major reading comprehension models that play a significant role in managing and facilitating the comprehension process, as well as assisting readers to better understand a written passage and overcome their reading comprehension difficulties while engaging in the reading process. These models include the bottom-up model, the top-down model, and the interactive model. The three models differ from one another based on their concentration of the method that readers apply in order to obtain meaning from a written passage. For instance, the bottom-up model requires readers to decode each word in the text in order to gain meaning. In contrast, the top-down model emphasizes the role that both the reader's background knowledge and previous experience about the given topic play in order to obtain meaning from a text. However, the interactive model looks at the reading process as an activity that requires engaging in two interactions. The first interaction occurs between the written text and the reader's prior experiences about the topic, while the second interaction occurs between different kinds of reading strategies that the reader utilizes (Ahmadi, Ismail, & Abdullah, 2013; Brunning, Shraw, & Ronning, 1999; Eskey, 2005; Grabe, 1991; Grabe, 2004). More explanations of these reading comprehension models follow.

Bottom-up model. The notion behind the bottom-up model is that readers should gradually start the reading process by decoding every letter, vocabulary word, and eventually sentence in order to construct meaning from a written passage. In other words, this model looks at the entire reading process as letter and vocabulary-based. Thus, in order to successfully gain meaning from a text, readers are required to understand and recognize each letter and vocabulary word while reading. Since this model emphasizes the importance of understanding every single

word for comprehension, quick word understanding is an essential requirement for the bottom-up approach (Ahmadi et al., 2013; Van Duzer, 1999).

This reading comprehension model supposes that readers who follow the bottom-up reading process rapidly become expert readers whose proficiency plays a significant role in improving their ability to decode (Pressley, 2000). However, this model looks at the readers who are not able to quickly decode words in the text as struggling readers whose comprehension process is interrupted by their failure to decode. Proficiency in decoding enables successful readers to easily and rapidly understand letter chunks, prefixes, suffixes, and the original vocabulary. As a result, readers' ability to rapidly decode words can exploit more memory capacity in their brains for reading comprehension. On the other hand, struggling readers spend more time and effort trying to figure out the meaning of each vocabulary word in the text, which results in losing a lot of the processing capacity in the brain that needed for understanding the text (Ahmadi & Gilakjani, 2012; Pressley, 2000).

Even though having the ability to rapidly decode is important for improving reading comprehension, the bottom-up model has been criticized for several reasons. First, according to Grabe and Stoller (2002), the "bottom-up model suggests that all reading follows a mechanical pattern in which the reader creates a piece-by-piece mental translation of the information in the text, with little interference from the reader's own background knowledge" (p.32). Second, this model requires readers to apply the vocabulary-by-vocabulary decoding process, which is considered slow process that requires a lot of time and attempts from the reader to understand a text. Trying to decode each word in the text can weigh the reader's short-term memory; therefore, the reader is more likely to forget what they have read by the time they finish their reading process. As a result, instead of gaining a solid understanding from the written passage, the reader

may only be able to understand different isolated words. Without having comprehensive understanding of a text, the reader will not be able to engage in reading and activate their critical thinking skills, which might also negatively impact their motivation level to read on a regular basis. Next, this model has been criticized because it does not take into consideration the role that the readers' prior knowledge plays in facilitating reading comprehension process. In other words, the constructing of the bottom-up model (letters→ words→ sentences) can limit the readers' ability to notice the processes that exist during the overall reading process. The limitations linked to the bottom-up reading comprehension model contributed to the produce of the top-down reading model (Adams, 1990; Eskey, 2005; Grabe, 2004).

Top-down model. In contrast to the bottom-up model, the top-down reading comprehension model engages readers' prior knowledge, experience, and expectation about a particular topic in order to obtain meaning from a written passage. Thus, as described by Eskey (2005), the top-down model considers reading comprehension as a process that begins "from the brain to text" (p. 564). In the top-down model, readers are required to start the process of reading comprehension with building particular expectations about the text. These expectations should be built based on a reader's previous knowledge about a particular topic. After building some expectations, the reader moves to another task in which they draw on their world knowledge in order to decode vocabulary within the text to either prove or modify their pre-established expectations. Therefore, the top-down comprehension model looks at the text itself as meaningless, with the reader gaining meaning by integrating the text into their prior knowledge (Aebersold & Field, 1997; Ahmadi, Hairul, & Pourhossein, 2012).

The top-down reading comprehension model was developed by Goodman (1967), who believes that reading comprehension process is a "psycholinguistic guessing game," in which

readers are required to bring in their previous knowledge in order to predict meaning. In addition, Smith (2004), another well-known proponent of the top-down model, emphasized the essential role that the reader plays in order to interpret a written text into meaning by utilizing their previous knowledge regarding the reading topic and experiences of how to read to either confirm or modify their pre-established expectations.

In order to obtain meaning from an entire written text, the reader has to involve a reading process called “text sampling” (Cohen, 1990). Basically, the text sampling concept confirms that in order to understand a text, the reader does not need to understand every single vocabulary word and sentence in the text. Instead of reading each word, the reader can construct meaning of the passage through reading particular vocabulary words and sentences. The top-down model emphasizes the importance of different comprehension skills, such as prediction, analysis, making an inference from the text, and summarizing.

Even though the top-down reading comprehension model emerged to address the limitations within the bottom-up model, it has been criticized due to its heavy dependence on readers’ prior expectation, information, and background knowledge, and its disregard of the significance of the text. Also, the top-down model is criticized for its neglect of the potential problems that readers might encounter while building their expectations or predictions about a specific passage, especially when the topic is not familiar to them. Therefore, the limitations and weakness of both the bottom-up and top-down reading models in clarifying the reading comprehension process have resulted in the birth of the interactive reading model (Ahmadi et al., 2013; Pearson, 1979; Samuels and Kamil, 1988; Wang, 2009).

Interactive model. Since the interactive model emerged to address weakness and limitations that were found in both the bottom-up and the top-down reading comprehension

models, it tends to integrate features of each. Today, the interactive model is the most widely conclusive model for explaining the process of reading comprehension and confirms the importance of the interaction between a reader and the text (Ahmadi & Gilakjani, 2012). Mainly, the interactive model adapts the notion that neither the bottom-up nor the top-down model can be used in isolation to explain the entire reading comprehension process. Therefore, it called for the creation of an interaction between these two models (Ahmadi & Gilakjani, 2012; Ahmadi, Ismail, & Abdullah, 2013; Rumelhart, 1977). In addition, Rumelhardt (1977) emphasized that “both sensory and non-sensory come together at one place and the reading process is the product of simultaneous joint application of all the knowledge sources” (p. 735). Similarly, Alderson (2000) pointed out that “the whole reading process is not an ‘either/or’ selection between the bottom-up and top-down models, but involves the interaction between both approaches” (p. 38).

The interactive reading comprehension model stresses the important roles that both lower-level processing skill, such as word recognition and higher-level inference and reasoning skills, such as text explanation play in comprehending a text (Grabe, 1991). Thus, the interactive model considers reading comprehension process as a product that emerged as a result of gaining meaning through the interaction between both readers and written passages, instead of looking at reading comprehension as an easy transmission of the textual passage and information to the reader’s brain (Eskey, 2005; Grabe, 1991).

The interactive reading comprehension model highlights that expert readers can synthesizes information and construct meaning of the textual passage through reciprocally use bottom-up or top-down while engaging in the reading activity (Ahmadi et al., 2013; Eskey, 2005; Grabe, 1991; Wang, 2009). Moreover, Stanovich (1980) explained the view of “compensation” in the interactive model. He did that by suggesting that both the bottom-up and the top-down

reading processes work as a complement for each other in the reading comprehension process. For instance, readers can rely on the bottom-up processes to offset for the required prior background knowledge when they lose the appropriate cognitive skills required for understanding a particular passage. However, when the reader loses the appropriate bottom-up skills required to understand a passage, they will compensate by using the high-level processes (top-down skills). Unskilled readers usually resort to use more high-level processes than skilled readers do. That is because the use of the top-down processes appears to compensate for their lack of not being able to use the bottom-up processes (Eskey, 2005; Stanovich, 1980).

Reading Comprehension Problems

Reading comprehension is an essential component of reading that all students need to ensure success in both academic and personal lives. Nevertheless, the majority of students with learning disabilities face serious problems with comprehending what they are reading (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005; Klingner, Vaughn, & Boardman, 2007; Shaywitz, 2003) even after they have acquired and mastered the necessary decoding skill (Kessler, 2009). Approximately 80% (Kavale & Reece, 1992; US Department of Education, 2003) to 90% (Kavale & Forness, 2000; Lyon, 1995; Vaughn, Levy, Coleman, & Bos, 2002) of students who are identified as having learning disabilities have major problems learning how to read. Reading comprehension problems that experienced by students with learning disabilities may take different forms, such as inappropriate use of background knowledge (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005; William, 1993), lack of vocabulary knowledge (Clemens & Simmons, 2014; Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005; Jitendra, Edwards, Sacks, & Jacobson, 2004), lack of reading fluency (Graham & Bellert, 2005), failure in distinguish between different text structures (Cain, 1996; Gersten,

Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005; Wong & Wilson, 1984), and difficulty making inferences (Hall & Barnes, 2017; Jiménez-Fernández, 2015; Sencibaugh, 2007). Detailed explanation about each problem is provided in the next section.

Inappropriately Use of Prior Knowledge

Lack of using prior knowledge appropriately is one of the reading comprehension problems that prevents students with learning disabilities from successfully comprehending a written text (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005). Prior knowledge is also commonly known as background knowledge, which refers to “the sum of what a person knows about the content of a text” (Brandao & Oakhill, 2005, p. 688). In other words, to better comprehend a written passage, the reader needs to make a connection between the new textual information and all information, world knowledge, and personal experiences he/she already has about the topic of the reading (McNamara & Kintsch, 1996). Making a connection between the reader’s background knowledge and textual material is an important for facilitating the reading comprehension process (Ferstl & Kintsch, 1999; Kintsch, 1998; Kintsch & Rawson, 2005).

Being able to appropriately use and activate prior knowledge is an important factor that help students to better understand a text (Armand, 2001; Adams & Collins, 1985; Cottrell & McNamara, 2002; Graham & Bellert, 2005; Pressley, 2000). When compared to readers with less background knowledge, readers who have more background knowledge about the reading can better understand a written material (Johnston, 1984; Taft and Leslie, 1985).

In the study of undergraduate psychology students in the University of Lyon, Blanc and Tapiero (2001) found that having more background knowledge about the topic of reading plays a significant role in helping readers to construct an accurate model of the spatial situation. Readers

who had more background knowledge were able to make more accurate connection between the new textual information and their previous experience when compare to readers with less background knowledge. Blanc and Tapiero (2001) concluded that background knowledge and demands of the task are very important elements in understanding and gaining meaning of a text.

In addition, having background knowledge about the reading material facilitates comprehension by allowing students to make a prediction, set some expectations, make inference about the reading (Anderson & Pearson, 1984; Cain & Oakhill, 2001), guide their attention to the important information, facilitate recalling the information (Anderson & Pearson, 1984), and monitor their reading (Chi, 1978). Also, prior knowledge plays a major role in helping students to understand all information that is implicit (Brandao & Oakhill, 2005) and easily remember what have been read (Kendeau & Broek, 2007). Even though prior knowledge is critical element for facilitating the students' understanding, some students including students with learning disabilities cannot fully comprehend a text due to their limited background knowledge.

When it specifically comes to students with learning disabilities, they have difficulties in developing and bringing in an appropriate background knowledge about a topic of reading, which negatively impacts their reading comprehension (Carr & Thompson 1996; Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005). Maria and MacGinitie's (1980) study of fourth through six grade students having learning disabilities found that even though students with learning disabilities who considered poor readers tended to depend on their background knowledge to recall important information about the written text, their background knowledge conflicted with comprehension of the text. In other words, the students were able to utilize their background knowledge to explain the written passage; however, they were not able to accurately understand the new information in order to use it to either modify or add to their pre-existing

knowledge. As a result, these students tend to eliminate new information that was presented in the written passage when it did not match their previous knowledge instead of modifying their prior knowledge. Other researchers have similarly found that, although some students with learning disabilities may have prior knowledge about the topic of a reading, they usually fail to appropriately use that knowledge in order to facilitate their understanding of the new textual information (Graham & Bellert, 2005; Paris, Lipson, & Wixson, 1983). Therefore, they need to be taught some pre-reading activities to be able to activate their own prior knowledge about a given topic.

William (1993) conducted a study to examine the students' comprehension of a modified story and their ability to recognize story themes. The study involved adolescents with learning disabilities. The results indicated that adolescents with learning disabilities brought incorrect or irrelevant information into the story and have difficulty understanding the text. These difficulties raised a result of their inappropriately using of their prior knowledge related to the topic. Also, William found that when these students were asked to respond to inferential questions, they resorted to either totally depend on their previous knowledge or disregarded their previous knowledge (William, 1993).

Even though the lack of using prior knowledge appropriately prevents students from successfully comprehending a text, teachers can help them to develop and activate their prior knowledge through utilizing different pre-reading activities. To successfully help their students develop an adequate background knowledge, teachers should be aware of topics that are more familiar to their students, as well as topics that the students have less prior knowledge about (Smith, 2012). Several studies found that students learn better when being taught through activities that evaluate, activate, and stimulate their prior knowledge before they involve in the

reading process (Jitendra, Hoppes, & Xin, 2000; Raben, Darch, & Eaves, 1999). These structured pre-reading activities include some metacognitive strategies, such as K-W-L charts (Fisher, Frey, & Williams, 2002), using visual aid (Dye, 2000; Graham & Bellert, 2005) brainstorming, questioning activities, and writing activities that linked to the topic to assist students to bring their prior knowledge to the text (Graham & Bellert, 2005). Through the utilization of pre-reading activities, which aims to both develop and activate the students' prior knowledge, teachers can facilitate the students learning by simplifying the textual information in order to make it accessible for all students. Doing this helps to improve students' reading comprehension by allowing students to easily and accurately recall what they have learned of the textual information, arrange the new information they just learned from the text in their memories (Graham & Bellert, 2005), and link their prior knowledge with the information within the text (Ferstl & Kintsch, 1999; Kintsch, 1998; Kintsch & Rawson, 2005).

Lack of Vocabulary Knowledge

Vocabulary knowledge is an important factor that facilitates students' reading comprehension by allowing them to rapidly decode vocabulary in the written text, which is an essential component of reading (Qian, 2002). Thus, there is a powerful and unequivocal relationship between vocabulary knowledge and reading comprehension (Baumann & Kameenui, 1991; Gersten, Fuchs, Williams, & Baker, 2001; Joshi & Aaron, 2000; Malatesha Joshi, 2005; Martin-Chang & Gould, 2008; Paul & O'Rourke, 1988; Stanovich, 1986). Based on a review of several studies, Just and Carpenter (1985) reported that the correlation between vocabulary knowledge and comprehension extended from 0.66 to 0.75.

The relationship between vocabulary knowledge and comprehension is also described as a reciprocal relationship (Cunningham & Stanovich, 1998; Ricketts, Nation, & Bishop, 2007). In

other words, having more vocabulary knowledge enhances students' reading comprehension (Stanovich, 1986) and can be improved through reading experiences (Cunningham & Stanovich, 1998). Also, when compare to students with less vocabulary knowledge, students with more vocabulary knowledge better understand a written text (Chou, 2011; Graves, 1986) and are able to rapidly acquire the meaning of new words (Boucher, 1986). Qian (2002) pointed out that "having a larger vocabulary gives the learner a larger database from which to guess the meaning of the unknown words or behavior of newly learned words, having deeper vocabulary knowledge will very likely improve the results of the guessing work" (p. 518). Even though vocabulary knowledge plays a critical role in facilitating students' reading comprehension, some readers including students with learning disabilities and those who have low comprehension skills, fail to successfully comprehend a text due to their limited vocabulary knowledge (Clemens & Simmons, 2014; Jitendra, Edwards, Sacks, & Jacobson, 2004).

Along with inappropriately use of background knowledge, a deficiency of vocabulary knowledge is another problem that negatively contributes in preventing students of comprehending a text (Graham & Bellert, 2005; Gersten, Fuchs, Williams, & Baker, 2001; Graves, 2004) as they progress through grade, especially after third grade (Becker, 1977; Graves, Cook, & LaBerge, 1983; Sundheim, 2005). Several researchers have found that students' comprehension of a passage is impacted by their familiarity with the words utilized in that passage (Anderson & Pearson, 1984; Birsh, 1999; Bos & Anders, 1990; Gersten, Fuchs, Williams, & Baker 2001). For instance, McCormick (1999), as cited by Graham and Bellert (2005), explained how students' knowledge of vocabulary impacts their understanding of a written texts through providing the following example:

1. Apprehension of the semantic fields of morphological units is pivotal for deriving semantic content when reading. This seems to be consummately plausible, and most preceptors' ripostes to this attestation would predictably be, "Inexorably so!" (p. 256).
2. Knowledge of word meaning is important for reading comprehension. This seems to be quite logical, and most teachers' responses to this statement would be, "Of course!" (p. 256).

Even though these two passages report the exact message, they employ entirely different vocabulary words. A passage that is written with a lot of difficult academic terminology and vocabulary puts students in a very difficult situation where they have a high error rate in the reading because of their failure to connect the passages to their prior knowledge. Using unfamiliar vocabulary also negatively influences the students reading comprehension, creating disappointment and loss of motivation to read (Graham & Bellert, 2005).

When it comes to learning disabilities, Gersten, Fuchs, Williams, and Baker (2001) noted that students with learning disabilities face difficulties to accurately understand many of the vocabulary and terminology that have been employed in academic texts. Understandably, beside an appropriate background knowledge of the topic, students need to have knowledge of the terminology and words utilized in the passage in order to better understand it (Anderson & Pearson, 1984; Bos & Anders, 1990). However, when compared to their typical peers, students who have learning disabilities usually do not have a lot of vocabulary knowledge to bring to the reading activity (Gersten, Fuchs, Williams, & Baker, 2001). In other words, they have serious vocabulary deficits (Clemens & Simmons, 2014; Jitendra, Edwards, Sacks, & Jacobson, 2004). Thus, their reading comprehension is negatively impacted by their lack of vocabulary knowledge (Gersten, Fuchs, Williams, & Baker, 2001). Sundheim (2005) pointed out that students with

learning disabilities who have a very limited amount of vocabulary use most of their cognitive resources attempting to decode unfamiliar vocabulary while reading passages. As a result, due to these vocabulary deficiencies, they fail to construct the meaning of the passages.

In addition, Ricketts, Nation, and Bishop (2007) found that the limited amount of vocabulary knowledge that the students have could limit their understanding of a text, especially when the text contains unfamiliar vocabulary. Also, when compared to students with high comprehension skills, students with low comprehension exhibited vocabulary deficits and were only able to read fewer exception vocabulary. Similarly, Chou (2011) concluded that the size of vocabulary knowledge impacts students' reading comprehension. Thus, students with more vocabulary knowledge can better understand text when compared to students with less vocabulary knowledge. These results also consistent with the results of previous studies (e.g. Garcia 1991; Qian, 2002).

Lack of Reading Fluency

Lack of reading fluency is another problem that negatively impact reading comprehension of students with learning disabilities (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005). Reading fluency is an essential component of reading that refers to readers' ability to accurately, automatically, and rapidly read a written passage with suitable expression (Chard, Vaughn, & Tyler, 2002; The National Reading Panel, 2000; Whalon, Al Otaiba, Delano, 2009). Fluency allows readers to rapidly process vocabulary units, such as letter-sound correspondences into understandable vocabulary, automatically make a connection between words, quickly process information, and thinking about the passage while reading, which all leads to construct the meaning of what they are reading (LaBerge and Samuels, 1974). Having the ability to read rapidly and smoothly assists readers with both decoding and word

identification, which results in saving more cognitive capacity for construction meaning (Chard, Vaughn, & Tyler, 2002; Perfetti, 1985; Perfetti, 1977; Therrien, 2004).

In contrast, having a slow word processing rate can hinder readers' thinking during the reading process and burden their working memory with their several attempts trying to sound out words, which lead to interrupt their understanding. In other words, instead of focusing on the content of the reading and how words are connected together, slow reading of words and information restricts readers' attention on letters and vocabularies, which prevents readers of processing information in their working memories for adequate time in order to gain meaning (Chard, Vaughn, & Tyler, 2002; Perfetti, 1985; Perfetti, 1977; Therrien, 2004). Thus, beside assisting students to rapidly and accurately read and process information, reading fluency plays a critical role in facilitating their reading comprehension.

There is a strong reciprocal relationship between reading fluency and comprehension (Cunningham & Stanovich, 1998; Gersten, Fuchs, Williams, & Baker, 2001; Pikulski & Chard, 2005; Speece & Ritchey, 2005;). Cunningham and Stanovich (1998) described that reciprocal relationship:

Slow, capacity-draining word recognition processes require cognition resources that should be allocated to comprehension. Thus, reading for meaning is hindered; unrewarding reading experiences multiply; and practice is avoided or merely tolerated without real cognitive involvement. (p. 8)

Similarly, Hudson, Lane, and Pullen (2005) highlighted that "Each aspect of fluency has a clear connection to text comprehension" (p. 703). They clarified the link between reading fluency and comprehension by stressing that the lack of accuracy and rapidity in word reading reflects readers' deficit in fluency, which plays a major role in preventing them of gaining access

to the meaning of the text. In other words, readers without fluency are at risk of misinterpreting the text. Moreover, the strong correlation that exists between measures of reading fluency and direct measures of reading comprehension highly supports the reasoning of this relationship (Deno, Mirkin, & Chiang, 1982; Fuchs, Fuchs, & Maxwell, 1988; Jenkins & Jewell, 1993; Jenkins, Fuchs, van den Broek, Espin, Deno, & Harris, 2003; Speece and Ritchey, 2005; O'Connor, Bell, Harty, Larkin, Sackor, & Zigmond, 2002).

Although reading fluency is a critical skill that could be describe as a bridge that links between word recognition and reading comprehension through smoothing students' processing of information, students with learning disabilities often have deficits in the area of fluency (Chard, Vaughn, & Tyler, 2002; Meyer & Felton, 1999), which prevent them of successfully construct meaning of a written text (Chard et al., 2002; Gersten, Fuchs, Williams, & Baker, 2001; Martin & Martin, 2001; Therrien, 2004). That fluency difficulty is related to the students' inability to read sight words, failure to decode words, and deficits in accurately and rapidly read phrases and sentences (Chard et al., 2002). Other researcher has observed that the majority of students who have learning disabilities experience academic failure due to their deficits in reading fluency, comprehension, or both (Billingsley & Wildman, 1988; Therrien, Gormley, & Kubina, 2006; Therrien, 2004). Similarly, Wolf and Katzir-Cohen (2001) highlighted that having difficulties in some aspects of reading, such as single naming-speed deficits, phonological weakness, or failure in both, can lead to the development of problems in reading fluency and comprehension. Also, Chard, Vaughn, and Tyler (2002) conducted a research to synthesize research on interventions that are primarily developed to enhance reading fluency of students who have learning disabilities. The study involved reviewing and synthesizing 24 published and unpublished studies. That reported different intervention features, such as repeated reading,

sustained reading, number of repetitions, text difficulty, and specific improvement criteria. Chard and his colleagues concluded that students with learning disabilities often have difficulty with reading fluency, which directly influence their reading comprehension.

Limited Knowledge of Common Text Structures

Having limited knowledge about the common text structures is another difficulty that can negatively influence reading comprehension of students with learning disabilities. Text structures are the way that an author organizes textual information in order to communicate a message to a reader (Weaver & Kintsch, 1991). Knowledge of text structures plays a major role in facilitating learning by helping students to link information in text and differentiate between important and less important ideas (Sáenz, & Fuchs, 2002). It also facilitates learning of the textual materials by encouraging the students to ask relevant questions about the text while engaging in the reading process (Gersten, Fuchs, Williams, & Baker, 2001). In addition, having the ability to recognize the different types of text structures contributes in improving the students' performance in reading (Englert & Hiebert, 1984). Meyer, Brandt, and Bluth (1980) found that having knowledge of text structures assists students in organizing information presented in the written text as they are reading, which results in improving and organizing their retelling skills. It is very important for students to have knowledge about text structures because they are expected to deal with various types of text structures while learning and progressing through school (Graham & Bellert, 2005).

As students' progress through school, they encounter and deal with different types of textual information. These types of texts include, but not limited to poems, plays, stories, novels, descriptions, and reports. Among all the different types of text structures, narrative and expository are the most well-known types of text that students encounter while learning (Graham

& Bellert, 2005). Expository text is a type of textual information is often developed to provide readers with new information and knowledge about world and natural phenomena (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005). In other words, the main focus of expository text is on expressing ideas, concepts, issues, argument (Berman & Nir-sagiv, 2007), cause and effect, problems and solution, and comparison and contrast, definition and example (Anderson & Armbruster, 1984), as well as clarifying the logical relationship between them (Berman & Nir-sagiv, 2007). Expository texts may take different forms, such as text books, new articles, and magazine articles (Weaver & Kintsch, 1991). In contrast to the expository text, the narrative text is a story that is intentionally written to amuse or entertain the reader with the text (Sáenz, & Fuchs, 2002). Narrative texts include, but are not limited to fiction, myths, plays, and legends. The components of the narrative texts often written through following the same story structure, which consists of setting, characters, events, and outcome (Graham & Bellert, 2005), which makes them easy for students to understand (Dickens, 2016).

Although knowledge of text structures is an important skill, some students, including students with learning disabilities, have difficulty distinguishing between different types of text structures, which negatively impact their reading comprehension (Englert & Thomas, 1987; Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005; Taylor & Samuels, 1983; Wong & Wilson, 1984). Unlike typically developing students, students with learning disabilities do not develop the required skill for differentiation between different types of texts gradually by experiences (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005). Thus, they often need the teachers' assistance in order to develop their knowledge of different types texts structures that are usually used in written materials (Graham & Bellert, 2005). Wong and Wilson (1984) reported that students with learning disabilities had less awareness of text structures and

failed to reorganize disorganized texts when compared to their typical developing peers. Moreover, it was found that when compared to typical students, students with learning disabilities tended to slowly recognize and develop knowledge of the main components of narrative texts (Montague, Maddux, & Dereshiwsky, 1990) and expository text (Weisberg & Balajthy, 1989); thus, they tended to retell less information about the text. Similarly, Cain (1996) highlighted that when compared to younger children who corresponded on their comprehension skill, students with learning disabilities have less awareness of narrative text structure. Also, Saenz and Fuchs (2002) found that gaining meaning of an expository text is more difficult than a narrative text for most students. Also, students with learning disabilities face more challenges with comprehending expository text than with narrative texts.

Difficulty Making Inferences

Difficulty with making inferences from a text is another problem that impedes reading comprehension of students with learning disabilities (Hall, & Barnes, 2017; Jiménez-Fernández, 2015; Sencibaugh, 2007). Having the ability to make inference while reading is an essential standards-based skill that students need in order to comprehend a text (Cain, Oakhill, & Bryant, 2004; Hall, & Barnes, 2017; Kendeou, Bohn-Gettler, White, & van den Broek, 2008; Oakhill, Cain & Bryant, 2003; Rapp, van den Broek, McMaster, Kendeou, & Espin, 2007; Woolley, 2011; Yeh, McTigue, Joshi, 2012). Making inferences is the students' ability to (a) draw their own conclusion of what has been said in the text without the explicit comment of the author (Keene & Zimmerman, 2007), (b), make predictions prior and during reading, and (c), utilize pictures or imagery to assist with comprehension (Bintz, Pienkosky-Moran, Berndt, Ritz, Skilton, Bircher, 2012; Torgesen, Houston, Rissman, 2007; Jiménez-Fernández, 2015; Woolley, 2011). Therefore, being able to perform all these metacognitive skills requires the students to

make connections between different types of information in order to construct meaning from the text.

Making inferences of a written text is a constructive cognitive process (Baretta, Tomitch, MacNair, Lim, & Waldie, 2009) that allows students to make a mental representation of a text by integrating different types of information in order to gain meaning of that text. For instance, students need to make a connection between the various parts of information that is exactly reported in the text (Elleman, Compton, Fuchs, Fuchs, & Jenkins, 2011; Hall, & Barnes, 2017; Woolley, 2011). That type of connection is called a text-connecting inference. Making a connection between a pronoun and the subject that refers to it is another example of the text-connecting inference (Hall & Barnes, 2017).

Also, students need to integrate information that is presented in the text with their own personal experiences, prior knowledge (Elleman, Compton, Fuchs, Fuchs, & Jenkins, 2011; Hall, & Barnes, 2017; Woolley, 2011), wisdom, values, thoughtfulness, and creativity in order to obtain meaning of that text (Keene & Zimmerman, 2007). Making a connection between textual information and personal experience is known as a knowledge-based inference (Hall & Barnes, 2017). Hall and Barnes (2017) provided an example of that connection by stating that “A *knowledge-based inference* might draw on what the reader knows about people’s motivations to infer why a character performed a given action” (p. 279). That complex nature of inference generation skill contributes to that numerous students with disabilities experience failure in reading comprehension (Laing & Kamhi, 2002).

Students with learning disabilities find it difficult to make inferences that are necessary for gaining meaning of the written text, which negatively influence their comprehension (Hall & Barnes, 2017; Sencibaugh, 2007; Jiménez-Fernández, 2015; McCormick, & Hill, 1984). Holmes

(1985) concluded that student with learning disabilities have difficulties with inferential comprehension. In particular, they have displayed deficit with logical reasoning in answering inferential questions. These deficits may emerge as a result of not having a successful strategy for solving these problems. Also, Humphries, Cardy, Worling, and Peets (2004) found that when compared to their typical functioning peers, students with learning disabilities have difficulties in comprehending inference, which negatively impact their ability to gain meaning and situational models about characters' feelings of the narrative text.

Overall, students with learning disabilities may fail to comprehend a written text due to range of problems. These problems include difficulty in using their background knowledge appropriately, lack of vocabulary knowledge, deficit in reading fluency, failure to distinguish between different types of text structures (Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005), and difficulty with making inference from the text (Hall, & Barnes, 2017; Jiménez-Fernández, 2015). Graham and Bellert (2005) described the reciprocal relationship between these problems by highlighting that “Frequently these reasons do not operate independently of one another; rather there exists a reciprocal causation between the component skills of reading comprehension, resulting in potentially complex and debilitating reading comprehension problems” (p. 76). Students with learning disabilities can overcome their reading comprehension problems through the utilization of effective reading comprehension strategies (Berkeley, Scruggs, & Mastropieri, 2010; Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005; Jitendra & Gajria, 2011).

Effective Reading Comprehension Strategies

Possessing the ability to gain meaning of a written text is an essential skill that all students need to ensure success in academic life (Mastropieri & Scruggs, 1997; National Reading

Panel, 2000; RAND Reading Study Group, 2002; Taylor, Alber, & Walker, 2002). However, students are different based on their ability to comprehend a written text (Grünke, Wilbert, & Stegemann, 2013; Swanson & De La Paz, 1998; Taylor, Alber, & Walker, 2002). For example, unlike the unskilled readers, skilled readers usually use one or more cognitive skills and strategies while reading that they use to construct meaning of a text. In other words, proficient readers read more strategically than struggling readers do. Strategic readers are active learners who are able to acquire strategic reading skills by themselves without being taught. They are able to construct meaning from a text through identifying and recalling significant information, monitoring their comprehension, integrating their prior knowledge with the new information, and summarizing as well as directing their learning (Gajria, Jitendra, Sood, & Sacks, 2007; Swanson & De La Paz, 1998).

In contrast, unskilled readers, including students with learning disabilities, usually fail to acquire strategic reading skills by themselves. They are not able to read strategically due to their failure to monitor their comprehension (Bos & Vaughn, 1994; Garner & Reis, 1981; Swanson & De La Paz, 1998), distinguish between various kinds of questions, appropriately utilize a specific strategy to gain meaning from a text (Raphael & Pearson, 1985), integrate prior knowledge with new information, or make a connection between the ideas within a passage to gain meaning (Oakhill & Patel, 1991). Also, inefficient readers are not able to utilize a repair strategy, such as rereading a certain paragraph of a text when they fail to understand it (Garner & Reis, 1981). Since poor readers have difficulties being strategic readers by themselves, they need to be taught how to implement strategies while reading to facilitate their understanding (Swanson & De La Paz, 1998).

Since reading comprehension is a complex skill that has not been naturally acquired by all students, teachers can enhance students' reading comprehension by implementing different research-based reading comprehension strategies (Gersten, Fuchs, Williams, & Baker, 2001; Mahdavi & Tensfeldt, 2013; Pressley, 1998; Swanson & De La Paz, 1998; Osborn & Lehr, 1998). According to the report issued by The National Reading Panel (2000), teaching reading comprehension to students plays a significant role in helping them to improve their overall academic performance and not only in the reading area. Every Students Succeeds Act (ESSA) requires teachers to satisfy the literacy needs of all students, including those who have disabilities, especially those whose reading skills are below grade level. Meeting these needs requires teachers to provide students with intensive, supplemental, accelerated, and explicit intervention and support in literacy (International Literacy Association, 2016).

Reading comprehension strategies are instructional methods developed in order to teach students how to construct meaning of a written text (Johnson, Graham, & Harris, 1997; Schunk, 2003). These strategies include, but are not limited to, graphic organizers (DiCecco and Gleason, 2002; Kim, Vaughn, Wanzek and Wei, 2004), cooperative learning (Crowe, 2005; Klingner & Vaughn, 2000;), story-mapping (Grünke, Wilbert, & Stegemann, 2013; Johnson, Graham, & Harris, 1997), self-questioning (Crabtree, Alber-Morgan, and Konrad, 2010; Taylor, Alber, & Walker, 2002), and peer-assisted learning strategies (Fuchs et al., 2002; Mathes et al, 1998). Also, the National Reading Panel (2000) has highlighted six reading strategies that have effectively improved students reading comprehension. These strategies involve monitoring comprehension, using visual aids, answering questioning, generating questions, understanding story structure, and summarizing. Even though there are numerous reading comprehension strategies available for students to use, they should be explicitly taught to them.

Explicitly teaching students how to use various comprehension strategies before, during, and after reading play an important role in improving their ability to comprehend what they are reading (Gersten, Fuchs, Williams, & Baker, 2001; Liang, Peterson, & Graves, 2005; Pressley and Wharton- McDonald, 1997). Teachers can make significant efforts to improve their students' understanding of what they are reading by teaching them different effective reading comprehension strategies (Mahdavi & Tensfeldt, 2013). There are several teaching models that are recommended to explicitly teach reading comprehension strategies to students, such as the National Reading Panel (2002) model, Ellis's (1994) integrated strategies model, and Harris & Graham's (1992, 1996) self-regulated strategy development model. For example, according to Harris & Graham's self-regulated strategy development guideline, in order to explicitly teach students how to implement a specific reading strategy, teachers should engage the students through the following steps. These steps include a) explicitly explaining the reading comprehension strategy, its steps, how to implementing the strategy, and the importance of use it, b) activating students' prior background knowledge and other skills that students already know in order to facilitate learning of the new strategy, c) providing students with corrective feedback about their current functioning level while using the strategy, d) modeling how to correctly use the strategy to the students while thinking aloud, e) providing students with multiple opportunities to cooperatively practice the strategy with their classmates, f) providing students with an opportunity to independently practice the strategy, g) helping students to generalizing the strategy by discussing where it is appropriate to use the strategy.

Detailed explanation of some the reading strategies that have been proved by research as effective reading comprehension to enhance students' reading comprehension are provided in the

next sections. The following five strategies have been selected because they have been frequently cited by researchers as effective strategies to improve reading comprehension skills.

Graphic Organizers

Graphic organizers are useful in the sense that “a picture is worth a thousand words” (Sam & Rajan, 2013). It is a visual model that has been used to organize, classify, and rearrange textual information in a very simple way that makes it easy to be remember and understood (Dye, 2000; Kim et al., 2004; Liliana, 2009; Muniz, 2015). That organization can be done through the “use of lines, arrows, and a spatial arrangement that describe text content, structure, and key conceptual relationship” (Darch & Eaves, 1986, p. 310). Representation of information through the graphic organizer can take different forms, such as semantic maps, concept maps, flowcharts, Venn diagrams, web, framed outlines, and story mapping (Bromley, Irwin-DeVitis, & Modlo, 1995; Dexter & Hughes, 2011; Kim, Vaughn, Wanzek, & Wei, 2004; Kim, Vaughn, Wanzek, & Wei, 2004). Although graphic organizers may take different forms, their common goal is to facilitate the students’ understanding through visualizing textual information.

Graphic organizers are a reading strategy that is helpful to both typical developing students and students who have learning disabilities. They benefit students in several ways. First, graphic organizers help students to make a connection between their previous knowledge and the new information in order to facilitate their understanding (Sam & Rajan, 2013). Second, they provide students with a visual presentation that clarifies and explains the relationship between ideas and concepts (Anders, Bos, & Filip, 1984; Bos, Anders, Flip, & Jaffe, 1985, 1989; Darch & Eaves, 1986; Darch & Gersten, 1986; Sam & Rajan, 2013). Third, they provide students with a framework that organize their thinking in order to avoid any perceptual errors that may emerge through the reading process and recall information (Boon, Burke, & Fore, 2006; Boon, Burke,

Fore, & Hagan-Burke, 2006; DiCecco & Gleason, 2002; Sam & Rajan, 2013). Fourth, graph organizers help students to better comprehend textual information through making a prediction about the text, making inference, checking their understanding while reading, and remembering major information provided by the author (Chang, Sung, & Chen, 2002; DiCecco & Gleason, 2002; Kim, Vaughn, Wanzek, & Wei, 2004; Pang, 2013; Sam & Rajan, 2013). Graphic organizers also help students to gain meaning of complex vocabulary (Anders, Bos, & Filip, 1984; Bos, Anders, Flip, & Jaffe, 1985, 1989; Sam & Rajan, 2013). Finally, graphic organizers can be used at any stage of reading process (Darch et al., 1986; Simmons, Griffin, & Kameenui, 1988; Sam & Rajan, 2013). Chang et al. (2002) pointed out that “among the numerous reading strategies, graphic strategies are one of the few approaches that can be applied at the preview stage before reading, during the reading process itself, and at the stage after reading” (p. 5).

The focus of the majority of the studies on graphic organizers is on students without learning disabilities, with few research studies conducted to examine the effectiveness of using graphic organizers with students who have learning disabilities. For example, graphic organizers were found to be a beneficial learning tool that improved the comprehension achievement of both high school students with learning disabilities (Darch & Eaves, 1986; Darch & Cersten, 1986) and students who have learning disabilities in grade 4 through 6 (Darch & Carnine, 1986; Griffin, Simmons, & Kame’enui, 1991) by clearly demonstrating the relationship between main concepts, relevant details, and vocabularies from a textual information (Anders, Bos, & Filip, 1984; Bos, Anders, Filip, & Jaffe, 1985, 1989).

DiCecco and Gleason (2002) conducted a study to examine the effectiveness of using graphic organizers with middle school students who have learning disabilities. In this study, specific graphic organizers were utilized as after reading activity to measure the students’ factual

comprehension of a social studies content. The students' comprehension was measured through using both multiple-choice test and written essays. The findings showed that students who were assigned for the intervention group performed better on relational content knowledge than students who were placed on the traditional instruction condition. They also supported that graphic organizers are an effective tool that can be used in order to improve students' comprehension because they help students to visualize the relational knowledge from expository text book.

Kim, Vaughn, Wanzek and Wei (2004) performed an intensive meta-analysis of the 21 intervention studies that assessed the effect of using graphic organizers on reading comprehension for students with learning disabilities. These studies involved a total of 848 students with learning disabilities. The results of their review indicated that, although improving reading comprehension is very difficult task, it could be done through using graphic organizers. Taken together, these studies suggest that using graphic organizers as a reading strategy can improve comprehension of students with learning disabilities in all grades levels and across all academic subjects.

Collaborative Strategic Reading

Collaborative strategic reading is another strategy that has been widely used to improve students' reading comprehension. It encourages students' engagement in reading activities to extend their own learning and enhance the learning of their peers by working in small heterogeneous cooperative groups and engaging in peer discussion (Klingner, Vaughn, Boardman, & Swanson, 2012; Klingner, Vaughn, & Schumm, 1998; Klingner & Vaughn, 1999). Its main aim is "to teach students four specific comprehension strategies they can use with all informational and expository texts they read" and to assist them in developing strategic

techniques for comprehending a text (Liang & Dole, 2006, p. 7).

Collaborative strategic reading method consists of a set of four cognitive strategies that students as a cooperative group engage with before, during, and after reading a text. The first strategy is “preview”. In this phase, students are required to activate their previous background knowledge, make a prediction, and brainstorm about the given topic before they start the reading process. The second strategy is “click and clunk”, a self-monitoring activity during reading. In this phase, students have an opportunity to manage their understanding by writing down all words, sentence, and phrases that are unfamiliar to them or difficult to be understand (clunk). They also write down words, concepts, phrases, and sentences that are familiar to them and can be easily understood (click). After students identify “click and clunk”, they will work together as a group to re-read each clunk and try to gain meaning from the context. Through that group activity, students have an opportunity to learn from one another through discussing all the identified clunks and try to figure them out. The third strategy is “getting the gist”. In this phase, students engaging in a specific activity while reading in which they analyze and synthesize the important information of each paragraph as well as restate its main idea. The fourth strategy is “wrapping-up”. After students complete the reading activity, they start to generate questions about the text. Students within a cooperative group have an opportunity to ask their questions and respond to their groups questions. The students close their group debate by exchanging significant ideas and information from the text (Boardman et al., 2016; Klingner, Vaughn, Boardman, & Swanson, 2012; Klingner & Vaughn, 1999).

Although collaborative strategic reading can be used to improve reading comprehension for all students, (Klingner et al., 1998; Klingner, Vaughn, Argüelles, Hughes, & Leftwich, 2004; Vaughn et al., 2011), it was originally developing to solve three issues in education. The

first issue is the urgent need to satisfying educational needs of diverse learners. It primarily focuses on students who have learning disabilities, English language learners, and struggling learners. The second issue is the need to produce instructional strategies and techniques to improve students' reading comprehension for students to better understand textual information. The third issue is the need to place students in a cooperative learning environment to profit from peer-assist instruction (Flavell, 1979; Klingner et al., 1998; Vaughn, Klingner, & Bryant, 2001).

Even though cooperative strategic reading was developed to improve reading comprehension of students who have learning disabilities, only a few studies have examined the effectiveness of cooperative strategic reading on students with learning disabilities. For instance, Klingner and Vaughn (1996) conducted a study to examine the effectiveness of cooperative strategic reading on students' reading comprehension. The participants were 26 English language learners, middle school students with learning disabilities. The finding of this study indicated that the students reading comprehension levels improved after implementing cooperative strategic reading. Also, students' reading comprehension continued to improve even when provided only minimal support of the teachers.

More recently, Boardman, Vaughn, Buckley, Reutebuch, Roberts, and Klingner (2016) conducted a study to examine the effectiveness of using collaborative strategic reading on reading comprehension of elementary students with learning disabilities. The study was conducted in 14 elementary schools. The participants were 60 teachers who were delivering instructions in the general education classrooms. Teachers in the control group were asked to teach their students through using their traditional instructional method with no collaborative strategic reading intervention, and the teachers in the intervention group were required to teach their students through implementing collaborative strategic reading intervention.

Teachers who were assigned to the intervention group participated in a one day or collaborative strategic reading intervention professional development. Within that professional development training, they learned about the rationale of using the strategy, how to teach it, how to support students while implementing the strategy. Also, they were provided with opportunity to practice the strategy and receive corrective feedback from researchers. Teachers who were assigned to the intervention group were asked to use the strategy two to three times each week with their students for about 50 minutes while delivering reading instruction. The length of this study was approximately 14 weeks of instruction. The students reading comprehension achievement were assessed by the reading comprehension subtest of the Gates-MacGinitie Reading Test (MacGinitie et al., 2000). The results of this study indicated that the reading comprehension of students with learning disabilities who were taught through implementing collaborative strategic reading was significantly greater than students with learning disabilities who were placed in traditional instructional condition. Similar results were found by an experimental study that was conducted by Kim, Vaughn, Klingner, Woodruff, Reutebuch, and Kouzekanani (2006) to investigate the influence of using collaborative strategic reading intervention to improve reading comprehension of middle school students who have learning disabilities.

There are also several studies that have supported some components of cooperative strategic reading that positively impact the reading comprehension of students with learning disabilities (Kim et al., 2006). The first component is working within a cooperative group. As a strategy, cooperative strategic reading provides students with a cooperative learning environment in which they work as disproportionate group to assist each other, check their understanding of the textual information, and discuss their thought interaction with each other. In other words,

cooperative strategic reading improves students' reading comprehension through promoting their helping behaviors. (Gersten, Fuchs, Williams, & Baker, 2001; Klingner & Vaughn, 2000). Also, Swanson and Hoskyn (1998) found that working within cooperative group enhanced the academic achievement of student with learning disabilities. The second component is students' interaction through generating question about what they read. Both generating and answering questions about the textual information allows students to engage within a reciprocal and cooperative teaching activity, which allows them to exchange their ideas and confirm their understanding and helps them to better comprehend the textual information. Through having a discussion with their group, students with learning disabilities can think about what are they reading and easily recall story details and retaining information for long period of time (Crowe, 2005; Gersten, Fuchs, Williams, & Baker, 2001; Klingner & Vaughn, 2000;).

Peer-assisted Learning Strategy

Peer-assisted learning strategy is another evidence-based strategy that is beneficial for increasing reading comprehension for all students, including those who have learning disabilities. It is a commonly known instructional method used to enhance students' reading comprehension through engaging in a peer-tutoring activity. In this method, teachers pair a skilled reader with an unskilled reader and allow them to cooperatively engage in different reading activities that are designed to improve reading comprehension. When implementing this strategy, teachers assign each student with a specific role to play, either tutor or tutee, while engaging in pre-structured reading tasks and activities. Students in each group have an opportunity to exchange the roles while working together on the reading activity. By allowing students to exchange roles, both tutor and tutee have an opportunity to practice the same responsibility that their partner will learn and practice the required skills to effectively perform

the pre-structured reading activity. Each pair cooperatively works together for at least four weeks before they are paired with different classmates (Fuchs, Fuchs, Al Otaiba, Thompson, Yen, McMaster, Svenson, & Yang, 2001; Fuchs, Fuchs, Mathes, & Simmons, 1997; Fuchs, Fuchs, & Burish, 2000; Falk & Wehby, 2001; Greenwood, Carta, & Hall, 1988; Gresten, Fuchs, Williams, & Baker, 2001; McMaster, Fuchs, & Fuchs, 2007; Rafdal et al., 2011; Topping, 2001).

The peer-assisted learning strategy improves the students' reading comprehension through three reading activities, which are (1) partner reading with brief retelling, (2) paragraph shrinking, and (3) prediction. In the first phase, the partner reading activity, each student in the pair is required to read aloud for approximately five minutes before exchanging role. The reading starts by having a skilled reader within each pair read to the unskilled reader. After the skilled reader finishes reading, the unskilled reader is required to reread the same passage. While one student is reading, the other students carefully listens and tries to identify any reading errors and, if any have occurred during the reading, provide corrective feedback. Having the proficient reader read first allows the unskilled reader to become familiar with the text and feel more comfortable before reading it later. After students each have a turn at oral reading, they move to the retelling phase, which lasts for approximately 2 minutes. The unskilled reader starts by telling the proficient reader what he/she learned from the text. If the unskilled reader fails to remember the information from the text, the proficient reader as a tutor provides corrective feedback. The main aim of the retelling phase is to provide the students with opportunities to discuss and confirm their understanding of the reading material.

In the second phase, paragraph shrinking activity, the skilled reader as a tutor starts by reading paragraph by paragraph aloud. After reading each paragraph, the skilled reader stops to check reading comprehension of the unskilled reader through asking questions that require

summarizing and identification of main ideas of the paragraph. In this activity, the unskilled reader is required to provide a summary of each paragraph in 10 words or less. If the unskilled reader uses more than ten words to summarize the paragraph, the skilled reader will ask the her/him to shrink it. However, if the unskilled reader does not accurately provide a good summary or provides irrelevant information, the skilled reader should reread the paragraph and summarize it. This activity lasts for approximately 5 minutes before the students exchange roles. The main purpose of the paragraph shrinking activity is to enhance reading comprehension through identifying the main idea and providing an accurate summary of each paragraph.

Prediction delay is the last reading activity that students engage in while implementing the peer-assisted learning strategy. In this phase, the proficient reader starts by making a prediction about the textual information, reading the text aloud, either confirming or disconfirming the prediction, and summarizing the text. While the proficient reader is reading, the unskilled reader monitors the reading process to identify any possible mistakes, determine if the reader is making a reasonable prediction and accurately summarizing the text. After five minutes, the students switch roles (Fuchs et al., 2001; Fuchs, Fuchs, Mathes, & Simmons, 1997; Simmons et al., 1994).

Peer-assisted learning strategy was designed by Doug Fuchs, Lynn Fuchs, and Debbie Simmons as a collaboration project with several public-school districts in Tennessee to help all students improve their reading skills (Fuchs et al., 1997; Sáenz, Fuchs & Fuchs, 2005). Peer-assisted learning strategy improves student learning by allowing students with disabilities to have access to the general curriculum, pairing students with different ability level, allowing students to engage in several reading activities through peer tutoring, allowing teachers to satisfy the individual educational needs of all students (Fuchs, Fuchs, & Thomas et al., 2001; The Access

Center, 2008).

Peer-assisted learning strategy has been demonstrated as an effective instructional method by the U.S. Department of Education's Program Effectiveness Panel (McMaster, Fuchs, & Fuchs, 2006; McMaster, Fuchs, & Fuchs, 2007). It also has been proved by several research studies as an effective strategy to enhance reading comprehension and fluency for all students from kindergarten through high school (Calhoon, 2005; Fuchs et al., 2001; Fuchs, Fuchs, & Kazdan, 1999; Fuchs et al., 1997; Fuchs et al., 2002; Mastropieri et al., 2001; Mathes et al., 1998; Saenz et al., 2005), including students who are low-average achieving, high-average achieving (Fuchs, Fuchs, Mathes, & Simmons, 1997; Mathes et al., 1998), English language learners (Calhoon et al., 2006; McMaster, Kung, Han, & Cao, 2008; Sáenz, Fuchs, & Fuchs, 2005), and have learning disabilities (Calhoon, 2005; Fuchs, Fuchs, Mathes, & Martinez, 2002; Fuchs et al., 2001; Fuchs, Fuchs, Mathes, & Simmons, 1997; Fuchs, Fuchs, & Kazdan, 1999; Mathes et al., 1998; Rafdal, McMaster, Mcconnell, Fuchs, & Fuchs, 2011; Simmons, Fuchs, Fuchs, Hodge, & Mathes, 1994; Sanenz, Fuchs, & Fuchs, 2005). It enhances the students' reading comprehension by allowing them to engage in several cognitive strategies, such as prediction, confirmation of prediction, questioning, summarizing, and identification of main ideas (Fuchs, Fuchs, & Thomas et al., 2001; Fuchs et al., 1997; Hughes & Frederick, 2006; Palinscar and Brown, 1984).

Specifically, regarding students with learning disabilities, Calhoon (2005) examined the effectiveness of peer-assisted learning strategy on phonological and reading comprehension skills for 38 middle school students with learning disabilities in self-contained classrooms. The students were divided into two groups. The first group was taught through utilizing a traditional whole class-method, while the other group was taught through peer-assisted learning strategy.

The results indicated that students who were placed in peer-assisted learning strategy condition gained a significant improvement on word attack, word identification, and passage comprehension utilizing the Woodcock-Johnson Test of Achievement-III. The results of this study aligned with the finding of several previous studies (Fuchs et al., 2002; Fuchs, 2002; Fuchs & Fuchs, 2001; Mathes, 1998).

Similarly, Rafdal, McMaster, McConnell, Fuchs, and Fuchs (2011) examined the influence of peer-assisted learning strategy on reading of kindergarten students with disabilities. The participants were 89 students who have individualized educational plans, but were included in the general classrooms. They were taught through peer-assisted strategy four times a week. Each lesson took approximately 20-30 minute. The intervention lasted for 18 weeks. The finding of this study indicated that peer-assisted learning strategy is an effective method for improving the students' initial alphabet and decoding skills, such as word attack, spelling, and oral reading. The results of this study consistent with previous studies (Calhoon, 2005; Fuchs et al., 2002, Fuchs, Fuchs, Mathes, & Simmons, 1997).

Story-mapping

Story-mapping is another evidence-based reading strategy that has been widely used to enhance students' reading comprehension. It is a cognitive intervention that requires students to fill a pre-structured template with story grammar components as headings to visualize, organize, understand textual information from a story. The template works as a framework to guide students' attention in order to identify the story grammar elements while reading and writing them on the provided template (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Mathes, Fuchs, & Fuchs, 1997; Onachukwu, Boon, Fore, & Bender, 2007; Swanson & De La Paz, 1998; Stetter & Hughes, 2010; Stagliano & Boon, 2009; Zahoor & Janjua, 2013). Although story-mapping

may take different forms, such as a diagram or graphic organizer, it should contain basic story grammar elements, such as the title, characters, time, setting, conflict, major events, solution, conclusion, and moral of the story in order to guide students to organize, record, and comprehend information about a story (Grünke, Wilbert, Jürgen, & Kim, 2013; Daqi, 2007; Mathes, Fuchs, & Fuchs, 1997; Stein & Glenn, 1979; Stagliano & Boon, 2009; Wade et al., 2010). Improving the students' abilities to successfully identify all these story components plays a critical role in making a connection between the important events in the story, which can lead to a better understanding of the text.

Story-mapping is one of the reading strategies that can be used before during, and after the reading process for different purposes in order to facilitate students' comprehension of a text. For example, using the strategy before reading encourages students to activate their previous background knowledge about the topic, organize their discussion, and write some elements about the text. While using story-mapping during the reading process can help students direct their attention and continue identifying and writing relevant information about the text. Finally, using story-mapping after reading can help students to review and confirm their understanding of the text (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Kirylo & Millet, 2000). Although story-mapping as a reading intervention can be used at any stage of reading process, it should be effectively taught modeled for students for best results.

There are several considerations that teachers should take into account in order to teach their students how to correctly utilize story-mapping in order to improve their reading comprehension. For example, before teaching story-mapping, teachers should determine their students' reading abilities and weakness in order to decide what story-grammar elements are most appropriate to be taught to students. Teachers also should decide which vocabulary and

phrase they will use in order to create and fill the story map. Finally, teachers should determine whether to provide the students with a pre-structured story map or allow them to create their own.

After the preparing to teach phase, teachers should move to the teaching phase in which they start by modeling to the students how to find the required components of the story and record them into the story map while thinking aloud. In addition, teachers should explicitly use different self-instruction sentences during the modeling phase in order to hold students' attention and help them successfully apply the strategy steps. During the guided practice phase, teachers provide students with an opportunity to apply the strategy steps while providing them with immediate corrective feedback. Teachers should gradually remove the use of story-mapping, graphic representation, and reduce the rate of providing corrective feedback during independent and mastery sessions in order to help students to individually utilize the strategy (Grünke, Wilbert, Jürgen, & Kim, 2013; Mathes, Fuchs, & Fuchs, 1997; Swanson & De La Paz, 1998).

Story-mapping has been proven as an effective intervention when used by students with learning disabilities to enhance reading comprehension across different grade levels, such as elementary level (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Davis, 1994; Idol & Croll, 1987; Stagliano & Boon, 2009; Paris, 2007), middle school (Boyle, 1996; Gardill and Jitendra, 1999; Vallecorsa & deBettencourt, 1997; Onachukwu Boon, Fore, & Bender, 2007), and secondary level (Dimino, Gersten, Carnine, & Blake, 1990; Gurney, Gersten, Dimino, & Carnine, 1990). More specifically, using story-mapping has positively impacted reading comprehension skills for students with learning disabilities by improving their abilities to successfully identify story-grammar elements, such as setting, conflict, and characters (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Dimino, Taylor, Gersten, 1995; Davis, 1994; DiCecco & Gleason, 2002;

Idol & Croll, 1987), order the story information in its correct sequence (Gardill and Jitendra, 1999; Pearson, 1985), develop a connection that clearly show the relationship between the story components (Pearson, 1982), identify and recall important information from a text (Idol, 1987; Idol & Croll, 1997; Stetter & Hughes, 2010), improve overall comprehension of a narrative story (Paris, 2007), and correctly answer comprehension questions about an expository text (Onachukwu Boon, Fore, & Bender, 2007; Stagliano & Boon, 2009).

For example, Boulineau, Fore, Hagan-Burke, and Burke (2004) conducted a study to examine the influence of story-mapping on students' reading comprehension through a descriptive ABC design. The participants of this study were six elementary school students with learning disabilities. They were receiving special education services in a resource room due to their difficulties with reading. The study took place in resource room setting where the students usually receive their reading instruction. Participants' performance on story-grammar elements was probed by teachers, but no instructional strategy was provided during the baseline condition. However, in the intervention condition, teachers provided the students with direct instruction, support, and feedback of story-grammar elements using the story map strategy. The intervention was provided to the students during the last half hour of their daily reading time. During the maintenance phase, the teacher removed all instruction and support. The students' performances were measured by calculating the percentage of the correct answer completed on each story-map (template) immediately after participants read each story and completed a template. The findings of this study show significant improvement in the percentage of correct story elements for all students from baseline to the intervention conditions. It was found that story-mapping is an effective intervention to improve the reading comprehension of students with learning disabilities when reading a narrative text. Also, the same positive impact was found for all

students during the maintenance phase. Similar findings also were found by other studies (Paris, 2007; Stagliano & Boon, 2009).

Self-questioning

Self-questioning is an affective metacognitive reading strategy developed to develop reading comprehension in all students with and without learning disabilities across different grade levels. It is an intervention reading approach that requires students to actively engage in reading process by frequently stopping and asking themselves several questions about the reading in order to monitor their own comprehension and meaning construction of the text. Asking questions while involving in the reading process provides students with an opportunity to think about what are they reading, be active and independent readers, and be able to appropriately reflect on their reading (Mahdavi & Tensfeldt, 2013; National Reading Panel, 2000; Rosenshine, Meister, & Chapman, 1996; Rouse, Alber-Morgan, Cullen, & Sawyer, 2014; Taylor, Alber, & Walker, 2002;). Although self-questioning has been proved to improve reading comprehension for all students, it may take various forms.

There are two forms to generate questions while implementing self-questioning strategy in order to increase students reading comprehension: student-generated questions and teacher-generated questions. Generally, self-questioning strategy requires students to develop their own questions during and after the reading process. Requiring students to generate their own questions and answers to them allows students to monitor their comprehension, locate important information, better understand the text, and retain knowledge that they gained from the text. However, the low reading abilities of some learners, including at risk students and students with learning disabilities, may negatively impact their ability to create their own questions while reading. Therefore, teachers may decide to provide them with a list of questions to use during

and after the reading in order to direct and facilitate their reading comprehension. Overall, the student-generated question method is mostly used with students without disabilities, while teacher-generated question is used with students with disabilities (Rouse, Alber-Morgan, Cullen, & Sawyer, 2014; Swanson & De La Paz, 1998; Taylor, Alber, & Walker, 2002). Regardless of the form that self-questioning may take, teachers should select the most appropriate form based on their students' learning abilities and explicitly teach it to them.

Students should be explicitly taught how to use self-questioning for different purposes as it relates to reading comprehension. These purposes involve developing questions about main ideas and details (Hagaman, Casey, & Reid, 2010; Wong and Jones, 1982), integrating self-questioning with story-grammar components (Johnson, Graham & Harris, 1997; Singer & Donlan, 1982), summarizing and retelling textual information (Mansett-Williamson, Dunn, Hinshaw, & Nelson, 2008; Mason, Snyder, Sukhram & Kedem, 2006), and confirming understanding of information (Hagaman, Casey, & Reid, 2010; Johnson, Graham & Harris, 1997; Mason, Snyder, Sukhram & Kedem, 2006). Regardless of the purposes beyond using self-questioning, teachers teach the strategy through following an explicit teaching technique.

When using this strategy, teachers should follow an explicit technique while teaching students how to generate questions about the reading in order to improve their reading comprehension. Those teaching techniques include modeling, guided practice, and independent practice. In the modeling phase, teachers model when to stop reading, and how to generate questions relevant to the text, and answer the questions during and after the reading process through thinking aloud. In the guided practices phase, teachers provide the students with an opportunity to practice generating questions and answer them under their supervision and provide them with corrective feedback. In the independent practices, students are provided with

an opportunity to independently practice the strategy (Mahdavi, & Tensfeldt, 2013; Swanson & De La Paz, 1998; Taylor, Alber, & Walker, 2002).

Several studies have examined the effectiveness of self-questioning on reading comprehension of students with learning disabilities. For instance, Crabtree, Alber-Morgan, and Konrad (2010) conducted a study to examine the impact of using self-questioning on reading comprehension of high-school with learning disabilities. Participants were provided with a list that consists of five pre-structured questions related to different story components (e.g., characters, events, time, setting, and conflict). The students were required to stop their reading at three pre-determined stopping points in order to ask and answer the provided questions. They were required to record their responses on the self-questioning form. The results indicated that the students reading comprehension of a narrative texts and retelling significantly increased after teaching them through using self-questioning. Also, the results show that after implementation of the strategy, all participants were able to maintain their reading comprehension outcomes. Specifically, they were able to determine their stopping points and use the strategy after removing some prompts. Similar results were found by several other studies (Davey & McBride, 1986; Graves & Levin, 1989; Nolte & Singer, 1985). Self-questioning also has been demonstrated to improve reading comprehension for students with learning disabilities by improving their abilities to respond to inferential questions (Taylor, Alber, & Walker, 2002) and by allowing them to actively engage with the textual information and generate their own questions (Chan, 1991; Gaultney, 1995; Johnson, Graham, & Harris, 1997; Rouse, Alber-Morgan, Cullen, & Sawyer, 2014; Taylor, Alber, & Walker, 2002).

Overall, although various strategies have been demonstrated as effective intervention for improving students' reading comprehension, educators should not rely on one single strategy

while teaching their students. That is because one specific strategy might be beneficial for one particular student, but not for another due to the unique comprehension problems that each student has. Also, educators should be aware of that even utilizing evidence-based strategies may negatively influence students' reading comprehension if it is employed in an inappropriate or very modified form (Kim, Linan, Thompson, & Misquitta, 2012; Watson, Gable, Gear, & Hughes, 2012).

Classroom-based Reading Comprehension Assessments

Reading comprehension assessment is an instrument that has been developed and used to measure and determine students' reading comprehension levels (Dewitz, 2003). It is an essential tool to measure the effectiveness of teaching reading and to check the efficiency of a reading intervention method designed to respond to educational needs of students (Woolley, 2011; Caccamise & Snyder, 2005). In other words, assessment helps determine why students have comprehension difficulties, so their teachers can develop appropriate instruction to meet their students' individual needs (Carlson, Seipel, & McMaster, 2014). It also allows teachers to determine (1) whether or not the students have mastered the pre-determined criteria for their grade levels, (2), determine how effectively students utilize particular comprehension strategies, (3), and find out why some students may struggle (Klingner, Vaughn, & Boardman, 2014). In contrast, the lack of using assessment tool may lead educators to the failure to meet the individual educational needs of students and place them in an inappropriate intervention program, which will negatively impact students' academic achievement (Woolley, 2011).

Reading comprehension consists of a complicated interaction of skills, such as language, sensory perception, memory, and motivational beliefs (Guthrie, Hoa, Wigfield, Tonks, Humenick, & Littles, 2007). Therefore, suitable assessment tools should contain a multifaceted

method with a comprehensive evaluation of individual learning needs (Woolley, 2011). Also, due to the complication of the reading comprehension process, it is not unexpected that approximately 10% of American students across the country struggle with specific learning difficulties in reading comprehension (Cain & Oakhill, 2007). It also, not surprising that when discussing reading comprehension as an essential component of reading, the majority of learners with learning disabilities encounter and suffering of significant difficulties and challenges with reading comprehension across all grades level (Jones, Hughes, Donahue, Parker-Katz, Talbott, & Tatum, 2012; Stetter & Hughes, 2010). Therefore, efficient reading comprehension assessment must be available to educators to accurately identify and deliver the appropriate intervention to these struggling students (Gebhardt, 2013).

There are numerous assessment tools and tests available to measure reading than for other academic areas (Lerner & Johns, 2012), such as formal and informal assessment (Oakhill, Cain and Elbro, 2015). Based on the purpose of this study, the focus of the assessment theme as a part of the literature review is on the informal reading comprehension assessment, classroom-based assessment. Therefore, in the following section more details and examples about classroom-based assessments are provided.

Informal assessment is a type of assessment that is most commonly used by classroom teachers (Ortlieb & Cheek, 2012). Informal assessment is also called Classroom-based assessment (Serafini (2010). It is known an informal assessment because (1) it is often created by teachers, and (2) its administration does not require following specific procedures to implement the assessment or specific time to finish the test. Mainly, informal assessment is criterion-referenced. That is because they assess the students' information on a particular topic or their abilities to perform a pre-determined set of skills as evaluated by some criteria (Ortlieb & Cheek,

2012).

Informal classroom-based assessment is a critical component of classrooms' activities. That is because it plays a major role in assisting the teachers to determine the individual strengths, ability, needs, and weakness of each student in the classroom, which helps teachers to better serve a student through the most appropriate instruction based on his/her individual needs. Serafini (2010) referred to several features that make the classroom-based assessment more efficient than standardized tests for assisting teachers to support students' learning. First, classroom-based assessment is frequent. That means that in order to collect data about a students' performance, teachers do not need to stop the student from what they are doing to collect the data. The assessment takes place while students are engaging in the learning process and it ongoing, not only for one day. Second, classroom-based assessment is noncompetitive. Teachers use the collected information to determine students' academic progress over time. Thus, in contrast to the standardized test, teachers use that information to compare a student's performance to himself/herself, not to his peers. Third, classroom-based assessment focus on the students' strengths. Through using classroom-based assessment, teachers can determine what each student can do and what is the most appropriate learning starting point for him/her. In other words, in contrast to the standardized test, classroom-bases assessment aims to enhance students' weakness rather than creating a profile of students' strengths. Lastly, classroom-based assessment is used to drive an instructional decision. That data collected by classroom assessment help teachers to (1) develop the most appropriate instruction for students, (2) make a better determination about what lesson would be more effective to teach, (3) determine what supportive material to use during their lessons, and (4) uncover challenges that students may have.

There are different types of informal reading comprehension assessments that can be used by classroom teachers. These include, but are not limited to: Cloze procedure (Ahangari, Ghorbani, & Hassanzadeh, 2015; Habibian, 2012; Kibui, 2012; Spinelli, 2012), informal reading inventory (Barr, Blachowicz, Bates, Katz, & Kaufman, 2007; Burns and Roe, 2011), retelling procedure (Dory, Popplewell, & Byer, 2001; Hagtvvet, 2003), and think aloud (Klingner, Vaughn, and Boardman, 2014; Serafini, 2010; Spinelli, 2012). Since one of the research questions that are leading this study focuses on the classroom-based assessments, more details about these classroom-based assessments are provided in the following section.

Cloze Assessment

Cloze Assessment is a classroom reading technique used to measure students' reading comprehension level (Ahangari, Ghorbani, & Hassanzadeh 2015; Spinelli, 2012). It is a cognitive task that measures reading comprehension by providing students with a written passage in which certain vocabulary is missing at fixed intervals in the passage. The student's job is to supply the words that have been deleted from the passage (Gellert & Elbro, 2013; Spinelli, 2012). In order to correctly restore the missing vocabulary that belongs to a particular sentence in the passage, students need to recognize the contextual information surrounding it, which helps them guess the missing word and comprehend the passage (Spinelli, 2012; Trace, 2016). According to Spinelli (2012), "this assessment procedure measures students' ability to read and interpret written passage, to understand the context of reading material, to use word prediction abilities for comprehension, and to use cues to identify words" (p. 224). In other words, to successfully supply the missing vocabulary, the student needs to engage in a variety of cognitive activities, such as reading, word prediction, making a connection between information in the text, and making inference, which all are necessary skills for comprehending a text (Kibui,

2012). Kibui (2011) noted that there is a correlation between how efficiently students can restore the missing vocabularies in Cloze Assessment and other criteria of how efficiently and correctly they can obtain meaning from written passages.

Several studies have highlighted that Cloze Assessment is a beneficial tool for measuring students reading comprehension (Yamashita, 2003). Williams, Ari, and Santamaria (2011) conducted a study to compare the achievement of 100 students on a silent reading test and two types of Cloze Assessment tests (Maze and open-ended) to determine which test format makes major greater variance in reading comprehension. The participants were two group of post-secondary students, struggling and typical. The findings of this study indicated that there is high correlation between both Cloze Assessment and the reading comprehension test ($r = .68$ and $.52$, $p < .00$). More recently, Gellert and Elbro (2013) developed a quick 10-minute Cloze Assessment that required participants to accurately comprehend information and concepts across the passage in order to correctly guess and fill in the deletions. The participants were 204 Danish adults. The results indicated that students' performance on the Cloze test were highly correlated ($r=.84$) with their performance on a 30-minute standard question-answer comprehension test. Therefore, Gellert and Elbro (2013) concluded that cloze test could be employed to assess reading comprehension.

In addition to its role in measuring students' reading comprehension, there are some other advantages of Cloze Assessment that may encourage teachers to utilize it. The first advantage is that Cloze Assessment can be easily developed and scored by teachers (Kibui, 2012; Spinelli, 2012), the second is that it can be administrated to students individually (Spinelli, 2012) or in large group settings (Spinelli, 2012; Kibui, 2012), and the third is students' familiarity with the test application, procedure, and instruction due to the current wide use of Cloze Assessment in

schools (Kibui, 2012). Beyond the individual student, Cloze Assessment can also be a helpful tool in determining whether or not the reading material developed for a particular grade level is appropriate for the students' reading ability (Spinelli, 2012). A final advantage is that Cloze Assessment provides students with an interactive model that allows them to interact with the text in order to gain meaning of the text (Kibui, 2012). All of these features lead to the wide utilization of of Cloze Assessment by educators.

Informal Reading Inventory

Informal Reading Inventory is another example of a classroom reading assessment that has been commonly used to measure students' reading comprehension (Spinelli, 2012; Serafini, 2010; Nilsson, 2013; Ford and Optiz 2008). It is an assessment method that contains a group of leveled vocabulary lists (i.e., sight words) and leveled reading texts that ranged from an easy to more difficult level, as well as comprehension questions that are related to each text (Mercer, Mercer, & Pullen, 2011; Paris & Carpenter, 2003; Serafini, 2010). The aim of using the leveled vocabulary lists is to (1) assess the students' knowledge of sight words, (2) gain information on how students decode unfamiliar words, and (3) determine the most appropriate leveled text for each student to read. After determining the student's reading level, the leveled reading passages are used to gain information about the students' ability to comprehend the words based on the context of the passage and provide information about the strategies students use in order to understand the passage (Spinelli, 2012). Informal Reading Inventory measures students' reading comprehension by requiring them to either provide a summary about the text or answer different comprehension questions about it (Serafini, 2010).

Informal Reading Inventory is individually developed and administered for each student based on his/her learning abilities (Serafini, 2010; Spinelli, 2012). More specifically, after

determining the most appropriate passage for each student through using word lists, the teacher asks students to read their passages either out loud or silently. In some cases, especially for a student with poor fluency skills, the teacher may read the passage for the student. After reading the passage, the teacher asks several comprehension questions that require students to recall information, in order to assess their comprehension (Nilsson, 2013; Paris & Carpenter, 2003; Spinelli, 2012). Thus, students' reading comprehension ability is determined according to their ability to answer questions about the text (Serafini, 2010).

Besides assessing students' reading comprehension, there are other advantages of Informal Reading Inventory. First, Informal Reading Inventory allows teachers to determine the instructional level for each student in order to provide him/her with the most appropriate instruction (Kibui, 2012; Nilsson, 2013; Venn, 2006). Second, it also helps teachers in assessing students' reading interests and background knowledge about a particular topic (Klingner, 2004). Thus, teachers can successfully differentiate instruction and group students based on their learning abilities and interests (Monti, 2003). Third, Informal Reading Inventory also provides teachers with needed data to prepare and apply appropriate interventions. For example, Dewitz and Dewitz (2003) found that Informal Reading Inventory is a useful assessment tool that teachers can employ to collect helpful data that help in planning instruction to meet the students' educational need. Another advantage is that Informal Reading Inventory allows teachers to obtain ongoing helpful data to determine the effectiveness of a particular intervention (Scott & Weishaar, 2003; Tomlinson & McTighe, 2006). The several advantages of Informal Reading Inventory serve as contributing factors in its wide use among teachers and reading specialist (Flippo, Holland, McCarthy, and Swinning, 2009), with these advantages playing a critical role in helping teachers to better serves their students' educational needs.

Retelling Assessment

Retelling is another type of classroom-based reading assessment that has been widely employed to measure students' comprehension (Dory, Popplewell, & Byer, 2001; Hagtvet, 2003; Serafini, 2010). It involves students demonstrating their understanding and what they have learned through retelling and summarizing in their own words the major concepts and ideas from a selected passage (Spinelli, 2012; Goodman, Watson, & Burke, 2005; Serafini, 2010). Students can demonstrate their understanding of the passage by either producing a verbal presentation or engaging in a written activity (Han, 2005; Morrow, 2005).

Having students use their own words while retelling, helps teachers to determine that the students accurately understand the passage rather than just literally restate the authors' words (Spinelli, 2012). Also, the retelling activity allows teachers to determine students' reading comprehension by assessing the accuracy of the information that they are retelling when compared to the original passage (Serafini, 2010). Although the main purpose of using retelling assessment is to measure the students' reading comprehension, teachers can differentiate how they use it based on students' learning abilities.

There are four different forms of the retelling assessment that students can use in order to demonstrate their understanding of a passage. These forms differ in their complexity based on the way that students read a passage and the method that they use to express their retelling. The first form is written-to-written, in which students read a written passage to themselves and show their understanding of the reading material in writing. The second form is written-to-oral. This form requires students to read a written passage to themselves and verbally summarize what they have learn and understand from that passage. The next is oral-to-written. In this form, the teacher

reads the passage orally to a student and ask him/her to express his/her understanding of the information in writing. The last form is oral-to-oral. For this type, the teacher starts by orally reading the passage to the student and then requires him/her to verbally respond (Brown, & Cambourne, 1987; Serafini, 2010). Regardless of the retelling procedure form that teachers decide to use, its main focus should be on measuring the students' ability to understand the major components, ideas, details, and concepts presented in the passage (Han, 2005).

In addition to measuring the students' reading comprehension, there are other advantages of using the Retelling assessment. First, it allows teachers to assess different comprehension skills, which play a critical role in helping students to develop the most appropriate instructional intervention based on the students' abilities and needs (Klingner, 2004; Roberts, Good, & Corcoran, 2005). Second, the Retelling assessment does not require a lot of the teachers' time for preparation, creating, administering, and scoring the assessment (Han, 2005; Roberts et al., 2005). Third, Retelling provides teachers with helpful information about their students' abilities to organize, classify, integrate and make an inference about a textual information. Fourth, it also assists the teachers in discovering the specific challenges that students face while organizing the various component of a story in order to gain meaning of the story as a whole (Han, 2005). Another advantage is that it can be used an essential part of oral reading analyses or combined with another assessment, such as Informal Reading Inventories (Serafini, 2010). Lastly, compared to other assessments, teachers can teach, model, and employ Retelling assessments more easily (McKenna & Stahl, 2009). In sum, all these features emphasize that retelling procedure is an effective tool that can be used as a diagnostic before reading, during reading, or post-reading as a comprehension assessment (Han, 2005).

Several studies have examined the Retelling procedure as a reading comprehension

assessment. For example, Morrow (1985) conducted a study to examine the impact of two methods on the students' comprehension. The participants were 59 kindergarten students. Twenty-nine of these students were asked to use their own words to orally retell the story after listening to it. Thirty students were asked to show their comprehension of the story by drawing a picture that explains the events in the story. Morrow found that students who orally retold the story showed improvement on the total comprehension score compared to students who were asked to draw a picture. Gillan and Carlile (1997) conducted a study to assess the students' story retention through the Retelling procedure. The participants in that study were 24 school-age students. Half of the students were typical development students while the other half were students with specific language impairments. Several questions were developed and asked of the participants before they read the story in order to activate their prior knowledge. After reading the story out loud, the students were asked to retell the story. Their retellings were assessed, analyzed, and compared with the original story. Even though students who had particular language impairments encountered more difficulties with the initial reading of the story, they were able to retell as much word and information from the story as their typical achieving peers.

Think-aloud

Think-aloud is another assessment tool that measures students' reading comprehension. With this assessment method, the students are required to verbalize their thinking before, during, and after the process of reading a selected passage (Klingner, Vaughn, & Boardman, 2014; Spinelli, 2012). However, unlike the Retelling Assessment, teachers ask students to frequently stop reading at different points (e.g. before, during, after) and ask them several questions to encourage them to think aloud about the process and metacognitive strategies that they use while reading (Klingner, Vaughn, & Boardman, 2014; Serafini, 2010). By stopping students and asking

them what are they thinking while reading, teachers can focus in on assessing students' comprehension during the act of reading (Serafini, 2010).

The focus of the questions asked during the assessment differ based on their purposes. For example, questions asked before the reading focus on how students feel about the entire passage. Students are provided with the main topic and asked to reflect on it, such as "What do you think this text will be about?" (Gunning, 2002; Spinelli, 2012). However, during-reading questions would be focused on assessing students' comprehension of a particular part of the text, such as "What were you thinking while reading this part?" "What is this part talking about?" Post-reading questions would focus on the entire reading passage, such as "Provide me with a summary of the entire passage." (Gunning, 2002). Asking these questions play a significant role in assisting teachers to recognize what metacognitive strategies a student utilizes in order to construct meaning of a text while reading (Klingner, Vaughn, & Boardman, 2014; Serafini, 2010). These metacognitive strategies may include paraphrasing, generating questions, making inferences, drawing conclusions, making prediction, creating mental images, and monitoring understanding (Klingner, Vaughn, & Boardman, 2014). Thus, Think-aloud focuses on assessing the students' ability to control their thinking processes as well as determining whether or not they use appropriate metacognitive strategies while reading in order to gain meaning of the text (Spinelli, 2012).

Beside measuring the students' reading comprehension, Think-aloud as an assessment has other advantages that help teachers to better serve their students. For example, Think-aloud provides teachers with helpful information about the students' strengths and weakness, which contributes in developing recommendations and modifications for their instructional practice (Klingner, Vaughn, & Boardman, 2014; Serafini, 2010). Think-aloud technique also allows

teachers to determine which passage is found to be the most important or interesting to the students (Klingner, Vaughn, & Boardman, 2014). It also allows teachers to observe the strategies that students apply while reading in order to understand a particular text (Serafini, 2010). Beyond its benefits for teachers, Think-aloud assessment allows students to recognize and control the cognitive process and strategies they are utilizing while reading. As a result, they can work toward improving their comprehension (Oster, 2001). In sum, the Think-aloud activity provides teachers with different types of information about the students' reading skill that is not easily to be gathered or evaluated through other assessment tools, such as observation or interview (Serafini, 2010). Overall, although several classroom-based reading comprehension assessments exist as described above, teachers should use the most appropriate assessment based on students' educational needs and abilities.

Chapter 2 Summary

Chapter Two presents a review of related literature which started with a discussion of reading comprehension definition, its importance, and the common reading comprehension problems that students with learning disabilities face while reading. Also, the literature review discusses in details different examples of the reading comprehension strategies and classroom-based assessment tools that have been commonly used by teachers. Chapter Three provides detailed explanation of the research approach and the appropriateness of the design that will be utilized to investigate the problem under study.

CHAPTER 3

METHODOLOGY

The purpose of this qualitative case study was to hear the voices of five experienced special education teachers who teach reading comprehension to third-grade students with learning disabilities in resource room settings.

The overarching questions for this research study were:

1. What are the common reading problems that prevent third-grade students with learning disabilities from comprehending what they are reading?
2. What effective reading comprehension strategies do special education teachers utilize in order to improve reading comprehension skills of students with learning disabilities?
3. What are the classroom-based reading assessment tools that special education teachers use to measure the students' reading comprehension growth and determine the effectiveness of these strategies?

In this study, I defined the “effective reading comprehension strategies” as any strategies that have been found by the special teachers as beneficial for improving reading comprehension levels of third graders with learning disabilities in the resource room setting. Importantly, a particular reading comprehension strategy could be beneficial based on these teachers' experiences while working with students who have learning disabilities, but it might not have been found to be an effective reading strategy in the literature. Thus, the focus of this research was on determining the effectiveness of using a particular strategy based on teachers' teaching experiences, rather than strategies only found in the literature.

Research Design and Rationale

The selection of the appropriate research method for this research was guided by both the research purpose and the research questions. Stake (2010) stated that the research questions play a major role in selecting the most appropriate research methodology. Additionally, Creswell (2013) stated that when a researcher needs to deeply discover and understand a researchable problem or an issue, it is most appropriate to use a qualitative research method of inquiry. Also, obtaining a strong understanding and detailed description of an issue or problem can be only done through directly interacting and communicating with individuals who are involved in that issue (Creswell, 2013).

In the case of this study, my aim was to obtain a deep understanding of (a) the reading comprehension problems that prevent third graders with learning disabilities from comprehending what they are reading and (b) the effective reading strategies that experienced special education teacher have utilized in order to improve their students reading comprehension skills. Because I was interested in identifying “what” reading comprehension problems impede students’ reading comprehension, the students experience, and deeply understanding “how” their teachers help them overcome these challenges using reading strategies, how teachers respond to the problem (Buchler, 2013), a qualitative research method seemed to be the most appropriate approach for conducting this study.

Creswell (2013) identified five different traditions that researchers who are interested in utilizing qualitative research methods could use. These traditions include biography, phenomenology, grounded theory, ethnography, and case study. Taking into account the purpose of the study and the research questions, I selected a case study approach for conducting this study. According to Creswell (2013):

Case study research is a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case themes. The unit of analysis in the case study might be multiple cases (a multisite study) or a single case (a within-site study). (p. 97)

Case study approach has been used across different disciplines include psychology, social science, education, and political science (Creswell, 2013). Therefore, since the case study approach has been utilized in many similar educational settings and found to be suitable for different studies that are dealing with the experience of educators, it seems to be appropriate method of inquiry to conduct this research.

More specifically, I used multiple case study method of inquiry. Utilizing a multiple case study design provides the investigator with an opportunity to study the cases and gather data and detailed information within a natural context and real settings (Creswell, 2013). I also decided to use the multiple case study method because it allows the rich description and in-depth exploration needed to develop a better understanding of the problem under study (Marshall & Rossman, 2011).

Reflections on Researcher Identity

My previous experience as special education teacher has influenced and enhanced my desire for conducting this study. I noticed that further research is needed to identify and deeply understand the common reading comprehension problems that third-grade students with learning disabilities face. I used to be an elementary special education teacher in Saudi Arabia, where I taught reading for elementary students with learning disabilities in a resource room setting.

While teaching, I noticed different reading comprehension problems that the students had, and I used different reading strategies to help those students. I was able to see the positive role that reading strategies play in improving the students' comprehension.

My academic major, Bachelor Degree in Special Education, and teaching experience of working with elementary students with learning disabilities played a critical role in helping me to develop an effective relationship and collaboration with most of the special education and general education teachers at schools who help their students with learning disabilities. I tried to assist these teachers as much as I could by providing them with reading strategies that could help them increase their students' reading achievement levels. We used to exchange our teaching practices every week and determine what worked and what did not.

Working on my Master's and Doctoral degrees in Special Education in the United States provided me with different opportunities for learning and working in the special education field. More specifically, I benefited from working as a volunteer with skilled and experienced elementary special education teachers in resource rooms in American schools. From working with these teachers, I learned a lot about different methods of teaching reading to elementary students with learning disabilities. I noticed how importance is to equipped students with learning disabilities with different reading strategies in order to help them overcome their difficulties with reading. Also, the academic coursework that I had while working on my master's degree helped me better understand the American educational system, laws, and legislation that impact students with disabilities. Also, I have had different opportunities to work with and be close to experienced professors and professionals in the field of special education, which has allowed me to learn more about the field, the evidence-based practices, teaching methods, and research skills. Also, studying special education major in the United States, has

allowed me to clearly realize the importance of developing and improving instruction appropriate for students with disabilities.

While I was working on my doctoral degree in the United States, I was hired as a lecturer for a special education program at a University in Saudi Arabia. In this capacity, I am in charge of a future teachers' preparation program. My job is to prepare future special education teachers to become effective teachers. Therefore, conducting this study was a helpful experience that I will transfer to Saudi Arabia.

Study Setting and Participants

Setting. The settings for this study were five public elementary schools, in mid-size, mid-western cities. The schools met the following criteria:

- 1) located in the Southwest region of Michigan,
- 2) within 30 miles of the sponsoring university,
- 3) 5% or more of the students' body certified as having learning disabilities, and
- 4) have a resource room.

More specifically, this research was conducted in the resource rooms where special education teachers implement different teaching practices to improve their students' reading comprehension achievement level or any other private, safe, comfortable place based on the participants' convenience. This study was not conducted during the teachers' instructional time.

Participants. The participants were five experienced special education teachers who:

- 1) have a minimum of three-years experience in teaching and working with elementary students with learning disabilities
- 2) have a learning disabilities endorsement, and
- 3) have a minimum of 3-year experience of delivering reading instruction to third graders

in the resource room setting.

Importantly, I was only interviewing teachers, not students, for this study. I reviewed the students' reading comprehension aggregated scores, based on their reading assessment without having their real names identified.

Recruitment and Sampling Selection

I followed two main levels of approval to recruit participants and gain access to the settings of this study. First, I submitted all the requirements needed to the Human Subjects Institutional Review Board (HSIRB) in order to obtain approval to conduct the study. After gaining the HSIRB approval (Appendix F), I moved to the next level, which was recruiting participants and gaining access to the schools. I started by identifying the public elementary schools in the Southwest region of Michigan. These schools had to be within 30 miles from the sponsoring university, certify 5% or more of the student body as having learning disabilities, and have a resource room.

The goal was to identify at least seven potential participants. Creswell (2013) stated that qualitative research studies involve a small number of participants who share similar perceptions of a specific experience. Once the schools that met the previous criteria were identified, I gained access to these schools in order to identify the potential participants. I used purposeful sampling method because I want to examine participants who practice and share similar practices and experiences in a specific area of expertise (Creswell, 2013). The purposeful sampling is commonly used by qualitative investigators that because it allows them to identify and select information-rich cases related to the issue under a study (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). According to Patton (2002), the samples for qualitative research are mostly assumed to be chosen purposefully to locate cases that are “information rich”. In

addition, purposeful sampling allows qualitative researcher to identify and choose individuals or groups of individuals who are sharing similar knowledge or experiences about a phenomenon of interest (Cresswell & Plano, 2011).

There are different methods to the utilize of purposeful sampling strategies in implementation research (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). In this study, I used the gatekeeper technique to identify special education teachers who met the above criteria and who were interested in participating in the study. Basically, the gatekeeper is the individual who will assist the researcher in obtaining access to the people who meet the study criteria in schools (Farber, 2006). Hatch (2002) stated that it is very beneficial to identify the gatekeeper and obtain a permission through them. That is because gatekeepers play a critical role in controlling the researcher access to the setting of interest. He also highlighted that “when researchers have not done their homework about entry requirement or have not taken the time to find out who controls access, they risk sabotaging their own projects” (p. 45).

In this study, the gatekeepers were the schools’ principals. In this sampling approach, I started by sending the recruitment email to the principal in order to show them my desire in conducting the study at their schools and obtain a permission (Appendix A). In that email, I provided the schools principals with a description about the purpose of the study, a copy of the consent form (Appendix D), interview questions (Appendix E), and the HSIRB approval (Appendix F). Also, in that email, I asked the school principals for an appointment based on their availability to have an initial recruitment face-to-face visits. Through these meetings, I provided the school principals with a detailed description about the study, criteria, and its purpose. I also answered all the questions and inquiries that they had regarding the study and its time element. Creswell (2009) pointed out that researchers should obtain needed permissions and approval

before conducting the research through providing a detailed explanation of the procedures, the needed time, and the use of the data to the gatekeepers (Creswell, 2009).

Once school principals provided me with the necessary permissions, I asked them to reach out to the potential special education teachers on my behalf by sharing a flyer. That flyer included brief information about the study (Appendix B). Within that flyer, I asked the potential special education teachers to confirm their interests in participating in the study either through communicating with their school principals or with me directly via emails or phone calls. Some potential participants decided to confirm their interests through their school principals.

Therefore, I asked the school principals to share the teachers' emails or phone information in order to communicate with them to schedule an appointment for initial face-to-face meetings.

However, some potential participants who were interested in participating in the study decided to communicate with me directly via either email or phone call, so I immediately responded to their communication via the same means in order to schedule an initial appointment for face-to-face meeting with them (Appendix C).

I arranged an initial individual in-person meeting with each teacher. Through those meetings, the teachers were informed about the purpose of this research, target audience, data collection methods, the criteria for recruiting special education teacher who qualify to participate in this study, and the significance of conducting this research. Also, I provided them with copies of the interview questions. Additionally, I answered all questions that the teachers had about the study. At these meetings, I asked teachers about their preferred setting for conducting the interviews. Some teachers preferred to conduct the interview in their resource rooms while other teachers preferred other setting outside the school building.

As soon as teachers agreed to participate in the study, I asked them to provide me with the best time to schedule and conduct the face-to-face interview. Also, I asked teachers to be prepared to supply me with the students' data (reading aggregated scores without sharing the students' real identities) and share some examples and artifacts of the instructional materials they are using with the students, such as worksheets and instructional activities. All these materials helped me to triangulate the data from different resources in order to ensure the accuracy of the provided data when start the data analysis. Personally, gatekeeper method was useful for finding the participants in this study because I do not formerly know the targeted special education teachers at the predetermined schools.

Also, I used the snowball strategy. It is a method of recruitment used by researchers in which the participants in the study are asked to assist the researcher in identifying other potential subjects who meet the study criteria and might be interested in participating in the study. In this study, the experienced special education teachers who were identified as potential participants through their school principals (the gatekeeper) were asked to recommend other experienced special education teachers that she/he might know (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). Once the special education teachers recommend other teachers who meet the study criteria, I started communicating with them through email (Appendix C). Through these email, I provided them with a copy of the HSIRB approval and a detailed description about the study. Once the potential teachers agreed to either participate in or learn more about the study, I asked them to provide me with the best time for the initial face-to-face meeting. Through these meeting, I explained my study, provided teachers with a copy of the interview protocol, and answered all questions and inquires they had. As soon as they decided to participate in the study, I asked them to careful read the consent form and sign it (Appendix D). After that I started

collecting the data. Using this strategy was helpful because it allowed me to find other teachers who were willing to participate in this study.

Through conducting these recruitment techniques, I selected 5 special education teachers from all the qualified potential participants who decide to consent to participate in the study. Creswell (2013) stated that “For case study research, I would not include more than 4 or 5 case studies in a single study. This number should provide ample opportunity to identify themes of cases as well as conduct cross-case theme analysis” (157). Those teachers asked to carefully read and sign the Consent-to-Participate Form (Appendix D), which clearly stated the purpose of the study, the data collection method that will be used, that the confidentiality of the participants will be protected, and provided a clear description of any possible risks and benefits of participating in the study. It also clearly stated that participants have the right to withdraw from the study at any point. Once potential participants signed the consent forms, they were considered study participants.

Data Collection and Procedure

In this study, I was the sole source of data collection through semi-structured interviews, follow-up interviews, and document reviewing. The primary data collection source for this qualitative study was semi-structured interviews. “Semi-structured and standardized interviews are more carefully scripted, asking specific question in a specific sequence, sometimes without follow-up. This type of interview is often used in multiple case studies or with larger sample sizes” (Marshall and Rossman, 2016, p. 150). The semi-structured interview allows a systematic and repeated collecting of data where questions are organized in a protocol that seeks thick and deep data and also focused for efficient data analysis (Marshall & Rossman, 2016).

I developed open-ended structured questions that focused on special education teachers’

perceptions of the reading comprehension problems that may prevent third-grade students with learning disabilities from comprehending a text as well as effective reading strategies they utilized to improve reading comprehension achievement levels of the students (Appendix E). Open-ended questions provided the participants with opportunities to share more information, experiences, attitudes about the topic under the study rather than limits them in specific responses. They also, allowed me to better understand the teachers' experiences through asking more details or clarification about a specific answer. I interviewed each special education teacher individually. All the interviews were face-to-face. A face-to-face interview is appropriate where participants are not hesitant to talk and share their experience, opinion, ideas with others (Creswell, 2013). I started the interview process in the fall semesters of 2017. These interviews took place in the resource rooms settings and other private, safe, comfortable place based on the participants' convenience. I was not conduct the interviews during the special education teachers contracted instructional hours. Instead, I scheduled time at the teachers' convenience. Each interview was audio-recorded by using a smartphone device. The interviews were varying in length. Each interview took approximately 40-60 minutes in an approximate.

The interview protocol consisted of seven open-ended questions and several follow-up questions that aligned directly with the three research questions. The interview protocol also included background information about the participants, such as name, gender, years of experience, certification as a teacher, the academic degree (Appendix E). I started by asking teachers about their background information for use later in their profiles. While I was conducting the interview with each teacher, I was writing some notes on the interview protocol in case something happens to the recorder.

During the interviews, I asked the prepared questions, conducted the interviews within the time specified, was respectful, and was focused on understanding teachers' experiences rather than frequently speaking. Also, some additional questions were asked based on the teachers' responses. Additionally, I informed the teachers being interviewed that breaks are allowed at any time they feel the need to do so. I provided each participant with a pseudonym to protect her/his real identity. I also informed the participants that their actual identities are protected, and their reflections and answers will be used for the purpose of the study only and will not be shared with anyone else (Creswell, 2013). I ended the interviews by thanking the participants for giving their time and voice. Moreover, follow-up interviews were conducted with teachers as needed. The aim of the follow-up interviews was to either clarify information that was provided by teachers in the main interviews or ask more question that raised based on the provided data. Each follow-up interview took approximately from 10-40 minutes. I saved each interview and its transcript in a separate electronic Microsoft Word file. All of these files were saved in one electronic folder. That folder was saved on the researcher's personal laptop and secured with a password. I also made a backup of each raw data file. Immediately after transcribing the interviews, I destroyed all the audio-recording. The transcripts will be saved for three years after completing the study in the academic advisor's office.

I also collect data through using document reviewing method. Document review is a qualitative data collection approach that aims to review documents and artifacts about particular individuals, programs, population, or settings. These artifacts could be printed, such as picture and writing sample or electronic, such as websites (Bowen, 2009; Marshall & Rossman, 2016). According to Marshall and Rossman (2016), "researchers often supplement participant

observation, interviewing, and observation with gathering and analyzing documents produced in the course of everyday events or constructed specifically for the research at hand” (p. 164).

Document reviewing is one of the common data collection approaches in qualitative method of inquiry (Bowen, 2009; Creswell, 2013; Marshall & Rossman, 2016). Hatch (2002) pointed out that selecting and reviewing documents is an effective method that provides the researcher with alternative point of view to understand how participants think and act. Bowen (2009) highlighted that researchers who are interested in utilizing qualitative method of inquiry are expected to use more than one sources of evidence, “that is, to seek convergence and corroboration through the use of different data sources and methods” (p. 28). Using multiple sources of data collection will allow me to triangulate my data in order to provide a strong evidence that produces credibility. In addition, collecting data via different means will allow researchers to prove findings across data sets, which helps to decrease the influence of potential biases that may exist (Bowen, 2009).

In this study, I reviewed the students’ reading comprehension aggregated score based on their performance on the MAP Growth test, which utilized by their teachers in order to measure the students’ reading skills level. Teachers were not asked to share the student’s names or any personal information. In addition, teachers were asked to share some of their instructional artifacts, such as instructional materials and worksheets. I asked for these additional resources because they allowed me to triangulate the data collected from different sources.

Data Analysis

After I complete the data collection process through using semi-structured interviews, document analysis, and students’ scores, I started the data analysis and interpretation in order to discover the common reading comprehension problems that third graders with learning

disabilities face, as well as the strategies that teachers use to address these problems. According to Hatch (2002), data analysis can be described as systematic steps of classifying the data into related themes in order to explain the meaning of the relationships. Researcher creates codes for comparable or periodic themes that might connect to the research questions of his/her study through examining the transcripts from the collected data (Hatch, 2002).

Specifically, in this research, I utilized inductive analysis strategy. It is an analysis technique widely utilized in qualitative research that requires frequently reported patterns. Most qualitative research using the inductive technique contains results with three to eight categories. Qualitative researchers prefer using the inductive approach of data analysis over the other traditional methods of qualitative data analysis (Thomas, 2006) because “the inductive approach is to allow research findings to emerge from the frequent, dominant, or significant themes inherent in raw data, without the restraints imposed by structured methodologies” (Thomas, 2006, p. 238). The process of the inductive analysis begins with collecting all the data together in order to gain meaning from the created patterns from the collected data (Creswell, 2007; Hatch, 2002). It starts from the specific and moves from word to the general. The researcher then develops meaning by beginning with specific components and searching for connections among them (Hatch, 2002). I also used qualitative data analysis software (Nvivo 11.0) program to organize, manage, and analyze my data.

In order to utilize the inductive approach for qualitative data analysis, I followed the steps recommended by Thomas (2006). First, I prepared raw data files by transcribing each participant interview verbatim. Transcribing the data helped me become acquainted with the data (Creswell, 2002; Creswell, 2013; Marshall & Rossman, 2016). Before I started coding the transcribed

interviews for themes, I attached each interview transcription to the participant profiles and sent a copy to each participant for a member check purpose. Also, I backed up of each raw data file. Second, I conducted a close reading of the data. I read and reread the data several times to build a better understanding of the details and themes of the texts (Thomas, 2006). Hatch (2002) stated that reading and rereading the data allows the researcher to gain a solid sense of what is included in the data set. The data should be read over, and over as different questions are asked of the data and as decision are made about how to make sense of what is there (Creswell, 2002; Hatch, 2002).

Third, I started creating categories. In this step, I moved from reading the text to identifying the themes and categories (Creswell, 2002; Thomas, 2006). Creating categories in the critical inductive component. In this phase, I was reading the data to search for particulars that can be placed into categories due to their relation to other particulars. The main aim behind creating categories is to find particulars through reading the data with specific relationship in mind (Hatch, 2002). The more general categories are usually emerged based on the research purpose. However, the less general categories emerge as a result of multiple readings of the raw data (Thomas, 2006). The fourth step was looking for both overlapping coded and un-coded text because one piece of information (e.g. a sigma of text) may be coded and used in more than one category while another piece of information (e.g. another sigma of text) may not fit any category (Creswell, 2002; Thomas, 2006). I was looking for overlapping coded and un-coded text in my data. The fifth step was continuing to revise and refine the category system. I searched for subtopics within each category and include contradictory points of views and new insights. Also, I choose the appropriate quotes that fit the core theme of a category. I combined or connect some categories under other categories when the contents are similar (Figure.1).

In the phase of interpreting the data (telling the story), I moved away from refine the category system to making sense and meaning of the data. During this phase, I answered the research questions and make a connection between my interpretation of the data and the large research literature that was developed by others (Creswell, 2013; Thomas, 2006).

Also, I had another external reviewer to verify the accuracy and explicitness of my interpretation. She performed that by reviewing 10% of the interview transcripts, codes, and emergent themes.

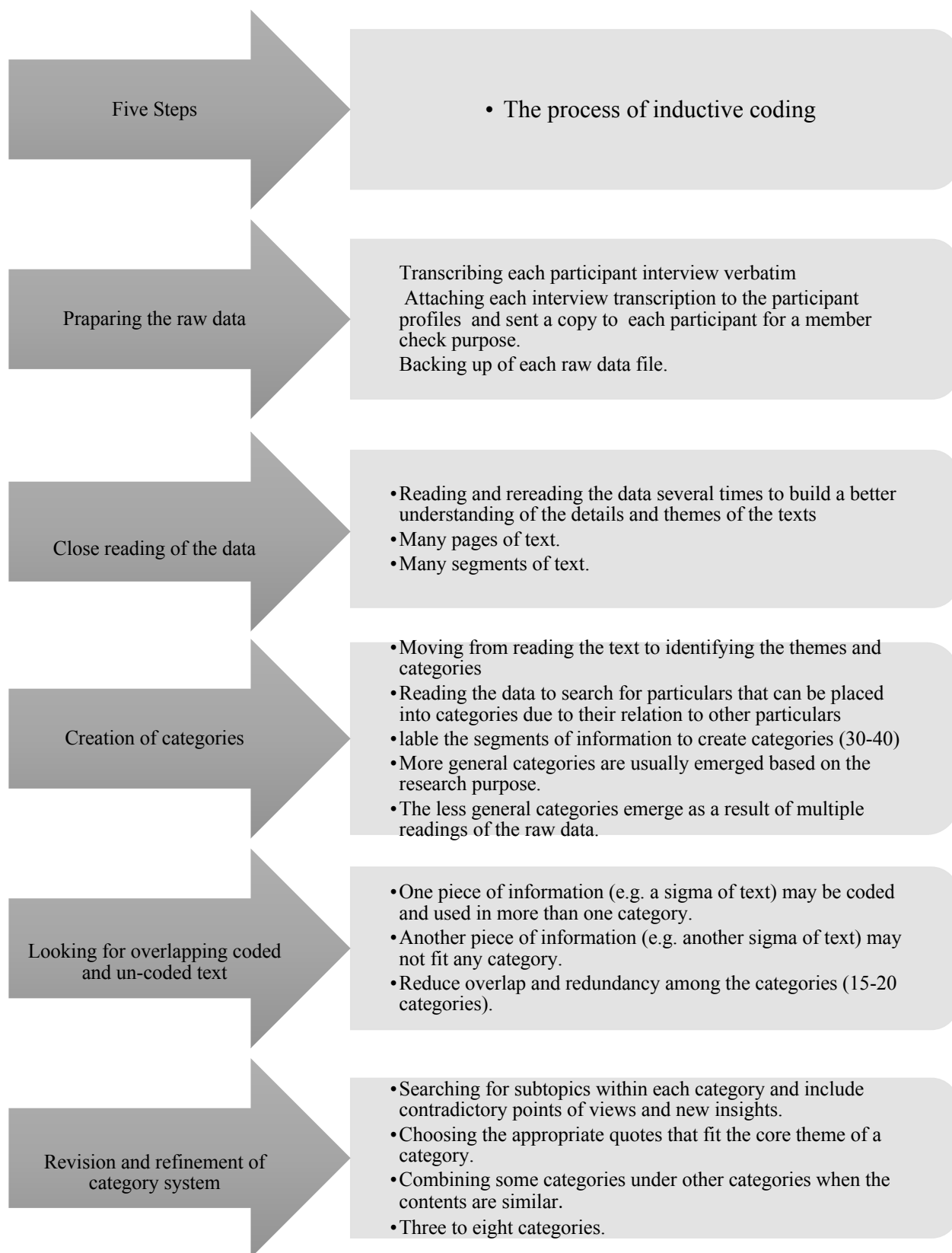


Figure 1. Illustration of the process of inductive coding.

Limitations

Even though I made sincere attempts to prevent potential problems throughout the process of conducting this qualitative research, there are some limitations that existed in this study. One limitation of this study was the small sample size. Since a case study research approach was utilized in this study, the findings of this study cannot be generalized beyond the five teachers. Another limitation was that since the study is limited to special education teachers who are teaching reading to third-grade students with learning disabilities in resource rooms, the results of this study cannot be generalized to other teachers who teach reading comprehension to students in other grades or other settings. Also, since this study was conducted on one region and one city, the findings are limited to that region and that city. Finally, since this study was limited to experienced special education teachers, the findings might not apply to other special education teachers who are less experienced.

Trustworthiness

Creswell (2013) emphasized three concepts that play an important role in ensuring the trustworthiness of a qualitative research study: internal validity, external validity, and reliability. In this study, I utilized all three in order to evaluate both integrity and trustworthiness of the research study.

Internal Validity

Both Creswell (2013) and Merriam (2002) emphasized the importance of checking internal validity in order to ensure the credibility of a qualitative study. According to Merriam (2002), the internal validity strategies provide the researcher with an opportunity to ensure the trustiness of how the observations, interviews, and other data collection were implemented. Numerous strategies are available for researcher to use in order to shore up the internal validity

of a research study. In order to achieve the internal validity in this study, I used two strategies. The first strategy was “peer review”. The peer reviewing is a technique in which the researcher asks a colleague to ensure that the data is arranged around themes that represent the participant’s experiences and point of views. Peer reviewer technique increases the accuracy of the descriptions in order to avoid bias or mistakes due to inaccuracies related to the data analysis (Falk & Blumenreich, 2005).

In this research, I identified a professional in the field of special education who was willing to act as a peer reviewer. Particular, I along work with the dissertation chairperson to check the raw data, the coding, themes, and compare findings as the study goes forward. The dissertation chairperson also worked with me to assess whether the study findings are reasonable based on the data (Merriam, 2002). Also, through using member check technique, I verified the data with the participants by providing each of them with a copy of her/his interview transcript for review (Creswell, 2013; Merriam, 2002) before starting the analysis process.

The second strategy that I used to evaluate internal validity was triangulation (Creswell, 2013; Merriam, 2002). Triangulation means using several forms or data sources in qualitative research in order to develop a comprehensive understanding of an issue or a problem (Carter et al., 2014). According to Creswell (2013), triangulation allows researchers to provide corroborating evidence by using multiple methods to collect data from different sources. In this study, I utilized triangulation technique to compare the codes and the themes that emerged as a result of the data collection process, which will be collected from interviews and documents review to determine their consistency (Creswell, 2013; Merriam, 2002; Stake, 2010).

External Validity

External validity is a technique used to determine transferability of the study to other similar conditions (Merriam, 2002). The possibility of transferring, replicating, and conducting a research study to another setting is called external validity. In order to achieve the external validity, I clearly described the procedure and the process that I followed in order to conduct the present study, including the recruitment process, how the data was collected and analyzed. Providing that detailed description allows another researcher to make a decision regarding transferability (Creswell, 2007; 2009; Merriam, 2002).

Reliability

Reliability is also known as “repeatability”. It refers to the ability to obtain the same findings as a result of repeating the procedure of a particular study (Mertens, 2005). To achieve reliability of the qualitative research method, it was recommended that the researcher use an “audit trail” technique. The audit trail is a method in which the researcher is required to write and keep a journal that describes in detail all the procedure that were followed to collect and analysis the data. Keeping that journal allows other researchers to recognize how finding of a particular study were accomplished (Merriam, 2002). To achieve the reliability in this study, I kept a journal and recorded memos throughout the conducting of the study that describe in detail the data collection process, data analysis procedure, interpretation, and how themes were derived. Also, in these memos I wrote my personal reflection, some questions came to my mind while analyzing the data, issues, and ideas that came to my mind while collecting data (Merriam, 2002).

Chapter 3 Summary

The aim of conducting this qualitative research study was to identify the reading comprehension problems that may prevent third graders with learning disabilities from comprehending a text and to deeply understand the reading strategies that experienced special education teachers use to help those students.

A qualitative method was an appropriate approach for conducting this study because it allows the researcher to develop a better understanding of an experience or an issue under the investigation. Specifically, I utilized multiple case studies approach. The case study method of inquiry was appropriate because all the experienced special education teachers in this study have similar experiences in teaching reading comprehension strategies to students with learning disabilities. The data collection methods for this study involved interviews and documents analysis. Inductive approach of data analysis was utilized. The multiple data sources were used to triangulate the findings from this qualitative research.

Chapter Four of this dissertation provides a detailed description of the results of the inductive analysis, the participants profiles, and the themes that emerged from the data analysis.

CHAPTER 4

RESULTS

This chapter presents the finding from my inductive analysis process and is organized into three sections: (a) an overview of the purpose and research questions, (b) participant profiles and demographics, and (c) a presentation of the emergent themes.

The purpose of this qualitative study was to (a) identify the common reading comprehension problems that negatively impact reading comprehension of third graders with learning disabilities and (b) investigate the effective reading strategies that experienced special education teachers utilize to improve reading comprehension levels of the students in resource room settings.

Importantly, I defined “effective reading comprehension strategies” as any strategies that the special education teachers that I interviewed found to be beneficial for improving reading comprehension levels of third graders with learning disabilities in the resource room setting. A particular reading comprehension strategy could be beneficial based on these teachers’ experiences while working with students who have learning disabilities, but it might not have been found to be an effective reading strategy in the literature. Thus, this research focused on determining the effectiveness of a particular strategy based on teachers’ teaching experiences, rather than strategies only found in the literature.

The overarching questions for this study were:

1. What are the common reading problems that prevent third-grade students with learning disabilities from comprehending what they are reading?
2. What effective reading comprehension strategies do special education teachers utilize in order to improve reading comprehension skills of students with learning

disabilities?

3. What are the classroom-based reading assessment tools that special education teachers use to measure the students' reading comprehension growth and determine the effectiveness of these strategies?

Therefore, the present chapter focuses on capturing the voices of the five special education teachers A, B, C, D, E as they shared their experiences of teaching third graders with learning disabilities.

Participant Profiles

Of the seven special education teachers who responded to the initial recruitment email for participants, five teachers were chosen for the in-depth interviews, four females and one male. Their ages ranged from approximately 35 to 56 years old. More information about each teacher and his/her school's demographic are provided in the following sections.

Teacher A

Teacher A is a female, with ten years of teaching experience. She has been teaching reading to elementary students with learning disabilities in the resource room for 5 years. She teaches students from kindergarten through third grade. She holds a Bachelor degree in Science and Psychology and holds a learning disabilities endorsement (Table 1).

Teacher A works in a public elementary school that is located in mid-size city in the Southwest region of Michigan. About 50.1% of the students' population at her school identify as white, which is comparable to a typical school in this city, where 45% of students identify as white. Approximately 33.6% identify as African American, 7% as bi-racial, 6.5% as Hispanic, and as 2.8% Asian. A typical school in that city usually contains about 45.6% white students of its total population. Therefore, when compared to other schools in the city, this school has a very

comparable racial distribution (Table 2). Approximately, 62.8% of all students who attend this school qualify for free lunch, and about 11.6% receive reduced lunch (Startclass.com). (Table 3).

Teacher B

Teacher B is a male, with 20 years of teaching experience. He has been teaching reading to elementary students with learning disabilities in the resource room for 16 years. He teaches students from kindergarten through third grade. He holds a Bachelor degree in Psychology and Special Education and a Master's degree in Special Education. He holds both learning disabilities and emotional impairment endorsements (Table 1).

Teacher B is working in a public elementary school that is located in mid-size city in the Southwest region of Michigan. Approximately 56.3% of the student population at his school are identified as African-American. About 23.1% of the students' population identify as white, 12.5% as bi-racial, 7.8% as Hispanic, and 0.3% as Native American. A typical school in that city usually made up of about 34.1% African-American students of its total population. Therefore, when compared to other schools in the city, this school has a significantly different racial distribution (Table 2). In terms of receiving free or reduced lunch approximately 88.8% of all students who attend that school qualify for receiving free lunch, and about 4.1% of all students receive reduced lunch (Startclass.com). (Table 3).

Teacher C

Teacher C is a female, with 17 years of teaching experience. She has been teaching reading to elementary students with learning disabilities in the resource room for 17 years. She teaches students from kindergarten through eighth grade. He holds a Master degree in elementary literacy and holds a learning disabilities endorsement (Table 1).

Teacher C is working in a public elementary school that is located in mid-size city in the Southwest region of Michigan. About 75.1% of the student population at her school are identified as African-American. A typical school in that city usually made up of about 34.1% African-American students of its total population. Therefore, when compared to other schools in the city, this school has different racial distribution. About 10.6% of students identify as Hispanic, 9.8% as bi-racial, and 4.5% as white, (Table 2). Approximately 94.3% of all students in that school receive free lunch, and about 2.6% receive reduced lunch (Startclass.com). (Table 3).

Teacher D

Teacher D is a female, with 11 years of teaching experience. She has been teaching reading to elementary students with learning disabilities in the resource room for 11 years. She teaches students from kindergarten through fifth grade. She holds a Bachelor degree in Special Education and Master's degree in Special Education Administration. He holds both learning disabilities and cognitive impairment endorsements (Table 1).

Teacher D is working in a public elementary school that is located in mid-size city in the Southwest region of Michigan. About 45% of the student population at her school identify as white, which is comparable to a typical school in this city, where 45% of students identify as white. Approximately 32.4% identify as African American, 10.6% as Hispanic, 9.1% as bi-racial, and 2.6% as Asian. In addition, about 0.2% of the students' population identify as Native American and 0.2% as Pacific Islander (Table 2). In terms of qualifying for free lunch, about 62.3% of all students receive free lunch, and 8% receive reduced lunch (Startclass.com). (Table 3).

Teacher E

Teacher E is a female, with 33 years of teaching experience. She has been teaching reading to elementary students with learning disabilities in the resource room for 31 years. She teaches students from kindergarten through fourth grade. She holds a Bachelor degree in Science and a Master's degree in Orientation and Mobility. She holds endorsements in learning disabilities, cognitive impairment, visual impairment, and emotional impairment (Table 1).

Teacher E works in a public elementary school that is located in mid-size city in the Southwest region of Michigan. About 43.2% of the student population at her school identify as white, which is comparable to a typical school in this city, where 45% of students identify as white. Approximately 27.5% of the students' population identify as African American, 13.2% bi-racial, 12.1% as Hispanic, 3.7% as Asian, and 0.4% as Native American (Table 2). Approximately, 64.8% of all students who attend this school qualify for free lunch, and about 8.1% receive reduced lunch (Startclass.com). (Table 3).

Table 1

Participant profiles

Participants	Teacher A	Teacher B	Teacher C	Teacher D	Teacher E
Gender	Female	Male	Female	Female	Female
Years of teaching experience	10	20	17	11	33
Years of experiences as resource room teacher	5	16	17	11	31
Grade level	K-3	K-3	K-8	k-5	K-4
Academic degree	Bachelor degree in science and psychology	Bachelor degree in psychology and special education Master degree in special education	Master degree in elementary literacy	Bachelor degree in special education Master degree in special education administration	Bachelor degree in science Master degree in orientation and mobility
Endorsements	Learning Disability	Learning Disability	Learning Disability	Learning Disability Cognitive impairment	Learning Disability Cognitive Impairment Visual Impairment Emotional Impairment

Table 2

Students' racial distribution

Racial group	White	Hispanic	Asian	African American	Bi-racial	Native American	Pacific Islander
School of teacher A	50.1%	6.5%	2.8%	33.6%	7%	-	-
School of teacher B	23.1%	7.8%	-	56.3%	12.5%	0.3%	-
School of teacher C	4.5%	10.6%	-	75.1%	9.8%	-	-
School of teacher D	45%	10.6%	2.6%	32.4%	9.1%	0.2%	0.2%
School of teacher E	43.2%	12.1%	3.7%	27.5%	13.2%	0.4%	-

Table 3

Students' eligibility for free or reduced lunch

	Eligible for free lunch	Eligible for reduced lunch
School of teacher A	62.8%	11.6%
School of teacher B	88.8%	4.1%
School of teacher C	94.3%	2.6%
School of teacher D	62.3%	8%
School of teacher E	64.8%	8.1%

Presentation of Themes

The data analysis process started by conducting a careful review and analysis of the interviews. All interviews were literal transcribed and then analyzed through Nvivo software program. Before going further with the data analysis to answer the three main research questions, it would be beneficial to first present each special education teachers' philosophy regarding reading comprehension. These are organized into three subcategories: (a) definition of reading comprehension, (b) how comprehension occurs, and (c) teachers' personal point of view regarding reading comprehension.

Definition

Eighty percent of the total participants expressed their own definitions of reading comprehension. Even though each definition seemed unique from the others, they all stressed the main purpose of reading, which is gaining meaning from a text. One teacher described reading comprehension as a "system used to read and then understand what they have read and be able to use that information and use higher level thinking to compare to other things, to other text, to make connection to themselves, and to their lives and to the world." Another teacher defined reading comprehension as the mental processing of information. She shared

I think when you're able to think about your reading enough to get a mental image to make a picture in your mind about what's happening, to be able to fully understand, the details and the main ideas of that selection.

Two other teachers emphasized cognitive reading skills in their definition, such as being able to recall facts and details, interpret, analyze information, as well as fluency and word attack, which help to facilitate the reader's understanding of text. One teacher shared that

My understanding of reading comprehension is being able to interpret a text, regardless of what the text type is, and you are able to retell besides analyzing, interpret, and understand what you have just read, be it an informational text or a story or that type of thing. When you are reading, I think you need to be able to understand the main idea and the key details that are being part of your writing, part of the reading.

Another teacher explained that

Reading comprehension has to do with the student's reading level in terms of their cognitive skills, what they know and what they can recall, as well as their word attack skills and their fluency, and also their ability to recall the facts and details and abilities to relate those details to past experiences.

How Comprehension Occurs

All participants highlighted the importance of being able to make a connection between a given text and a reader's background knowledge and world around them in order for reading comprehension to occur. One teacher described that for students to understand the text, they need to be able to "connect to prior knowledge. Also connect it to the world around them. How does this fit into my understanding of the world or to my understanding of people I know?" She also provided more justification of how making connection between the reader's background knowledge and the text is important by sharing that

I think that it makes the information relevant to them and personal to them through what I know about how our brains work and learning new information. We build our knowledge by adding to what we already know. That where the new information gets stored. So, if you have something to connect it to, so it is easier to take that new knowledge.

In addition to the importance of making connection between background knowledge and the text, three of the teachers emphasized the important of understanding the word meaning within the text. They believed that comprehension occurs through incorporating the use of background knowledge, past experience, and word meaning knowledge. One teacher shared that

I think reading comprehension takes place when a student is able to relate to the story and gains understanding and is able to have an opinion about the characters or details about the characters. The students may also relate past experiences to that information that recalling to and by doing that the students understand the story and therefore reading comprehension takes place. Or if there is a past lesson or past experience that the student has that they can bring to the story that also helps with their comprehension.

Another teacher shared that

In order for students to make meaning of a text, they need to understand the words and how they are put together. It is easier for students to make meaning if they can connect with their prior knowledge, a previous experience or even just a previous learning experience so that they have some context and vocabulary. I could read a sentence in Spanish, sure, but if I do not have any context or meaning of the words, if I cannot connect it to anything that I have learn at all, then it will mean nothing.

She also believed that the text itself is not enough for students to get meaning from unless they are able to connect it to their background knowledge. She pointed that

No, because I could physically read something in Spanish, but I wouldn't have a clue what it means, unless I was able to connect it, unless I was able to grasp the meaning behind it and then apply it. I would have to have a knowledge of vocabulary. I would have to have the knowledge of dialog. I would definitely have to make a connection.

Another teacher clearly stressed the importance of having other reading skills besides the ability to connect the text to readers' background knowledge in order for comprehension to occur. She shared that "first they have to be able to decode and have phonemic awareness, understanding the phonics in order to decode using the text clues also." She also added that "You have to have fluency too because if you don't have fluency, you are not going to understand what you are reading. The decoding piece of it and background knowledge to me is very important and being able to take connect text to the real world."

Teachers' Personal Point of View Regarding Reading Comprehension

Forty percent of the interviewed teachers expressed their philosophy regarding reading comprehension. One teacher highlighted that reading comprehension is the ultimate goal of reading, and it is the last step of the reading process. She believed that there are some pre-reading comprehension skills that students need to have before they can comprehend a text, such as being able to read words, being able to identify sounds. She shared that

Reading comprehension is really like the goal and the reason to read. You have got to understand what you are reading. I think it often times comes later in the reading process, especially for my students, they need to be able to read the words, they need to be able to identify the sounds, and then put it all together to finally make comprehension.

She also emphasized the importance of reading comprehension by sharing that

The idea of understanding the words on the paper and then taking it and applying or grasping what is being said in order to form your own ideas or in order to use that information in your own life is really what reading is about.

Another teacher stressed that the different types of students that he has have their own reading methods and behavioral aspects toward reading, which requires him as a teacher to use

different approaches and strategies and to be a flexible to meet his students' needs. He shared that

My philosophy as it relates to reading comprehension is a kind of bilateral approach and as much as that students have a qualifying number of reading approach, but they then have some behavioral aspects to it too that you have to take into consideration. So, because of that, you have to have different approaches to how you intervene in their reading weaknesses. So, my philosophy behind that has to do with using a number of approaches, have flexibility within those approaches as well.

He provided further explanation about the importance of being flexible when working with students with learning disabilities, even though the school district set some rigid expectations for teachers.

I just like to emphasize how important flexibility is. I do because of the different types of students that I serve. It is just important to be very flexible. Even though the district requires certain rigid expectations, the fact that I found it important to be flexible with these students because they have different needs. When you become an asset over time, you use a right intervention and strategies, and you do see a lot of growth.

Research Question 1: Problems

The first research question asked about the reading problems that negatively impact the reading comprehension of third graders with learning disabilities. The problems emerged as the following categories: (a) problems, (b) challenges, (c) and manifestation of the problems. I defined problems as any problem related to the students themselves that negatively impacts their comprehension of text. Teachers can observe and deal with these problems in the classroom in order to help students overcome their difficulty with reading comprehension. I defined

challenges as any factor that influences students that is outside schools and that might impact their reading comprehension. In the following sections, I will separately highlight these problems and challenges based on the teachers' voices.

Problems

According to the participants' teaching experience and their responses to the interview questions, there are a variety of problems that prevent third graders with learning disabilities from comprehending a text. The problems emerged as the following sub-categories: (a) issues with background knowledge, (b) trouble with fluency, (c) difficulty with informational text, (d) difficulty with making inferences, (e) issues with vocabulary, (f) low reading level, (f) memory issues, and (g) non- interesting topic. Further explanation of these problems is provided in the following sections.

Issues with background knowledge. Issues with background knowledge are organized within two types. The first type is the lack of background knowledge. The lack of background knowledge refers to the students not having adequate background knowledge and past experience, which are very important to facilitate their reading comprehension of text. Regarding the importance of having background knowledge and life experience one teacher shared that "I think the more life experience they have then the more they can connect those experiences to their reading and build on a knowledge base." Another teacher pointed out that

Background knowledge is important in reading because it builds connections, and what I mean by that specifically is, some students are involved with memorizing and recalling things from their background, and if it's a new story, they relate that to something that happened in their past and that helps build memory and helps them understand and comprehend the story that they are engaged in.

All interviewed teachers agreed that their third graders with learning disabilities do not have enough background knowledge, which prevents them from comprehending a text well. One teacher explained how the lack of background knowledge negatively impacted her students with learning disabilities from comprehending a text by sharing that

So, we have this passage about sailors and about when they introduce the steam system on boats and the students did not know some of the vocabulary words. I copied down the passage, it said, "For thousands of years, sailors had made their boats go by using sails, and oars. It seemed foolish to believe a boat could be pushed by a steam." And they did not know what a sailor was. They have never heard that word sailor. They did not know what a sail was or an oar, so all of that can get in the way of understanding what a passage was taking about.

She stressed that students who do not have enough background knowledge and life experiences have nothing to connect the new information with, which makes the new information hard to understand. She also describing how this problem negatively influenced the students by sharing that

They have no frame of reference for the new information. They do not have previous knowledge to build upon so, for example, one of the students that I had did not know the rules of baseball, did not know the rules of the game, did not know what the word "strike" meant, did not know what an out was and so, therefore, did not know how that character felt when they were struck out or gotten out.

Another participant shared an example to explain how the lack of background knowledge might negatively impact the students' comprehension. She stated that

A student in third grade is reading about the lifecycle of a geranium, but has never seen a

picture or knows anything about a geranium. They are not going to connect to the story or remember any of those details. But if I just simply remind them that, oh yeah, your grandma has a geranium in her front yard, and then automatically the students can click to that, what it is, it is a flower, it is probably pink, and whatever, they can make more meaning and have more connection to real life or something. It might be you remember the picture on that book of a geranium or something like that.

Sixty percent of teachers interviewed highlighted a relationship between the lack of background knowledge, life experience, and the students' social low economic status. One teacher shared that

The students that I see at my school vary widely on social economics status, so some of my poor students have not had the life experiences of going to a museum or even going to a pool before or seeing, watching a baseball game. Whereas, some of my other students can't believe they don't know what we are talking about because that's just part of their life.

She provided further explanation by stating that

Families with low socioeconomic status cannot afford to go do the things the other families can do like enrichment activities, like go to museums, or trips to the beach, or pay for their kids to play sports, so therefore, their kids may lack some of those experiences the other kind have had. If they did not have access to a car, then they cannot as easily go and do things. One of the students that I have, even though we live in Michigan, and so close to Lake Michigan, has never been to the beach before, so did not know how sand felt, you know, had not had that experience before.

Another teacher describing her students offered that

They do not have a very big background knowledge because we are in a high poverty

district, and in my building, approximately, I think it's about 90% are free and reduced lunch, so they do not have a lot of experiences. They have not traveled. They have just been stayed in kind of a . . . city area.

The second type is the inappropriate use of background knowledge. These teachers reported that even though some of their third students might have some background knowledge about the given topic, they inappropriately use or incorporate that background knowledge when they are reading. One of the interviewed teachers pointed out that

With my third grade LD, I noticed that some third-grade students that I work with have the tendency to elaborate a little bit too much, especially when we were reading. If we are reading a story, they will share information about the story, but they will bring irrelevant information into the story. They will make things up they will give incidence that do not relate to the current story we are reading, so this become concern sometimes.

When he was asked to provide an example, he stated

I have this one boy who talks a lot. He also exaggerated a lot. We were reading a story regarding a crow and drinking water, and he went on taking about birds and what happened to the bird around their house, what he and his friend did, and then once again it was not relating to the story. He thought it was related to the story we are reading, but it was not. It was irrelevant information. It went off task and so that is an example. I noticed that he was bringing information that was not related to the text he was giving stories that were not related to the story about the bird or the birds' problem. He just keeps going on and giving information that was not related, so that became a problem.

Another teacher pointed out that

With my third grade LD students that they at times have inappropriate use of their

background knowledge, so we will be reading a story and then when I go to ask the comprehension questions they will go off intentionally based on something they know or that happened in their background. So, for example, maybe there is a birthday party in the story and then instead will concentrate on what happened at the birthday party at the store in the story. They will go off and start talking about maybe their own birthday party or a birthday party they went to, and it is not relevant to the story other than a birthday party occurred, and so they are using that background knowledge really inappropriately. They just start to grasp, and then you have to stop them and say pull them back to the story that they are reading and say, “No we are talking about this story.”

All five teachers pointed some methods and strategies that they use in order to help their students overcome their issues with background knowledge. Two teachers shared that they use graphic organizer to help students build a background knowledge. One teacher said, “I do try to use like draw on their background knowledge through like graphic organizer.” Another teacher stressed the importance of helping students through checking their background knowledge and building upon it. She shared that

I think it's also a good way to start stories and reading is to tap into the background of the student just, so you know where they are at and part of my understanding that I need to build that background before we go to new story or a story that students are getting for the first time.

He builds the students' background knowledge through explaining and demonstration.

He shared that “I will either do it by bringing things in, by explaining by demonstrating, by modeling those are ways that I bring in.” Different teachers stressed that teachers should know their students in order to provide them with the most appropriate story. One shared that

“Knowing your audience when you choose a story and helping students to make those connections are pretty important.” Three other teachers highlighted the importance of teaching vocabulary and showing pictures in order to help students to build background knowledge. One teacher pointed that

Teaching the vocabulary and pre-teach background information, and I use my phone, and we will look at pictures, and when I'm teaching the vocabulary, so that they have understanding whatever we're reading. So, I am trying to do that pre-teach of stuff.

In terms of using their background knowledge inappropriately, one teacher pointed some ways to help their students. She often stops her students and explicitly direct them to focus on the current story. She shared that

Then you have to stop them and pull them back to the story that they are reading and say, “No we are talking about this story.” So, they can use that background knowledge in appropriate times and off intention that are not relevant to what the comprehension is going on in the story.

Trouble with fluency. Based on the teachers’ responses, trouble with fluency is another problem that negatively impact the students’ comprehension. The trouble with fluency takes two different forms, which are fast reading and slow reading. All of the teachers interviewed agreed that lack of fluency and slow decoding negatively influence students’ comprehension. One teacher explained how lack of fluency affects the student comprehension by sharing that

I think a lot of the 3rd grade students I've seen they have a lot of trouble just with decoding. So, a lot of cases it seems like they're brain capacity and brain power is so focused on decoding the word that there's nothing left for comprehension, so a lot of times decoding actually gets in the way of comprehension.

She provided further explanation by saying that

I think when the working memory is taken up by sound out words there is really no working memory left for thinking about the story and thinking about what is happening in the story if you are reading so slowly or so choppy the you cannot put together the meaning.

Another teacher describing her students by stating that “They are just slow reader. They are slow to get the concept. So when they having trouble decoding, their reading is so choppy and slow, they are losing the meaning of the sentence.” She added that

I can see that they are comprehending when I read them a story and then we talk about it. They can answer questions because they are listening. They have the capacity to comprehend, but it is when their reading in such a choppy way, and so slowly, then they start to lose the meaning.

Another teacher also explained how slow readers do not comprehend a text well by sharing that “They are not able to understand what they are reading because they are spending so much energy and process on trying to figure out what the word is, they just lose the meaning. They are not putting it all together.” Three teachers shared that they utilize rereading strategy and modeling in order to help their slow reading students with fluency in order to improve their comprehension. One teacher described how she helps her students

A lot of times, just rereading passages, rereading practice, providing a good model for them, so I will read it, so that they can hear where I pause, the intonation, and then say, “can you read it and make it sound like me.”

Another teacher pointed out that

I do accommodate in the classroom here. We do a lot of rereading, or the students will

read it, and then I will read it over again, or listen to books on tape if it's a classroom book or something, so they hear it fluently.

Two teachers also highlighted that not only slow reading, but also fast reading might be a problem that prevents their third-grade students with learning disabilities from comprehending a text. One teacher pointed out that "I have had a third grade LD student who just reads super fast to get through it because he can read the words, but he goes so quickly that then he has no idea what he is read." Another teacher pointed out that "Some kids read very fast, but they do not understand what they are reading." When he was asked to provide an example, he shared that

A present third grader that I have, and I had some students in the past, they were very good at fluency. They can read well, but sometimes they want to go fast and would not demonstrate comprehension when you would ask them questions about what they read, and quite often, they would have to go back and reread, so that is one situation.

One teacher pointed out that she helped her fast readers through one-minute prompts. She shared that "We did one-minute prompts where he would have to read, and he was thinking "I get as fast", as I can and then when it comes to the retell, he can give me maybe one detail about that." The other teacher helps his fast reader students through rereading. He stated that "They want to go fast and would not demonstrate comprehension when you would ask them questions about what they read and, quite often, they would have to go back and reread, so that is one situation."

Difficulty with informational text. All interviewed teachers agreed that third graders with learning disability have hard time reading and understanding informational text when compared to fantasy or narrative stories. One teacher shared that

I had a student last year that had a hard time with informational texts, but could follow

like a fantasy story or a narrative story quite well and tell you what happened in the beginning, middle and end, but then when it came to reading a book with lots of information, it was harder for her to recall the facts in the text.

Also, teachers explained why informational text is hard for their students. Sixty percent of the interviewed teachers highlighted that their students face difficulty with understanding informational text due to the hard-academic vocabulary that have been used in these types of text. One teacher stated that

In third grade, there is really a pump up in informational text. They are reading a lot more science and more social studies, and so those are heavy in vocabulary, and our kids just do not have that. So, all they know is that they want to avoid it because it is hard. You know they are already struggling with reading, but then we get into informational text, and it is very tough because they do not have any knowledge of the vocabulary.

When another teacher was asked to share an example of his experience while working with third graders with learning disability, he pointed out that

This happened with one of my students. We were reading a story about cleaning up our planet, as I explained before, and the student understood the concept. However, when we had a change of reading genres, and we went to science fiction, it had more technical terms in it, and the student struggled with words that he had never seen before, and there were some words dealing with fantasy that he had never seen before. So, it was difficult. This previous story did not have the technical words that the science fiction did. So that is an example.

Another teacher justified why her students have difficulty with informational text by sharing that

Well two things, one the informational texts tend to be written at a higher level, and so that just trying to decode, number one going back to that decoding piece, is written at a level that's much higher than they're functioning at. So even if they're doing a grade 3 science text, it may be really written at a grade 4 level, and my student might just be reading at a 1st grade level. So that my student is not able to decode the text in order to understand it.

Two other teachers stated that to be understood, informational text requires students to use high level thinking skills, which are weak for their students. One teacher shared that

Informational text some requires that you have to recall certain facts and sequencing and details and recalling what happen first, seconds, and last. And that is a problem with students with LD who have difficulty with recalling and comprehension.

Sixty percent of the interviewed teachers mentioned some ways that they utilize in order to assist their students in understanding informational text. One teacher helped her students through teaching vocabulary. She pointed out that "You really have to focus on teaching the vocabulary so they do not lose comprehension." Another teacher helped her students through reading the text to her students. She shared that "Therefore, I basically read the information out loud, and then It's more of an oral comprehension, as opposed to him being able to decode the text on his own to be able to read.

Difficulty with making inferences. All participants mentioned difficulty making inferences as a problem that negatively influences the reading comprehension of third graders with learning disabilities. One interviewed teacher stated that

My students who do not comprehend have difficulty making inferences with the stories because they're looking when they are reading, they are just understanding the basic

knowledge, the basic facts like literal facts. And then when they have to tie it to what might happen or that happened because of something, they are not making that connection and therefore that affects their comprehension.

Another teacher described how making inferences is difficult for her students by pointing out that “That’s one of the hardest skills. I think that the kids have to learn.” When she was asked to provide an actual example of how the difficulty making inference prevents her students from comprehending a text well, she shared that

One student was reading a passage that said, “It made Cynthea sad when her dad came home late.” And then later in the passage it said her dad came home late that night. So, one of the questions was” How did she feel? And if she cannot make the inference and put together the information that she (Cynthea) was always sad when her dad was late and, in fact, her dad was late that night, so she must feel sad, she could not put that together to make the inference that she, felt sad.

Another teacher pointed out that difficulty with making inference impact the students’ performance on reading text. He shared that “Inference is a problem of testing over the year that my students were weak at in the third grade.” The same teacher explained the importance being able to make inferences in facilitating understanding of the text. He shared that “Contextually they are able to bring in their own personal experiences and try to develop a concept or the meaning of what is going on in the story, so that why inferences is important.” He also explained why his third-grade students with learning disability have difficulty with inference by stating that

What I have noticed so far in terms of making inferences requires that recalling strong memory skills, and how it impacts the students that I have worked with in the past and

present is if you have poor skills in recalling information or once again the sequencing of the events becomes a problem.

All the participants shared some strategies and method that they use in order to help third grader students with learning disability to improve their ability in making inference. One teacher shared that

The inferencing! I've used the comprehensive tool kit. It has a whole unit on inferencing, and that's been helpful with kids. It basically has the formula like what you know plus what you learned from the story equals an inference, so they actually have them write it down and fill it out. So, what you know already, and they will write it down. What you learned about this from the story, and they will write it down. And then last, can you draw an inference from that or can you answer this question?

Another teacher highlighted the use of questioning in order to improve the students' ability to make inference. She shared that "we are working on the why and why if he cannot make inferences yet."

Issue with vocabulary. All interviewed teachers agreed that their third graders with learning disabilities have very limited amount of vocabulary, which negatively impacts their comprehension of text. One teacher stressed lack of vocabulary as a problem for her students by sharing that "vocabulary definitely is a big one. There are too many words in a text that they don't know or that they don't know well enough like automatically. Comprehension definitely is affected by lack of vocabulary." Another teacher described her students by stating that "They also have limited vocabulary, and so when you will introduce a new word, they will not always, they will not have any experience with the word. They will not even recognize it." Another teacher shared that her students lack academic vocabulary, which prevents them from

comprehending a text. She pointed out that “We talk very differently in a school setting than some of these students’ homes. Even just the dialect is very different. Yeah, if they are not exposed to academic English, it’s going to be a challenge.” Forty percent of teachers highlighted that difficulty with vocabulary might take different forms. These forms include multiple meaning words and multiple shape and size of the words. Regarding multiple meaning words, one teacher shared that

With the student, we were reading about something with a forest and a pond and they were talking about the bank of the pond, and when they didn’t understand bank had multiple meanings, they weren’t understanding the bank around the water, all they could think was a bank. What’s a bank? “It’s like, that’s where you go to get money or something.” So, it wasn’t going with the right context of the story. So especially when you have multiple meaning words, my student would have difficulty connecting it to the reading it makes no sense to them.

Regarding the different shapes and sizes of vocabulary, different teacher provided an example by mentioning that

I have noticed with some of the students that I have, when we are going over sight words, they have problems. For example, if we are going through Fry (sight) Word List maybe the first hundred, and the print is in a certain form for example "and", and it is a lower case, if it is switched in a text that the student is reading the same word "and", and it might be capitalized, and the text has changed, maybe is darker or larger, students will have difficulty recalling that word at times. For instance, I have gone back to that Fry List and the students able to say it with 80% or 90%, but you go to the text, and it is

capitalized, and they do not know the word, and that has been a problem and that affects their comprehension.

Therefore, he helped his students through providing them with different example of text and words. He shared that

Showing them different types of text. If I do not show different types of text and of the words and their size, it will affect the students' comprehension. Because I know if I keep the word in isolation meaning, if they see the word and just written in one certain way, they can recall it. But when it changes in a different book, in a different setting, it becomes a problem and affects their comprehension and their fluency, and they can't read with understanding.

Low reading level. Forty percent of the participants shared that their third graders with learning disabilities have difficulty with comprehending a text due to their low reading level and lack of pre-reading skills. One teacher reported that “My student might just be reading at a 1st grade level.” Another teacher shared that

Students with learning disabilities are sometimes two to three grade levels below reading, which puts some of them in kindergarten reading level, which is they're still trying to find the letter sounds and putting letters together to make the word. And if they are stuck in that, putting a whole sentence together, making an understanding the paragraph, of the deeper meaning, or taking it even further, is just not going to happen.

She added that “I have got a third grader he does not know his letter sounds and that is where we are kind of stuck right now.” She also mentioned how she helped her students to improve their reading level through teaching the pre-reading skills. She pointed that “I think you kind of have to have those building blocks in place and students with learning disabilities in 3rd grade are

certainly lacking that. I spend a lot of time with kids on the foundations.”

Memory issues. Two teachers mentioned memory issues as a problem that prevents third graders with learning disabilities from comprehending text. He shared that

Also, memory plays a part in it, and as much as that the student might not have seen the word enough and, therefore, and interfere with ability to recall words, that could be words from the Fry List or words from their spelling list. So once again those all affect the students’ ability to read and memory skills.

When he was asked to provide an example, he reported that

One particular girl that I have worked with, a very nice girl. She had difficulty recalling initial blends or word endings. She would try different techniques, but it would not work.

This affected her overall comprehension, and we are still working on that.

Another teacher pointed how low memory skill negatively impact her student’s comprehension by sharing that “I have one with memory issues too, and he won't remember what a letter is.”

Non- interesting topic. Only one teacher mentioned that if the topic of reading is not interesting to the students, that makes understanding the text very hard. She shared that “I think if they are not interested in the text, they have less motivation to, to read it, comprehend it, care about it, understand it. So, it is hard. It makes it harder if it's something that they're not interested in.” She explained how being interested in a specific topic helps students to understand a text through sharing the following example:

I had a student whose vocabulary was very behind, but when it came the vocabulary like basketball, he knew all the terms, like dribbling, traveling, he knew, and so when he saw those in print he knew the words and was able to understand what the story was talking

about when normally longer words like that, or specialized words, I would have had to teach.

She also described the reaction of one of her students toward a topic that is not interesting to him by saying that “One of my students once said I do not want to read this story. This is dumb and just pushed it away.”

Challenges

Based on the participants’ responses and experiences while working with third graders with learning disabilities, two teachers mentioned one challenge that negatively influences the students’ comprehension: a lack of opportunity to practice reading outside school. One teacher shared that “They have not been exposed to book at home in the summer time. They just don’t have that working knowledge.” Another teacher described it as a huge problem by sharing that

“I think different social economic groups have different levels of that. But the population I have right now, I mean, some of these kids say, “I do not have books at home.” It breaks my heart, but how can they open up their mind to having that, that knowledge of different vocabulary, if they don’t see it if they don’t hear it.

She justified the importance of practicing reading by pointing that

I just know that the more practice, the more reading, that the child does, it is going to give them greater vocabulary. It is going to give them greater context and be able to make more of those personal life connections. I think students need to build vocabulary. They also need to listen to a fluent reader read to them, and practicing outside of the school day is critical. You cannot do it all at school.

She also emphasized how practicing reading is critical to helping students improve their reading skills by providing an actual example from her classroom:

Well, I have two students. One student who has a very supportive and a very involved mom. She says that she reads to her kid ten minutes every day at least. He is making greater gains than my other student in comprehension and reading in general, really. I have another student whose dad is involved and he tries and he is doing his best. But there are six kids all together, and he is changing diapers, and I know he does not have the time to read all time. Mom works second shift, and that child makes less gains. He can get more if he is practicing reading every day.

Manifestation of the Problems

The participants' responses regarding when they first are seeing the manifestation of these problems are organized within two parts. The first part is the manifestation of the problems based on the grade level. Three teachers reported that they start to notice these problems when students fail to learn the pre-reading skills in kindergarten. One teacher shared that

As early as kindergarten, when they had trouble recalling alphabet, letter sound recognitions certain word, sight words. And so, you see a number of reading skills or pre-reading skills that they have trouble focusing on, and that happened as early as kindergarten.

Another teacher stated that

I can see it young, I can go into the kindergarten room and tell you which kids know the letters because they have been exposed, which ones have no clue. But in kindergarten, you can kind of get that.

She stressed that even though she notices these problems in kindergarten level, the gap grows so much bigger by third grade. She shared that "I think the gap grows so much faster so much bigger by the time third grade hits." She explained that growth by saying that

Third grade is kind of shift where instead of just the reading process learning how to decode, they need to read for information now, and so the gap is now bigger. Third graders are expected to read faster and know more. And do more and students with learning disabilities, they are not that. Information shifts in third grade. Instead of reading for the progress, instead of reading for the process, students are reading for information. In third grade, students are expected to get through decoding skills and comprehending text. Students with learning disabilities are not quite there yet, and therefore struggle with content. The class moves quickly through subjects, and students still decoding words are not focused on the meaning and understanding.

Another teacher pointed out that she starts to notice the manifestation of these problem in second grade. She shared that “By second grade, if they are not reading with good comprehension, then they really start to stick out, and you really start to notice.”

The second part is the methods and ways that teachers use in order to help their students to improve their comprehension before they reach third grade. Four of the interviewed teachers shared different methods to help their students improve their comprehension and be ready for third grade. One teacher shared that “Well if the students are on my case load already, then I can start using some of those comprehension strategies with them, small group, and use the strategies that we have talked about to help with their comprehension.” She stressed that students should receive the needed support early and not wait until they fall behind their peers. She stated that “I think they can make progress overall and not fall far behind if the help starts earlier.” Another teacher helps his students through teaching some reading skills, such as letter sound and sight words. He shared that “I help them work on letter-sound recognition, and I help them review sight words simple sight words, like the sight word, like the sight word you see in the first

hundred Dolch List or Fry List.” He explained how helping students through teaching them letter-sound recognition and reviewing sight words is beneficial to improve the students’ comprehension. He shared that “Well, they gain a better understanding of the words and the details in the story. Also, they understand the whole story’s plot.” Another teacher explained how she helps her students before they reach third grade by pointing that

When reading comprehension is missing with my young students, prior to third grade, I first seek out the specific skills lacking in that particular child. Many times, comprehension is lacking due to the inability to read fluently. This may even be due to lack of decoding skills. I would pick an intervention based on the skill deficit of the child. Many times, I will supplement a child's education with a direct instruction program, such as reading mastery, which is a direct instruction program that targets phonemic awareness, phonics, blending sound together, reading words, making meaning of words, and finally, putting it all together. I would combine that instruction with practicing some listening comprehension strategies.

Research Question 2: Effective Strategies

The second research question explored the effective reading comprehension strategies that special education teachers utilize to improve reading comprehension of third graders with learning disability. Effective reading comprehension strategies organized into two main categories. These include: (a) the effective strategies and (b) the impact of the teachers’ experience on selecting these strategies. In the following sections, I will separately highlight each category based on the teachers’ responses.

The Effective Strategies

Based on the responses of the special education teachers, the category of the effective strategies category is divided into five sub-categories: (a) non-computerized strategies, (b) computerized strategies, (c) differentiating strategies, (d) criteria for selecting the strategies, and (e) onset and reasons behind using these strategies.

Non-computerized strategies. I defined the non-computerized strategies as any reading comprehension strategy that does not require a computer when it is implemented by teachers or students. According to the special education teachers, there are numerous non-computerized reading comprehension strategies found to be effective to improve comprehension of third graders with learning disabilities. These include: (a) graphic organizers, (b) questioning, (c) story mapping, (d) peer-assisted strategy, (e) think aloud, (f) discussing the text, (g) explicit instruction, (h) brain storming, (i) different grouping, (j) close reading, (k) collaborative strategic reading, and (l) cloze procedure.

Graphic organizer. All of the special education teachers interviewed mentioned different forms of graphic organizers as an effective reading comprehension strategy that helped to improve reading comprehension of third graders with learning disabilities. These forms included Venn Diagram, T chart, and KWL chart. One teacher stated that “We also use a lot of graphic organizers for during reading and after reading.” She also provided further explanation of how graphic organizer help her students after reading a text by adding that

After they have read it, it can help to sequence events in the story to really firm up in their mind. What happened first, next, last. Also like picking out the most important things of the story, the most important ideas, or events to have like a graphic organizer about a character to really study that character kind of more in depth. So, I think it helps

them answer questions about character's motivation or even to make inferences about what a character might do in the future or might do next.

When another teacher was asked to justify why he thinks graphic organizers are an effective strategy, he shared that

Graphic organizers help student organize all that information, so they can come to a common understanding or a personal understanding. It helps them sequence events. It helps them tell the differences between characters. So, kids can get a better understanding of what happened between two characters and over all increases their concept or comprehension about the story.

He also added that

It presents what the students bring to the reading in terms of their background experience, what knowledge they have, and they are related to what they are going to read, what they think the story is about in terms of predicting, and they actually read it, once again discuss how it is related to what they know.

Another teacher explained how graphic organizers help her students with learning disabilities by sharing that

I think the graphic organizer, like the Venn Diagram, can help organize their ideas, provide an opportunity for them to go back and reread the text, think more deeply about the text and really analyze it. We did a Venn diagram about the differences and similarities between a cat and a dog, so they had to go back to the text and find some of those similarity and differences.

Another teacher justified why graphic organizers are effective strategy for her students by pointing out that “I think by breaking down paragraphs like that for this student and really

talking about it. It definitely makes him understand what we have read.” When she was asked to provide an example of how graphic organizers help her students, she shared that

For example, we were reading a story. What we’re doing was, the story's already broken into three parts, and then as we were reading each of the parts, we have a graphic organizer that we start with and we talk about what's the main idea of that paragraph and then two details that go with it. Then we go to the middle, so we have a beginning middle and end paragraph, and then again, we do the same thing. Then, we write it on the graphic organizer as we are doing that so that then we can have a retell of the story, make sure they're comprehending the story.

Questioning. Questioning is another strategy that was mentioned by all interviewed participants. One teacher shared that

We do a lot of questioning as they are reading. So, I will interrupt their reading to ask a question to see if they have understood so far of what they have read. And that starts off again as me leading it, and then hopefully, as they start to pick it up and do it in their minds on their own.

When she was asked why she believed that reading comprehension is an effective strategy for improving students reading comprehension, she shared that “I think that it kind of reinforces while you are reading you have really got to be thinking. If you are just reading the words on the page, then your mind is not thinking about the words that you are reading, then you are that's not really reading.” According to the participants’ responses, based on the students’ ability, questioning as strategy can take two forms, either the teachers question the students or the students question themselves while reading. One teacher shared that “I start by doing the questioning, and as we progress along, try to get them to question themselves to be able to check

their own comprehension.” Another teacher stated that “if the ability is not there, then they are waiting for me to ask the questions.” She explained why questioning is an effective strategy by adding that

I feel like it starts to teach them, “Oh, I need to be paying attention as I go along, and I need to think about what I am reading, and if I have a question, I need to think about what the answer is, or if I have missed it, I have to go back and reread it.

Another teacher described how questioning as a strategy helped his students by sharing that

When using questioning with my students, I have noticed that helps generate understanding of the main idea concept in the plot. Some students will go further and ask “what if” questions. They will also gain understanding of the details, and it will also bring in their own experiences.

Story mapping. All participants shared that story mapping is an effective strategy that helps to improve their students’ reading comprehension. One teacher reported that “We do use story mapping.” She explained the benefits of story mapping:

It gives them like an organized retelling of the story, so that they are kind of summarizing it and organizing it chronologically at the same time. It is giving them an opportunity to identify the characters, plot, setting, problem, and solution. The students read carefully to learn the details.

Another teacher pointed out that

We use story mapping from kindergarten on in a variety of ways, getting the kids to understand. It is kind of like graphic organizer. It is another way of helping them put all of that information kind of in a file. Story mapping is useful.

Another teacher justified the benefit of story mapping by highlighting that

When students know where to start, they can easily develop topic sentences, they can easily develop meaning from a story mapping. They can easily understand main idea. It develops details, it develops comprehension. Students are able to recall information quicker if they are story mapping.

Another teacher described how the visual nature of story mapping assists her students.

I am into multimodality. So, I think with kids being able to see like not only read it, but they need to see it they need to orally talk about it. Sometimes we might act out so whole-body learning through using story mapping.

Another teacher shared that “I think it helps them improve their comprehension by matching the details with the main idea, sequencing events, adding “what if”, and being able to predict.”

Peer-assisted reading strategy. Eighty percent of the total participants mentioned the peer-assisted reading strategy as effective for increasing the students’ reading comprehension.

One teacher justified how peer-assisted strategy helps her students by sharing that

I think sometimes they are more able to listen to each other than to listen to you all the time. And it just kind of motivates them if they see that their peers or their classmates are coming up with these ideas and are able to do these things. Then it kind of makes them want to be able to do it.

She stated that with the strategy, students “talking with one another, hearing what each other thinks, hearing what they have to say, hearing each other’s personal connection to the texts.”

Another participant described how peer-assisted strategy assists his students by sharing that

Students have a chance to learn additional information. They can coordinate, discuss, and reflect information that has been in the book and share with one another and feel more

confident about what is going on in terms of general understanding of the text and the content.

He also added that peer-assisted reading strategy help students by providing them with a chance to learn from each other through close reading. He shared that

With close reading, they can get to hear peers pronounce and they get the support of peers when they are practicing words. And it allows them to hear the word as it should be pronounced. It gives them confidence and, one again, with practice they seem to improve over time.

Another participant reported how that strategy helped her students by stating that “I think being able to have to explain, being able to say your thoughts to somebody else, and have them understand what you are saying. Also makes the comprehension better and at a higher level.”

She explained how she use the strategy with her students by expressing that

The LD student would have another LD partner. And because they are working together, and they both have issues, they can help each other out with the comprehension piece. So, if one doesn't know it, they can work together to look back in the text in order to work together.

Think aloud. Sixty percent of interviewed teachers highlighted think aloud as an effective reading comprehension strategy. One teacher explained how think aloud helps her students by stating that “because they can see how I do it and then hopefully model it, and then they would be able to repeat it at some point.” Another teacher described how think aloud benefits his students by sharing that

Think-aloud helps my students to understand what is read, what is needed, what they think about it. They also have a chance to share with other students in the classroom. It helps them focus on understanding the main idea when it comes to the reading.

Discussing the text. Three teachers interviewed indicated that discussing the text with their students is another effective strategy that helps increase the students' reading comprehension. One teacher described her use of discussing the text as a strategy as "Stopping throughout the text. If we were reading something, I stop and we discuss part of that." Another teacher clarified how having a discussion with her students about the text is an effective strategy by sharing that "Some of them might just miss a piece of the story, but as we are talking about it like, "Oh! Yeah! That it is. And it is make more sense." Another teacher pointed out that this strategy helps her students by allowing them to work together and learn from each other. She stated that

They are learning from each other. And then also just them hearing themselves say it out loud I think helps them, as well as with the strategy of looking back in the text making sure they may highlight together they may say, "no I don't think that's right let's go back to the text." So, they can find out if they are comprehending it correctly because I talk to them, "you have to look back and find the evidence in the text."

Explicit instruction. Forty percent of the interviewed teachers mentioned direct and explicit instruction as an effective strategy for improving reading comprehension of third graders with learning disabilities. One teacher described how she explicitly teaches reading comprehension, "I do a lot of direct instruction." When she was asked how she teaches comprehension through direct instruction, she said that "It's a lot of repetitive things, where I say something and the kids repeat back." She added

I think that that is a really good strategy because I think that they are understanding even though they are saying back what you might ask or say. It keeps them focused. It keeps them on track. It keeps them moving along, so they have to suck in the information.

Brain storming. Two teachers mentioned brainstorming as an effective reading comprehension strategy. One teacher described how he use brain storming to help a particular student of his:

I have a particular student that I am working with, and I use ABC brain storming with him. And what we do is, there are different letters of the alphabet and characters or something in the story that the student recalls that starts with the C for example. That student will write that down and talk about it. He can pick five letters, he can pick ten letters, it is up to him. And once we pick those letters, we discussed how they are related to the story, and that increased the students' comprehension.

Different grouping. Eighty percent of interviewed teachers mentioned the using of different grouping methods while teaching reading comprehension to their third graders with learning disabilities. Two teachers pointed to small groups as an effective strategy. One teacher shared how she uses small groups:

I can tell them to turn and talk to their partner. How do you think she was feeling at the end of the story or at the beginning of the story and then they can tell what they think and then tell each other the reason why if they disagree?

Another teacher mentioned that “We do more like a whole group, but it is more like three or four students. I think they hear more of what their peers say then they hear what I say.”

Another teacher said that she groups her students based on their learning abilities and friendship . She shared that

I do different groupings. Sometimes, I will group kids that are friends already because I know that they will work nicely together. Other times, I will group like a higher-level student with maybe a lower level student to really motivate the lower level student.

She believes doing that helps students to improve their comprehension by

Talking with one another, hearing what each other thinks, hearing what they have to say, hearing each other's personal connection to the texts. They just seem more interested in what their peers have to say. They seem to have more interest and motivation.

Another teacher highlighted one-to-one as another grouping method that helps to improve his students' reading comprehension. He explained how he uses this strategy with students:

When we do one-to-one, students share one thought from their reading that they feel that is important. They can bring their past connection to what is going on in the story, and they are allowed to share that, but they can share one thing, and they can say one good thing or one bad thing within limit.

He added that one-to-one helps his students by allowing them

To formulate thoughts and opinions, which are important to our reading. It lets me know that they understood the story, and that they are starting to use higher level thinking when they answer questions from one-to-one. So, I like that that seems to work well.

Close reading. Forty percent of the interviewed teachers mentioned close reading as an effective strategy that increases their students' reading comprehension. One teacher shared how close reading helps his students:

With close reading, they can get to hear peers pronounce, and they get the support of peers when they are practicing words, and it allows them to hear the word as it should be

pronounced, gives them confidence and, one again, with practice they seem to improve over time.

When he was asked to share an example, he offered that

There is a student in my class who will not know words and struggles with sight words that are used in close reading. And when they allowed the opportunity to practice those words, they demonstrated over time that they comprehend the sight words better.

Another teacher shared an example that demonstrates how she helped one of her students through close reading:

One of the students has a severe attention problem. So, there will not be any comprehension if I do not somehow get her attention and so I will do a strategy like close proximity. I will sit close to her, and then I need to keep checking in with that student. I will ask questions directly to the student, so she is not off. I have to keep her attention.

Collaborative strategic reading. Only one special education teacher mentioned collaborative strategic reading as an effective strategy that improves reading comprehension of students with learning disabilities. She shared that “So when they are doing collaborative reading, working together is very familiar with them. I have to do a lot of pre-teaching through as far as the ground rules and, at least once a week, I remind them what the rules are with collaborative reading.” She justified why collaborative strategic reading is an effective strategy by adding that

Honestly, with special education kids, when you do something collaborative, they are very kind to each other. They understand that they each have a trouble, and so when one will not be able to answer the question, they will work together to answer the question.

They are very generous in that. They help each other. So, if one does not exactly know the answer, they want to help each other. They kind of know each other's weak spots.

Cloze procedure. One teacher shared that she uses cloze procedure passages to teach reading comprehension to her third-grade students with learning disability. She explained how cloze procedure helps her students:

Using the cloze procedure makes them think of the context clues that are within the story. So that they could figure out what word might go there. Also knowing a verbs or words that make sense to whatever the sentence is that you want them to fill in the cloze word procedure. So, they have to be able to pull from what they have learned. "Oh! Do I need to put this type of a noun or this type of a verb or this type of an adverb or an adjective to make sense to the story?" So, using that procedure definitely helps to improve their understanding of what the text is asking them for.

Computerized strategies. In contrast to the non-computerized strategies, the computerized strategies are defined as any strategy that requires a computer when it used by students. These computerized strategies included (a) System 44, (b) Fast Forward, and (c) Raz Kids.

System 44. Sixty percent of the interviewed teachers highlighted System 44 as an effective strategy that increases that students' reading comprehension. One teacher described System 44 by sharing that "System 44 does have some comprehension along with it. And it starts off a sentence level, like it will say, "Tad and Gay find a cat." They will have to answer the question, "what did they find?" She thinks System 44 is an effective strategy because it contributes to improve students' reading scores. She added that "A lot of my students I have seen

it increase their test score and their level of comprehension through their NWEA tests.” Another teacher describing how System 44 helps students by stating that

It also has comprehension component that requires students to read the story by themselves, read to an instructor, and the third thing they do is listen to the story on tape. After those are done, the students are required to pass a test with 75%. If they fail the test, they have 24 hours to take the test again.

He described the test as, “Ten questions regarding the story they are reading comprehension questions.” He justified why he think that System 44 is an effective strategy by sharing that

The reason that I think it is effective in improving my students' comprehension is because they get a chance to practice. They get a chance to relate to the story by reading, by also reading with the instructors, so there is plenty of chance for comprehension and fluency practice.

Fast forward. Only one teacher mentioned fast forward as an effective strategy that she uses to improve reading comprehension of her third-grade students with learning disabilities. She shared that

It is a program that the kids do on the computer that works on higher order thinking skills, vocabulary, and comprehension. So, some of my students are using that, and I have seen really good gains after they have started using that.

When she was asked to justify why she think Fast Forward is an effective strategy, she added that “I think it helps students starting in a very basic level to build on their comprehension skills.”

Raz Kids. Only one teacher mentioned Raz Kids as an effective strategy that she uses to help her students with reading comprehension. She described Raz Kids by stating that

It's a wonderful computer program that works with students' comprehension from preschool level all the way through 5th grade. The stories that the students read they listen to the stories first, then they have to read it numerous times, and then again, they take comprehension tests. On these, the stories range from fiction, nonfiction near all sorts of genres so that they are not reading the same thing over and over and the texts get obviously more difficult as they go.

She highlighted how Raz Kids helps her students by sharing that

Those repetitive readings have helped those students when I test them on the Star test and also on the NWEA test. I think that it works well. I see higher scores because they practice so much.

Differentiating strategies. Eighty percent of interviewed teachers agreed that reading comprehension strategies are not one-size-fits- all. That means that some strategies might work very well with one student with learning disability, but not with others. Therefore, the majority of the special education teachers do not use the same strategy with all students, they differentiate. When one teacher was asked if she uses the same reading comprehension strategies with all students, she shared that “No not with all students. I think just knowing your students that some strategies are going to work better for some or be more useful for some than others.” When another teacher was asked the same question, she stated that “No. No. Everybody is different.” Another teacher shared that “Definitely different, individualized.” Only one teacher uses the same strategies with all students with learning disabilities. She reported that “I use similar strategies yes.”

Criteria for selecting the strategies. Since 80% of the interviewed special education teachers agreed that reading comprehension strategies are not one-size-fits-all, they take into

consideration some criteria for selecting a strategy for a particular student. These criteria include: (a) students' abilities and needs, (b) current pre-reading skills and reading level, (c) prior knowledge, (d) learning styles, (e) strategies that used in general classrooms, (f) recommendation of student's IEP team, and (g) different tests.

Students' abilities and needs. Four teachers mentioned that they take into consideration the students' abilities and need when they select their reading comprehension strategies. When one teacher was asked about the criteria that she takes into consideration to select a strategy for her students, she shared that "What their ability level is, what their strengths and weaknesses are, what their disability is, and you have to consider that." Another teacher stated that "their abilities, their strengths, and weaknesses." When yet another teacher was asked to share an actual example from her classroom, she shared that "Some of my students with LD are good writers. And I can ask comprehension questions that require them to write and recall, but some students I might have to do one-in-one with them to get their response out of them." Another teacher shared that

So, let me think back to last year when I had a girl with a learning disability. She had a hard time with time order. So, she could retell a story, but it was never in order. She would just kind of jump around as she remembered things. So, I thought, well a sequence of events, story map, or some time order words in there to help her structure her retell was really going to help.

Another teacher stated that

I have two students of varying skills. One student has strong memory skills. The other student does not. With the student with weak memory skills, I might use a graphic that asks the students to recall additional details and I ask about the main ideas two or three

times. So, he can have an opportunity for grasping the concept and the comprehension. And the other student who has stronger skills, I can give them a graphic organizer in which they can very much do individually. They may not need much direction.

Current pre-reading skills and reading level. Sixty percent of the interviewed teacher shared that they consider the students' current pre-reading skills and reading level when they select a strategy for their students. One teacher shared that "I want to see if they have pre-reading skills. That means, can they identify the alphabet? Do they know diphthongs and digraphs? The sight words? Do they know the first 100, the second 100?"

Prior knowledge. Sixty percent of the interviewed teachers mentioned that they take into account the students' prior knowledge when they select a strategy for them. One teacher shared that "once again the information that they are bringing." Another teacher stated that "I definitely take into consideration their previous knowledge, especially if I have known them for a year or two. I have a good idea of their previous knowledge."

Learning styles. Forty percent of interviewed teachers mentioned that they take into consideration the students' learning styles when they select a strategy for their third-grade students with learning disabilities. One teacher shared that "I have students their learning style is very visual. So, I have used the draw up picture of that strategy, since that is their strengths and the story map because that is kind of a more visual way of looking at a story." Another teacher shared that

I have one third grader who is a completely visual learner. I mean, I can say anything to him he will not get it. But as soon as I draw picture of it, as soon as I point to the words visually, he will get it. I have another who is completely opposite and makes things so difficult. Visuals are lost on him. He needs to hear the story more than once and ask and

answer questions to internalize the story. So, I definitely take into account their differences.

Strategies used in the general classrooms. Forty percent of the teachers mentioned that when they select a strategy for their students, they take into consideration the strategies that are used in the students' general classrooms. One teacher shared that "I also look at what their grade-level peers are working on and learning. And I try to match that if I can with some of the same strategies."

Another teacher stated that "other strategies that are used by other teachers. They may have been taught a skill that I do not use that helps them. And so, I want to listen to what they use and then how to change and then incorporate that, as well. That helps them with reading fluency or word understanding.

Recommendation of student's IEP team. Only one teacher shared that he takes into consideration the recommendations that provided by the students' IEP team. He stated that "The IEP team determined some things that I can focus on with these particular students. So, I have to take into consideration those suggestions." When he was asked to provide an example, he shared that

So, the psychologist will give the test, and he finds there are some deficits in reading. She or he might know that a child may have a trouble with digraphs and then they will write that statement. It is part of my responsibility to develop goals with the parents and the IEP team, and therefore, that effects my reading strategies.

The results of different tests. Only one teacher mentioned that she takes into account the results of different tests when she selects a strategy for her students. She shared that "IQ test. I

also look at the other academic tests that they do. And I do some informal testing myself to see which programs or strategies that I'm going to use with that particular student.”

Onset and reasons behind using these strategies. All teachers shared that they start to use these reading comprehension strategies with their students before third grade. Two teachers stated that they start to teach their students with learning disabilities through these strategies at the kindergarten level. One teacher shared that “I would say right away, with the kindergarten level.” Forty percent of the interviewed teacher mentioned that they start using reading comprehension strategies with their students in first grade. One teacher shared that she uses them “In first grade, “When they are reading short stories.” When another teacher was asked when she starts using strategies with her students, she said, “First grade, if they can read a sentence.” When teachers were asked why they start teaching strategies to their students prior to third grade, one teacher shared that “We need them starting to understand what they are reading right away, regardless of the age of them. I mean the earlier you can get them, the better it is for them.”

Another teacher explained

So that they understand that when we read something, the whole point is to take meaning from it and understand more about our world. I want to give them that level of reading, and part of that is reading to them because some of them are struggling so much. So, I want to give them that desire to read and understanding what they are reading. So, I think that why when they are little, you have to teach them.

Another teacher shared that

I just like to start sooner. I want them to get that that even as young as they can handle it. Every student is different in terms of their ability to comprehend. So individually, I have to see where they are at, and I think they start more successful. That is my philosophy.

Only one teacher mentioned that she starts using reading comprehension strategies with her students in second or third grade. She shared that “usually second or third grade.” She justified that by adding that “usually that’s when it becomes a problem. When I notice if they are behind and if they are not comprehending, then they need some extra help with that.”

Based on the special education teachers’ responses, forty percent of them utilize reading comprehension strategies as a response to the reading developmental process. One teacher shared that “I would say more of the developmental process.” Another teacher shared that

I think it’s development process. I just think for developmental. They need to start as soon as they can. As I said like with our own child, you are reading, you are pointing to pictures in the book, you are saying, “Oh! the people in the characters are so and so.” I think you need to just start right away with and not wait to the fail model.

The other forty percent of the interviewed special education use reading comprehension strategies as a result of a student failure and a response to the reading development process. One teacher said that

I do not think it is as easy as one or the other. I think that it is both. I think the child comes to us with deficits in reading, right? And so, it is our job is to remediate that. But I think it is a response to the way thing are taught. If you are in third grade, but you are at first grade reading level a lot of the things that you are going to be taught are way above you head. Do you know what I mean? So, it is a combination.

Another teacher shared that

I have to two approaches to that. And as much as that developmentally, some kids have some concerns and issues that have to do with recalling, they have issues regarding ability to concentrate and when they are manifested in the school environment.

Only one teacher mentioned that she uses reading comprehension strategies as a result of the students' failure. She stated that

Usually for me it's a response to their failure. So, since I am the special education teacher, then the general education teachers usually have already tried their strategies.

And how they teach the whole class comprehension and has failed. So usually when I get a kid on my case load to help, it's because there's been a failure.

The Impact of the Teachers' Experience on Selecting These Strategies

The impact of the teachers' teaching experience on selecting reading comprehension category is divided into two sub-categories: (a) how experience helps teachers to select strategies, and (b) ways to modify strategies.

How experience helps teachers to select strategies. All interviewed teacher mentioned that, as their experience of working with students with learning disabilities increased year after year, they were able to better serve their students and know what strategies might work well with them. One teacher shared that

I think once you have had more experience with kids, and especially when you have kids year after year, you really get to know them quite well. So, you know kind of already what they need, what they had trouble with last year, what they are still struggling with.

Another teacher shared that stated that

I do feel like, the more you teach, the more you kind of know what the kids need. And each individual student has their own strengths and weakness. So, as I teach, I get better at that, and as I get to know the student, I get better at that, knowing what they need of me.

Another teacher described how her teaching experience helped her to select strategy for her students by sharing that

My teaching experience, I have a lot of ideas to draw from at this point. Oh! This student was just like so and so. I can try this strategy. Because the students are so different every year, every day, but trying some of the same strategies, having that pool of ideas is valuable.

All teachers pointed that they are using only research-based strategies when teaching reading comprehension to their students. One teacher shared that “I usually use the research-based strategies. I have done a lot of different programs. So, I have gathered a lot of different strategies and tools from the different programs that I have used with the kids.” She justified the reason behind using only research-based strategies by adding that “I just do not want to waste my time with a strategy that has not been approved or that I do not know it would work. So, I want to use my time with the kids and waste less as I can.” Another teacher shared that “I use research best practices. Those seems to work well. There minor are changes, but I do not change them a lot.” He justified the reason for utilizing only research-based strategies by stating that “because that is what our district supports and that is kind of what my past education in terms of the reading classes that I had that emphasizes best practices.”

Ways to modify strategies. All participants agreed that they do modify the use of some strategies based on the students’ educational needs and abilities. One teacher shared that

Some of the graphic organizers that we use do require a lot of writing, and some students kind of just break down when they are asked to do a lot of writing. So, to really focus only on the comprehension piece, if that’s what I really need to focus on, I might scribe

for them their ideas. So that the writing is not getting in the way, and that's one way I typically will modify, yeah.

Another teacher said, "I may adapt or tweak something here and there or add. Some of the strategies I may use with that particular student that I have, I may break the strategy down into smaller pieces, practice them more, repeat it, practice it." Another teacher shared how she modified the use of System 44 for her students by stating that

I have had to do that with System 44, yeah. It is the whole system. When we do the reading comprehension portion, it's supposed to be read to self. So, they are supposed to take these books and read them to their selves while they are so difficult. So, we do it whole group. We do listen to the story. The first day, we use a graphic organizer. The second day, we fill it out together, and we read the story again, but I do not have the student just do it by themselves. That is how that's supposed to be built. But the kids cannot do it. So, we still want them to be getting the comprehension piece, but we have to modify the way we're doing it. We're supporting them.

Research Question 3: Informal Classroom-Based Assessment

The third research question asked how teachers informally assess the reading comprehension of their third graders with learning disabilities. According to the special education teachers' responses, the informal classroom-based assessment emerged as the following categories: (a) importance of assessment, (b) informal assessment tools, (c) how often is reading comprehension assessed, and (d) ways to modify some assessment tools based on the students' needs and abilities.

Importance of Assessment

In terms of the importance of informal reading comprehension assessment, 80% of the interviewed teachers mentioned that informal assessment helps them in order to better serve their third-grade students with learning disabilities. It mainly provides teachers with a clear picture of students' reading comprehension level and performance. As a result, it helps to guide the teachers' instructions in a way that benefits the students. It also informs teachers whether or not the strategies that they are adopting work. One teacher described how informal assessment help her by sharing that "It gives me kind of a clear picture of where they are headed and how they are doing. I guess just thinking about my teaching the next day and if I need to revisit a concept." Another teacher shared that "It tells me what to do next. It will tell me Oh! That strategy was not working, and let's try something else. It helps to guide my instruction. It gives me more of a clear picture of what the students are capable of." Another teacher pointed out that

I think assessment will drive my instructions to where their weaknesses are, and then I can apply interventions to their weaknesses and hopefully make them more independent and fluent readers, and that is my goal. It tells me how fluent students are in terms of their reading skills, what reading skills or interventions I might need to do in terms of those individuals or small reading lessons that I might need to approach in the future.

Informal Assessment Tools

The assessment tool refers to any informal assessment methods that special education teachers use to assess the students' reading comprehension and determined the effectiveness of the strategies that they have been used with students. Teachers pointed out different classroom-based assessment tools that they use to assess reading comprehension of third grade students with learning disabilities. These assessments include: (a) retelling, (b) questioning, (c) cloze

procedure, (d) having students fill in graphic organizers, (e) writing activity, (f) informal reading inventory and running records, and (g) teachers made-tests.

Retelling. All teachers mentioned that they use retelling to informally assess the reading comprehension of their third graders with learning disabilities. Retelling as an assessment requires students to either verbally or in writing retell and summarize the reading passage to the teachers. Therefore, teachers can determine whether or not the students comprehend the text well. One teacher shared that

I will ask them to tell me verbally what happened beginning, middle, next, so if their strengths are not writing, I still know that they understand what has happened in the story. I will sometimes also say, "Okay, I need some details." So, I want them to tell me a detail, something happened, something is a detail in the story.

She also added that "retelling is very effective. I mean, if they can tell some of the main ideas and details, whether or not they get the story." Another teacher stated that

Sometimes, I will just start all off with, "Tell me what happened in this story." Some kids can just go on and on and tell you everything about the story. Some need a little more prompting. Okay, well then what happened? And then what happened next? And what happened at the end? and some can answer when prompted.

She thinks retelling is a beneficial assessment because "It tells you whether they got to understand what the most important part of the story is, if they connected one event to the next to go through the story from beginning to end." Another teacher shared that "I think retelling tells the most. I use that one a lot. If student can retell a story to me, then they got it. They may not remember the details, but the meaning is there. It tells me what they understood." Another teacher pointed out how she differentiates retelling based on the students' abilities by sharing

that “I use both oral and I written. Again, if they are unable to really write clearly, because a lot of my students cannot. These students have difficulty also with being fluent in writing, and so I may choose to do an oral retell.” Another teacher shared that

I have noticed with my students, retelling allows me to check their understanding if they’re comprehending the materials, see their ability to recall information, see how they sequence things. I can measure their comprehension by their ability to recall and give me information about the details that they read. Retelling allows students to confirm the information they get from the story.

Questioning. Assessing the students’ comprehension through questioning is another method that all interviewed teachers used to assess their students. One teacher shared that “We do a lot of questioning as they’re reading. So, I will stop, interrupt their reading to ask a question to see if they have understood so far of what they have read. Just asking questions. Usually orally question. Sometimes they answer written questions.” She added that questioning helps her “to see if they understood certain key elements or key events. These questions kind of determine if they understood some of these key elements in the story.” Another teacher shared that “I am checking understanding through questioning.” He explained how questioning helps him by adding that

That helps me know if they have taken the concept and organize it to a higher order thinking or whether they are still at a fundamental after reading the text and the story. I am presenting questions to the students to gain understanding of their understanding of the main ideas and details related to the story.

Another teacher explained how she assesses her students’ comprehension through questioning by “Asking them questions and have them summarize part of the story. That tells me quickly if they

grasp the text or not. It tells me if we need to utilize another strategy or rereading or illustrating something.” Another teacher shared that “I just do a lot of questioning with my students to make sure that they are comprehending what they are reading, and if they don’t, I need to reteach to them.”

Cloze procedure. Eighty percent of the interviewed teacher use cloze procedure to assess reading comprehension of their third graders with learning disabilities. One teacher pointed out that “I do use a cloze procedure. It has missing words that they have to fill in order to see if they comprehend it. I have used it more for understanding the who, what, when, where, why, the questions of the story, making sure that they have comprehended what they have read.” Another teacher stated that “It helps them understand certain words, certain phrases, certain inflection on word, and beginning sound and ending sound also. I feel comfortable, and I do think it is helpful” He added that “cloze allows me to see if the students know to select words within that story and assess their reading and comprehension and word skills.” Another teacher shared that

It is very specific. It looks as if the students can read a sentence and fill in the blank that is missing, then they grasp the sentence’s meaning and get the whole picture through that. It could be a measurable tool that we can use to kind of monitor comprehension progress.

Having students fill in graphic organizers. Sixty percent of the special education teachers mentioned that they usually ask their students to fill graphic organizers to assess their reading comprehension. One teacher described his use of a graphic organizer by sharing that “It is informally to assess what they know, what they learned, and what they did not know. As an assessment, it allows them to interrupt information from reading, to add to their stories, and to gain language skills by verbal presentation.” Another teacher pointed out that

Filling in a graphic organizer is helpful for third grade LD student because it is able to have them hold on the parts of the story. If I am asking them usually, I can have them do it independently after they have had numerous practices on filling their own graphic organizers and answering oral questions.

She also shared that she uses graphic organizers “just as a quick informal assessment to see if they are learning the information and comprehending what the information has to say.”

Writing activity. Forty percent of the special education teachers mentioned that they ask their students to express their reading comprehension through a writing activity. One teacher shared that “Having the students express their comprehension through writing that is a big one for me, I like that.” He added that

It helps them in so many ways, but in terms of me, it is easier for me to see what they comprehend in writing because I can always have it in front of me. I see them organize their thoughts, I see them compare and contrast what they gained from the book, from what they recall from their head. By using writing, it gives them a freedom to add and take away details that are not important.

Informal reading inventory and running records. Only one teacher mentioned that she is using informal reading inventory and running records to assess the students’ reading comprehension. She shared that “Informal reading inventory. It’s a quick measure that gives you a good measure of did they get the main point of the story.” She added that

They usually have questions, like within the text questions and beyond the text, so I can see a lot of my students get the questions that are within the text. Those are the ones they can go back and find the answers to right in the story. Beyond the text not quite so much. It is like, “Why did the author include a table on this page?” And that is a little more

difficult for them sometimes. And then beyond the text, it seems to be the most difficult because that's usually the inferencing.

In terms of running records, she shared that "I normally use to monitor their reading running record with some comprehension questions afterwards, and that is oral mostly. That is my informal assessment." She reported some of the advantage of using running records by adding that

You can use it with whatever they happen to be reading. You do not need something special. You can use questions that are provided. Usually we have books with questions provided for that, or you can create your own, so its flexible to use.

Teachers made-tests. Only one teacher shared that she usually creates her own informal test to assess the students' reading comprehension. He stated that "I can develop my own test. So, there will be some open-ended questions. There are some multiple choices, and there will be some questions to demonstrate their overall comprehension." He explained that how teacher-made tests help him assess his students "When students answer the questions, especially the open-ended questions. Because the open-ended questions allow them to bring their own thoughts and understanding. Therefore, I can tell if they are generally answering the questions correctly."

How Often Is Reading Comprehension Assessed?

In terms of how often special education teachers informally assess their students' reading comprehension, they all agreed that they do it on a daily basis. They also pointed out that about once a week, they do assess the students' performance to write it down in their official records. One teacher shared that "I kind of have an informal assessment every day. But for my records, I do once a week." When another teacher was asked how often does she assess her students reading comprehension, she reported that "I would say every day." Another teacher shared that

“Every assignment, every day. Writing down a recording and making it all official is once a week.” Another teacher stated that “As you are teaching you are doing a daily informal assessment because you are constantly checking what the kid comprehends.”

Ways to Modify Assessment Based on the Students’ Needs and Abilities

Eighty percent of the special education teachers agreed that they do modify the use of some of these assessments based on the students’ needs and abilities. One teacher stated that

When they are retelling or filling out a graphic organizer, some students can just write down the information to retell the story or to answer questions or do a graphic organizer. Some students are not so good with writing, so I will just allow them to tell me that aloud.

Another teacher stated that “I do not generally use their grade level. For example, the graphic organizers I do will not use one that had ten bubbles. I would use one that had a small amount of information, you know, based on the ability of my students.” Another teacher shared that “I would ask questions on a more simplistic basis for some students at different levels. I have got others that have a much more in-depth knowledge base, and I would probably ask them more inferencing more difficult questions.” Another teacher explained how she differentiates the use of retelling as assessment tool based on the students’ abilities by sharing that “One of my students is able to write, so I ask him to do a written retell for me.”

Triangulation of Evidence

Qualitative researchers use triangulation as technique to verify information and to ensure that their evidence is credible. In this technique, the researchers are required to compare evidence from different data sources in order to check and establish the validity of their study. In other words, triangulation helps researchers to check consistency across different data sources

(Brantlinger, et al., 2005; Pugach & Johnson, 2002; Stake, 2010). In this study, the interview transcripts, teachers' instructional materials, and students' MAP Growth test scores were triangulated to check consistency for emerging themes across those three data sources (Figure2).

When it comes to instructional materials, teachers were able to provide me with worksheets and instructional materials that were used in order to teach reading comprehension to their third graders with learning disabilities. After carefully reviewing these worksheets and comparing them with what the teachers said they did to improve reading comprehension of their students (the strategies that teachers shared previously in this chapter), I found that the strategies that the teachers had shared were consistent with their actual practices.

The teachers interviewed also were able to share their students' scores on the MAP Growth test in order to show their students' growth on reading while implementation of the reading comprehension strategies throughout the academic school year. All teachers shared that they used MAP score in order to formally determine their students' progress on reading comprehension throughout the academic year as well as to determine the effectiveness of their instructional strategies. The MAP Growth is a computer-adaptive test, which allows an individualized test experience that precisely measures students' academic performance on reading and other academic subjects. The nature of the MAP Growth tends to challenge students who are performing above their grade level without agitating students who are performing below their grade level. Specifically, when students correctly respond to one question, the next question provided will be harder. However, if the students incorrectly respond to one question, the next question will be easier. It shows teachers, parents, and the students themselves whether the students' performance are on, above, or below their grade level. The MAP Growth test is usually administrated to the students three times through the school year (fall, winter, spring). It uses

different forms of questions to measure the students' growth, such as multiple choice and drag-and-drop. The MAP Growth test use the Rasch Unit Scale to represents students' score on reading. Students are provided with RIT score after they complete the MAP Growth test, which precisely assess students' growth over time regardless their grade level. It also allows to monitor the students' progress through the academic school year as well as across several years (NWEA.org, n.d). RIT allows to compare the student's score to her/his previous score throughout the year.

In this study, teachers provided me with a total of 12 students' progress reports (MAP growth scores). After reviewing the students' RIT reading scores throughout the academic year and comparing them to what they teachers said they used to teach reading comprehension, I found that for the most part, the work teachers said they did and the students' reading progress on MAP Growth were consistent. RIT scores for the majority (about 83.3%) of the third-grade students improved throughout the academic year while using these strategies. However, there were two cases that were inconsistent between the students' reading scores on the MAP Growth and what teachers said they utilized. These two students (about 16.6%) did not show any improvement in their RIT reading score. That was not surprising. It was expected because not all students grow at the same degree or amount of time.

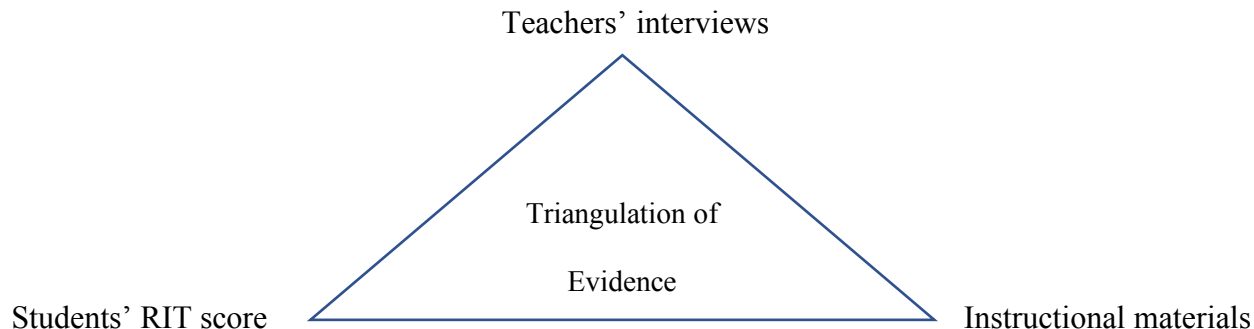


Figure 2. Illustration of triangulation evidence.

Chapter 4 Summary

This chapter presented the themes and subthemes that emerged as a product of the inductive analysis. There were ten emergent themes and twenty-eight sub-themes (Appendix G). In review of the teachers' responses to the interview questions, asked in this study, the special education teachers in this study mentioned different problems and challenges that negatively impact reading comprehension of their third graders with learning disabilities. These included: (a) issues with background knowledge, (b) trouble with fluency, (c) difficulty with informational text, (d) difficulty with making inferences, (e) issues with vocabulary, (f) low reading level, (g) memory issues, (h) non- interesting topic, and (i) a lack of practicing reading at home. Teachers also shared some strategies that they use to help third grade students with learning disabilities to improve their reading comprehension. These strategies included:(a) graphic organizers, (b) questioning, (c) story mapping, (d) peer-assisted strategy, (e) think aloud, (f) discussing the text, (g) explicit instruction, (h) brain storming, (i) different grouping, (j) close reading, (k) collaborative strategic reading, (l) cloze procedure, (m) System 44, (n) Fast Forward, and (o) Raz Kids. To informally assess reading comprehension of their third graders with learning

disabilities, teachers pointed out different classroom-based assessments. These included: (a) retelling, (b) questioning, (c) cloze procedure, (d) having students fill in graphic organizers, (e) writing activity, (f) informal reading inventory and running records, and (g) teachers made-tests (Appendix G).

The next chapter of this study presented the major results as connected to main research questions, relationship of results to existing studies, and recommendations future research.

CHAPTER 5

DISCUSSION

The purpose of this qualitative study was to (a) identify the common reading problems that negatively impact reading comprehension of third graders with learning disabilities and (b) to investigate the effective reading strategies that special education teachers utilize to improve reading comprehension levels of their students in resource room settings. In this chapter, I presented the discussion of the main themes, which emerged as a product of the inductive analysis process and is organized into two sections: (a) major results as connected to research questions and existing studies, (b) results as connected to the transactional theory, and (c) recommendations for future study.

For the aim of this study, I defined “effective reading comprehension strategies” as any strategies that the special education teachers that I interviewed found to be beneficial for improving reading comprehension levels of third graders with learning disabilities in the resource room setting. A particular reading comprehension strategy could be beneficial based on these teachers’ experiences while working with students who have learning disabilities, but it might not have been found to be an effective reading strategy in the literature. Thus, this research focused on determining the effectiveness of a particular strategy based on teachers’ teaching experiences, rather than strategies only found in the literature.

The overarching questions for this study were:

1. What are the common reading problems that prevent third-grade students with learning disabilities from comprehending what they are reading?
2. What effective reading comprehension strategies do special education teachers utilize in order to improve reading comprehension skills of students with learning disabilities?

3. What are the classroom-based reading assessment tools that special education teachers use to measure the students' reading comprehension growth and determine the effectiveness of these strategies?

The present chapter focuses on discussing the responses of the five special education teachers as they shared their experiences of teaching third graders with learning disabilities. I separately and briefly responded to each of the research questions by identifying the common related categories and sub-categories that emerged from analyzing and coding the interviews. I also discussed each of those questions as they relate to the existing literature that was presented in chapter two. Results were also discussed as they relate to the transactional theory. Recommendations for future study will also be provided.

Results as Connected to Research Questions and to Existing Studies

Findings of this study as related to the three-main research questions and to the existing literature are discussed in the following sections.

Research Question 1: Problems and Challenges

The first research question asked, "What are the common reading problems that prevent third-grade students with learning disabilities from comprehending what they are reading?" The teachers' responses regarding this question emerged as three main themes: (a) problems, (b) challenges, (c) and manifestation of the problems.

Problems

According to the teachers' responses, the problems that negatively impact reading comprehension of some of their third graders with learning disabilities included: (a) issues with background knowledge, (b) trouble with fluency, (c) difficulty with informational text, (d) difficulty with making inferences, (e) issues with vocabulary, (f) low reading level, (g) memory

issues, and (h) non- interesting topic. Further discussion of the common problems that shared by most teachers is provided in the following section.

The first problem is the issue with background knowledge. According to the finding of this research, the issues with background knowledge take two forms: lack of background knowledge and using background knowledge inappropriately. Teachers reported the lack of background knowledge as a problem that prevent some of their third grader students with learning disability from understanding what they are reading. Teachers also emphasized the important rule that background plays in facilitating students' comprehension of a given text. According to the results, having background knowledge is very important factor that facilitates students' understanding of a text through connecting the information to their previous experiences. In contrast, students who do not have enough background knowledge and life experience have nothing to connect the new information with, which makes the new information hard to be understood. What was found in this study regarding the importance of background knowledge generally aligns with what Blanc and Tapiero (2001) found in their study. They pointed out that having more background knowledge about the topic of reading plays a significant role in helping readers to construct meaning from a text. Readers who had more background knowledge were able to make more accurate connection between the new textual information and their previous experience when compare to readers with less background knowledge. Blanc and Tapiero (2001) concluded that background knowledge and demands of the task are very important elements in understanding and gaining meaning of a text. Also, to better comprehend a written passage, the reader needs to make a connection between the new textual information and all information, world knowledge, and personal experiences he/she already has about the topic of the reading (McNamara & Kintsch, 1996). Making a connection between the

reader's background knowledge and textual material is an important for facilitating the reading comprehension process (Ferstl & Kintsch, 1999; Kintsch, 1998; Kintsch & Rawson, 2005).

According to the present study, it seems to be a relationship between the lack of background knowledge, life experience, and the students' social economic status. Thus, students with low social economic status may not have as much life experience as other students do, which reduces their chances of building a sufficient amount of background knowledge regarding life experiences, situations, and activities. Even though that seems logical because families with low social economic status cannot afford taking their children to different activities, it is worth more investigation.

Using background knowledge inappropriately also negatively impacts the students' understanding of a text. According to the present study, some third-grade students with learning disabilities tend to use their background knowledge regard the given text inappropriately while reading. Particularly, the students do that by bringing irrelevant information into the given, which negatively influence their understanding. What was found in this study regarding the inappropriate use of background knowledge are consistent with previous research. For example, Maria and MacGinitie's (1980) pointed out that students with learning disability tend to eliminate new information that was presented in the written passage when it did not match their previous knowledge instead of modifying their prior knowledge. Other researchers have similarly found that, although some students with learning disabilities may have prior knowledge about the topic of a reading, they usually fail to appropriately use that knowledge in order to facilitate their understanding of the new textual information (Graham & Bellert, 2005; Gersten, Fuchs, Williams, & Baker, 2001; Carr & Thompson 1996; Paris, Lipson, & Wixson, 1983).

Also, William (1993) conducted a study to examine the students' comprehension of a

modified story and their ability to recognize story themes. The study involved adolescents with learning disabilities. The results indicated that adolescents with learning disabilities brought incorrect or irrelevant information into the story and have difficulty understanding the text. These difficulties raised a result of their inappropriately using of their prior knowledge related to the topic. Also, William found that when these students were asked to respond to inferential questions, they resorted to either totally depend on their previous knowledge or disregarded their previous knowledge (William, 1993). According to this study, teachers helps their third graders with learning disabilities to overcome their issues with background knowledge through several strategies. These include graphic organizers, explaining, demonstration, brining things in, teaching vocabulary, and showing pictures.

The second problem is the issue with reading fluency. Issues with fluency was found as another problem that impacts the students' comprehension of a text. Based on the results of this study, the issues with fluency are organized into two parts: fast reading and slow reading (lack of fluency), which both impact students' reading comprehension. All teachers pointed out that the lack of fluency (slow decoding) is a problem that prevents some of their third graders with learning disabilities from comprehending a text well. According to the results, when students with learning disabilities are reading in a very slow and choppy way, they are using most of their working memory and energy trying to decode words in a text. As a result, they start losing the meaning of sentences. Not only slow reading, but also, super-fast reading negatively impacts reading comprehension of some third-grade student with learning disabilities. Fast readers miss the meaning of what they are reading because they just thinking about finishing what they are reading. while reading so fast students are missing punctuation marks and pausing as needed while reading, which all are a very important to be considered while reading to understand a text.

What is found regarding lack of fluency is broadly in line with those found in the literature (Graham & Bellert, 2005; Chard, Vaughn, & Tyler, 2002; Perfetti, Therrien, 2004; Therrien, Gormley, & Kubina, 2006; Wolf and Katzir-Cohen, 2001). Also, Chard, Vaughn, and Tyler (2002) concluded that students with learning disabilities often experience difficulty with reading fluency, which directly influence their reading comprehension. According to the present study, teachers help their students to improve their reading fluency through implementation of rereading strategies. rereading strategy helps students through providing them with a good model of reading, so they can recognize where to pause and using the intonation. It allows students for more rereading practices.

Another problem is the difficulty with informational text. According to the results, some third graders with learning disabilities have a hard time comprehending informational text when compare to narratives. That difficulty with understanding informational text is due to the hard-academic vocabulary that have been used in these types of text. Also, informational text usually is written at a higher level than the students' grade level, which makes it difficult to be understood. It also requires students to recall certain facts and sequence events, which is a major problem with most students who have learning disabilities. My findings in this area are align with those found in the literature. For instance, Saenz and Fuchs (2002) found that comprehending expository text is more difficult than narrative text for most students. Also, students with learning disabilities face more difficulty with comprehending expository text than with narrative texts. The majority of the literature focuses on the difficulty that students with learning disabilities have regarding distinguishing between the different types of common text structures, which impact their reading comprehension. Although knowledge of text structures is an important skill, some students, including students with learning disabilities, have difficulty

distinguishing between different types of text structures, which negatively impact their reading comprehension (Englert & Thomas, 1987; Gersten, Fuchs, Williams, & Baker, 2001; Graham & Bellert, 2005). Therefore, teachers who participated in this study helped their students to understand informational text better through teaching vocabulary and reading the text loudly to the students.

According to the results, difficulty with making inference is another problem that prevents some third-grade students with learning disabilities from understanding concepts and knowledge that are not literally stated in the text. Making inference as a reading skill is very hard for these students because it requires them to go beyond looking for literal fact by analyzing information and make connection between facts in order to make meaning. What is found in this study about difficulty with making inference is in harmony with findings in the literature (Hall, & Barnes, 2017; Jiménez-Fernández, 2015; Sencibaugh, 2007). Also, Humphries, Cardy, Worling, and Peets (2004) found that when compared to their typical functioning peers, students with learning disabilities have difficulties in comprehending inference, which negatively impact their ability to gain meaning and situational models about characters' feelings of the narrative text. According to the present study, the comprehension tool kit and questioning are the two strategies that teachers used to assist their third graders with learning disabilities improving their ability in making inference.

Another problem is issue with vocabulary. Knowledge of vocabulary plays a critical role in facilitating readers' understanding of a text (Malatesha Joshi, 2005; Martin-Chang & Gould, 2008). Qian (2002) pointed out that "Having a larger vocabulary gives the learner a larger database from which to guess the meaning of the unknown words or behavior of newly learned words, having deeper vocabulary knowledge will very likely improve the results of the guessing

work” (p. 518). According to the results, the limited amount of academic vocabulary negatively influences comprehension of some third graders with learning disabilities. The lack of academic vocabulary as a problem that prevents some third graders with learning disabilities from comprehending a text is generally consistent with those found in the literature (Clemens & Simmons, 2014; Jitendra, Edwards, Sacks, & Jacobson, 2004). Also, Gersten, Fuchs, Williams, and Baker (2001) noted that students with learning disabilities face difficulties to accurately understand many of the vocabulary and terminology that have been employed in academic texts. Sundheim (2005) pointed out that students with learning disabilities who have a very limited amount of vocabulary use most of their cognitive resources attempting to decode unfamiliar vocabulary while reading passages. As a result, due to these vocabulary deficiencies, they fail to construct the meaning of the passages. It was found in this study that besides the limited amount of academic vocabulary, some students with learning disability have difficulty with understanding vocabulary that have multiple meanings. Also, some third-grade students with learning disabilities have difficulty recognizing words when they are written in different shapes (noun, verb, adverbs) than what they were taught. According to this study, teachers helped their students improving their vocabulary amount through showing the students different examples of text and different sizes of words

Another problem that prevents some students with learning disabilities from comprehending the text well is having low reading level. According to the results, some third graders with learning disabilities are two or three grade levels below their peers in reading. Thus, they are struggling with the basic reading skills, such as recognizing letters, letters’ sound, decoding, and putting the parts of the whole sentence together to gain meaning, which all are important to facilitate understanding of a text. Also, memory issues were identified as a problem

that negatively influence reading comprehension of third graders with learning disabilities.

Challenges

I defined challenges as any factor that influences students that is outside schools and that might impact their reading comprehension. According to this study, a lack of opportunity to practice reading outside school is the only challenge that was identified, which negatively influences students' reading comprehension. Thus, practicing reading at home is a significant factor that helps students improving reading comprehension skills through learning new vocabulary and giving them more information and learning experience.

Manifestation of the Problems

According to the results, teachers start to observe the manifestation of these reading problems before their students reach third grade, usually between in kindergarten and second grade. Teachers usually start to notice these problems when their students fail to learn the pre-reading skills, such as having trouble with recognizing alphabets, letter-sounds, sight words, and decoding. Even though, teachers start to notice reading problems with their students who have learning disabilities before they reach third grade, the gap grows so much bigger by third grade. That is logical because third grade is kind of shift where students are expected to read more informational text. After third grade, students are expected to be independent readers who can read for learning. That is what justifies teachers trying to help their students before they reach upper elementary level through using different reading strategies.

That notion, which was found as a result of this study is broadly in line with those found in the literature. For instance, it is especially important to help students with learning disabilities overcome the reading problems that may prevent them from literacy success before they reach the fourth grade. This is because, in lower level elementary grades, students are focused on

learning to read, while students beyond third grade are reading to learn (Sloat, Beswick, & Williams, 2007; Clarke, Truelove, Hulme, Snowling, 2013). Failing to solve reading difficulties during students' early grades dramatically increases the likelihood that the reading difficulties will follow them into their adult years (Ford & Opitz, 2008; Samuelsson, Lundberg, & Herkner, 2004). Thus, the critical role that reading plays in students learning beyond third grade emphasizes the importance of identifying students with learning disabilities early and providing them with the most appropriate reading strategies (Antoniou & Souvignier, 2007).

Research Question 2: Effective Strategies

The second research question asked, "What effective reading comprehension strategies do special education teachers utilize in order to improve reading comprehension skills of students with learning disabilities?" The teachers' responses regarding the effective reading comprehension strategies emerged as two major categories: the effective strategies and the impact of the teachers' experience on selecting these strategies. These two categories and their sub-categories are separately discussed in the following sections.

The effective strategies

Five sub-categories emerged from the effective strategies as a main category: (a) non-computerized strategies, (b) computerized strategies, (c) criteria for selecting the strategies, and (e) onset and reasons behind using these strategies.

Non-computerized strategies. In this study, non-computerized strategies were defined as any strategy that does not require a computer when it is implement by teachers or students. According to the results, special education teachers mentioned several non-computerized reading comprehension strategies as effective strategies to improve reading comprehension of their third-grade students with learning disabilities. Graphic organizers, questioning, story mapping, peer-

assisted reading strategy, using different grouping, thinking aloud, and discussing the text with the students were the top seven strategies that are mentioned as effective by the majority of special education teachers. Most of these strategies are broadly aligned with the strategies that are highlighted by the National Reading Panel (2000) as an effective for improving students' reading comprehension. These strategies involve monitoring comprehension, using graphic organizers, answering questions, generating questions, recognizing story structure, and summarizing (the National Reading Panel, 2000).

According to the results, regardless of the different forms that graphic organizers may take (Venn Diagram, T chart, and Spider map), they are found to be an effective strategy that can be used in different stages of reading (during and after reading) for improving students' reading comprehension. That finding is broadly in line with those of researchers such as Sam and Rajan, (2013). Also, Chang et al. (2002) pointed out that "among the numerous reading strategies, graphic strategies are one of the few approaches that can be applied at the preview stage before reading, during the reading process itself, and at the stage after reading" (p. 5). Also, Kim, Vaughn, Wanzek and Wei (2004) concluded that although improving reading comprehension is a very difficult task, it could be done through using graphic organizers.

According to this study, graphic organizers help third graders with learning disabilities to understand text through (1) organizing ideas in the text, (2) sequencing events in the story, (3) showing differences and similarities between characters or objects, (4) encouraging them to bring in and organize their own ideas and background knowledge regarding the text, (5) providing them with an opportunity to think deeply about the text and analyze it, (6) breaking down the text into smaller parts, (7) identifying main idea and details, (8) making connections between main idea and related details, and (9) making predictions. Most of what teachers shared

about how using graphic organizers helps students with learning disabilities to understand text generally aligns with previous research. For example, graphic organizers help students in several ways: they connect students' prior knowledge with the new information in order to facilitate their understanding (Sam & Rajan, 2013); they provide students with a visual presentation that shows the relationship and connection between ideas and concepts (Anders, Flip, & Jaffe, 1989; Darch & Gersten, 1986; Sam & Rajan, 2013); and lastly they help students to better comprehend textual information through making a prediction about the text (Chang, Sung, & Chen, 2002; DiCecco & Gleason, 2002; Kim, Vaughn, Wanzek, & Wei, 2004; Pang, 2013; Sam & Rajan, 2013).

Questioning is another strategy that helps to improve reading comprehension of third graders with learning disabilities. According to this study, questioning as a strategy takes two forms based on students' ability: (a) teachers frequently stop and question the students while they are reading and (b) students are questioning themselves about the text while they are reading. These two forms of questioning are broadly consistent with what was found in the literature (Rouse, Alber-Morgan, Cullen, & Sawyer, 2014; Swanson & De La Paz, 1998; Taylor, Alber, & Walker, 2002). In addition, questioning as a strategy improves students' comprehension through encouraging them to think while reading, stay focused on reading task, thinking about the best answers, and go back to the text and reread it if they miss some information. It also improves students' understanding of main ideas and details of the text by encouraging them to ask, "what if" questions and connecting the text to their background knowledge. What was reported by teachers are generally align with what is in the literature. For example, it was found that asking questions while involving in the reading process provides students with an opportunity to think about what are they reading, be active and independent readers, and be able to appropriately reflect on their own reading (Mahdavi & Tensfeldt, 2013; National Reading Panel,

2000; Rosenshine, Meister, & Chapman, 1996; Rouse, Alber-Morgan, Cullen, & Sawyer, 2014; Taylor, Alber, & Walker, 2002). Also, Crabtree, Alber-Morgan, and Konrad (2010) conducted a study to examine the impact of using self-questioning on reading comprehension of high-school students with learning disabilities. The results indicated that the students' reading comprehension of narrative texts and retelling significantly increased after teaching them through using self-questioning. Also, the results show that after implementation of the strategy, all participants were able to maintain their reading comprehension outcomes.

According to the results, story mapping is another reading comprehension strategy that helps students to comprehend what they are reading. Story mapping is an effective reading comprehension strategy that increase comprehension of a text through providing them with a template that organizes and summarizes the different parts of a story (characters, plot, setting, problems, and solution), which are very important for identifying and recalling the important details and ideas. It also facilitates students' comprehension through visualizing their thought, allowing them to match the main ideas with their details, and sequencing events. These findings are generally in line with those found in the literature. For example, story-mapping template works as a framework to guide students' attention in order to identify the story grammar elements while reading and writing them on the provided template (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Stetter & Hughes, 2010; Stagliano & Boon, 2009; Zahoor & Janjua, 2013). In addition, using story-mapping has positively impacted reading comprehension skills for students with learning disabilities by improving their abilities to successfully identify story-grammar elements, such as setting, conflict, and characters (Boulineau, Fore, Hagan-Burke, & Burke, 2004; Dimino, Taylor, Gersten, 1995; Davis, 1994; DiCecco & Gleason, 2002; Idol & Croll, 1987), order the story information in its correct sequence (Gardill and Jitendra, 1999;

Pearson, 1985), develop a connection that clearly show the relationship between the story components (Pearson, 1982), identify and recall important information from a text (Idol, 1987; Idol & Croll, 1997; Stetter & Hughes, 2010), improve overall comprehension of a narrative story (Paris, 2007), and correctly answer comprehension questions about an expository text (Onachukwu Boon, Fore, & Bender, 2007; Stagliano & Boon, 2009).

Peer-assisted reading strategy was another reading comprehension strategy that was frequently mentioned as effective by the special education teachers in this study. Similarly, Peer-assisted learning strategy has been demonstrated as an effective instructional method by the U.S. Department of Education's Program Effectiveness Panel (McMaster, Fuchs, & Fuchs, 2006; McMaster, Fuchs, & Fuchs, 2007). According to the results, the peer-assisted reading strategy increases reading comprehension of third graders with learning disabilities through allowing them to work with and listen to a peer, increasing their motivation to learn, predicting, and learning from each other's personal connection to the text. It also facilitates students' comprehension through allowing them a cooperative learning experience in which they coordinate and discuss information that has been in the book and share with one another. It also helps improving students' confidence to share and confirm what they learn from the text with others. What was shared by teachers regarding this strategy is broadly harmony with those of researchers such as (Fuchs, Fuchs, & Thomas et al., 2001; Fuchs et al., 1997; Hughes & Frederick, 2006). Also, Calhoon (2005) examined the effectiveness of peer-assisted learning strategy on phonological and reading comprehension skills for 38 middle school students with learning disabilities. The students were divided into two groups. The first group was taught through utilizing a traditional whole class-method, while the other group was taught through peer-assisted learning strategy. The results indicated that students who were placed in peer-

assisted learning strategy condition gained a significant improvement on word attack, word identification, and passage comprehension utilizing the Woodcock-Johnson Test of Achievement-III. Also, the results of this study aligned with the findings of several previous studies (Fuchs et al., 2002; Fuchs, 2002; Fuchs & Fuchs, 2001; Mathes, 1998).

Using different grouping was another strategy that was mentioned as effective by the majority of special education teachers. These different grouping include small group and one-to-one. According to the results, teachers group their students based on different factors, such as their friendship, their abilities, their personalities. According to this study grouping students while engaging in reading activities is an effective strategy to increase reading comprehension. That is because it allows students to discuss their thoughts and retelling with others, learn from each other, bring in their past experience and connect it with the new information, formulate their thoughts and opinions, and work together to answer questions that are related to text. According to the results, thinking aloud is an effective reading strategy that helps to improve reading comprehension of third graders with learning disabilities. It facilitates students' understanding through providing them with a good model to follow when they are reading and an opportunity to share their thoughts with other classmates. Also, having a loud discussion with the students about the reading is another effective strategy that helps to improve their reading comprehension. That is because it provides them with a cooperative learning environment, which allows them to learn from teachers and from each other and confirm their understanding of a text.

Only one teacher mentioned cooperative strategic reading as an effective reading comprehension strategy. She believes that strategy helps students by allowing them to cooperatively work together on reading activities. Cooperative strategic reading strategy was

found to be effective for improving students' reading comprehension by other researchers too. For instance, Boardman, Vaughn, Buckley, Reutebuch, Roberts, and Klingner (2016) conducted a study to examine the effectiveness of using collaborative strategic reading on reading comprehension of elementary students with learning disabilities. The study was conducted in 14 elementary schools. The participants were 60 teachers who were delivering instructions in the general education classrooms. Teachers in the control group were asked to teach their students through using their traditional instructional method with no collaborative strategic reading intervention, and the teachers in the intervention group were required to teach their students through implementing collaborative strategic reading intervention. The results of this study indicated that the reading comprehension of students with learning disabilities who were taught through implementing collaborative strategic reading was significantly greater than students with learning disabilities who were placed in traditional instructional condition. Similar results were found by an experimental study that was conducted by Kim, Vaughn, Klingner, Woodruff, Reutebuch, and Kouzekanani (2006) to investigate the influence of using collaborative strategic reading intervention to improve reading comprehension of middle school students with learning disabilities.

One teacher surprised me when she shared that she uses Cloze procedures, which is known as an assessment technique, as a strategy to teach reading comprehension to her students. According to the results, Cloze as a reading strategy helps students improve their comprehension through allowing them to think of the context clues within the text. It also allowing them to determine which words (noun, verb, or adjective) they need to be filled in the missing blank to make sense of whatever the sentence is. Even though, this technique was identified as an effective reading strategy for teaching comprehension by a teacher who have 31 years of

experience working with students with learning disabilities, I feel that it is worth more investigation.

Computerized strategies. In this study, computerized strategies were defined as any strategy that requires a computer when it is used by students. Three computerized reading strategies were identified by participants in this study. The first strategy is System 44, which was identified by the majority of participants. According to the results, System 44 helps students to increase their reading comprehension through allowing them multiple practices of reading activities. Also, Fast Forward is another strategy that is mentioned as effective to increase students' reading comprehension. It allows students to improve their vocabulary and thinking skills, which are all important for comprehension. In addition, Raze Kids was identified as an effective strategy that helps to improve reading comprehension of third graders with learning disabilities. It allows for repeated readings, which is very important to increase reading level especially for students with learning disabilities. Although Fast Forward and Raze Kids were identified as effective strategies by teachers who have several years of teaching experience, they are worth more investigations.

Criteria for selecting the strategies. According to the findings, reading comprehension strategies are not one-size-fits-all. Therefore, teachers took into consideration numerous criteria when selecting an appropriate strategy for their third graders with learning disabilities. The first criterion is the students' abilities and needs. Teachers pointed out that each student is unique based on his/her ability and needs; therefore, they emphasized the importance of taking into account the students' abilities and educational needs when selecting a strategy for their students. The second criterion is current pre-reading skills and reading level. According to the finding, teachers select strategies based on their students' pre-reading skills, such as identifying the alphabet, knowing diphthongs and digraphs, and sight words. The third criterion is the student's prior

knowledge. According to this study, teachers take into account their students' previous knowledge. Also, it was found that having the same students for two or three academic years helps teachers to have better idea of their students' prior knowledge, which results in utilizing the most appropriate strategies with them.

The fourth criterion is the student's learning style. According to the finding, not all students have the same learning style; therefore, it is very important to utilize an appropriate strategy that satisfies the students' way of learning. Another criterion is strategies that used in the general classroom. According to the results, looking at the reading comprehension strategies that are used by the general education teacher in the general classroom is helpful when selecting a strategy to use in the resource room. Doing that allows the special education teachers to incorporate the same strategy with the students in the resource room, which provides students with an opportunity to frequently practices the same strategy over and over. Thus, I believe it is very important for special education teachers to create and keep an ongoing and effective cooperation with general education teachers. That kind of relationship benefits the students in several ways. For example, both teachers can plan and implement the most appropriate intervention for a particular student, discuss the students' growth, identify the student's weaknesses and strengths, and decide which changes or modifications should be made to the student's intervention. The final criterion is recommendations of student's IEP team. According to this study, recommendation of student's IEP is another factor that taken into consideration when selecting a particular strategy for third students.

Onset and reasons behind using these strategies. According to the results, teachers start to use different reading comprehension strategies with their students before they reach third grade. Teachers teach their students through strategies because they want their students to

recognize that the main goal of reading is understanding. Teachers also emphasized that the earlier their students learn to read the better for them. According to the results, teachers start to use reading comprehension strategies in early grades (kindergarten, first grade, second grade) because that time is usually when the reading problems manifest. I believe that teaching students to utilize reading strategies while reading in early grades is a key factor that we all as educators should consider. Also, all students including those with learning disabilities need to learn how to overcome their reading difficulties in early grade through using reading strategies.

According to this study, teachers' responses differ regarding the reasons behind using reading comprehension strategies while teaching students with learning disabilities. About one half of the teachers teach reading comprehension through the use of different strategies as a response to the reading developmental process. That is because they want to help their third graders with learning disabilities right away from the beginning instead of waiting for students to fail in order to receive help. The other half of teachers are using reading comprehension strategies as a result of students' failure and as a response to the reading development process. That is because they believe that even though all students need to learn how to read through the most appropriate strategies, some students have issues that required teachers to provide special support through using a specific instructional method. Only one teacher shared that she uses reading comprehension only as a result of students' failure. I support the opinion that teachers should use reading comprehension strategies with all students from the beginning and do not wait until the students fail in order to receive the help. If some students still need more support after implementation of general strategies, teachers should provide them with more intensive and individual supports.

The Impact of the Teachers' Experience on Selecting These Strategies

Two sub-categories emerged from this category. These include: how experience helps teachers to select appropriate strategies for their students and ways to modify strategies.

How experience helps teachers to select appropriate strategies for their students.

According to the results, as teachers' experiences of working with students with learning disabilities increase year after year, they become more experienced in determining which strategies might work better with a particular student. Also, having the same students for more than one year allows teachers to know the students well, which is critical to satisfy their educational and learning needs through using the best instructional methods. Also, teachers were very interested in selecting only research-based strategies to teach reading comprehension for their students. Teachers used only research-based practices because school districts require them to use only research-based strategy, their past education experience emphasizes best practices, and they want to beneficially use their instructional time with students rather than trying methods that may or may not work well.

Ways to modify strategies. According to the results, although teachers use only reading comprehension strategies that have been approved as effective by research, they modify some of these strategies based on the students' needs and abilities. For instance, one strategy might originally require students to write down their ideas on worksheets or other instructional means. However, students might be weak at writing, so teachers allow their students to verbally express their ideas and write these ideas down for them. Also, teachers do modify some strategies by breaking them into smaller pieces and modify strategies for students who have low reading level, which prevent them from comprehending a text well. For example, if one strategy requires

students to independently read a text, teachers may read to these students instead of having them read by themselves.

Research Question 3: Informal Assessments

The third research question asked, “What are the classroom-based reading assessment tools that special education teachers use to measure the students’ reading comprehension growth and to determine the effectiveness of these strategies?” The teachers’ responses regarding this question emerged as four main themes: (a) importance of assessment, (b) informal assessment tools, (c) how often is reading comprehension assessed, and (d) ways to modify assessments based on students need and abilities.

Importance of Assessment

Based on the results of this study, informally assessing students’ reading comprehension serves teachers in several ways. First, informal assessment provides teachers with a clear picture of their students’ reading comprehension level. Second, it guides teachers’ instructions in a way that benefits the students. In other words, it helps teachers to determine what strategy and practices that needs to be modified or totally changed. Third, informal reading assessment helps teachers to measure the effectiveness of a particular strategy on the students’ reading comprehension. The results regarding the advantages of informal reading assessment generally align with what other researchers found. For instance, assessment is an essential tool to measure the effectiveness of teaching reading and to check the efficiency of a reading intervention method designed to respond to educational needs of students (Woolley, 2011; Caccamise & Snyder, 2005). Also, Serafini (2010) pointed out that informal assessment helps teachers to (1) develop the most appropriate instruction for students, (2) make a better determination about what

lesson would be more effective to teach, and (3) determine what supportive material to use during their lessons.

Informal Assessment Tools

According to the results teachers informally assess their students' reading comprehension through using different assessment tools. The five common reading assessments are discussed in the following section.

The first assessment tool is retelling. Based on the results, special education teachers assess reading comprehension of third graders with learning disabilities through asking students to either verbally or in writing retell the reading passage through using their own words. Some students have a hard time retelling and summarizing what they just read. Therefore, teachers verbally prompt them to retell more ideas and details regarding the text. Teachers believe retelling is a beneficial assessment tools that allows teachers to determine whether or not their students understand the most important part of the texts and whether or not they sequence events in the text. Retelling is not only beneficial for teachers, but it also allows students to confirm their own understanding. The results regarding the benefits of retelling are generally in line with what was found in the literature. For example, retelling allows students to demonstrate their understanding of the passage by either producing a verbal presentation or engaging in a written activity (Han, 2005; Morrow, 2005). Also, having students use their own words while retelling allows teachers to determine that the students accurately understand the passage rather than just literally restate the authors' words (Spinelli, 2012). Furthermore, the retelling activity allows teachers to determine students' reading comprehension by assessing the accuracy of the information that they are retelling when compared to the original passage (Serafini, 2010).

Retelling provides teachers with helpful information about their students' abilities to organize, classify, integrate and make an inference about a textual information (Han, 2005).

The second assessment tool is questioning. Teachers use questioning to informally assess reading comprehension of third graders with learning disabilities. According to the results, questioning as an assessment can take two forms: orally and written. Also, students' responses regarding these questions can be expressed orally or in writing. Questioning is a beneficial assessment that allows teachers to determine whether or not their students have understood information in the text and organized it to higher order thinking. It is also a quick assessment that allows teachers to decide what changes or modifications that need to be made in their instructions. I totally agree questioning is one of the assessment tools that can be used quickly and multiple times throughout teaching the lesson. It can be used to check students' comprehension while and after reading. The third assessment tool is Cloze procedure. Teachers use Cloze procedure to informally assess reading comprehension of their third graders with learning disabilities. It allows teachers to determine whether or not students know what word to select in order to make meaning of the text. It assesses student's comprehension and word skills. Also, in the literature Cloze procedure is found to be a beneficial assessment to assess reading comprehension. For instance, Williams, Ari, and Santamaria (2011) conducted a study to compare the achievement of 100 students on a sustained silent reading test and two types of Cloze Assessment tests (Maze and open-ended) to determine which test format makes greater variance in reading comprehension. The participants were two group of post-secondary students, struggling and typical. The findings of this study indicated that there is high correlation between both Cloze Assessment and the reading comprehension test ($r = .68$ and $.52$, $p < .00$). More recently, Gellert and Elbro (2013) developed a quick 10-minute Cloze Assessment that required

participants to accurately comprehend information and concepts across the passage in order to correctly guess and fill in the deletions. The participants were 204 Danish adults. The results indicated that students' performance on the Cloze test were highly correlated ($r=.84$) with their performance on a 30-minute standard question-answer comprehension test. Therefore, Gellert and Elbro (2013) concluded that cloze test could be employed to assess reading comprehension.

The fourth assessment tool is having students fill in graphic organizers. According to the results, having the students fill in graphic organizers as an assessment tool allows teachers to quickly determine what the students know, what did they learn, and did not know. The next assessment tool is having the students express their understanding through a writing activity. According to the results, having the students express their understanding through a writing activity is a beneficial assessment tool. That is because teachers can always have the students work in front of them in order to determine whether or not students understand what they read, compare and contrast what they gain from the reading, and how they connect information to their past experiences. I do agree that having the students express their understanding through writing is a useful assessment. That is because teachers always have the students' work in front of them for reviewing and grading purpose.

How Often is Reading Comprehension Assessed

According to the results, special education teachers informally assess their students reading comprehension every day every assignment. Also, they do informally assess the students once a week to write it down in their official records. These assessments are important to both guide the teachers' instructions and determine what the students have learned. As a special education teacher, I think that assessing students every day is very beneficial to determine the students' achievement level, monitor their progress, and allow teachers to determine the most

appropriate instructional method for their students.

Ways to Modify Assessments Based on Students Needs and Abilities

Based on the results of this study, teachers do some modifications on these informal assessment tools based on the students' needs and abilities. These modifications include simplifying the assessment for the students. For example, teachers might simplify questions based on the students' abilities and knowledge. Teachers also might reduce the amount of details that students have to retell or summarize. Other teachers allow their students who are not good writers to orally retell the information. According to my experience, I really believe that teachers should modify some assessment tools based on their students' abilities and learning styles in order to accurately assess their reading comprehension. That is because assessment tools are not one size-fit-all. Each individual student has his/her abilities and needs, which need to be considered.

Discussion of the Results Related to the Transactional Theory

This part explains how the results of this study are related to the theoretical framework. The theoretical framework that led this study was related to the lens of Rosenblatt's (1978) transactional theory. Rosenblatt's (1978) theory stresses that meaning cannot be created in isolation from the reader. According to Rosenblatt (1982), "reading is a transaction, a two-way process, involving a reader and a text at a particular time under particular circumstances" (p. 268). Her description of the reading process is harmonious with the definition of reading comprehension, which is the process in which readers involve in to gain meaning through particular interaction with a text (the Rand Reading Study Group, 2002; Snow, 2002). Both descriptions emphasize the importance of both reader and text in order to gain meaning of a particular passage. Thus, based on the transactional theory, the process of reading

comprehension requires an active transaction between readers, as the heart of the reading process, and the text at a particular time in a specific context in order to obtain meaning of the reading materials (Taylor, 2011; Rosenblatt, 1982; Unrau and Alvermann, 2013).

Teachers who believe in Rosenblatt's theory while teaching reading comprehension provide their students with instructional strategies that smooth the transaction between students and text. They also supply instructional assistance that purposefully engages students with transactional activities in an environment that encourages interaction while reading a text. Special education teachers in this study explicitly teach and incorporate several strategies, based on Rosenblatt's transactional theory, that facilitate their students' reading comprehension. These strategies include: (a) graphic organizers, (b) questioning, (c) story mapping, (d) peer-assisted strategy, (e) think aloud, (f) discussing the text, (g) different grouping, (h) close reading, (i) collaborative strategic reading, (j) and System 44. Most of these strategies allow students to learn through interactive process, which encourages them to make a connection between their background knowledge and textual information in order to gain meaning from the text.

For this study, I was wondering if the special education teachers who are teaching reading will look at reading comprehension as a process that requires students to make a connection between the text and their own background knowledge in order to gain meaning from that text. After the data analysis has taken place, I found that all special education teachers emphasized the importance of being able to make a connection between a given text and a students' background knowledge in order for reading comprehension to occur. What the teachers said regarding the importance of that connection is closely aligned with Rosenblatt's theory.

Recommendations for Future Research

Based on the finding of this study, the following recommendations should be considered for future research:

1. Conducting a study that specifically explores the most beneficial methods to enhance the relationship between special education and general education teachers in order to create a kind of consistency in their strategies while working with students with learning disabilities in both settings, the resource room and the general class room.
2. Conducting a quantitative study that investigates the effective reading strategies that experienced special education teachers utilize to improve the students' reading comprehension. Based on the responses of special education teachers in this current study, a unique survey could be developed as an instrument for collecting the data from participants. The participants could be special education teachers from multiple states or multiple regions within the same state.
3. Replicating the present study and including a larger sample size that would be collected from more than one region. The results of that replication could support the finding of this study.
4. A further qualitative study investigating the research questions of this study through using additional data collection methods, such as observation would be very interesting.
5. Even though Cloze procedure is a well-known assessment technique that is used to assess the students' reading comprehension, one teacher shared that she uses Cloze as a strategy to teach reading comprehension for her students. Therefore, further research exploring the effectiveness of using Cloze procedure as a strategy to teach reading comprehension is worth more investigation.

6. Conducting further research examining the impact of the students' social economic status on their background knowledge and life experience would be very interesting.
7. Conducting further study to investigate the effectiveness of using Fast Forward and Raze kids as strategies to increase reading comprehension of students with learning disabilities.
8. Conducting a study that explores the most effective methods that encourage students with learning disabilities increasing their reading practice outside the school setting.
9. Conducting further study to explore the effectiveness of assessing reading comprehension of third graders with learning disabilities through asking them to fill in graphic organizers.

Chapter 5 Summary

This chapter presented a brief summary of the study, discussion of the results as related to the main research questions, discussion of the results as related to the transactional theory, and recommendations for future studies. Different reading problems were mentioned by teachers as reason that prevent third graders with learning disabilities from comprehending a text. These problems include, but are not limited to issues with background knowledge, issues with fluency, difficulty making inference, and difficulty with informational text. Therefore, teachers helped their students to overcome their difficulty with reading comprehension through using different strategies. These strategies include graphic organizers, story mapping, and questioning, which all encourage students to interact with the text in order to gain meaning from the text. Also, teachers measure the students' reading comprehension growth through using several informal reading assessments. These assessments include retelling, questioning, Cloze procedures, and graphic organizers. The results of this study might be beneficial for school principals, educators, and parents, who are playing major roles in the decision-making process, which influence the

development of the strategies and instructional activities for students with learning disabilities.

Since different strategies were pointed out as effective for increasing students' reading comprehension, the finding should lead to some modifications in teachers' instructional activities and strategies.

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Appendix A
Principals' Recruitment Email

Dear Principals,

My name is Nouf Almutairi (students investigator); I am a student who is working on her doctorate degree in special education at Western Michigan University under the supervision of Dr. Luchara Wallace as a principal investigator. I would like to kindly inform you about my desire to conduct my study at your school as one of the schools that have met my study criteria, as well as obtain your permission to conduct my study in your schools.

Currently, I am working on a research study (doctoral dissertation) that I think may be beneficial for many special education teachers.

The purpose of this study is to provide an opportunity for experienced special education teachers to share their experiences and practices in teaching reading comprehension to third grade students with learning disabilities in resource rooms settings.

This research study is part of the requirements for obtaining a doctoral degree in special education for the department of Special Education and Literacy Studies at Western Michigan University, in which I am a student.

I would like to conduct the study with special education teachers who are teaching third graders with learning disabilities in resource rooms settings in you building. Specifically, special education teachers are invited to identify the common reading comprehension problems that third graders with disabilities face and share the effective strategies that they have used in order to increase the students reading comprehension achievement level.

The criteria for teachers to participate in the study are as follows:

1. have a minimum of three-years experience in teaching and working with elementary students with learning disabilities
2. have a learning disabilities endorsement
3. have a minimum of 3-years experience of delivering reading instruction to third graders in the resource room setting

If teachers would like to participate in this study, they will be asked to participant in approximately 30-60-minute interview with the researcher, follow-up interview, and share artifacts of their strategies for teaching reading to students with learning disabilities, assessment, and instructional activities. During that interview, they will be asked to answer different in-depth open-ended questions. The interview will be audiotaped and later transcribed. Teachers will be provided with a copy of their transcripts to add or clarify whatever they think is necessary.

The interview will contain different questions about their teaching experience and practices. Teachers will be asked about the reading strategies that they use to improve reading comprehension achievement level for third grade students with learning disabilities. Their interview's transcript will be compared with those of other study participants to come up with some common themes in which teachers' experiences differ from one another. All this information will not include their real name or other identity information that could be attributed back to them.

The interview will not be conducted during the teachers' instructional time. students will not be involved in this study.

It will be conducted in a private, safe, comfortable place based on the participants' convenience.

I assume that you might need more information to make your decision. Therefore, I would like to schedule an initial face-to face visit in order to provide you with more information about the study. To schedule an initial meeting, please contact me at either email address Nouf.r.Almutairi@wmich.edu Or this phone number 740-274-1376 or call the academic advisor, Dr. Luchara Wallace at 269-387-5935 at or luchara.wallace@wmich.edu. Also, I will answer any questions and make sure you have all the information you need to decide if you will allow me to conduct this study in your school.

By contacting me or meeting me face-to-face, you are making no commitment unless you decide to allow me to conduct the study in your school through allowing me to work with the special education teachers.

Thank you for your consideration of this request to be part of this study. I would appreciate a response to this email, so I know that you received it during this semester.

You can call me or email a contact number, date, and time for me to call you or arrange a meeting time and location.

Sincerely,
Nouf Almutairi

Appendix B
Teachers' Flyer

**Department of Special Education and Literacy Studies
Western Michigan University**

Participants Needed For

**Research on Effective Reading Strategies for increasing the Reading Comprehension Level
of Third Grade Students with Learning Disabilities**

We are looking for volunteers to take part in a qualitative study on

**Effective Reading Strategies for increasing the Reading Comprehension Level of Third
Grade Students with Learning Disabilities**

Inclusionary criteria:

The participants are experienced special education teachers who:

1. have a minimum of three-years experience in teaching and working with elementary students with learning disabilities.
2. have a learning disabilities endorsement
3. have a minimum of 3-year experience of delivering reading instruction to third graders in the resource room setting.

As a participant in this study, you will be asked to share your experience about the common reading comprehension problems that third graders with learning disabilities face. Also, you will be asked to share your experience about the effective reading comprehension strategies that you have used with the students. You will be asked to participate in approximately 30-60-minute interview. And 30- minutes follow-up interview. In addition, you will be asked to share the students' aggregated data (reading score without sharing information about the students' identities) and some examples and artifacts (worksheets, materials, and strategies) that you have used to teach reading comprehension.

The interview will not be conducted during the teachers' instructional time. Students will not be involved in this study.

It will be conducted in a private, safe, comfortable place based on the participants' convenience.

To either confirm your interest in participating in this study or for more information about this study

You have the two options:

1. Contact me through your school principal.
2. Or contact me directly via either an email or a phone call

Nouf Almutairi

Email: Nouf.r.almutairi@wmich.edu

(740-274-1376)

**The study has been reviewed and approved by the
Human Subjects Institutional Review Board, Western Michigan University.**

Appendix C Teachers' Email

Dear Special Education Teachers,

My name is Nouf Almutairi, I am a student who is working on her doctorate degree in special education at Western Michigan University under the supervision of Dr. Luchara Wallace as a principal investigator. I would like to kindly thank you for your interests in participating in my research study (doctoral dissertation) that I think may benefit all special education teachers.

The purpose of this study is to give an opportunity for experienced special education teachers to share their experience and practices in teaching reading comprehension to third grade students with learning disabilities.

This research study is a part of the requirement for obtaining a doctoral degree in special education for the department of Special education and literacy studies at Western Michigan University, in which I am a student.

Specifically, you are invited to participate in 30-60-minute interview to identify the common reading comprehension problems that third graders with disabilities face. You also will be asked to share your experiences, practices, and the strategies that you have used in order to increase your students' reading comprehension levels in your resource room. You will be asked to share some example of the artifacts that you use to teach the students (strategies, materials, worksheets) and students data (reading score without sharing any personal information). During that interview, you will be asked to answer different in-depth open-ended questions. The interview will be audiotaped and later transcribed. You will be provided with a copy of your transcript to add or clarify whatever you think is necessary. Your interview transcript will be compared with those of other study participants to come up with some common themes in which teachers' experiences differ from one another. All this information will not include your real name or other identity information that could be attributed back to you.

The criteria to participate in the study are the follows:

The participants should be experienced special education teachers who:

1. have a minimum of three-years experience in teaching and working with elementary students with learning disabilities
2. have a learning disabilities endorsement
3. have a minimum of 3-year experience of delivering reading instruction to third graders in the resource room setting.

The interview will not be conducted during the teachers' instructional time. Students will not be involved in this study.

It will be conducted in a private, safe, comfortable place based on the participants' convenience.

I assume that you might need more information to make your final decision. Therefore, I would like to schedule an initial face-to-face meeting in order to provide you with more information about the study. Also, I will answer any question that you may have and make sure you have all the information you need to decide if you will participate in this study.

To schedule our initial meeting, please contact me at either email address Nouf.r.Almutairi@wmich.edu or this phone number 740-274-1376 or call the academic advisor, Dr. Luchara Wallace at 269-387-5935 at or luchara.wallace@wmich.edu.

By contacting me or meeting me face-to-face, you are making no commitment to participate in the study unless you decide to complete the informed consent to participate after we talk.

Thank you for your consideration of this request to be part of this study. I would appreciate a response to this email, so I know that you received it during this semester.

You can call me or email a contact number, date, and time for me to call you or arrange a meeting time and location.

Sincerely,
Nouf Almutairi

Appendix D
Consent Form

Western Michigan University

Department of Special Education and Literacy Studies

Principal Investigator: Luchara Wallace

Student Investigator: Nouf Almutairi

Title of Study: Effective Reading Strategies for Increasing the Reading Comprehension Levels of Third Grade Students with Learning Disabilities

You have been invited to participate in a research project titled "Effective Reading Strategies for Increasing the Reading Comprehension Levels of Third Grade Students with Learning Disabilities". This project will serve as Nouf Almutairi's research project for the requirements of gaining a Doctoral of Education. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

What are we trying to find out in this study?

The goal of this study is to identify the reading comprehension problems that third grade students with learning disabilities face as well as discover the effective reading strategies that skilled special education teachers utilized in order to facilitate comprehension for those students in resource rooms. This study will focus on different aspects including the comprehension problems that students face, strategies that teachers use in order to assist and support students. This research may contribute to produce clear understanding and description of the strategies and process that experienced special education teachers utilize to improve reading achievement levels for third grade students with learning disabilities in resource rooms. It is possible that based on the results of this research, the special education teachers will have an interest to share their experiences with and provide support for new teachers. Thus, these new teachers can effectively teach reading for their students.

Who can participate in this study?

You can participate in this study if you are an elementary special education teacher who is teaching third graders with learning disabilities and providing reading instruction in resource rooms. Moreover, participants must meet the following criteria:

1. have a minimum of three-years experience in teaching and working with elementary students with learning disabilities
2. should have a learning disabilities endorsement
3. must have a minimum of 3-years experience of delivering reading instruction to third graders in the resource room setting

Where will this study take place?

The interviews will be at resources room settings or any other private, safe, comfortable place based on your convenience.

What is the time commitment for participating in this study?

The total amount for the interview will be approximately 30-60 minutes. A follow-up interview may take 30 minutes. During that time, the researcher will engage you in a conversation about your reading teaching practice. You will have an opportunity to review the transcript of your interview and clarify or add to the transcript if you feel you want to explain more.

What will you be asked to do if you choose to participate in this study?

If you agree to participate, you will be asked to participate in a 30-60-minute interview with the researcher. During that interview, you will be asked to answer different in-depth open-ended questions. You will also be asked to share examples of your teaching strategies and document for helping third grade students with learning disabilities to improve reading comprehension, such as assignment, worksheets, homework, and some in class activities. You will be asked to share students aggregated score on reading assessment without sharing any personal information about the students. The interview will be audiotaped and later transcribed. You will be provided with a copy of your transcript to add or clarify whatever you think it is necessary. You will be asked to share your experience in teaching reading to students with learning disabilities.

What information is being measured during the study?

The interview will contain different in depth open-ended questions about the teachers' teaching experience and practices. Teachers will be asked about the reading strategies which they use to improve reading comprehension achievement for third grade students with learning disabilities. your interview's transcript will be compared with those of other study participants to come up with some common themes in which teachers' experiences differ from one another. All this information will not include your real name or other identifying information that could be attributed back to you.

What are the risks of participating in this study and how will these risks be minimized?

There is no known risk for your participation this study. The topic requires the participant to share her/his experiences and teaching practices. That might encourage emotional responses for some of participants. If that happens, if you are seems to be in a situation of emotional difficulty the investigator will stop the interview. You have the right to stop the interview if you feel you need to do so.

What are the benefits of participating in this study?

There are no known benefits to you for participating in the study. However, you might contribute to benefits new special education teachers improving their teaching experiences. You may produce and generate a clear understanding and description of the strategies and process that experienced special education teachers utilize to improve reading comprehension achievement level for third grade students with learning disabilities in resource room.

Are there any costs associated with participating in this study?

There will be no financial cost for participation.

Is there any compensation for participating in this study?

There is no compensation for participating in this study.

Who will have access to the information collected during this study?

The researcher and the academic advisor are the only people who will have access to the collected information. The data will be saved and store in a file that have a password. Once the researcher transcribes the interview, she will immediately destroy the digital recording files. All information will be treated with high confidentiality. You will be assigned a pseudonym to protect your identity.

What if you want to stop participating in this study?

You can choose to stop participating in the study at any time for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study. The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact me the investigator, at 740-274-1376 or via email Nouf.r.Amutairi@wmich.edu or call the academic advisor, Dr. Luchara Wallace at 269-387-5935 at or luchara.wallace@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

I acknowledge that the interview will be audio recording and it will be used solely for the purpose of this research by the researcher and the academic advisor of Western Michigan University.

Participant's signature

Also, I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please Print Your Name

Participant's signature

Date

Appendix E

Interview Protocol

Project: Reading comprehension strategies that have been used by special education teachers in resource rooms to increase the reading comprehension achievement levels of elementary students with learning disabilities

Time of Interview: _____

Date of Interview: _____

Location: _____

Interviewer: _____

Interviewee: _____

Participant Background Information:

Name: _____

Gender: _____

Years as a teacher: _____ What grade level(s) _____

Certification as a teacher: _____

Degrees obtained: _____

Years have you teach at resource room _____

Do you have an endorsement in reading? if yes. Please specify _____

Thank you for consenting to participate in this study. I would like to record the interview, so the study can be as accurate as possible. You may request that the tape recorder be turned off at any point of the interview. This interview will probably take between 30-60 minutes to complete.

Lead-in: Today, we are going to explore your experience with your own reading comprehension teaching practice and practices with third grade students with learning disabilities. I would like to

understand the most common reading comprehension problems that third graders with learning disabilities face while reading and your experience with teaching reading comprehension to them. I am most interested in giving experienced teachers like you an opportunity to describe what they have done in order to increase the students' reading comprehension achievement.

1. Please describe your own philosophy of reading comprehension, its definition, and how it occurs.
2. Please describe the reading comprehension problems and challenges that may prevent your third-grade students with learning disabilities from comprehending a text?
 - A. Would you please provide me with more examples about the comprehension problems?
 - B. When are you first seeing the manifestation of the problems?
3. Please describe the effective reading comprehension strategies that you use in order to improve comprehension of your students.
 - A. When do you find yourself first introducing reading comprehension strategies?
 - B. Is it a result of a student failure or deficit or it is a more of a response to the reading development process?
 - C. Do you use the same strategies with all students?
4. How does your teaching experience assist you to either select or adapt comprehension reading strategies? Can you provide me with examples?
 - A. Do you usually come up with strategies on your own or do you use research-based strategies?

- B. Have you modified the use of some strategies base on the students' abilities and educational needs? If yes, how do you do that? Please provide me with an example?
5. What criteria do you use to select the appropriate strategies for your students?
- A. When you select your strategies, do you take into consideration some factors, such as the students' pervious knowledge, socio-cultural aspects, abilities, needs?
- B. If yes, please provide me with an example.
6. Please describe the class-room based assessment tools that you use to measure the students reading comprehension growth and to determine the effectiveness of these strategies.
- A. How do you determine that these strategies are effective?
- B. How do you select these assessment tools?
- C. How often do you assess the students?
- D. Do you modify some of these assessment tools based on the students' needs or abilities? If yes, please explain.
7. Is there anything that I did not ask that you would like to share about your experience of utilizing some reading strategies with your students?

Thank you for participating in this interview. I appreciate your willingness to participate in this study. All the information you shared is very valuable and will be treated with complete confidentiality. The next step will be for the audio-recording to be transcribed. Once the reordering of your interview transcribed I will contact you, so you may review the transcription to ensure that it accurate and reflect what you said. Do you have any question?

Again, thank you for giving your time and voice to this study.

Appendix F

HSIRB Approval

WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: August 2, 2017

To: Luchara Wallace, Principal Investigator
Nouf Almutairi, Student Investigator for dissertationFrom: Amy Naugle, Ph.D., Chair 

Re: HSIRB Project Number 17-07-12

This letter will serve as confirmation that your research project titled “Effective Reading Strategies for Increasing the Reading Comprehension Level of Third Grade Students with Learning Disabilities” has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., ***you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study.”*** Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

The Board wishes you success in the pursuit of your research goals.

Approval Termination:

August 1, 2018

1903 W. Michigan Ave., Kalamazoo, MI 49008-5456

PHONE: (269) 387-8293 FAX: (269) 387-8276

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Appendix G: Results Summary Tables

Table A-1.

A summary of findings based on teachers' philosophy regarding reading comprehension

Primary Categories	Subcategories	Sample Quotes
Teachers' philosophy regarding reading comprehension	Definition of reading comprehension	<ul style="list-style-type: none"> • I think when you're able to think about your reading enough to get a mental image to make a picture in your mind about what's happening, to be able to fully understand, the details and the main ideas of that selection. • My understanding of reading comprehension is being able to interpret a text, regardless of what the text type is, and you are able to retell besides analyzing, interpret, and understand what you have just read, be it a informational text or a story or that type of thing. When you are reading, I think you need to be able to understand the main idea and the key details that are being part of your writing, part of the reading.
	How comprehension occurs	<ul style="list-style-type: none"> • I think reading comprehension takes place when a student is able to relate to the story and gains understanding and is able to have an opinion about the characters or details about the characters. The students may also

		<p>relate past experiences to that information that recalling to and by doing that the students understand the story and therefore reading comprehension takes place. Or if there is a past lesson or past experience that the student has that they can bring to the story that also helps with their comprehension.</p> <ul style="list-style-type: none">• For students to understand the text, they need to be able to “Connect to prior knowledge. Also connect it to the world around them. How does this fit into my understanding of the world or to my understanding of people I know?” She also provided more justification of how making connection between the reader’s background knowledge and the text is important by sharing that I think that it makes the information relevant to them and personal to them through what I know about how our brains work and learning new information. We build our knowledge by adding to what we already know. That where the new information gets stored. So if you have something to connect it to, so it is easier to take that new knowledge.
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	Teachers' personal point of view regarding reading comprehension	<ul style="list-style-type: none">• Reading comprehension is really like the goal and the reason to read. You have got to understand what you are reading. I think it often times comes later in the reading process, especially for my students, they need to be able to read the words, they need to be able to identify the sounds, and then put it all together to finally make comprehension.• The idea of understanding the words on the paper and then taking it and applying or grasping what is being said in order to form your own ideas or in order to use that information in your own life is really what reading is about.• My philosophy as it relates to reading comprehension is a kind of bilateral approach and as much as that students have a qualifying number of reading approach, but they then have some behavioral aspects to it too that you have to take into consideration. So because of that, you have to have different approaches to how you intervene in their reading weaknesses. So my philosophy behind that has to do with using a number of approaches, have flexibility within those approaches as well.
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		<p>and then instead will concentrate on what happened at the birthday party at the store in the story. They will go off and start talking about maybe their own birthday party or a birthday party they went to, and it is not relevant to the story other than a birthday party occurred, and so they are using that background knowledge really inappropriately. They just start to grasp, and then you have to stop them and say pull them back to the story that they are reading and say, “No we are talking about this story.”</p>
	<p>Trouble with fluency.</p> <p>(a) fast reading.</p> <p>(b) slow reading.</p>	<ul style="list-style-type: none"> • I have had third grade LD student who just reads super fast to get through it because he can read the words, but does not go so quickly that then he has no idea what he is read. • I think a lot of the 3rd grade students I've seen they have a lot of trouble just with decoding. So a lot of cases it seems like they're brain capacity and brain power is so focused on decoding the word that there's nothing left for comprehension, so a lot of times decoding actually gets in the way of comprehension.

	<p>Difficulty with informational text.</p>	<ul style="list-style-type: none"> • I had a student last year that had a hard time with informational texts, but could follow like a fantasy story or a narrative story quite well and tell you what happened in the beginning, middle and end, but then when it came to reading a book with lots of information, it was harder for her to recall the facts in the text.
	<p>Difficulty with making inferences.</p>	<ul style="list-style-type: none"> • My students who do not comprehend have difficulty making inferences with the stories because they're looking when they are reading, they are just understanding the basic knowledge, the basic facts like literal facts. And then when they have to tie it to what might happen or that happened because of something, they are not making that connection and therefore that affects their comprehension
	<p>Issues with vocabulary.</p>	<ul style="list-style-type: none"> • They also have limited vocabulary, and so when you will introduce a new word, they will not always, they will not have any experience with the word. They will not even recognize it. • With the student we were reading about something with a forest and a pond and they were talking about the bank of the pond, and when they

		<p>didn't understand bank had multiple meanings, they weren't understanding the bank around the water, all they could think was a bank. What's a bank? "It's like, that's where you go to get money or something." So it wasn't going with the right context of the story. So especially when you have multiple meaning words, my student would have difficulty connecting it to the reading it makes no sense to them.</p>
	<p>Low reading level.</p>	<ul style="list-style-type: none"> • Students with learning disabilities are sometimes two to three grade levels below reading, which puts some of them in kindergarten reading level, which is their still trying to find the letter sounds and putting letters together to make the word. And if they are stuck in that, putting a whole sentence together, making an understanding the paragraph, of the deeper meaning, or taking it even further, is just not going to happen.
	<p>Memory issues.</p>	<ul style="list-style-type: none"> • One particular girl that I have worked with, a very nice girl. She had difficulty recalling initial blends or word endings. She would try different techniques, but it would not work. This affected her overall comprehension, and we are still working on that.

		<ul style="list-style-type: none"> I have one with memory issues too, and he won't remember what a letter is.
	Non- interesting topic.	<ul style="list-style-type: none"> I think if they are not interested in the text, they have less motivation to, to read it, comprehend it, care about it, understand it. So it is hard. It makes it harder if it's something that they're not interested in.
Challenges that impact reading comprehension of students with learning disabilities	The lack of practicing reading outside school.	<ul style="list-style-type: none"> Some of these kids say, “I do not have books at home.” It breaks my heart, but how can they open up their mind to having that, that knowledge of different vocabulary, if they don’t see it if they don’t hear it. I have another student whose dad is involved and he tries and he is doing his best. But there are six kids all together, and he is changing diapers, and I know he does not have the time to read all time. Mom works second shift, and that child makes less gains. He can get more if he is practicing reading every day. They have not been exposed to book at home in the summer time. They just don’t have that working knowledge.
Manifestation of these problems.	Based on the grade level. (a) kindergarten	<ul style="list-style-type: none"> As early as kindergarten, when they had trouble recalling alphabet, letter

	(b) Second grade	<p>sound recognitions certain word, sight words. And so you see a number of reading skills or pre-reading skills that they have trouble focusing on, and that happened as early as kindergarten.</p> <ul style="list-style-type: none"> • By second grade, if they are not reading with good comprehension, then they really start to stick out, and you really start to notice.
	Ways that teachers use to help students to improve reading comprehension before they reach third grade.	<ul style="list-style-type: none"> • Well if the students are on my case load already, then I can start using some of those comprehension strategies with them, small group, and use the strategies that we have talked about to help with their comprehension • When reading comprehension is missing with my young students, prior to third grade, I first seek out the specific skills lacking in that particular child. Many times, comprehension is lacking due to the inability to read fluently. This may even be due to lack of decoding skills. I would pick an intervention based on the skill deficit of the child. Many times I will supplement a child's education with a direct instruction program, such as reading mastery, which is a direct instruction program that targets phonemic awareness, phonics,

		<p>blending sound together, reading words, making meaning of words, and finally, putting it all together. I would combine that instruction with practicing some listening comprehension strategies.</p>
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Table A-3.

A summary of findings based on research question 2- reading comprehension strategies

Primary Categories	Subcategories	Sample Quotes
The effective strategies.	<p>Non-computerized strategies: I defined the non-computerized strategies as any reading comprehension strategy that does not require a computer when it is implement by teachers or students.</p> <p>(a) graphic organizer</p> <p>(b) questioning</p>	<ul style="list-style-type: none"> • We also use a lot of graphic organizers for during reading and after reading. • Graphic organizers help student organize all that information, so they can come to a common understanding or a personal understanding. It helps them sequence events. It helps them tell the differences between characters. So kids can get a better understanding of what happened between two characters and over all increases their concept or comprehension about the story. • We do a lot of questioning as they are reading. So I will interrupt their reading to ask a question to see if they have understood so far of what they have read. And that starts off again as me leading it, and then hopefully, as

	<p>(c) story mapping</p> <p>(d) peer-assisted strategy</p>	<p>they start to pick it up and do it in their minds on their own.</p> <ul style="list-style-type: none"> • When using questioning with my students, I have noticed that helps generate understanding of the main idea concept in the plot. Some students will go further and ask “what if” questions. They will also gain understanding of the details, and it will also bring in their own experiences. • We use story mapping from kindergarten on in a variety of ways, getting the kids to understand. It is kind of like graphic organizer. It is another way of helping them put all of that information kind of in a file. Story mapping is useful. • Students have a chance to learn additional information. They can coordinate, discuss, and reflect information that has been in the book and share with one another and feel more confident about what is going on in terms of general understanding of the text and the content.
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	<p>(g) explicit instruction</p> <p>(h) brain storming</p> <p>(i) different grouping</p>	<ul style="list-style-type: none"> • “Through teaching it explicitly.” • “I do a lot of direct instruction.” • I have a particular student that I am working with, and I use ABC brain storming with him. And what we do is, there are different letters of the alphabet and characters or something in the story that the student recalls that starts with the C for example. That student will write that down and talk about it. He can pick five letters, he can pick ten letters, it is up to him. And once we pick those letters, we discussed how they are related to the story, and that increased the students’ comprehension. • I do different groupings. Sometimes, I will group kids that are friends already because I know that they will work nicely together. Other times, I will group like a higher level student with maybe a lower level student to really motivate the lower level student. • One of the students has a severe
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	<p>(j) close reading</p> <p>(k) collaborative strategic reading</p> <p>(l) cloze procedure.</p>	<p>attention problem. So there will not be any comprehension if I do not somehow get her attention and so I will do a strategy like close proximity. I will sit close to her, and then I need to keep checking in with that student. I will ask questions directly to the student, so she is not off. I have to keep her attention.</p> <ul style="list-style-type: none"> • So when they doing collaborative reading, working together is very familiar with them. I have to do a lot of pre-teaching through as far as the ground rules and, at least once a week, I remind them what the rules are with collaborative reading. • Using the cloze procedure makes them think of the context clues that are within the story. So that they could figure out what word might go there. Also knowing a verbs or words that make sense to whatever the sentence is that you want them to fill in the cloze word procedure. So they have to be able to pull from what they have learned. “Oh! Do I need to put this type of a noun or this type of a verb or this type of an adverb or an adjective
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		<p>to make sense to the story?” So using that procedure definitely helps to improve their understanding of what the text is asking them for.</p>
	<p>Computerized strategies: it is defined as any strategy that requires a computer when it used by students.</p> <p>(a) system 44.</p> <p>(b) fast forward.</p>	<ul style="list-style-type: none"> • System 44 does have some comprehension along with it. And it starts off a sentence level, like it will say, “Tad and Gay find a cat.” They will have to answer the question, “what did they find?” • The reason that I think it is effective in improving my students' comprehension is because they get a chance to practice. They get a chance to relate to the story by reading, by also reading with the instructors, so there is plenty of chance for comprehension and fluency practice. • It is a program that the kids do on the computer that works on higher order thinking skills, vocabulary, and comprehension. So some of my students are using that, and I have seen really good gains after they have started using that.

	(c) Raz kids.	<ul style="list-style-type: none"> • I think it helps students starting in a very basic level to build on their comprehension skills • A wonderful computer program that works with students' comprehension from preschool level all the way through 5th grade. The stories that the students read they listen to the stories first, then they have to read it numerous times, and then again they take comprehension tests. On these, the stories range from fiction, nonfiction near all sorts of genres so that they are not reading the same thing over and over and the texts get obviously more difficult as they go.
	Differentiating strategies.	<ul style="list-style-type: none"> • No not with all students. I think just knowing your students that some strategies are going to work better for some or be more useful for some than others.

	<p>(c) prior knowledge</p> <p>(d) learning styles</p> <p>(e) strategies used in general classrooms</p> <p>(f) recommendation of student's IEP team</p>	<p>if I have known them for a year or two. I have a good idea of their previous knowledge.</p> <ul style="list-style-type: none"> • I have one third grader who is a completely visual learner. I mean, I can say anything to him he will not get it. But as soon as I draw picture of it, as soon as I point to the words visually, he will get it. I have another who is completely opposite and makes things so difficult. Visuals are lost on him. He needs to hear the story more than once and ask and answer questions to internalize the story. So I definitely take into account their differences. • I also look at what their grade-level peers are working on and learning. And I try to match that if I can with some of the same strategies. • The IEP team determined some things that I can focus on with these particular students. So I have to take into consideration those suggestions.
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	<p>(g) the results of different tests</p>	<ul style="list-style-type: none"> • IQ test. I also look at the other academic tests that they do. And I do some informal testing myself to see which programs or strategies that I'm going to use with that particular student.
	<p>Onset and reasons behind using these strategies.</p> <p>(a) when teachers start using these strategies</p>	<ul style="list-style-type: none"> • I would say right away, with the kindergarten level. • When teachers were asked why they start teaching strategies to their students prior to third grade, one teacher shared that “We need them starting to understand what they are reading right away, regardless of the age of them. I mean the earlier you can get them, the better it is for them. • I would say more of the

	3. As a result of the students' failure	education teachers usually have already tried their strategies. And how they teach the whole class comprehension and has failed. So usually when I get a kid on my case load to help, it's because there's been a failure.
The impact of the teachers' experience on selecting these strategies.	<p>How experience helps teachers to select strategies.</p> <p>Ways to modify strategies.</p>	<ul style="list-style-type: none"> • I think once you have had more experience with kids, and especially when you have kids year after year, you really get to know them quite well. So you know kind of already what they need, what they had trouble with last year, what they are still struggling with. • Some of the graphic organizers that we use do require a lot of writing, and some students kind of just break down when they are asked to do a lot of writing. So to really focus only on the comprehension piece, if that's what I really need to focus on, I might scribe for them their ideas. So that the writing is not getting in the way, and that's one way I typically will modify, yeah.

Table A-4.

A summary of findings based on research question 3- reading comprehension informal assessments

Primary Categories	Subcategories	Sample Quotes
Importance of assessment		<ul style="list-style-type: none"> • It gives me kind of a clear picture of where they are headed and how they are doing. I guess just thinking about my teaching the next day and if I need to revisit a concept • It tells me what to do next. It will tell me oh! that strategy was not working and let's try something else. It helps to guide my instruction. It gives me more of a clear picture of what the students are capable of.
Assessment tools	Retelling	<ul style="list-style-type: none"> • I will ask them to tell me verbally what happened beginning, middle, next, so if their strengths are not writing, I still know that they understand what has happened in the story. I will sometimes also say, "Okay, I need some details." So I want them to tell me a detail, something happened, something is a detail in the story.
	Questioning	<ul style="list-style-type: none"> • We do a lot of questioning as they're reading. So I will stop, interrupt their reading to ask a question to see if they have understood so far of what they have read. Just asking questions.

		Usually orally question. Sometimes they answer written questions
	Cloze procedure	<ul style="list-style-type: none"> • I do use a cloze procedure. It has missing words that they have to fill in order to see if they comprehend it. I have used it more for understanding the who, what, when, where, why, the questions of the story, making sure that they have comprehended what they have read • It helps them understand certain words, certain phrases, certain inflection on word, and beginning sound and ending sound also. I feel comfortable, and I do think it is helpful
	Having students fill in graphic organizers	<ul style="list-style-type: none"> • Filling in a graphic organizer is helpful for third grade LD student because it is able to have them hold on the parts of the story. If I am asking them usually, I can have them do it independently after they have had numerous practices on filling their own graphic organizers and answering oral questions.
	Writing activity	<ul style="list-style-type: none"> • Having the students express their comprehension through writing that is a big one for me, I like that • It helps them in so many ways, but in terms of me, it is easier for me to see what they comprehend in writing

		because I can always have it in front of me. I see them organize their thoughts, I see them compare and contrast what they gained from the book, from what they recall from their head. By using writing, it gives them a freedom to add and take away details that are not important.
	Informal reading inventory and running records	<ul style="list-style-type: none"> • Informal reading inventory. It's a quick measure that gives you a good measure of did they get the main point of the story
	Teachers made-tests.	<ul style="list-style-type: none"> • I can develop my own test. So, there will be some open-ended questions. There are some multiple choice, and there will be some questions to demonstrate their overall comprehension
How often is reading comprehension assessed?		<ul style="list-style-type: none"> • I kind of have an informal assessment everyday. But for my records, I do once a week • Every assignment, everyday. Writing down a recording and making it all official is once a week. • I would say everyday.
Ways to modify some assessment tools based on the students' needs and abilities.		<ul style="list-style-type: none"> • When they are retelling or filling out a graphic organizer, some students can just write down the information to retell the story or to answer

		<p>questions or do a graphic organizer. Some students are not so good with writing, so I will just allow them to tell me that aloud.</p> <ul style="list-style-type: none">• I do not generally use their grade level. For example, the graphic organizers I do will not use one that had ten bubbles. I would use one that had a small amount of information, you know, based on the ability of my students
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تم بحمد الله وفضل