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# The effects of graphic organizers to identify main idea and supporting details in informational text on students with learning disabilities

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**THE EFFECTS OF GRAPHIC ORGANIZERS TO IDENTIFY MAIN IDEA AND SUPPORTING DETAILS IN INFORMATIONAL TEXT ON STUDENTS WITH LEARNING DISABILITIES**

by

Heather Coombs

A Thesis

Submitted to the
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In partial fulfillment of the requirement
For the degree of
Master of Arts in Special Education
at
Rowan University
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Thesis Chair: Amy Accardo Ed.D.

**Dedications**

This thesis is dedicated to my mother, Christine Demcovitz, and my mother in law, Jean Coombs, for their patience and countless hours of babysitting while I tirelessly completed my research, writing, and editing to complete this thesis and Master's degree.

I also dedicate this thesis to my husband, Matthew Coombs, for always believing in me and my daughter, Amy Coombs, for being my reason to never give up.

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# Abstract

Heather Coombs
THE EFFECTS OF GRAPHIC ORGANIZERS TO IDENTIFY MAIN IDEA AND
SUPPORTING DETAILS IN INFORMATIONAL TEXT ON STUDENTS WITH
LEARNING DISABILITIES
2016-2017
Amy Accardo, Ed.D.
Masters of Arts in Special Education

The purpose of the study was to examine the effects of graphic organizers to identify main idea and supporting details in informational text on students with learning disabilities. The participants were eight $6^{th}$ grade students classified with learning disabilities in reading. This study implemented an ABAB design. Data was collected during the Baseline (A1), Intervention (B1), Baseline (A2), and Intervention (B2) phases. The independent variable for this study was the utilization of a graphic organizer to assist in identifying main idea and supporting details, as well as reading comprehension. The dependent variables were student identification of main idea and supporting details and reading comprehension. Overall, the results of the study demonstrate that the utilization of graphic organizers is an effective intervention to increase identification of main idea and supporting details from an informational text, and to increase reading comprehension in students with learning disabilities.

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**Chapter 1**

**Introduction**

Seventy percent of secondary students struggle with reading (Biancarosa & Snow, 2006). Although they can phonetically read words, these students have difficulty comprehending informational text (Sam & Rajan, 2013). This is also true of students with learning disabilities, as eighty percent of these students have difficulty learning to read and will later experience difficulty comprehending such texts (Gersten, Russell, Fuchs, Lynn, Williams, Baker, & Scott, 2001). Despite the staggering numbers of struggling readers in the secondary grades, content area teachers do not often focus on reading comprehension as part of their lessons (DiCecco & Gleason, 2002). As a result, these students may fail to determine the main idea of a text and how it is developed throughout the text (Sam & Rajan, 2013). Struggling readers may benefit from visual aids, like graphic organizers, to assist in the organization of new information. Graphic organizers are one easy and fun way to help students comprehend a text (Sam & Rajan, 2013).

**Statement of the Problem**

The majority of students with learning disabilities have reading difficulties (Gersten et. al, 2001). One skill that students with specific learning disabilities in reading frequently have trouble with is identifying main idea and supporting details, as they have difficulty separating important details from less significant details in the text (Baxendell, 2003; Gersten et. al, 2001). Students with learning disabilities need a way to organize their thoughts and separate major and minor details gathered from a text (Gersten et. al, 2001).

In particular, students with learning disabilities in reading have significant difficulty comprehending nonfiction texts (Kim, Vaughn, Wanzek, & Wei, 2004). As students with learning disabilities move on to secondary grades, they struggle to relate reading strategies, such as identifying main idea and supporting details, to more complex, information-driven nonfiction text (Baxendell, 2003; DiCecco & Gleason, 2002; Kim et. al., 2004; Sam & Rajan, 2013). Graphic organizers can be used to organize new information and have been proven successful in assisting in the comprehension of informational texts (Biancarosa & Snow, 2006; Kim et. al., 2004).

The students participating in this study are sixth-grade students in a high-needs, low-income district. Each student is classified with a specific learning disability in reading, and with a functioning reading level two or more grades below their current grade. In general, these students are reluctant and unmotivated readers. Overall, they prefer fiction texts and find informational text more challenging. As with most classified students, the students in this study lack organizational and note-taking skills (Kim et. al., 2004). They may benefit from a visual organizational tool, like a graphic organizer, to assist in the comprehension of informational texts, specifically the identification of main ideas and supporting details.

This study will investigate the effect of using a graphic organizer on student identification of main idea and supporting details in informational texts. The use of graphic organizers is a research-based strategy frequently recommended when assisting students with learning disabilities in comprehending informational text (Kim et. al., 2004). Informational text tends to be challenging for many secondary students, as they often introduce new concepts and unfamiliar vocabulary (Kim et. al., 2004). When

applied to informational text, graphic organizers have increased the success of students with specific learning disabilities, helping them to organize new content and information effectively (Baxendell, 2003). In order for a graphic organizer to be successful with students with specific learning disabilities, it must be used consistently (Baxendell, 2003). Therefore, the same graphic organizer will be applied to all of the informational texts used throughout this study to provide a framework for the organization of key concepts from the text.

**Significance of the Study**

Although much research has been done on the effect of using various types of graphic organizers and on how to apply them to reading instruction (Kim et. al., 2004; DiCecco & Gleason, 2002), there is little research on the effects of using graphic organizers to support students with learning disabilities in identifying main idea and supporting details. More studies are needed investigating the effectiveness of graphic organizers when applied to identifying main idea and supporting details.

This study attempts to add to the existing research on graphic organizers, focusing on their success with identification of main idea and details specifically. Identifying main idea and supporting details is a key reading skill, necessary for the comprehension of informational text. This study will focus on middle-school age readers who are classified with a specific learning disability in reading and are currently functioning below grade level. Identifying main idea and supporting details is a key reading skill, necessary for the comprehension of nonfiction informational text.

This study builds on the research of Singleton and Filce (2015). In their article, "Graphic Organizers for Secondary Students with Learning Disabilities," Singleton and

Filce discuss the benefits of using graphic organizers with secondary students with learning disabilities. They suggest that graphic organizers lessen the cognitive demands placed upon these students when asked to comprehend a new text. In addition, they recommend that graphic organizers be used along with teacher modeling to ensure that the graphic organizer is being utilized effectively (Singleton & Filce, 2015).

**Purpose of the Study**

This study will investigate the use of a graphic organizer on the identification of main idea and supporting details in nonfiction text by sixth grade students with specific learning disabilities. Students will be given various informational texts at their individual functioning grade levels and will be asked to identify the main idea and the supporting details within the text. Students will be asked to do this with and without the use of a graphic organizer.

After identifying main idea and supporting the details, students will be given a brief multiple-choice comprehension assessment based on the text. At the end of the study, the students will be given a survey to evaluate their satisfaction with the use of graphic organizers to identify main idea and supporting details in nonfiction text.

The purpose of this study is to: (a) determine if the use of a graphic organizer increases the identification of main idea and supporting details in a nonfiction text, (b) determine if the use of a graphic organizer will increase the comprehension assessment scores of students with specific learning disabilities in reading, and (c) evaluate student satisfaction with using graphic organizers to identify main idea and supporting details from a nonfiction text.

**Research Questions**

1. Will the use of a graphic organizer increase the identification of main idea and supporting details from a nonfiction text by students with specific learning disabilities in reading?

2. Will the use of a graphic organizer increase the comprehension assessment scores of students with specific learning disabilities in reading?

3. Will students be satisfied with the use of a graphic organizer to identify main idea and supporting details?

**Chapter 2**

**Review of the Literature**

There are an estimated 8 million students in grades four through twelve that are not reading on grade level (Biancarosa & Snow, 2006).  Although these students may be able to physically read the words aloud, they often fail to understand the content of what they are reading (Biancarosa & Snow, 2006).  Problems with reading are even more prevalent in the special education community, as at least 80% of students with learning disabilities not only struggle with comprehending text, but also with decoding new words (Gersten, et al., 2001).  As a result, reading nonfiction texts becomes increasingly difficult for students with learning disabilities throughout their academic careers.  The introduction to new vocabulary and unknown topics leads to low comprehension in these students (Kim et al., 2004).  Graphic organizers are a useful visual tool to support students in the comprehension of these advanced texts (Singleton & Filce, 2015).

This chapter provides a review of the research related to the reading comprehension of students with learning disabilities, particularly those in the secondary grades.  Specifically, this chapter will discuss the skill of identifying main idea and supporting detail to comprehend text, and the utilization of graphic organizers as an instructional strategy to support comprehension.

**Reading Profile of Students with Learning Disabilities**

The vast majority of students with learning disabilities (LD) have difficulties with reading and show significant reading deficits (Boulineau, Fore, Hagan-Burke, and Burke, 2004, Gersten et al., 2001).  It is estimated that 21% of secondary students with LD read five or more grade levels below average (Solis, Ciullo, Vaughn, Pyle, Hassaram, &

Lerous, 2012). Specifically, students with LD in reading have difficulties in the area of

reading comprehension and often fail to actively self-monitor their comprehension

(Watson, Gable, Gear, & Hughes, 2012). Despite repeated instruction, many students

with LD fail to utilize previously-taught reading strategies when facing new text (Gajria,

Jitendra, Sood, & Sacks, 2007). Students with LD often have difficulty connecting their

prior knowledge to new information and distinguishing between essential and

nonessential information in text, particularly in challenging nonfiction texts (Singleton &

Filce, 2015).

In an article considering the problems facing students with LD who have

weakness in the area of reading comprehension, Watson, Gable, Gear, and Hughes (2012)

report that deficiencies in reading comprehension can negatively impact student

performance across curricula. A lack of academic success leads to frustration in the

classroom and in turn can lead to escape-motivated classroom behavior. In turn, truancy

and high school dropout rates are above average among students with LD. Watson et al.

(2012) recommend explicit instruction in the areas of paraphrasing, inferencing, story

mapping, and other evidence-based reading strategies. Additionally, Watson et al. (2012)

recommend that content area teachers use graphic organizers to assist students with LD in

creating an organized schema when reading informational text.

**Informational Text**

The goal of reading is to gain meaning from text. In elementary grades, students

learn to read, while in secondary grades, students read to learn (Gajria et al., 2007). The

purpose of reading nonfiction or informational text is typically to obtain new information

on a specific topic or concept. In general, secondary students are expected to learn this

new information through reading independently even when content-area textbooks are typically written above grade level and lack clear organization (Dexter & Hughes, 2011, Gajria, et al., 2007, Mastropieri, Scruggs, and Graetz, 2003, Singleton & Filce, 2015).

Many secondary students fail to make the switch from the teacher-led reading instruction of elementary grades to the independent reading in the secondary grades, especially those with LD (Dexter & Hughes, 2011, Singleton & Filce, 2015). In secondary grades, expository texts on unfamiliar topics often include technical vocabulary and abstract concepts, making the texts difficult for struggling readers, particularly those with LD (Dexter & Hughes, 2011, Mastropieri et. al, 2003). Because students with LD make up about 7% of the school-age population in the United States (Gersten et al., 2001), teachers in the content-specific secondary grades must use tools such as a graphic organizers to assist in their students' comprehension of complex nonfiction text (Dexter & Hughes, 2011, Singleton & Filce, 2015).

**Main Idea**

Identifying main idea in text is a key building block of a student's reading comprehension. Before he or she can successfully move on to other essential reading skills, the student must be able to effectively identify the main idea of a text (Lord, 2015). The ability to properly identify main idea aids in a student's ability to draw inferences, read critically, summarize, and remember what was read (Watson et al., 2012). In order to identify the main idea, the student must be able to separate relevant information from irrelevant information, as well as create a summative statement about the passage as a whole (Lord, 2015).

Many teachers teach main idea in its beginning stages using fictional text (Lord, 2015). As students continue to secondary grades, themes of texts become a distraction when trying to identify main idea and supporting details. Therefore, secondary teachers should focus on nonfiction informational texts with familiar topics for their student population (Lord, 2015). In their article, Watson et al. (2012) discuss two evidence-based practices, Paraphrasing Strategy and Summarization Strategy. Paraphrasing Strategy and Summarization Strategy are used as tools to teach students how to identify main idea. Paraphrasing Strategy requires the reader to use his or her own words to state the gist of the text, while Summarization Strategy requires the reader to eliminate irrelevant information to condense the text. Once mastered, both strategies will assist students with LD in identifying main idea.

**Graphic Organizers**

Because they are stimulated throughout their daily lives, 21st century learners are becoming increasingly visually dependent. Therefore, many students find success in utilizing a visual tool, like graphic organizers, to assist with reading comprehension (Sam & Rajan, 2013). Graphic organizers can be used to alleviate some of the stress students with LD feel when reading a complex text. Graphic organizers provide a framework to organize new information in a meaningful way, making the task of learning new information less daunting (DiCecco & Gleason, 2002, Singleton & Filce, 2015). Graphic organizers are a useful tool to help students with LD to visually understand concepts within a text, as they help students to organize new information and focus solely on important information in the text (DiCecco & Gleason, 2002). While facilitating learning, graphic organizers help students to create an organized schema and activate

prior knowledge when faced with an unfamiliar text or abstract concept (Dexter &

Hughes, 2011, Watson, et al., 2012).

A study conducted by DiCecco and Gleason (2002) to investigate the effects of

graphic organizers on attaining relational knowledge from expository texts included 24

middle school students with LD.  As a result of the study, DiCecco and Gleason found

that students with LD often have difficulty in content area classes when expected to gain

new content knowledge from reading informational text, especially when reading from a

textbook, where key ideas and relationships are not made clear.  In turn, they struggle to

infer, make connections, and separate key ideas from insignificant details in

informational text.  Although struggles with inferencing, making connections, and

separating key ideas from insignificant details are regularly seen in secondary students

with LD, content area teachers typically do not address these reading comprehension

concerns in the classroom.  Students with LD need tools and strategies put into place to

interpret information from these nonfiction texts.  As a result of the study, DiCecco and

Gleason found that of the 12 students given a graphic organizer, nine increased their

relational knowledge statements with the use of graphic organizers.

Graphic organizers can be utilized by students with LD throughout the entire

reading process (Singleton & Filce, 2015).  In the pre-reading stage, graphic organizers

assist in brainstorming and activating prior knowledge.  During reading, graphic

organizers keep students on task, highlighting important information and distinguishing

between essential and nonessential details.  In the post-reading stage, graphic organizers

can be used to recall important information, summarize key ideas, assess comprehension,

and reinforce new information from the text (Singleton & Filce, 2015).  Graphic

organizers have shown to be effective in the following reading tasks; identifying main idea and supporting details, understanding new vocabulary, distinguishing fact from opinion, display connections within a text, and making inferences. The success of graphic organizers lies in their ability to allow students to approach new information cognitively and organize it in a meaningful manner. Graphic organizers also help students to connect new information to prior knowledge, turning the new information into concrete concepts (Kim et al., 2004; Sam & Rajan, 2013).

Bolineau, Fore, Hagan-Burke, and Burke (2004) conducted a study on the use of story-mapping to increase text comprehension in elementary students with LD. Story-mapping is used to assist students in recognizing relevant story elements and utilizes a graphic organizer to visually organize significant information. In this study, the participants were six students in grades 3-5 with LD. The study used an ABC design to examine the effects of story-mapping on reading comprehension performance. After administering baseline probes in Phase A, teachers taught the elements of story grammar through explicit instruction utilizing a story map as a guide in Phase B. Once all students were able to complete a story map based on key story-grammar elements with 90% accuracy, the participants moved on to completing story maps independently in Phase C. The maintenance data from Phase C showed improvement. From Phase A to C, the mean percentage correct improved 53 points, from 31% to 84% correct overall. The results of this study suggest that story-mapping improves accuracy of identifying story-grammar elements when used by students with LD. Study results align with the findings of DiCecco and Gleason (2002) showing the positive effects of story-mapping on the reading comprehension of students with LD.

Building off of the success of the previously mentioned studies, teachers of students with LD should consider graphic organizers as tools to facilitate critical thinking and to prepare students for eventual independent learning, specifically gaining new content knowledge from expository texts (Singleton & Filce, 2015). To promote the effectiveness, teachers must explicitly model the correct usage of the graphic organizers and demonstrate its success when applied to the task. (Singleton & Filce, 2015).

Research also suggests that graphic organizers must be used in a very specific way to support students with LD. In order to be effective, graphic organizers need to be specific to the task, as well as the students' learning needs and ability levels. (Baxendell, 2003; Singleton & Filce, 2015). When choosing a graphic organizer, teachers need to specify the task they would like the students to focus on and the graphic organizer should correlate to the function of the task. (Singleton & Filce, 2015). In addition, graphic organizers need to be used consistently. Students should know the type of graphic organizer appropriate for different tasks within the classroom (Baxendell, 2003). However, teachers should be wary of students becoming reliant on teacher-created graphic organizers. Once mastered, students should be able to create their own task-specific graphic organizers independently (Singleton & Filce, 2015).

Graphic organizers are evolving to meet the needs of 21st century learners. Although many teachers use paper graphic organizers, there is a shift happening towards computer-based graphic organizers. Mastropieri, Scruggs and Graetz (2003) conducted a study assessing student use of a graphic organizer software, *Inspiration*, on the comprehension of struggling readers. The study focused on tenth grade students in an inclusive classroom setting and included students both with and without LD. At the

beginning of the study, students were given explicit instruction on how to navigate and utilize the *Inspiration* software, focusing on using *Inspiration* to facilitate the creation of graphic organizers. Then, the students were asked to independently create their own graphic organizers using the *Inspiration* software and utilize those graphic organizers during teacher-led lessons. Mastropieri, Scruggs, and Graetz (2003) found that *Inspiration* was not only user friendly, but also showed improvement in student learning. Pretest and posttest data indicated that the students in the study retained about 32% more new information presented through expository history texts when allowed to use the self-created graphic organizers, utilizing the *Inspiration* software. In addition, the students studied reported having a strong preference towards using the software and indicated future use both at home and in school. However, the teachers polled in the study showed apprehension towards using the software and reported a lack of confidence when using it as an instructional aid. The study calls for additional teacher training to build confidence with instructional interventions, such as *Inspiration.*

Dexter and Hughes (2011) conducted a meta-analysis on graphic organizers and students with LD and identified 16 studies investigating the impact of graphic organizers on reading comprehension. Within the examined studies, Dexter and Hughes were able to classify graphic organizers into 5 general categories: Cognitive Mapping, Semantic Mapping, Semantic Feature Analysis, Syntactic/Semantic Feature Analysis, and Visual Display. When identifying main idea and supporting details, Semantic Mapping is most often used. Semantic Mapping assists the student in focusing on key concepts, even in complex expository text. In Sematic Mapping, the graphic organizer helps the student to isolate relevant information while discarding details irrelevant to the task. Through the

graphic organizer, teachers and students create a visual representation of the relationships among concepts during and after reading. Typically, students are given the key concept by the teacher. The key concept is placed in the center or top of the graphic organizer surrounded by a box or oval. It is connected to other boxes or oval using lines, which are meant to represent the functions mandated by the task. For example, the main idea would be put in the center box with lines connecting to additional boxes meant to contain supporting details. Semantic Mapping creates a visual organization of the relationships between key ideas and concepts within a text, including main idea and supporting details (Dexter & Hughes, 2011).

Dexter and Hughes (2011) examined the effects of graphic organizers on different subject areas through posttest data. Through their meta-analysis, Dexter and Hughes found that graphic organizers, when used in relation to reading comprehension for students with LD, are successful. Large posttest effects were shown with the use of graphic organizers in reading, specifically when utilizing Semantic Mapping. To achieve success, Dexter and Hughes recommend that teachers deliver explicit instruction using the graphic organizer and extensively model the use of that graphic organizer. To validate these claims, the meta-analysis calls for more research on the use of graphic organizers with students with LD, specifically those in the secondary grades.

The utilization of a graphic organizers may improve success when identifying main idea and supporting details in a nonfiction text for students with LD. Success can only be found if the graphic organizer is appropriate to the task and the students' ability levels (Singleton & Filce, 2015). As students become more familiar with using graphic organizers, they should be creating their own graphic organizers for use throughout the

writing process and should be supported in using self-monitoring techniques (Singleton & Filce, 2015, Watson et. al, 2012).

**Summary**

This study aims to investigate the effectiveness of a graphic organizer on the identification of main idea and supporting details from a nonfiction text by students with LD.  The study will utilize a Semantic Mapping graphic organizer to assist students in organizing new information and isolating key ideas and concepts, leading to the successful identification of main idea and supporting details.  The goal of this study is to add to the existing research supporting the use of graphic organizers to improve the reading comprehension of students with LD.

# Chapter 3

## Methodology

### Setting and Participants

This study included eight sixth-grade students from a middle school in a low-income, high-needs suburban school district in central New Jersey.  The school district contains five elementary schools, one middle school, one junior high school, one high school, and one administration building.  There are approximately 2,700 students in the district; 430 of those students are currently enrolled in the district's one middle school.  The middle school includes students in grades five and six.  The typical school day at the middle school runs for six hours and twenty-five minutes.  The amount of actual instructional time is four hours and fifty-four minutes.  Of that time, the middle school students receive 87 minutes of English Language Art instruction.  The students participating in the study also receive an additional 42 minutes of supplemental reading instruction three times per week.

According to the New Jersey School Performance Report (New Jersey Department of Education, 2015), 58.6% of the students in the middle school are Black, 35.6% of the students are Hispanic, 3.5% of the students are White, 2.1% of the students are Asian and 0.2% of the students are Pacific Islander.  Roughly 50% of the community speaks English, while approximately 29% speak Spanish and 15% speak a variant of Creole.  Focusing solely on the middle school population, 14% of the students are students with disabilities, 71.6% of the population is considered economically disadvantaged, and 3.5% of the population is considered English Language Learners.

Due to the high number of economically disadvantaged students, the entire middle school qualifies for Title I and receives state funding.

All of the students participating in this study are classified with specific learning disabilities in reading. Although they are sixth-grade students, all of the participating students read at a fourth-grade level. Due to their reading difficulties, these students receive supplemental reading instruction in addition to their English language arts classes. Also, half of the students participating in this study have 504 plans for attention deficit hyperactivity disorder (ADHD) diagnoses or other physical disabilities.

**Participant 1**. JG is a sixth-grade Hispanic, female student who is currently receiving special education services and has an Individualized Education Plan. She is classified as having a specific learning disability in both reading and math. Currently, she receives support from a special education teacher in math and English language arts. Under a consultative model, she meets with a special education teacher once a week to receive services for her remaining classes. JG is a shy, reluctant reader who currently reads on a fourth-grade level.

**Participant 2**. SL is a sixth-grade Black, male student who is currently receiving special education services and has an Individualized Education Plan. He is classified as having a specific learning disability in reading and is also classified as visually impaired. SL is legally blind, but wears glasses to help correct the problem. He has a 504 plan relating to his vision, giving him preferential seating and large print when requested. Currently, he receives support from a special education teacher in only his English language arts class. SL is an enthusiastic reader who currently reads on a fourth-grade level. He enjoys reading aloud in class and reads for pleasure at home.

**Participant 3**.  JO is a sixth-grade Black, female student who is currently receiving special education services and has an Individualized Education Plan.  She is classified as having a specific learning disability in both reading and math.  Currently, she receives support from a special education teacher in math and English language arts.  Under a consultative model, she meets with a special education teacher once a week to receive services for her remaining classes.  JO also receives 504 services related to her ADHD diagnosis, inattentive type.  She deals with organizational issues and has difficulty focusing while reading.  She currently reads on a fourth-grade level.

**Participant 4**.  EP is a sixth-grade Hispanic, male student who is currently receiving special education services and has an Individualized Education Plan.  He is classified as having a specific learning disability in reading.  Currently, he receives support from a special education teacher in only his English language arts class.  EP speaks Spanish with his family at home, but never received services as an ELL.  SL currently reads on a fourth-grade level.  He is tech savvy and only reads for pleasure on his tablet.

**Participant 5**.  AR is a sixth-grade Hispanic, male student who is currently receiving special education services and has an Individualized Education Plan.  He is classified as having a specific learning disability in both reading and math.  Currently, he receives support from a special education teacher in math and English language arts.  Under a consultative model, he meets with a special education teacher once a week to receive services for his remaining classes.  Although born in the United States, AR has been classified as an ELL since Kindergarten and speaks Spanish at home.  He receives

ELL services in English language arts only.  He currently reads on a fourth-grade level.  He is unfocused in class and is reluctant to complete his schoolwork.

Participant 6. IS is a sixth-grade Hispanic, male student who is currently receiving special education services and has an Individualized Education Plan.  He is classified as having a specific learning disability in reading.  Currently, He receives support from a special education teacher in English language arts only.  IS also receives 504 services related to his ADHD diagnosis, hyperactive/impulsive type.  His 504 plan primarily addresses behavior related to his ADHD and IS's teachers must follow a strict behavior modification plan for him.  He is negative towards reading and is reluctant to read in class.  He currently reads on a fourth-grade level.

Participant 7.  JT is a sixth-grade Hispanic, female student who is currently receiving special education services and has an Individualized Education Plan.  She is classified as having a s learning disability in both reading and math.  Currently, she receives support from a special education teacher in math and English language arts.  Under a consultative model, she meets with a special education teacher once a week to receive services for her remaining classes.  JT also receives 504 services related to her ADHD diagnosis, combined type.  Her 504 plan primarily deals with behavior related to her ADHD.  At the request of her parents, JT recently began a behavior modification plan to improve performance in school.  She is a reluctant reader, currently reading on a fourth grade level.

Participant 8.  KW is a sixth-grade Black, male student who is currently receiving special education services and has an Individualized Education Plan.  He is classified as having a specific learning disability in both reading and math.  Currently, he

receives support from a special education teacher in math and English language arts. Under a consultative model, he meets with a special education teacher once a week to receive services for his remaining classes.  He currently reads on a fourth-grade level.

 **Procedure**

The intervention was implemented over a five-week period from December 2016 to January 2017.  The teacher met with the group of students three times per week for forty-two minutes.  The group of students typically met with the teacher for reading intervention during this time.  The group met Mondays, Tuesdays, and Thursdays from 9:30am to 10:12am.  The group consisted of eight sixth-grade students, five male and three female.

**Baseline (A1).** Sessions 1 through 3 took place over a one week period.  During these sessions, the students were assessed without the intervention and with little guidance from the teacher.  The assessment results from these sessions were used to gather baseline data on each student in regards to their identification of main idea and supporting details in nonfiction texts, as well as their reading comprehension of these texts.  In each session, the students were given a short, nonfiction reading passage and a main idea and supporting details questions sheet, as well as a short reading comprehension quiz based on the passage.  The students read and completed the question sheet and quiz independently.  Figure 1 displays the main idea question sheet.

Student # _____                                    Date: _____

Title of Passage: _____

    1.  What was the main idea of this passage?

_____

_____

_____


    2.  What are three details that support the main idea?

•  _____

    _____

    _____


•  _____

    _____

    _____


•  _____

    _____

    _____

*Figure 1.* Main Idea Question Sheet

**Instruction.** Sessions 4 through 9 took place over a two week period.  Sessions 4,

5, and 6 were instructional. During sessions 4, 5, and 6, the teacher modeled using the

graphic organizer to identify main idea and supporting details in a nonfiction text.  Each

session, the teacher read a passage along with the class and completed a graphic

organizer displayed at the front of the room while reading.  The teacher stopped to

explain each step and to answer student questions.  After modeling, the teacher  read a

second passage with the class, and together the class filled out the graphic organizer while reading.

**Intervention (B1).** During sessions 7, 8, and 9, the students began to work independently again. Using the intervention as it was taught to them, the students read one passage each day while completing a graphic organizer to identify main idea and supporting details. After reading, the students used their graphic organizer to answer the questions on the main idea and supporting details questions sheet. Once that was completed, the students answered 5 multiple choice questions on a quiz based on the passage. Figure 2 displays the graphic organizer.

Student # _____                                                      Date: _____

**Main Idea**

This story is mostly about....
_____
_____
_____

**Supporting Details**

| One piece of evidence that supports the main idea is... | Another piece of evidence that supports the main idea is... | Another piece of evidence that supports the main idea is.... |
|---|---|---|

*Figure 2.* Main Idea and Supporting Details Sheet

**Baseline (A2).** Sessions 10 through 12 took place during a one-week period. During these sessions, the intervention was removed. The students were again given a short, nonfiction reading passage and a main idea and supporting details questions sheet, as well as a short reading comprehension quiz based on the passage. The students read and completed the question sheet and quiz independently without the use of a graphic organizer.

**Intervention (B2).** Sessions 13 through 15 took place during a one-week period. For these sessions, the intervention was present once again. During each session, the students read one passage while completing a graphic organizer to identify main idea and supporting details. After reading, the students used their graphic organizer to answer the questions on the main idea and supporting details questions sheet. Once that was complete, the students answered 5 multiple choice questions on a quiz based on the passage.

**Social Validity.** On the last day, Session 15, the students were given a Likert scale type survey to indicate their feelings towards the intervention. The students were asked to answer honestly about their feelings towards using graphic organizers, in particular using them to identify main idea and supporting details in a nonfiction text. Figure 3 displays the survey given to the participants.

**Graphic Organizers to Identify Main Idea and Supporting Details Survey**

**Directions:** Read each sentence below and place an X in the column you feel most accurately indicates your feelings.

| Statements | Strongly Agree 5 | Agree 4 | Undecided 3 | Disagree 2 | Strongly Disagree 1 |
|---|---|---|---|---|---|
| 1. I found graphic organizers to be easy to use. | | | | | |
| 2. I enjoyed using the graphic organizer in class. | | | | | |
| 3. I found that the graphic organizer helped me to identify main idea and supporting details. | | | | | |
| 4. I would rather use a graphic organizer to assist in identifying main idea and supporting details than to not use one. | | | | | |
| 5. The graphic organizer was a distraction as I read. | | | | | |
| 6. I would use graphic organizers in other classes or settings to help me manage new information. | | | | | |
| 7. I would use graphic organizers to assist with other reading skills (e.g. summarizing, cause and effect, sequencing, etc.) | | | | | |
| 8. I would recommend using graphic organizers to my friends. | | | | | |

*Figure 3.* Student Satisfaction Survey

**Variables**

The independent variable in the study was the experimental intervention of the utilization of a graphic organizer to assist in identifying main idea and supporting details. This intervention aimed to increase students' success with that skill, as well as improve reading comprehension. The dependent variables in the study were the students' identification of main idea and supporting details, and reading comprehension.

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**ABAB Design**

       This study was conducted using an ABAB design. The students were given nonfiction texts at their reading level. After reading, they were asked to write the main idea of the passage and three details that support it. During each phase, the student's comprehension was also assessed through post-reading quizzes. The students were assessed first three times without the intervention to gain a baseline (A1). Then, they were given direct instruction and interventions using graphic organizers. Utilizing the graphic organizer intervention, they were assessed again three times to determine its success (B1). Next, they were assessed without the intervention again three times (A2). Lastly, the students were assessed again three times using graphic organizers (B2). At the end of the study, the students completed a Likert scale based survey, reporting their satisfaction level in regards to the use of graphic organizers to identify main idea and supporting details.

# Chapter 4

## Results

A single subject ABAB design study was implemented to investigate the effects of a graphic organizer on the identification of main idea and supporting details in nonfiction text by eight, sixth-grade students with specific learning disabilities. The research questions to be answered follow:

1. Will the use of a graphic organizer increase the identification of main idea and supporting details from a nonfiction text by students with specific learning disabilities in reading?

2. Will the use of a graphic organizer increase the comprehension assessment scores of students with specific learning disabilities in reading?

3. Will students be satisfied with the use of a graphic organizer to identify main idea and supporting details?

The students were assessed at the beginning of the study using three nonfiction texts to gain a baseline. During each assessment, the students were instructed to identify the main idea and three supporting details of each passage and to answer five multiple-choice comprehension questions based on the text. Next, the students were given direct instruction on using a graphic organizer to help identify main idea and supporting details. The students were then assessed again three times, using the graphic organizer as a strategy to assist in identifying main idea and supporting details. This procedure was repeated for a second baseline and intervention phase.

**Group Results**

Table 1 shows the mean percentage scores for each baseline and intervention

stage for all eight participants.  Additionally, the table shows the mean scores for the

group as a whole.

Table 1

*Mean Main Idea and Supporting Details and Comprehension Data Across All Phases*

| Partic-ipant | MAIN IDEA AND SUPPORTING DETAILS IDENTIFICATION (Mean %) | | | | COMPREHENSION (Mean %) | | | | Difference Between Baseline (A1) and Intervention (B2) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Baseline (A1)* | *Intervention (B1)* | *Baseline (A2)* | *Intervention (B2)* | *Baseline (A1)* | *Intervention (B1)* | *Baseline (A2)* | *Intervention (B2)* | *Main Idea and Supporting Details Mean %* | *Comprehension Mean %* |
| 1 | 100 | 100 | 100 | 100 | 73 | 87 | 80 | 93 | 0 | 20 |
| 2 | 83 | 100 | 92 | 92 | 73 | 100 | 67 | 93 | 9 | 20 |
| 3 | 0 | 83 | 16 | 92 | 60 | 80 | 67 | 87 | 92 | 27 |
| 4 | 58 | 92 | 75 | 100 | 53 | 80 | 53 | 80 | 42 | 27 |
| 5 | 0 | 0 | 0 | 0 | 60 | 60 | 60 | 60 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 40 | 73 | 33 | 67 | 0 | 27 |
| 7 | 100 | 100 | 100 | 100 | 33 | 60 | 40 | 67 | 0 | 34 |
| 8 | 17 | 92 | 0 | 83 | 47 | 80 | 60 | 73 | 66 | 26 |
| **MEAN** | 44.8 | 70.9 | 47.9 | 70.9 | 54.9 | 77.5 | 57.5 | 77.5 | 26.1 | 22.6 |

The Baseline was taken on leveled passages for each of the eight participants. All eight participants read on a fourth-grade level. Each student read a passage on their reading level. After reading, each student identified the main idea and three supporting details in writing and answered 5 multiple-choice questions on a comprehension quiz. For the identification of main idea and supporting details, the students earned one point if they properly identifying the main idea and one point for each correct supporting detail and their scores were a percentage out of 100. For comprehension, the students were given one point for each correct answer and their score was a percentage out of 100. During the Baseline Phase, the students were tested this way three times. During the Intervention Phase, the students were tested again three times using passages on their reading level. This time, they were asked to use a graphic organizer while reading to help identify the main idea and supporting details in each passage. The Baseline and the Intervention Phase were both repeated to gather additional data.

In examining the identification of main idea and supporting details, the results for the overall group show a Baseline (A1) of 44.8%. During the first Intervention Phase (B1), the group mean increased to 70.9%. During the second Baseline (A2), the mean was 47.9% for the overall group. Lastly, during the second Intervention Phase (B2), the group mean again increased to 70.9%.

In examining comprehension, the results for the overall group show a Baseline (A1) of 54.9%. During the first Intervention Phase (B1), the group mean increased to 77.5%. During the second Baseline (A2), the mean was 57.5% for the overall group. Lastly, during the second Intervention Phase (B2), the group mean increased again to 77.5%.

As a group, the mean increased 26.1 percentage points in the identification of main idea and supporting details from the first Baseline (A1) to the second Intervention Phase (B2). Individually, half of the participants showed no change from the first Baseline (A1) to the second Intervention (B2). The remaining participants increased their scores. The participants increased their mean comprehension scores 22.6 percentage points as a group from the first Baseline (A1) to the second Intervention Phase (B2). All participants increased their scores from Baseline (A1) to Intervention (B2) in the area of comprehension.

**Individual Results**

Figure 4 illustrates the main idea and supporting detail percentage scores for Participant 1 across all four phases. Of note, Participant 1 was included in the study based on need in the area of comprehension only. Participant 1 did not have need in the area of identifying main idea and supporting details as evidenced by consistent high scores. For Baseline (A1), Participant 1 scored 100%. She consistently scored 100% for Intervention (B1), Baseline (A2), and Intervention (B2), as well.
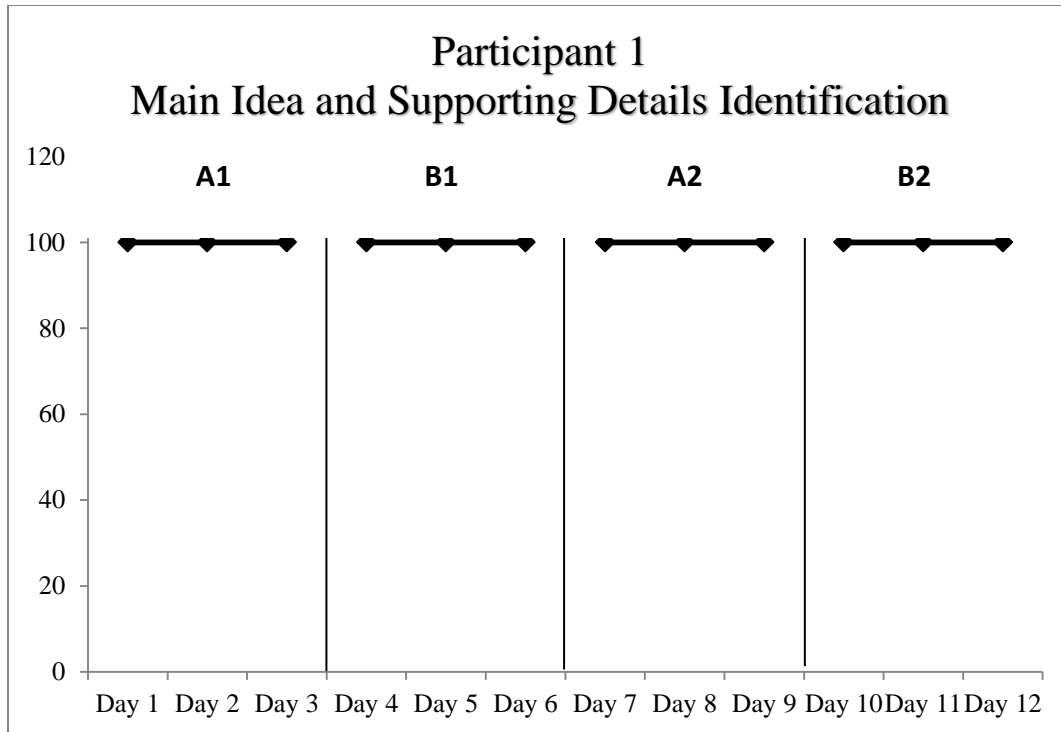
*Figure 4*. Participant 1 Main Idea and Supporting Details Identification

Figure 5 illustrates the comprehension percentage scores for Participant 1 across all four phases. During Baseline (A1), she scored a mean of 73%. For Intervention (B1), her score increased to a mean of 87%. During Baseline (A2), her score decreased to a mean of 80%, but increased again during Intervention (B2) to 93%.
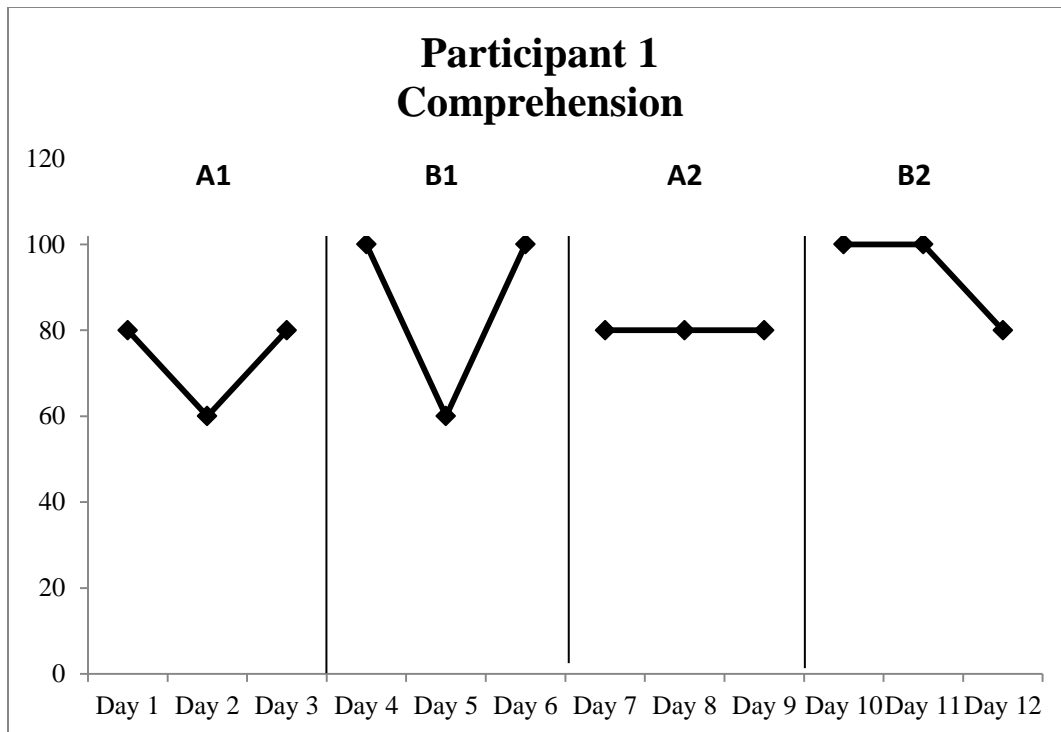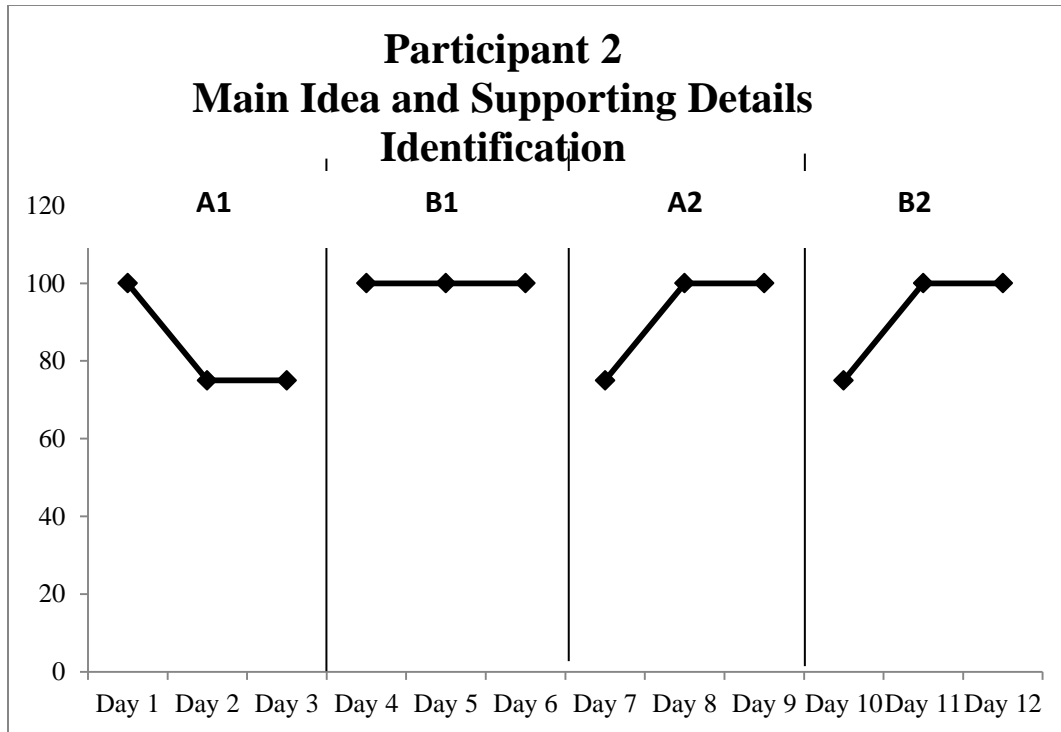
*Figure 5*. Participant 1 Comprehension

Figure 6 illustrates the main idea and supporting detail percentage scores for

Participant 2 across all four phases. For Baseline (A1), Participant 1 scored 83%. He

increased to a score of 100% for Intervention (B1). His score decreased for Baseline

(A2) to 92% and remained the same for Intervention (B2) at 92%.

*Figure 6.* Participant 2 Main Idea and Supporting Details Identification

Figure 7 illustrates the comprehension percentage scores for Participant 2 across all four phases. During Baseline (A1), he scored a mean of 73%. For Intervention (B1), his score increased to a mean of 100%. During Baseline (A2), his score decreased to a mean of 67%, but increased again during Intervention (B2) to 93%.
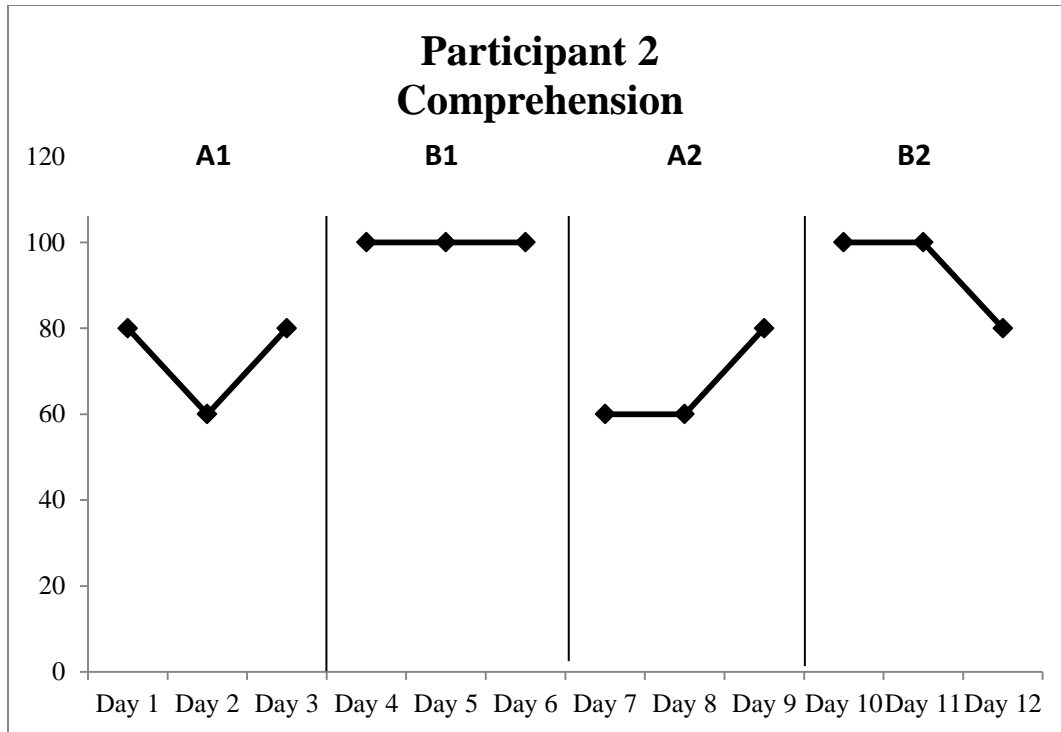
**Participant 2**
**Comprehension**



*Figure 7*. Participant 2 Comprehension

Figure 8 illustrates the main idea and supporting detail percentage scores for

Participant 3 across all four phases. For Baseline (A1), Participant 3 scored 0%. She

increased to a score of 83% for Intervention (B1). Her score decreased for Baseline (A2)

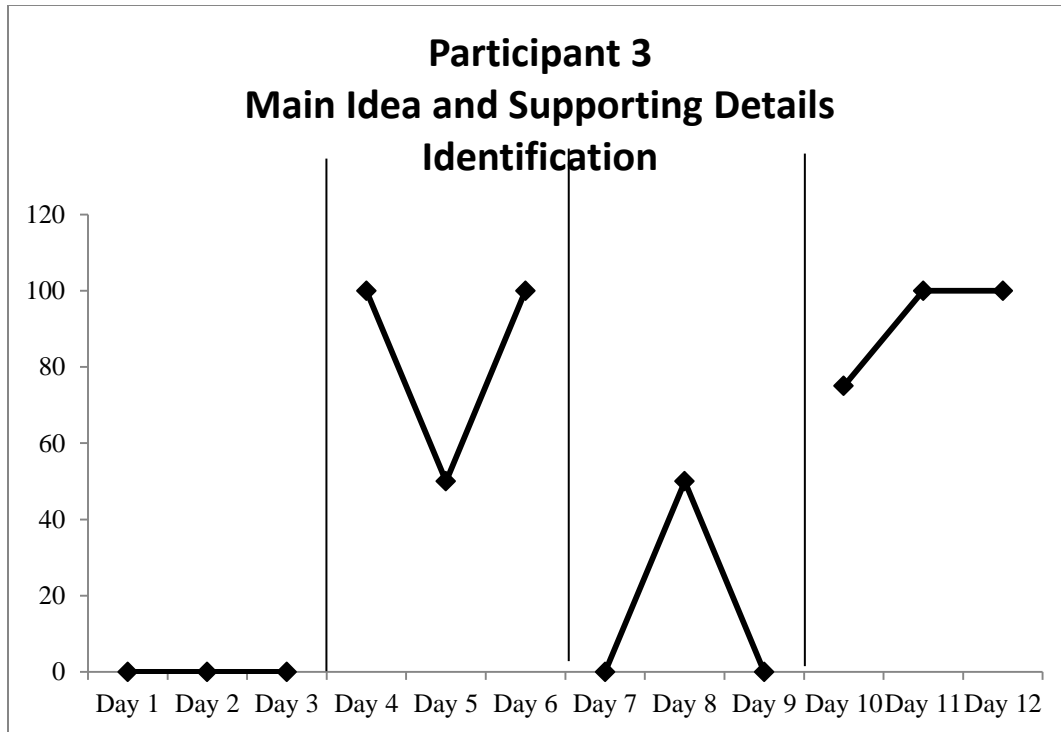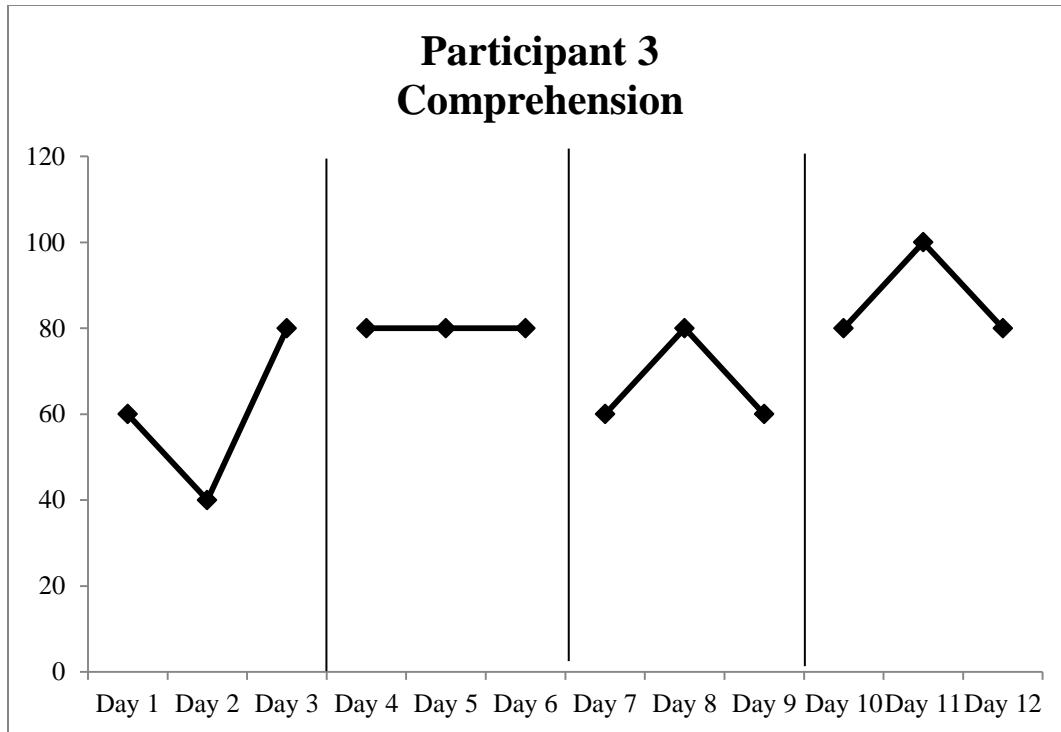to 16% and increased to 92% for Intervention (B2).

**Participant 3**
**Main Idea and Supporting Details**
**Identification**

*Figure 8.* Participant 3 Main Idea and Supporting Details Identification

Figure 9 illustrates the comprehension percentage scores for Participant 3 across all four phases. During Baseline (A1), she scored a mean of 60%. For Intervention (B1), her score increased to a mean of 80%. During Baseline (A2), her score decreased to a mean of 67%, but increased again during Intervention (B2) to 87%.

**Participant 3**
**Comprehension**



*Figure 9*. Participant 3 Comprehension

Figure 10 illustrates the main idea and supporting detail percentage scores for

Participant 4 across all four phases. For Baseline (A1), Participant 4 scored 58%. He

increased to a score of 92% for Intervention (B1). His score decreased for Baseline (A2)

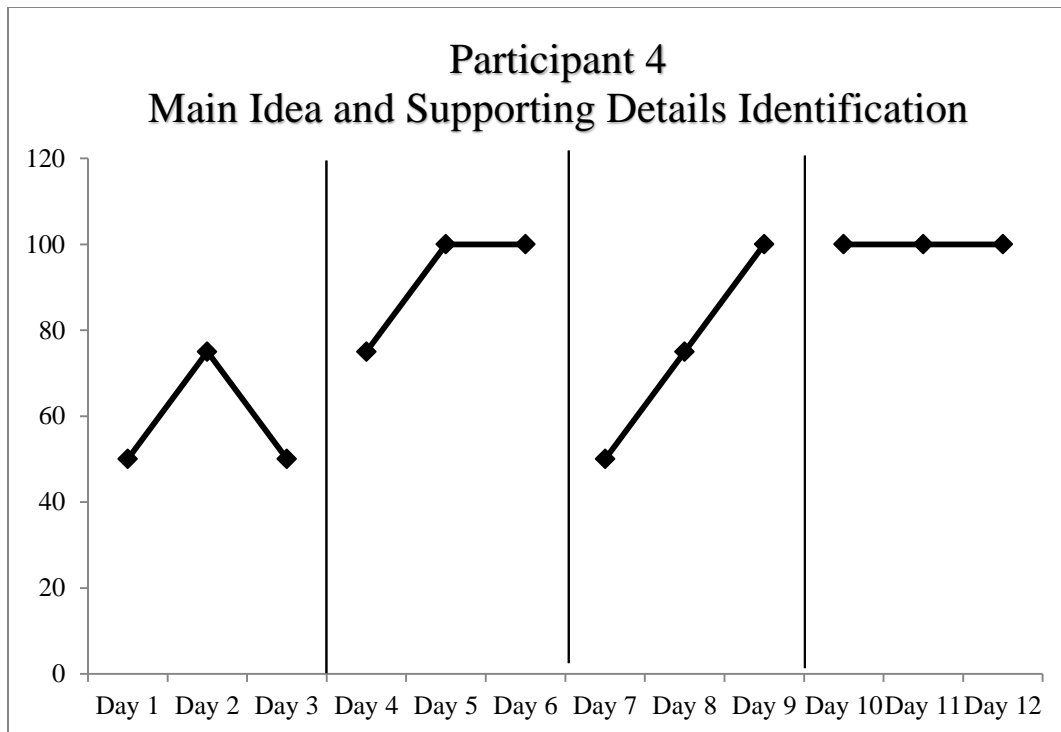to 75% and increased to 100% for Intervention (B2).

*Figure 10.* Participant 4 Main Idea and Supporting Details Identification

Figure 11 illustrates the comprehension percentage scores for Participant 4 across all four phases. During Baseline (A1), he scored a mean of 53%. For Intervention (B1), his score increased to a mean of 80%. During Baseline (A2), his score decreased to a mean of 53%, but increased again during Intervention (B2) to 80%.
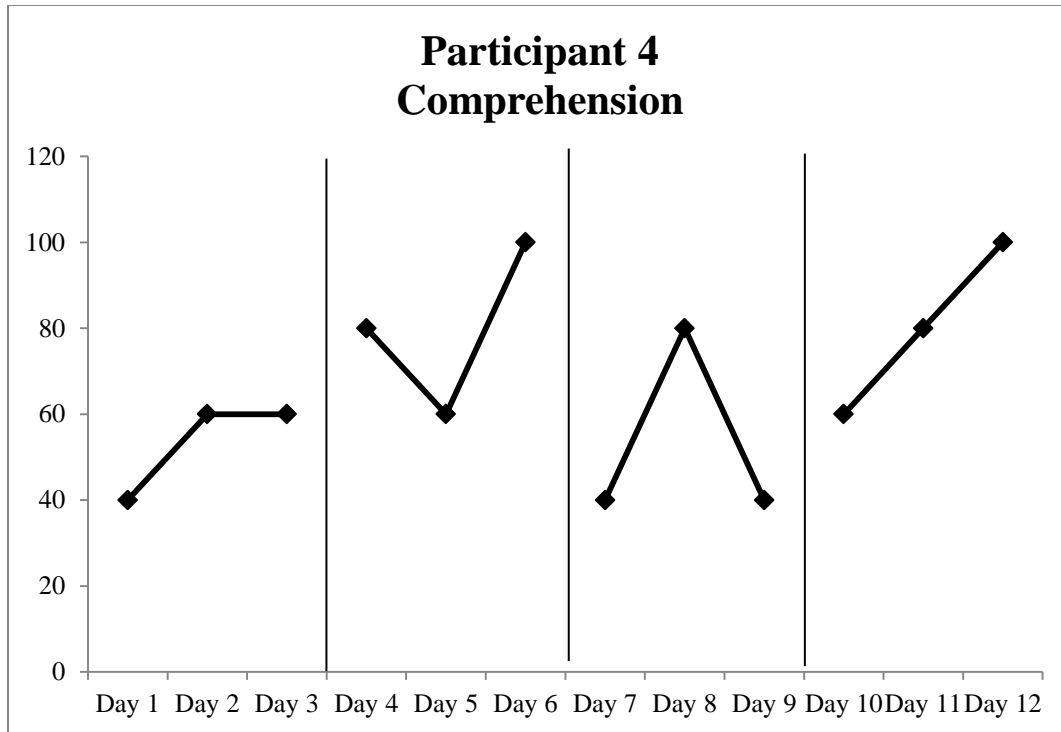
**Participant 4
Comprehension**



*Figure 11*. Participant 4 Comprehension

Figure 12 illustrates the main idea and supporting detail percentage scores for

Participant 5 across all four phases. For Baseline (A1), Intervention (B1), Baseline (A2),

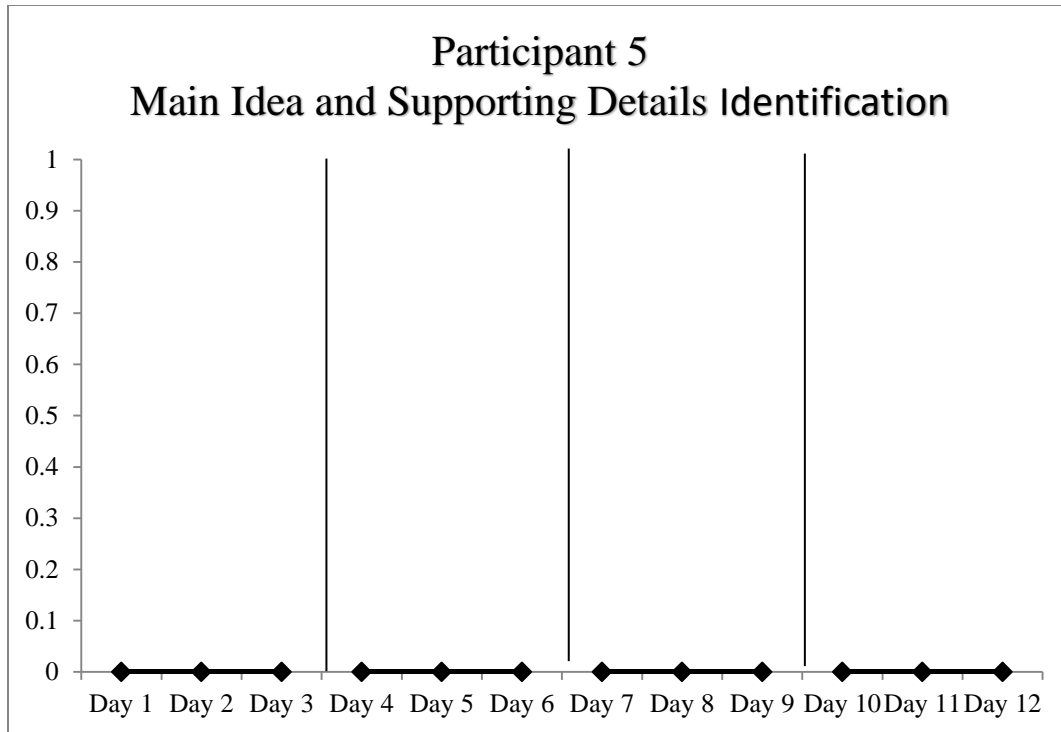and Intervention (B2), Participant 5 consistently scored 0% due to incorrect responses.

*Figure 12*. Participant 5 Main Idea and Supporting Details Identification


Figure 13 represents the comprehension scores of Participant 5. In the area of comprehension, for Baseline (A1), Intervention (B1), Baseline (A2), and Intervention (B2), Participant 5 consistently scored a mean of 60%.
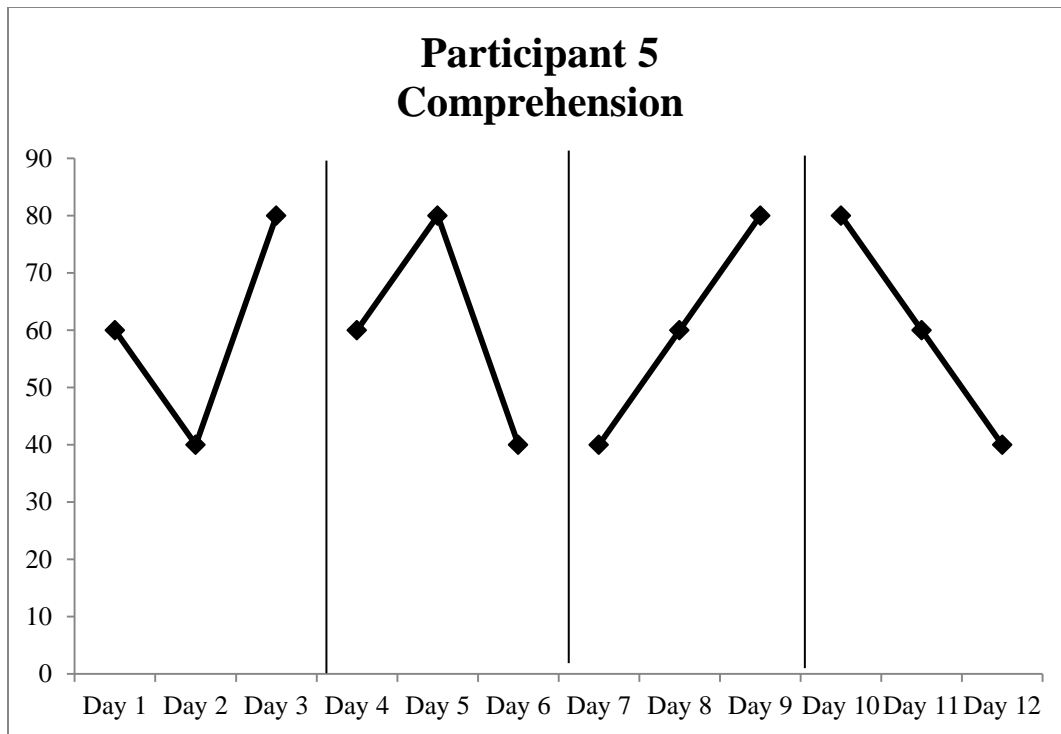
**Participant 5
Comprehension**

*Figure 13*. Participant 5 Comprehension

Figure 14 illustrates the main idea and supporting detail percentage scores for

Participant 6 across all four phases.  For Baseline (A1), Intervention (B1), Baseline (A2),

and Intervention (B2), Participant 6 consistently scored 0% due to incorrect responses.
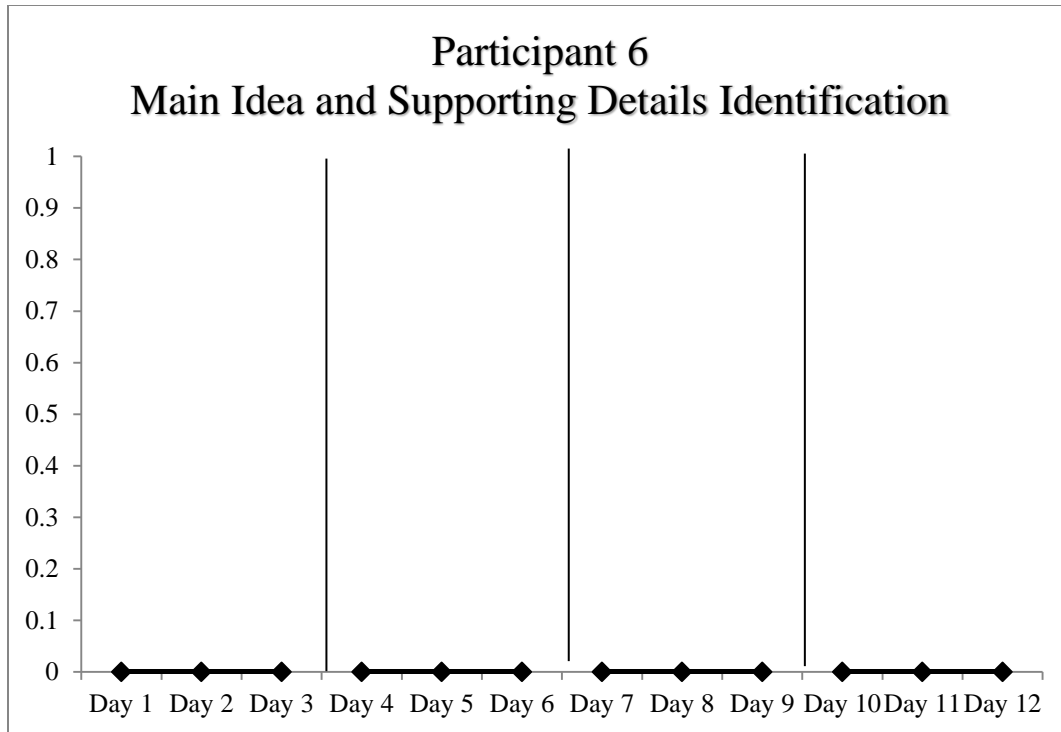
*Figure 14*. Participant 6 Main Idea and Supporting Details Identification

Figure 15 illustrates the comprehension percentage scores for Participant 6 across all four phases. During Baseline (A1), he scored a mean of 40%. For Intervention (B1), his score increased to a mean of 73%. During Baseline (A2), his score decreased to a mean of 33%, but increased during Intervention (B2) to 67%.
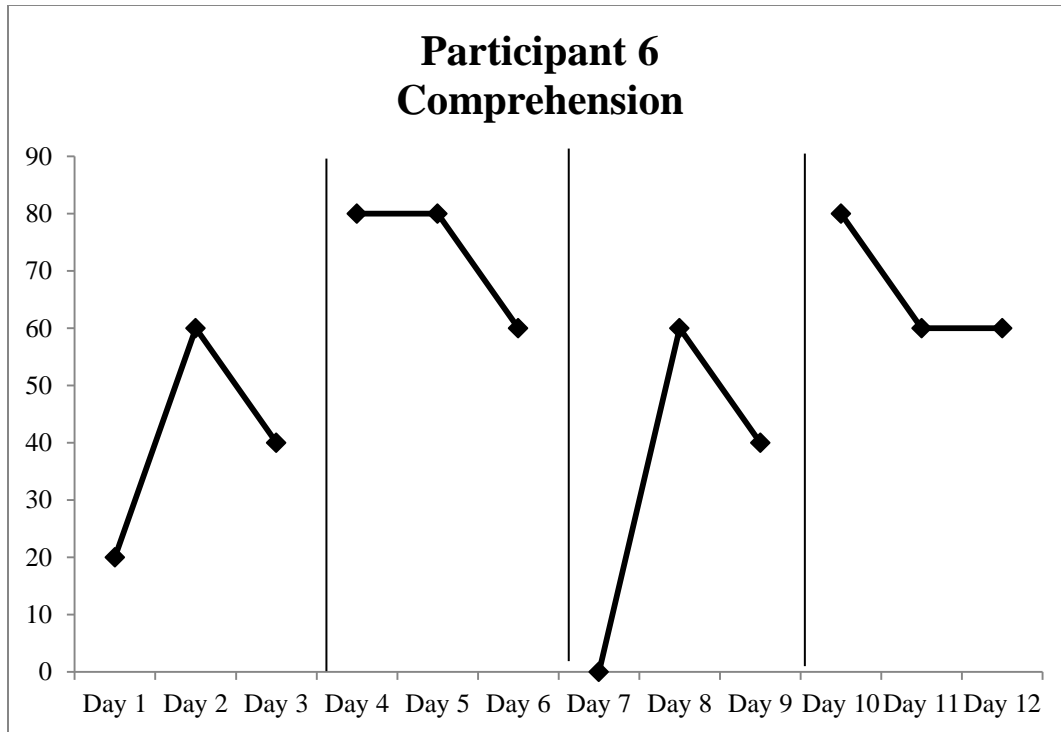
*Figure 15*. Participant 6 Comprehension

Figure 16 illustrates the main idea and supporting detail percentage scores for

Participant 7 across all four phases.  Similar to Participant 1, Participant 7 was included

in the study based on need in the area of comprehension only. Participant 7 consistently

scored 100% across all phases in the area of main idea and supporting detail.
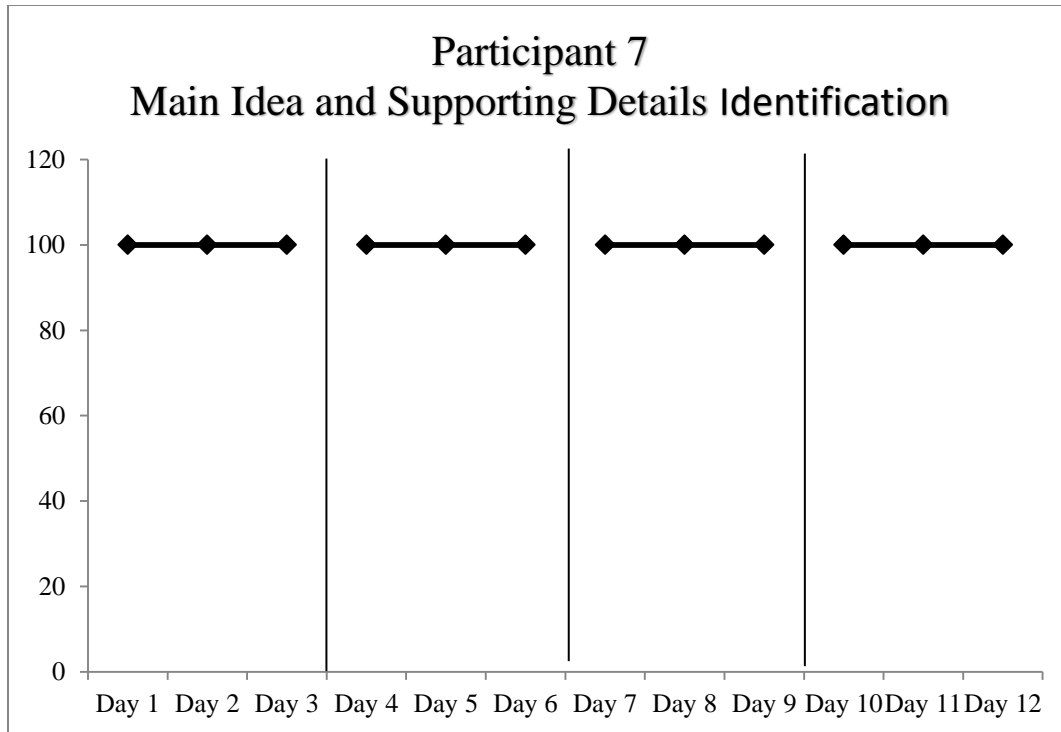
*Figure 16.* Participant 7 Main Idea and Supporting Details Identification

Figure 17 illustrates the comprehension percentage scores for Participant 7 across all four phases. During Baseline (A1), she scored a mean of 33%. For Intervention (B1), her score increased to a mean of 60%. During Baseline (A2), her score decreased to a mean of 40%, but increased again during Intervention (B2) to 67%.
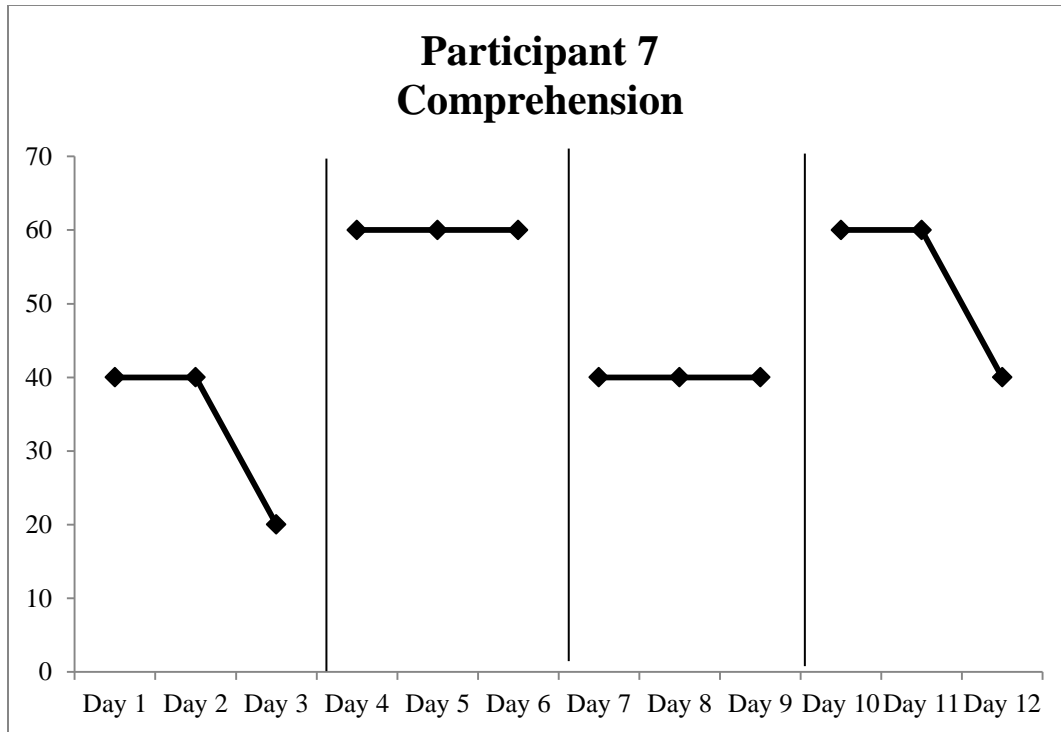
**Participant 7**
**Comprehension**

*Figure 17*. Participant 7 Comprehension

Figure 18 illustrates the main idea and supporting detail percentage scores for

Participant 8 across all four phases. For Baseline (A1), Participant 8 scored 17%. He

increased to a score of 92% for Intervention (B1). His score decreased for Baseline (A2)

to 0% and increased to 83% for Intervention (B2).
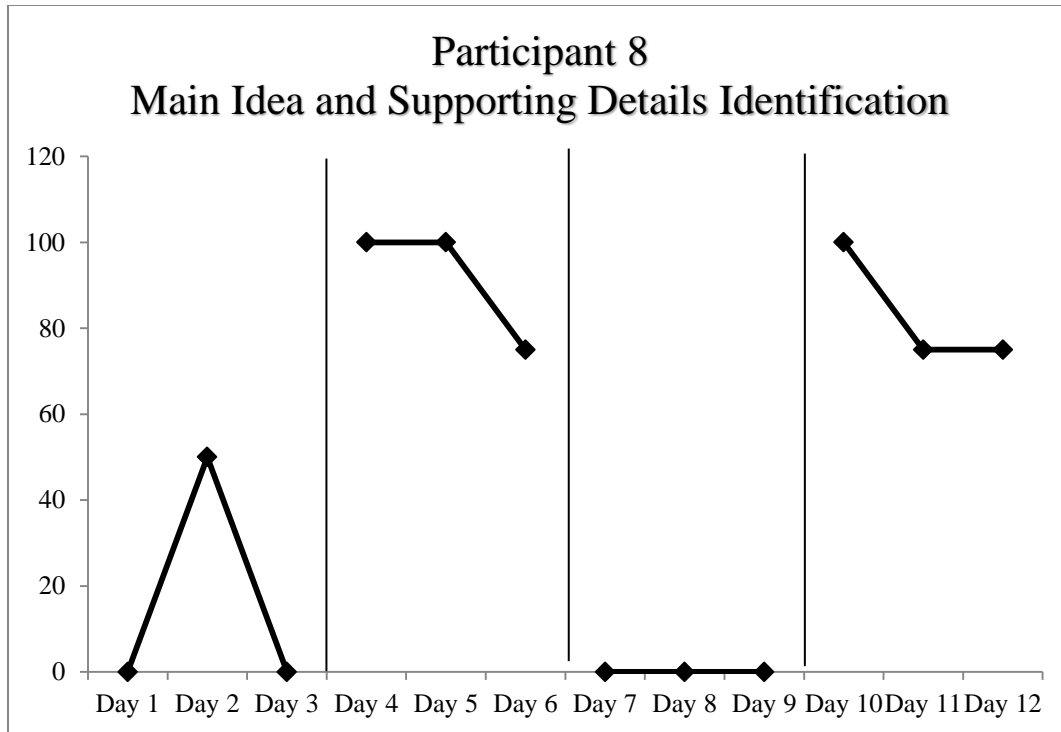
*Figure 18*. Participant 8 Main Idea and Supporting Details Identification

Figure 19 illustrates the comprehension percentage scores for Participant 8 across all four phases. During Baseline (A1), he scored a mean of 47%. For Intervention (B1), his score increased to a mean of 80%. During Baseline (A2), his score decreased to a mean of 60%, but increased during Intervention (B2) to 73%.

**Participant 8**
**Comprehension**

*Figure 19*. Participant 8 Comprehension

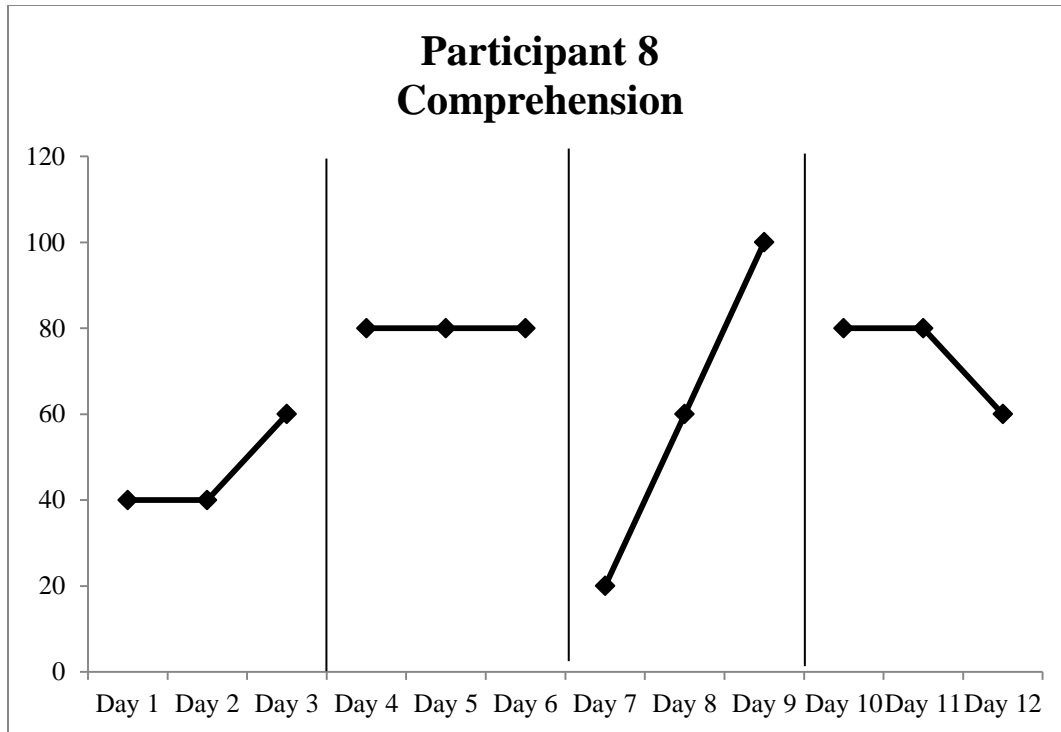## Survey Results

Research question three asked, will students be satisfied with the use of a graphic organizer to identify main idea and supporting details? All students completed a Likert scale satisfaction survey at the end of the study. Results were tallied and calculated into percentages. Table 2 represents the percentage of students that responded in each category to each statement.

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Table 2

*Student Satisfaction Survey*

| Statement | 5 Strongly Agree (%) | 4 Agree (%) | 3 Neutral (%) | 2 Disagree (%) | 1 Strongly Disagree (%) |
|---|---|---|---|---|---|
| 1. I found graphic organizers to be easy to use. | 25 | 50 | 25 | 0 | 0 |
| 2. I enjoyed using the graphic organizer in class. | 12.5 | 37.5 | 37.5 | 12.5 | 0 |
| 3. I found that the graphic organizer helped me to identify main idea and supporting details. | 25 | 37.5 | 25 | 12.5 | 0 |
| 4. I would rather use a graphic organizer to assist in identifying main idea and supporting details than to not use one. | 12.5 | 12.5 | 75 | 0 | 0 |
| 5. The graphic organizer was a distraction as I read. | 0 | 0 | 25 | 25 | 50 |
| 6. I would use graphic organizers in other classes or setting to help me manage new information. | 50 | 37.5 | 12.5 | 0 | 0 |
| 7. I would use graphic organizers to assist with other reading skills (e.g. summarizing, cause and effect, sequencing, etc.) | 50 | 37.5 | 0 | 12.5 | 0 |
| 8. I would recommend using graphic organizers to my friends. | 37.5 | 12.5 | 37.5 | 0 | 12.5 |

Results of the survey suggest the participants were in favor of using a graphic organizer. Fifty percent of the participants agreed with the statement, "I found graphic organizers to be easy to use." For the statement, "I enjoyed using the graphic organizer

in class," 37.5% agreed, while 37.5% were undecided.  Seventy-five percent of the participants were undecided about the statement, "I would rather use a graphic organizer to assist in identifying main idea and supporting details than to not use one.  Fifty percent of the participants strongly disagreed with the statement, "The graphic organizer was a distraction as I read."  Fifty percent of the participants strongly agreed with the statements, "I would use graphic organizers in other classes or settings to help me manage new information" and "I would use graphic organizers to assist with other reading skills (e.g. summarizing, cause and effect, sequencing, etc.)."  For the statement, "I would recommend using graphic organizers to my friends," 37.5% of the participants said that they strongly agreed, while 37.5% were undecided.

# Chapter 5

## Discussion

The purpose of this study was to evaluate the effectiveness of graphic organizers on the identification of main idea and supporting details from nonfiction texts by students with learning disabilities.  This study utilized a single subject ABAB design to investigate the effect graphic organizers had on the reading comprehension of eight $6^{th}$ grade students with learning disabilities identifying main idea and supporting details in nonfiction text. The following research questions were examined:

1) Will the use of a graphic organizer increase the identification of main idea and supporting details from a nonfiction text by students with specific learning disabilities in reading?

2) Will the use of a graphic organizer increase the comprehension assessment scores of students with specific learning disabilities in reading?

3) Will students be satisfied with the use of a graphic organizer to identify main idea and supporting details?

### Findings

The results of this study show that the use of graphic organizers improved identification of main idea and supporting details from a nonfiction text, as well as improved the comprehension of nonfiction text, for students with LD. When graphic organizers were used, the majority of participants improved their assessment scores.

As a group, the participants improved 26.1 mean percentage points from Baseline (A1) to Intervention (B2) for main idea and supporting detail identification.  Four of the participants showed an improvement in main idea and supporting detail identification

when using the graphic organizer intervention. These findings are in alignment with the findings of Sam and Rajan (2013) that graphic organizers are an effective visual tool to improve the identification of main idea and supporting details.  Graphic organizers assist students in independently identifying specific information from the text and successfully applying that information to a specific reading strategy, such as the identification of main idea and supporting details. Two of the participants however, Participants 5 and 6, did not show any improvement and  received consistent scores of 0 throughout.  Their scores were results of incorrect responses.  Participant 5's incorrect responses may be due to a language barrier, as he receives ELL services.  Participant 6's incorrect responses may be due to lack of focus because of his ADHD diagnosis.

In the area of comprehension, the participants improved 22.6 mean percentage points on their assessments from Baseline (A1) to Intervention (B2).  Unlike the main idea and supporting details identification, nearly all of the participants improved in this area.  When the graphic organizer intervention was used, 7 of 8 participants showed growth in their comprehension assessment scores. Only one participant, Participant 5, remained consistent with a mean score of 60% throughout.  Again, this may be due to Participant 5's ELL classification. Findings in the area of reading comprehension in the present study align with the findings of Kim et al. (2016) that graphic organizers improve the reading comprehension for students with learning disabilities. This coincides with the finding of DiCecco and Gleason (2002) that the utilization of graphic organizers by student with learning disabilities specifically improves comprehension of informational text.

Results of the Likert student satisfaction survey suggest the participants were satisfied with the graphic organizer intervention. Overall, the participants found the graphic organizer easy to use. They enjoyed using the graphic organizer and felt that it helped them to identify main idea and supporting details. Also, the majority of the participants reported they would use a graphic organizer to assist with other reading skills and in other classes.

**Limitations**

There were several limitations to this study. The main limitation was time. Due to time restraints, the study was only able to take place during a five-week period. The study may have generated higher results had each phase lasted longer, particularly the intervention phases.

An additional limitation was student attendance. Originally, 10 students were participating in the study. However, two of those students had excessive absences during the study; therefore, their data was not considered valid. The study may have shown different outcomes with the data collected from those students.

Lastly, the study utilized various nonfiction passages, ranging in topic. Student interest level in in the various topics covered can be considered a limitation.

**Implications**

This study adds to the research that implies that students with learning disabilities benefit from using graphic organizers to improve reading skills. The successful use of graphic organizers as an intervention to identify main idea and supporting details may lead other educators to consider similar interventions to improve the reading comprehension of students with LD. Teachers should create graphic organizers specific

to the skill being taught and should remain consistent with that graphic organizers whenever addressing that skill. This study implies that using graphic organizers improves the identification of main idea and supporting details in students with LD, as well as improves their comprehension overall.

In addition, the majority of the participants in the study enjoyed using the graphic organizers and found them easy to use. The participants also felt that the graphic organizers helped them to identify main idea and supporting details and would both use graphic organizers to assist with other reading skills and in other classes. Their opinions suggest that their reading comprehension may improve overall with the continued use of graphic organizers. Singleton and Filce (2015) recommended the utilization of graphic organizers to support reading comprehension in students with LD. Their research implies that students with LD will more easily attain new information from expository text when utilizing a graphic organizer and their success with graphic organizers will improve both student motivation and achievement across the content areas (Singleton & Filce, 2015).

In the future, more research is needed to see what specific types of graphic organizers prove most beneficial for the identification of main idea and supporting details. As suggested by DiCecco and Gleason (2002) additional research is needed in the area of the use of graphic organizers, specifically to determine the effects graphic organizer design and teacher instruction have on specific reading skills. Findings of the present study also suggest more research is needed to determine the effects of graphic organizers on other reading skills, particularly for students with LD.

**Conclusions**

      The results of this study show an increase in the successful identification of main idea and supporting details in nonfiction text, as well as the comprehension of nonfiction text when a graphic organizer is used.  However, the degree of increased success varied between participants in regards to the identification of main idea and supporting details. Overall, the results of this study revealed an increase in the identification of main idea and supporting details from an informational text by students with learning disabilities, as well as an increase in their comprehension of a text when a graphic organizer was used. In addition, this study also reveals that the participants felt they benefitted from using graphic organizers while reading informational text.

# References

Baxendell, B. (2003). Consistent, coherent, creative: The 3 C's of graphic organizers. *Exceptional Children* 35(3), 46-53.

Biancarosa, C., & Snow, C. E. (2006). Reading next—A vision for action and research in middle and high school literacy: A report to Carnegie Corporation of New York (2nd ed.). Washington, DC: Alliance for Excellent Education.

Boulineau, T., Fore, C., Hagan-Burke, S., & Burke, M. D. (2004). Use of story-mapping to increase the story-grammar text comprehension of elementary students with learning disabilities. *Learning Disability Quarterly, 27*(2), 105-121.

Dexter, D. D., & Hughes, C. A. (2011). Graphic organizers and students with learning disabilities: A meta-analysis. *Learning Disability Quarterly, 34*(1), 51-72.

DiCecco, V. M., & Gleason, M. M. (2002, July/August). Using graphic organizers to attain relational knowledge from expository text. *Journal of Learning Disabilities, 35*(4), 306-320.

Gajria, M., Jitendra, A. K., Sood, S., & Sacks, G. (2007). Improving comprehension of expository text in students with LD. *Journal of Learning Disabilities, 40*(3), 210-225.

Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research, 71*(2), 279-320.

Kim, A., Vaughn, S., Wanzek, J., & Wei, S. (2004, March/April). Graphic organizers and their effects on the reading comprehension of students with LD: A synthesis of research. *Journal of Learning Disabilities, 37*(2), 105-118.

Lord, K. M. (2015). Determining the main idea: Instructional strategies that work. *Kappa Delta Pi Record,51*(3), 138-142.

Mastropieri, M. A., Scruggs, T. E., & Graetz, J. E. (2003). Reading comprehension instruction for secondary students: Challenges for struggling students and teachers. *Learning Disability Quarterly, 26*(2), 103.

Sam D, P., & Rajan, P. (2013, January 9). Using graphic organizers to improve reading comprehension for middle school ESL students. *English Language Teaching, 6*(2), 155-170.

Solis, M., Ciullo, S., Vaughn, S., Pyle, N., Hassaram, B., & Leroux, A. (2011). Reading comprehension interventions for middle school students with learning disabilities. *Journal of Learning Disabilities, 45*(4), 327-340.

Singleton, S. M., & Filce, H. G. (2015, September). Graphic organizers for secondary
students with learning disabilities. *Teaching Exceptional Children,20*(10), 1-8.

Watson, S. M., Gable, R. A., Gear, S. B., & Hughes, K. C. (2012). Evidence-based
strategies for improving the reading comprehension of secondary students:
Implications for students with learning disabilities. *Learning Disabilities
Research & Practice, 27*(2), 79-89.