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Learning to read and reading to learn, while often used synonymously, are quite different skills. While the acquisition of one skill—learning to read—is a necessary component for the other—reading to learn—reading comprehension is one of the single most important skills for success in school and, most importantly, success in life beyond academia. Shanahan et al. (2010) posited that reading comprehension is the process of deriving and establishing meaning from text through engagement and interaction with a written language; this process is accomplished concurrently while a learner interacts with a text.

Individuals with learning disabilities are confronted with persistent reading comprehension difficulties. That is, these learners typically have word recognition difficulties, but also inadequate cognitive capacity and working memory difficulties (Jitendra & Gajria, 2011). Kim, Linan-Thompson, and Miquitta (2012) indicated that reading difficulties become more acute for students with learning disabilities (LD) who transition from elementary to middle school; the students are expected to practice reading to learn skills as opposed to learning to read skills. Teachers anticipate that middle school students will demonstrate adequate reading comprehension strategies by the time those student transition into middle school. However, students with LD continue to exhibit reading comprehension deficits throughout their academic lives. Such problems may include: locating the main idea, or gist, of a text, making inferences, using and applying strategies, and monitoring his or her use of strategies (Jitendra & Gajria, 2011). These problems become persistent problems in adult life.

Denton and Otaiba (2011) concluded that it is more probable for individuals with significant reading difficulties (RD) to drop out of school than fluent readers; they tend to have higher incidences of delinquency, more likely to engage in crime, and have higher suicidal

tendencies and rates. Generally, students who do not learn sufficient phonemic awareness strategies or adequate reading comprehension strategies has RD throughout their academic experience; these difficulties can perpetuate into adult life if intensive interventions are not implemented at an early stage in the individuals academic life. It is important that special educators present and practice effective reading comprehension strategies that enable students, particularly students with learning disabilities, with a variety of tools that can be used across all content-areas and can be used in adult life.

This paper will explore and synthesize the body of current research on effective reading comprehension instruction and strategies. Beginning with a survey of several variables that affect working memory and executive processes, this paper will discuss how the mind's ability to interpret text and derive meaning is a critical component for reading comprehension. The article will also explore how the elements of the working memory affect student with learning disabilities (LD). Furthermore, the working memory's executive process is essential for the "simultaneous process of extracting and construction meaning" from text (Garcia-Madruga et al., 2013, p. 155).

In addition, this paper will review and analyze existing evidence-based practices for teaching reading to struggling learners. Strategies such as using direct and explicit instruction, using graphic organizers, mnemonics devices, deriving main idea from texts, and using methods such as the SQ3R strategy are among a significant list that lend themselves to effective reading instruction. This review will investigate the effectiveness of some reading strategies because they are a significant part of a teacher's instructional process. This paper will contribute to the existing body of literature about the reading comprehension process and the effects of strategic instruction in reading comprehension. This literature review will conclude with a discussion that

summarizes major themes and synthesizes the effectiveness of reading comprehension instructional strategies.

Variables Affecting the Reading Process

Reading is a complex task that involves the simultaneous process of perceiving text and extracting meaning from that text. The brain's working memory (WM) plays a crucial role in deciphering such information.

Working Memory

Garcia-Madruga et al. (2013) expressed that WM "is a critical component of the neuroscience view of the human mind" (p. 155). The capacity of the WM can be defined as the amount of items one can recall during an intricate task. The capacity of the WM is a cognitive process, which maintains information in the brain during a complex task such as reading. Conceptually, there is no definitional agreement about the capacity of the working memory; there are however, several theories that do show some basic agreements about the working memory, such as a domain-general central executive (Garcia-Madruga et al., 2013). One such theory, as sited in Garcia-Madruga et al. (2013) and in De Weerdt, Desoete, and Roeyers (2013), is Braddeley's multicomponent model (1986) theory. This section will focus mainly on this processional theory, which includes looking at two domains—the phonological loop and the visuospatial sketchpad.

Garcia-Madruga et al. (2013) cited Braddeley's (1986) theory, which indicated that the phonological loop and visuospatial sketchpad are two domain-specific storage areas that are central to the WM system—both the episodic buffer and the central executive structures (as cited in Garcia-Madruga et al., 2013). These slave systems—phonological loop and visuospatial sketchpad—are essential components for the comprehension procedure of first processing,

deciphering, and storing information, and then retrieving that information. The slave systems are short-term storage centers that act as "an episodic buffer that links the two prior components with long term memory" (Garcia-Madruga et al., 2013, p. 155). The central executive structure is integral to the WM because it has to manage the other elements, and it is also responsible for attentional control (Garcia-Madruga et al., 2013). De Weerdt, Desoete and Roeyers (2013) further suggested that the multicomponent theory posits the WM to be a system that actively regulates complex intellectual behaviors. The central executive attentional control system is responsible for processing a task and interacting with the phonological loop and the visuospatial sketchpad. The visuospatial sketchpad is responsible for visual and spatial tasks, information, and processes.

To measure these slave systems—phonological loop and visuospatial sketchpad—recall tasks are implemented; contrarily, complex span tasks, which involve simultaneously storing and processing information, are used to measure the central executive capacity (De Weerdt et al., 2013). It is the phonological loop that is indicative to phonological awareness. Therefore, it is unsurprising that a significant volume of research suggests that children with RD have impairments with the phonological loop. De Weerdt et al. (2013) cited Swanson, Sheng, and Jerman's (2009) research that "overall memory problems were primarily moderated by deficiencies related to the central executive and the phonological loop" (p. 462).

Garcia-Madruga et al. (2013) indicated that learning to read impacts reading comprehension because individuals must know how to read before they begin to derive meaning from text. Reading comprehension requires an individual to store newly decoded, textual information and apply a complex process of constructing meaning from that information. The individual must extract and construct meaning, an intricate process that involves decoding,

storing, and retrieving. With regard to reading comprehensively, Garcia-Madruga et al. (2013) stated:

> Hence, it is unsurprising that learning to read comprehensively is often a rather complicated acquisition. It demands that the perception and identification of letters and words is automated so that cognitive resources are left free to be assigned to the construction of meaning and the representation of the situation that the text describes. (p. 156)

While WM capacity can be linked to a variety of comprehensive reading skills, students that score highly on WM demonstrate exceptional comprehensive reading skills, while those individuals with low WM scores typically perform poorly on comprehensive reading measurements (Garcia-Madruga et al., 2013). Garcia-Madruga et al. (2013) concluded that improvements in reading comprehension can be obtained by training both the executive processes involved in reading comprehension and training attentional control processes of cognitively demanding tasks.

Verbal and Spatial Working Memory Abilities

This section will briefly focus on verbal and spatial working memory abilities and how they relate to reading comprehension. Oakhill, Yuill, and Garnham (2011) postulated that WM is predictive of a children's reading comprehension; however, they indicated that it is unclear whether the relationship between WM and reading comprehension is warranted by a modality specific or basic WM. In their research, they examined relations amid reading skills and working memory by using three modalities (verbal, numerical, and spatial) and testing reading accuracy, reading comprehension, and WM.

WM and reading comprehension can be linked because a critical element of comprehension is the capability to process a semantic and syntactic relationship between sequential words and phrases/sentences (Oakhill et al., 2011). This capability is necessary for an individual to construct logical representation of text. In their study, Oakhill et al. (2011) compared two verbal working memory tests, both having different characteristics—mainly the level of verbal complexity. "The reading span task requires not only switching between storage and processing, the verbal encoding of information and phonological short-term storage, but also the syntactic and semantic processing of sentences, including word meanings" (Oakhill et al., 2011, p. 102). They indicated how the aptitude of one verbal working memory test for predicting comprehension stayed strong; it remained strong after a general ability test had been partially taken out. The level of processing difficulty impacting WM and reading comprehension was not supported by their data. The aptitude of the verbal WM test was specific to reading accuracy and not comprehension.

With regard to spatial working and reading comprehension, spatial WM was not indicative of reading comprehension, "once age and spatial ability had been partialed out" (Oakhill et al., 2011, p. 103). Their results revealed no evidence that spatial WM was suggestive for effective comprehension. Furthermore, spatial WM is not related to stronger comprehensive skills in younger children than in older. Conclusive in this study was that WM tasks, which involve symbolic processing, are predictive of positive reading comprehension skills. That is, symbolic processes in WM are positively linked to comprehension of WM tasks, more so than the cognitive processes.

Oakhill et al. (2011) indicated that strategies, which require symbolic processes of information, are effective for reading comprehension. While visual and spatial tasks may be

important for comprehensive reading, it is the teacher's presentation of skills/strategies that is crucial for the acquisition of learning effective comprehension approaches.

The following section will explore several reading comprehension strategies—direct instruction, the use of graphic organizers, mnemonic devices, main idea strategies, and computer assisted instruction.

Effective Reading Comprehension Strategies

Direct and Explicit Instruction

Generic direct instruction that is explicit—clear, specific, and detailed—is critical for activating students' prior knowledge about a reading topic (Watson, Gable, Gear, & Hughes, 2012). By embedding background knowledge in direct instruction, teachers can help improve students' comprehension of texts in other areas—vocabulary definitions, translations of phrases, and clarifying difficult concepts. When students can reflect on background knowledge, record it, and activate it through an inquisition process, they can make significant academic gains, particularly in reading comprehension. Teachers who use direct instruction for reading comprehension by demonstrating a skill, providing corrective feedback, using understandable language, and indicating a clear purpose for learning a strategy can accelerate a learner's reading development (Denton & Otaiba, 2011).

Polloway, Patton, Serna, and Baily (2013) indicated that direct instruction generally entails a clear explanation of the skill(s), teaching the knowledge/skill(s), modeling and demonstrating the skill(s), and providing feedback to the student(s) on how he or she performed with the skill. Similarly, Denton and Otaiba (2011) suggested several elements that are indicative of explicit instruction—assessment processes (informs teachers what a student's strengths/weaknesses are), lesson planning (based on the assessments given),

modeling/demonstrating, providing guided practice (of reading skill), verifying acquisition, providing corrective feedback, monitoring independent practice and mastery, and reteaching/reviewing a skill previously taught (to determine mastery and facilitate maintenance). Both Polloway et al.'s (2013) and Denton and Otiaba's (2011) instructional processes of learning should be implemented in all classrooms and content-areas to foster both effective learning and effective reading comprehension strategies.

Before reading comprehension can occur, it is important for a learner to acquire instruction in phonics (Denton & Otaiba, 2011). Likewise, phonemic awareness instruction can lend itself to later increases in reading comprehension. With phonics instruction, learners are taught to decode unfamiliar words. Teachers can use synthetic phonics, which facilitates the blending of phonemes, or an analytic phonics approach, which empowers segmenting of words. With either approach, teachers should determine how they are going to implement effective instruction in that skill. Denton and Otaiba (2011) stated that, regardless of the method, word-reading instruction must be efficient for empowering acceleration in reading.

Kim et al. (2012) "identified two factors that may contribute to the fidelity of the instruction: if instruction was scripted or not, and whether it was delivered by a researcher or teacher" (p. 67). Fidelity of instruction, or treatment, is the manner by which instruction was or was not delivered, and teachers must aware of this cautionary factor (Kim et al., 2012). It is particularly important for teacher to use the scripted manuals for commercially based direct instruction (DI) models; deterring from the presentation of these models effects fidelity of the research conducted for that intervention, and thus skews the effectiveness of treatment/instruction (Kim et al., 2012). Teachers can adopt instructional methods, and some may modify the methods depending on the student's need. If a teacher decides to adopt an

effective method, it is important that the teacher understands "how to adapt interventions, and knowing which adaptation would enhance the effectiveness of the intervention" (Kim et al., 2012, p. 75).

Purposefully directed instruction should include knowledge that is directly related to the skill being taught (Denton & Otaiba, 2011). Teachers who include essential reading knowledge in instruction and do not deter from the guidelines set forth in a selected treatment, are practicing appropriate fidelity of that treatment. Thus, it is important to provide clear demonstrations; likewise, clear and concise explanations of skills such as word identification and reading comprehension skills, are important for students who are easily confused.

Guided and independent practices are highly effective approaches for reading comprehension (Denton & Otaiba, 2011). These practices permit a teacher to observe his or her students practicing a reading skill; it also allows the teacher to coach the student as he/she practices that skill. Independent practice of a given reading strategy can foster repeated practice of a skill. That is, students should be given ample opportunities to practice an acquired reading skill. However, it is critical for the teacher to monitor the students as they practice the skill. Without verifying whether the student has mastered a skill, the teacher has no basis for moving forward with instruction. With more practice of an acquired reading skill, students can get into the repetitive routine of using that skill. During guided practice, a teacher provides corrective feedback throughout the reading process so that students are aware of their performance, and they can modify their use of the skill according to the provided feedback (Denton & Otaiba, 2011).

There are some beneficial practices that can help teachers who work with students with LD; these instructional practices can help the teacher provide his/her students with remedial

comprehensive reading strategies (Jitendra & Gajria, 2011). Jitendra and Gajria (2011) also suggested that text enhancement strategies—graphic organizers, story maps, and mnemonic devices—are encouraging instructional approaches that can be embedded in instruction. The following three sections will focus on the effectiveness of using graphic organizers and mnemonics for teaching reading comprehension.

Graphic Organizers

Ellis and Howard (2005) stated that graphic organizers (GOs) are visual strategies that represent information in various ways. According to Jitendra and Gajria (2011), GOs enable teaching and learning processes by providing students with visual cues that organize essential concepts. Sam and Rajan (2013) stated that GOs are graphic representations and/or images that can be used to enhance information provided in a text. These visual graphs can use lines, circles, and boxes; they "depict four ways information can be organized: hierarchic, cause/effect, compare contrast, and cyclic or linear sequences" (Ellis & Howard, 2005, p. 1). These visual cues promote communication of knowledge by presenting images that correlate with the organizational structure of information. Graphic organizers are images that serve as visual cues.

The visual cues can foster communication and a deeper understanding of content information in reading by illustrating how information is systematically organized (Ellis & Howard, 2005). The interrelationships of key concepts in a chapter or in reading passage can be represented through semantic or cognitive maps (Jitendra & Gajria, 2011). Jitendra and Gajria (2011) highlighted one key feature of using GOs; they can signify various text structure patterns. A cognitive map or a story map strategy can assist students with LD to visualize descriptions in a text. Jitendra and Gajria (2011) stated, "that teaching students to use cognitive maps is useful

when the details and relationships in the diagrams are made explicit" (p. 7). These cognitive maps use bubbles and lines to link main ideas and themes together.

Ellis and Howard (2005) stated that GOs are effective for reading comprehension instruction because they: accommodate students' need for clear organization/structure; they activate background knowledge; that teaching text structures can improve comprehension; GOs escalate literal/relational comprehension/recall/and terminology learning; when combined with strategy instruction, GOs are more effective than basal reading models; and advance organizers improve comprehension and factual recollection.

For uses in teaching reading, graphic organizers are help the structural needs of many students, an organized format, and the students' need to link new information to previous knowledge (Ellis & Howard, 2005). Through explicit instruction of text structures, teachers can enhance reading comprehension by using a story maps. Furthermore, using GOs for instruction in reading comprehension can increase literal/relational comprehension, recall of information, and acquisition of relevant vocabulary. Similarly, combining GOs with strategic approaches for reading instruction is more effective for enhancing comprehension skills than with using a basal reading model. And lastly, providing an advance GO before engaging in the reading process facilitates a foundation for recalling key facts in a text.

Like Ellis and Howard (2005), Sam and Rajan (2013) listed several uses for GOs—a clarification tool for categorizing information such as main idea and supporting details, organization of information in paragraph form to enhance comprehension, constructing meaning out of difficult vocabulary, linking new information to background knowledge, and to monitor conceptual/perceptual mistakes that can occur during the reading process.

Hall, Kent, and McCulley (2013) specified five steps that teachers should follow for implementing GOs in reading instruction. First, the teacher should identify the text structure and match it to an appropriate GO. Next, the teachers should explain to their students how the chosen GO can assist them when comprehension. Also, the teacher should model how to use the GO, and they should provide opportunities for active student engagement. Then, the teacher should transfer the responsibility of completing the GO independently to the students. And lastly, the teacher should urge students to explain the relationships of concepts in their completed GO (Hall et al., 2013).

Sam and Rajan (2013) identified three levels that GOs can be useful for during the reading process: before, during, and after reading. Graphic organizers can be used before instruction to gain knowledge about a learner's reading level and his or her ability to comprehend content. Because GOs can assist and enhance thinking, students can use them to tackle content with cognitive intentions; they can empower the cognitive process during the reading process (Sam & Rajan, 2013). Moreover, GOs can be used after reading instruction to help students summarize content and understand their advancements in the comprehension of a passage.

Graphic organizers can benefit a variety of students. As stated above, GOs have been used to help students organize content, summarize it, classify the facts they read, and analyze and compare/contrast a text's contents (Pang, 2013). Pang (2013) suggested that GOs can be valuable to help English Language Learners (ELLs) in much the same way as they help students with LD and typically developing learners. That is, they can classify, analyze, summarize main ideas and facts, and ELLs can criticize/evaluate an author's objective decisions. GOs can help students with LD and ELLs comprehend narrative stories by allowing the students to make

predictions, check for understanding about events that unfold in a text, and recall critical information provided by the author(s) (Pang, 2013).

Jitendra and Gajria (2011) suggested that GOs are particularly effective for promoting comprehension for students with LD in all content areas, namely science and social studies. GOs have proven to be effective tools; using GOs has consistently created significant gains on "research-developed multiple choice and free recall comprehension measures (Jitendra & Gajria, 2011, p. 4). However, GOs can have limitations for maintenance; students may not maintain their improvements when reading passages from novels or in standardized reading measures.

In summary, graphic organizers are teaching tools that help students access crucial prior knowledge by depicting this information—visually or with text—in an organized and systematic manner. Graphic organizers can help teachers assist their students by displaying new textually derived information in a visual manner, and it can give learners a concrete image for presenting the abstract thoughts they may read. It is crucial for teachers however, to infuse maintenance and generalization when using graphic organizers to facilitate reading comprehension in all content areas.

Mnemonic Devices

This subsection will briefly highlight the beneficial factors for using mnemonic devices in reading instruction. Using mnemonic device to facilitate reading instruction is another approach discussed by Jitendra and Gajria (2011). This instructional tool facilitates the learning process "by making unfamiliar, difficult to understand information more concrete, meaningful, and memorable by adding relevant connections and linking the information to students' existing knowledge base" (Jitendra & Gajria, 2011, p. 4). Mnemonics are useful to reading instruction because they are organized ways to help people store and recall ample amounts of information.

When there is an area where a student must recall vast amounts of information, mnemonic devices help them make relations between two or more pieces of information (Brigham & Brigham, 2001). Teachers using this tool integrate the introduction of new and relevant information with clear and systematic approaches for memorization.

Since most memory tasks require a student to organize/associate relative information to a prompt, like a test question, mnemonics are important cognitive tools that foster learning through the connection of that information to that specific prompt (Brigham & Brigham, 2001). Brigham and Brigham (2001) discussed several common mnemonics: first letter mnemonics, acronyms, and acrostics. Commonly used verbal mnemonics include acrostics, which empower recall by making a sentence with the first letters of the words that are being memorized. A first letter mnemonic uses the first letter to create an acronym for the information being learned. One of the most typical first letter mnemonics for memorizing the Great Lakes is HOMES (Huron, Ontario, Michigan, Erie, Superior). Mnemonics are topic specific, but some can be generalized to other content areas. For example, the RAP (Read, Ask, Put in own words) mnemonic is a device that can be used for graphing the main idea of a paragraph (Hagaman, Luschen, & Reid 2010). This strategy will be explored later in this article. One specific type of mnemonic is a visual mnemonic, which can be linked to an image or picture. The following subsection will explore the effectiveness of this type of mnemonic device.

Visual Mnemonics

Jitendra and Gajria (2011) discussed mnemonic devices that can be integrated with pictures and images. Mnemonic illustrations are generated based on the keyword to be learned. A concrete word that sounds like the new vocabulary term is followed by an illustration that displays the meaning. Using visual mnemonics can be helpful for reading comprehension

because the mnemonic can now be encoded in the WM through a visual, or pictorial, cue. Visual mnemonics, or mnemonic illustrations, signify new information as an animated image (Hall et al., 2013). This tool shows a question that interacts with the appropriate response to that question.

Hall et al. (2013) listed three types of visual mnemonics—acoustic elaborations, symbolic elaborations, and mimetic elaborations. While acoustic elaborations are useful for students who must recall information they have read about people, events, and/or places with unfamiliar names, symbolic elaborations help students remember facts about them that are associated with a recognizable image/symbol (Hall et al., 2013). Lets take ROY G BIV to illustrate the use of mnemonic visuals. ROY G BIV stands for red, orange, yellow, green, blue, indigo, violet. While this first letter mnemonic may be acoustically pleasant, reading about and understanding the primary colors can be enhanced if the instructor were to overlap this mnemonic on the picture of a rainbow; thus, this would be a symbolic elaboration. The third visual mnemonic is a mimetic elaboration, which are illustrative interactions that represent facts; there are no symbols or keywords. By integrating an acoustically and visually appealing mnemonic into the reading process, a learner can better derive meaning from new information than if he or she were to read plain text. Visual mnemonics must be directly related to the reading or to the topic at hand.

While mnemonic devices are beneficial for recalling ample amounts of information such as reading text, Brigham and Brigham (2001) stated that teachers should take caution when using these tools in classrooms with culturally/ethnically diverse students; mnemonic devices require a learner to link unfamiliar information to recognizable materials. Hence, a culturally or ethnically

different learner may not share the classes mainstream culture and therefore the principles of a mnemonic device may not benefit their learning (Brigham & Brigham, 2001).

While mnemonics devices are a strategic tools for memorizing information in reading, teachers must also consider other beneficial approaches that can help their students grasp vital elements and can empower reading comprehension. Although text enhancements are beneficial strategies, Jitendra and Gajria (2011) indicated that explicit instruction with cognitive strategies—main idea instruction, questioning, paraphrasing, and summarizing—can also facilitate advancements in acquiring effective reading processes for students with LD (Jitendra & Gajria, 2011).

Specific Reading Strategies

Deriving meaning from a text, whether it is nonfiction or fiction, is the main goal of effective reading comprehension instruction. Why read something if one is not going to gain anything meaningful from the text? In order to make reading meaningful, a learner must be able to put new information in his or her own words; he or she must be able to obtain main ideas from text, paraphrase those ideas in his or her own words, and summarize the text or passage in a concise fashion. However, doing so is often a struggle for many learners, particularly students with learning disabilities. Therefore, the following sections will explore reading comprehension strategies that can enable students with skills for deriving main ideas, paraphrasing, and summarizing information in manner that makes the reading experience unique and meaningful for that learner. Furthermore, the final section will investigate a strategy that can enable students to navigate a text and develop meaning from what they read. "The conditions of meaningful learning require an instructional method that must elicit the cognitive processes in the learner" (Ghabanchi & Mirza, 2010, p. 53)

Main Idea Strategy

Finding the main idea of a text is essential to comprehending a text. Identifying the main idea is crucial for students to make inferences, read critically, and summarize ample amounts of new information. Jitendra and Gajria (2011) stated:

> Students with LD frequently struggle with identifying the main idea in reading passages, and the challenges is more pronounced with content area texts. Several researchers have successfully used direct instruction principles of teacher modeling, guided practice, and corrective feedback to help student identify or construct the main idea. (p. 8)

Jitendra and Gajria (2011) continued by stating how other research indicates effective strategies such as paraphrasing, or restating the main idea in one's own words. Watson et al. (2012) indicated two evidence-based strategies that can enable a student with skills for identifying main ideas—Paraphrasing Strategy and the Summarization Strategy. These two terms are not the same. While paraphrasing entails the learner to use his or her original words to interpret the main idea, summarizing requires a reader to reduce the length of information in a text by discriminating relevant and irrelevant information (Watson et al., 2012). The Paraphrasing Strategy is the stepping-stone for Summarization; therefore, instruction in paraphrasing should occur first.

Paraphrasing Strategy

An effective strategy that empowers students to paraphrase is RAP—Read a paragraph, Ask yourself about the main idea/details of the paragraph, and Put it in your own words (Watson et al., 2012). The RAP strategy can enhance a learner's skills for identifying main ideas, and it can effectively enhance reading comprehension. Watson et al. (2012) stated that the RAP strategy also allows the student to engage in self-questioning by looking at the first sentence and

deciding whether or not the sentence highlights the main idea of the paragraph; does it tell what the paragraph is about? If the first sentence is not indicative of the paragraphs main idea, a student must engage in the process of looking for repetitive word patterns. Jitendra and Gajria (2011) indicated that asking one's self what the main idea of a paragraph is has resulted in the improvement of reading comprehension and maintenance. Instruction in main idea strategies using direct instruction meshed with the self-questioning strategy increases reading comprehension abilities.

Hagaman et al. (2010) explored components of the RAP strategy and indicated that the three-step strategy could improve reading comprehension for students with and without disabilities. Furthermore, they indicated that it is a flexible strategy that can be used at the elementary, middle, and high school levels. It requires students to engage in reading by self-questioning and paraphrasing; this allows student to process and thus, better comprehend the content. Hagaman et al. (2010) indicated six steps in a Self-Regulated Strategy Development Model (SRSD) of RAP that are important for teachers to employ—developing students' background knowledge, discussing the strategy with students (selling RAP), modeling the strategy for student, having students memorize the strategy to empower automaticity and fluency, supporting the strategy with scaffolded instruction, and allowing independent practice of the strategy. These six SRSD steps for RAP are critical for ensuring mastery and generalization.

Summarization Strategy

Extracting the gist and themes of the text one is reading, while also incorporating coherent details is a process known as summarization. Ghabanchi and Mirza (2010 cited in Brown & Palinscar, 1985) indicated that one's ability to summarize is contingent on the his or her language skills, his or her ability to make inferences, and the depth of his or her engagement

with or previous knowledge about a text/topic. The Summarization Strategy can permit students to grasp the gist of a story or passage (Jitendra & Gajria, 2011). This strategy requires the learner to draw upon background knowledge in order to execute several cognitive operations about the text. It is the ability to concisely reiterate—through writing or verbally—what the text is about by isolating relevant information and separating it from irrelevant information. Using the Summarization Strategy, students must concentrate on the major points indicated in the text they read; the student must condense that information so that they can better remember the gist of what they read (Watson et al., 2012). This process requires the reader to comprehend, analyze, and synthesize information he or she must recall.

Rules governing the Summarization Strategy include: identifying/formulating main ideas, linking the main ideas, deleting identified information that is irrelevant, and restating main ideas in different words (Watson et al., 2012). Teaching this strategy requires the teacher to teach each rule exactly as the Summarization Strategy indicates. Varying instruction and adding ones own creative twist to the strategy can negatively effect outcomes. Fidelity of treatment of is crucial. As with every teaching strategy, the rules that govern direct instruction must be implemented (Watson et al., 2012). That is, the method should be taught directly, explicitly, and in a concise and understandable manner. Furthermore, a teacher implementing this strategy in the classroom should provide students with ample guided and independent practice opportunities, and should offer corrective feedback that is directly related to the strategy.

Being able to summarize and paraphrase a text is critical for reading comprehension. It is rather impractical to suggest that a reader should recall every aspect of a text. Summarizing and paraphrasing are flexible strategies that teachers can employ in their daily instruction; these two strategies promote comprehension of main ideas. Consider the

description on the inside cover of a book or novel. The author(s) used summarization skills and paraphrased critical ideas in order to sell the book and to activate a consumer's interest.

SQ3R Strategy

The SQ3R strategy aligns itself with skills that promote reading expository texts—predicting, inferring, understanding vocabulary, interpreting and analyzing data/information, and the capability to communicate idea. SQ3R, or Survey, Question, Read, Recite, Review, is suitable for expository reading and for reading texts (Roberts, Takahashi, Hye-Jin, & Stodden, 2012; Huber, 2004). The SQ3R model can be divided into different and distinct skills. The "S" requires students to survey a text or chapter before they engage in reading it. During this stage students can look at such elements as the text structure, illustrations, graphs, maps, key words, bolded text, heading, and subheadings (Huber, 2012). Students can skim through the text, review tables and graphs, review end of chapter summaries and questions (Roberts et al., 2012).

During "Q" stage, a student should ask him or herself what he or she thinks the chapter is about (Roberts et al., 2012). Students engaged in this step should try to turn headings, subheadings, and bolded print into questions. Basically, the students should asks themselves questions that they believe may be answered in the text they just surveyed (Huber, 2012). The three "Rs" stands for read, recite, and review; and Huber (2012) stated that these three components should be accomplished correspondingly. Roberts et al. (2012) suggested that the read step requires the student to read and attempt answering the questions he or she raised in the second stage, the "Q" stage. Furthermore, the student also should write a brief note with a possible answer.

Reciting, or the "R" stage, occurs after reading a section; the reader should say or write to himself, or to herself, a key phrase in his or her own words (Roberts et al., 2012). The phrase

should summarize major points and answer self-imposed questions that were read in the sections of the text. The reader should test his or her knowledge by covering up the key phrases. This step can empower the recall of crucial information. The final step in SQ3R requires readers to review the material they just read, and it entails them to read the questions they posed (Roberts et al., 2012). Aside for surveying the text, the readers should repeat all of the steps for each section of the text they read; they should refer back to the questions they formulated and determine whether or not they can answer the questions without rereading (Roberts et al., 2012). This is a post-reading review portion of the strategy, which can also involve the student taking notes on the information they believed to be the most relevant (Huber, 2005).

Huber (2005) indicated that comprehensive research about SQ3R suggested a scarcity of information about its effectiveness. After exhaustive research, Huber (2005) found that the effectiveness of SQ3R fell into 3 categories—variations of SQ3R, how SQ3R is taught and implemented, and limited research that supports SQ3R as an effective strategy. With regard to the variations of the strategy, her research indicated that studies have focused on isolating and exploring the individual components discussed above. In her research, Huber (2005) cited Sakata (1999), who used a variation of to SQ3R that bears a similarity. This variation in the SQ3R is the SQRC model—State-Question-Read-Conclude.

Discussion

While learning to read and reading to learn are not natural, or inborn, skills, phonologic awareness and phonemic awareness skills are major steppingstones for reading comprehension. Reading comprehension is a process that involves a learner to derive meaning by engaging in a text and interacting with the written language. Therefore, phonics and phonemic awareness are predictive factors of later reading and academic success (Jitendra & Gajria, 2011).

Unfortunately, individuals with learning disabilities are challenged with reading difficulties that can persist into and throughout adulthood. Learners with reading disabilities struggle with word recognition skills. Likewise, these learners have problems with cognitive capacity and working memory. Therefore, a steppingstone for word recognition, phonics, and reading comprehension is effective executive working memory processes.

The executive processes of the working memory affect one's ability to recall a certain amount of items during an intricate task such as reading. As Garcia-Madruga et al. (2013) indicated, the WMs executive processing capacity is a cognitive process. This process maintains information in the brain during the active process of reading. Garcia-Magruga et al. (2013) cited Braddeley's (1986) theory that the phonological loop and visuospatial sketchpad are two storage areas that are central to WM. While phonological awareness is a prerequisite to phonemic awareness, which in turn is needed for reading comprehension, it is the phonological loop that is necessary for phonological awareness. Therefore, a significant volume of research suggests that children with reading disabilities have impairments with the phonological loop. Since reading is such a complex task because it requires an individual to store newly decoded text and requires a reader to construct meaning from that information, it can be concluded that the WM is essential for reading comprehension.

Oakhill et al. (2011) indicated reading comprehension strategies that use symbols are effective for visuospatial information gathering. Therefore, it is important that teachers use tools such as graphic organizers and mnemonic devices and implement them through systematic, explicit, and direct reading instruction. It is crucial for teachers to employ effective reading strategy instruction by modeling and demonstrating skills, providing students with ample

opportunities for guided practice and monitored independent practice, providing them with feedback related to the skill, and review the skill to promote generalization and maintenance.

Visual instructional tools are important for reading comprehension. Using GOs and mnemonic devices can enhance the learning experience by not only activating background knowledge, but also making abstract ideas more concrete. While text enhancements are beneficial strategies, Jitendra and Gajria (2011) also indicated that explicit instruction with cognitive strategies—main idea instruction, questioning, and summarizing—can facilitate progresses in reading comprehension for students with LD.

Paraphrasing and Summarizing strategies are beneficial for deriving the gist, or main idea, from a passage or a text. The RAP technique is a self-questioning strategy that requires the reader to read the passage, ask questions with regard to the passage's main idea, and put the main idea into original words. Research supports instruction in main idea strategies, but it is direct instruction in self-questioning that can promote enhancements in reading comprehension. Likewise, the Summarizing Strategy involves having the reader draw upon background knowledge (Jitendra & Gajria, 2011). Drawing upon background knowledge allows readers to make linkages between what they have experienced and what they are reading.

The final strategy that was discussed in this research synthesis was the SQ3R strategy. By surveying the text for relevant information, a reader can begin to generate questions with regard to the elements they reviewed before reading. By reading the text to verify the questions he or she bas generated, the reader can gain a purpose and derive meaning from why he or she is reading. The SQ3R strategy can be an effective method that will empower students with skills for navigating and deriving meaning from text.

Effective reading comprehension skills are crucial for success in school and for success in the world beyond academia. Reading is a phonologic, phonemic, and comprehensive process that requires essential executive processes of WM. Comprehending what one reads can make the reading process meaningful to a learner. The outcome of reading is to derive purpose from text, and this involves being able to decipher passages and place that information into ones own words.

Reading is a skill that many students struggle with throughout their academic experience; these difficulties can persist into adulthood if teachers do not employ effective strategies early in the learning process. It is crucial for students to learn reading comprehension skills in order to make reading a meaningful and enriching experience. Educators should present and implement effective reading comprehension strategies early. These strategies enable students, especially students with learning disabilities, with a variety of tools that can be used across different settings in school and carried over into adult life.

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