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Reading Comprehension in the Secondary Classroom

AN ALTERNATE PLAN PAPER SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL OF MINNESOTA STATE UNIVERSITY - MANKATO BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN READING

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Under the Alternate Plan Paper option for the Master of Science in Reading, this report is offered in lieu of a thesis.

Approved by the professor of the course, Dr. Sandra Mullins

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CHAPTER ONE

READING COMPREHENSION IN THE SECONDARY CLASSROOM

Reading is important for the mind and the success of students' academic career (Cunningham, 1998). To read, one must comprehend what has been read; otherwise, there would be no purpose in reading. Comprehension is one of the most important reading skills adolescent students need to possess (Underwood, 1994). Students who have excellent reading comprehension are able to master academic content, read for pleasure, and are more likely to succeed in post-secondary goals. Unfortunately, comprehension strategy skills are not natural skills of students, but rather must be self-taught or taught by someone else. In view of the impact that reading comprehension has on secondary students' success in content area classes, it is essential that effective comprehension strategies be taught by all secondary teachers.

Statement of the Problem

Secondary students are required to read and understand texts from many different content areas in school. American students are not entering high school equipped with the necessary reading skills as indicated by the large failure rate on required state reading tests (McLester, 2006). In addition, difficulty with reading is a primary factor in a student's decision to drop out of school (Daniel et al, 2006). Raising student achievement in reading has been shown to correlate with an increase in adult earnings, increase in tax revenues, less crime, and a reduction of welfare costs (Yeh, 2009).

In recent years, secondary schools have been increasing reading intervention classes to increase student achievement in reading. Most struggling adolescent readers do not have problems with reading words accurately, but lack comprehension (Underwood, 1994). Good readers know and apply a variety of strategies to help them comprehend what they read. All secondary content area teachers need to teach comprehension strategies if students are to become successful readers. The purpose of this study is to examine the available research on teaching comprehension strategies at the secondary level in order to recommend how and what strategies to teach in the secondary classroom.

Importance of the Study

The information gathered in this study will assist secondary teachers' decisions in teaching reading comprehension skills. It will provide information on comprehension strategies and the teaching of them. Research from this study may contribute to information available on effective reading comprehension strategies and practices for secondary teachers.

Methods of Selecting Data

The data selected for this study was obtained through nationally recognized academic journals. The articles were peer reviewed and written no earlier than 2005, with the exception of one historical review written in 1998, and a text and research written in 2000. Research studies in the area of reading comprehension strategies were utilized.

Questions asked in selecting data:

1. How recent is the research literature reviewed?

- 2. Does the review of literature bring together common theories and relevant information?
- 3. Does evidence of bias from the author exist?
- 4. Does the problem support the findings from other researchers by repeating their studies in a new application or by refining techniques?
- 5. Are important terms and concepts defined and used throughout the paper?
- 6. Are articles selected from peer reviewed journals?
- 7. Does the study have significance for comprehension strategies for secondary reading?

Limitations

Research under review is limited to secondary school students. For the purposes of this study, secondary teachers are defined as content area teachers, including reading teachers. Peer reviewed journal articles on reading comprehension strategies are available in sufficient quantities historically. However, information identified as effective methods of comprehension strategies for secondary students is limited in the last five years.

Definitions of Terms

Reading comprehension. The complex cognitive process involving the intentional interaction between reader and text to convey meaning.

Comprehension strategies. Intentional actions readers can do during reading to increase the chance of understanding and remembering the information in a text.

Graphic Organizers. Diagrams and charts used to help a reader comprehend what they have read are known as graphic organizers.

Independent reading. A time for students to make their own book choices, apply reading strategies, have large blocks of time to read and set independent reading goals.

Instructional strategies to teach comprehension. These are the teaching techniques a teacher might use to help a student learn comprehension strategies.

Questioning. These are verbal or written prompts to help a reader comprehend what they have read.

Think aloud. A form of explicit modeling in which teachers give an oral description of the cognitive processes that occur while reading in order to understand how a successful reader approaches a text.

CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter is an examination of the literature pertaining to increasing students' comprehension through the use of comprehension strategies. The literature review is organized into three sections. First, overall information on reading comprehension and the important elements will be reviewed. Second, research on specific comprehension strategies will be discussed. Finally, research that discusses teaching of comprehension strategies by content area teachers will be reviewed.

Reading Comprehension and the Important Elements

Reading comprehension is the process of understanding and interpreting information from text in order to construct meaning. Readers who simply read text and remember what has been said are not demonstrating reading comprehension. A good reader is not only thinking about everything that the writer includes in the message but is going beyond it as all complex areas of the brain are operating while readers' process texts. For reading comprehension to occur, a reader must filter what has been read through their own foundation of knowledge and beliefs, use the author's organizational structure to think about the information read and makes inferences about the author's message (Shanahan, 2005).

In the secondary classroom, reading comprehension needs to be considered by teachers in respect to helping students meet the demands of the texts used in the classroom. Questions need to be asked regarding what the reader needs to know or know

how to do in order to comprehend a text. Teachers need to think about the following questions when considering comprehension of texts in the secondary classrooms (Fountas & Pinnell, 2006).

- What is the overall meaning of this text?
- What layers of meaning will the reader need to understand?
- Will the reader need to gather information from a variety of places for example, graphics, illustrations, text body and glossaries?
- What new or unusual language elements both help and represent a challenge to the reader?
- Are there uses of words such as metaphors, similes and idioms?
- Is there a large number of multisyllable or technical words?
- To what degree is inference required to understand the text?
- Does the text demand that the reader understand below-the-surface uses of language such as irony?
- What background knowledge or experience is required to understand the text?
- What prior experience with this kind of text is needed to help the reader process it?
- How many unfamiliar words or words beyond the reader's present decoding ability are present?

According to the National Reading Panel (2007), three important elements needed to promote comprehension are first, vocabulary development and vocabulary instruction; second, comprehension strategies to facilitate an active thoughtful process between the reading and the text, and third, development of teachers to learn and help students apply

comprehension strategies. The following sections will focus on the last two elements: comprehension strategies and the teaching of them.

Comprehension Strategies

Comprehension strategies are intentional actions students can use during reading to guide their thinking and improve their understanding and memory of text read. Teachers directly teach strategies, but once mastered by readers the strategies are used as needed in any combination to help their reading comprehension (Yang, 2006).

The research contains many ideas on what to teach for comprehension strategies; therefore, teachers may have a difficult time deciding what the best approaches are to teach. For example, in the 1980s, researchers identified reading strategies that all readers supposedly used to understand what they read. In 1992, Pearson, Dole, Duffy & Roehler wrote about the comprehension strategies that active, thoughtful readers use. Later on, other researchers, including Keene and Zimmermann (1997), wrote about the importance of visualizing and creating images to improve comprehension. (Harvey, 2000)

The National Reading Panel conducted a comprehensive review of the research involving comprehension strategies in 2000, which may help teachers in identifying which comprehension strategies to teach. They identified 205 important studies on reading comprehension and selected those studies that showed evidence of learning and research with reliability across repeated studies. After further analyses of those studies, six major comprehension strategies that a reader can be taught to perform independently were determined to be common amongst the studies. It was also indicated that students improve their comprehension abilities the most when multiple strategies were taught in

combination (Shanahan, 2005). The identified strategies appearing in the studies, with frequency of the strategy noted in parenthesis were: question asking (27), monitoring (22), summarization (18), question answering (17), story mapping (17) and graphic organizers (11). Following is a brief description of how each strategy helps students improve their reading comprehension along with examples of each strategy.

Question asking and answering. This strategy teaches students to guide their own thinking about a text by asking themselves questions and then trying to remember or figure out the answers. This may include teaching students to ask different types of questions such as who, what, when, where, why, how or to focus on certain information such as main ideas. Teachers can have students ask questions of each other and provide answers.

Monitoring. This is a comprehension strategy that will enable the student to pay attention to whether they understand a text. If they do not understand, then the student must take action to clarify the information. Clarification may consist of rereading, thinking about what is already known, looking at illustrations or asking for help.

Summarization. This teaches the student to reduce the text to the most important information. This includes showing the students how to pick out key information, to ignore what is not important, and to condense information by paraphrasing. This may include teaching of the main idea or determining a topic sentence. Students may sum up at the end of a text or several times during reading. This is one of the most powerful single strategies.

Story mapping. This teaches students that text has a structure or organizational plan. Stories include a setting, a main character, a problem, an attempt to solve the problem and an outcome. Having students summarize stories this way is beneficial.

Graphic organizers. This uses visual summaries to teach students to translate text into charts or graphic organizers that show the important ideas and their interrelationships. Examples of graphic organizers are hierarchical trees and Venn diagrams.

In 2007, the National Institute for Literacy recognized the need for all content area teachers to help students comprehend texts that are used in their classrooms. They proposed reading comprehension strategies that are general and can be used across many different kinds of text. The strategies suggested were: generate questions, answer questions, monitor comprehension, summarize text, and use text structure and graphic organizers. A description of the strategies and steps to take follows.

Generate questions. Readers should ask questions before, during and after reading. This helps to process text and monitor comprehension. Asking questions during reading helps to monitor students' understanding of what they have read and helps to integrate different parts of the text to understand main ideas and important concepts. Teachers incorporate instruction in asking questions into their lessons by using the following steps:

- 1. The teacher reads aloud passages from subject-matter text.
- 2. The teacher stops and models the types of questions successful readers ask themselves while reading. For example, "Why does the author say this?" "Do I understand the facts correctly?" "What is the most important idea?"

- 3. The teacher repeats the modeling with different texts.
- 4. The teacher guides students in creating their questions with content-area texts.

Answer questions. To help students better understand what they have read, the teacher can ask students' questions to help them think about what they have read so they more fully comprehend text and improve how they answer questions. For question-answering instruction, teachers must create time for question answering and must help students decide the kind of response called for by the question. The teacher then models how to construct various responses. By using content-area texts, teachers model how to construct answers from:

- 1. Explicit information in the text the answer is evident and can be copied or repeated (referred as "right there" response);
- 2. Implicit information is found in several different places in the text whereby the reader has to pull it together from different parts of the text (referred to as "pulling it together" response);
- 3. Implicit information found in the text and in the readers' prior knowledge and experiences so that the answer must be obtained from a synthesis of information (referred to as "text and me" response).
- 4. Only a student's prior knowledge and experiences are used; the student does not need to use the text to answer the question (referred to as "on my own" response).

Monitor comprehension. Good readers monitor their comprehension while they read by identifying when they do and when they do not comprehend the information in a text. Since this is a mental process that cannot be seen, teachers must verbalize the strategies while they read as follows.

- 1. The teacher reads aloud a passage from a text.
- 2. Stop at points to "think aloud" about what may or may not be understood.
- 3. The teacher explains problem solving techniques when a student realizes their comprehension has broken down. Examples include re-reading the text, asking oneself questions about the text, and reading before or after the part of the text where comprehension problems occurred.

Summarize text. Summarizing assists students in focusing on important content, determine what is important and what is not, condense important content, and restate the information in their own words. Overall, it helps students comprehend and remember what they have read. The four main components of summarizing strategy are: 1) identify or formulate the main idea; 2) connect the main idea; 3) identify and delete redundancies; 4) restate the main ideas and connections using different words and paraphrasing.

A review of literature (Hagaman) published in 2010, found a comprehension method to combine strategies into one strategy called Read-Ask-Paraphrase or the RAP method, developed by Schumaker in 1984. The strategy requires students to engage in reading materials through questioning and paraphrasing. The acronym, "RAP" stands for Read a paragraph, Ask yourself: "what was the main idea and two details?" and Put

information into your own words. The strategy is easily incorporated into existing curriculum and is useful at all grade levels. Using this combination strategy may be an easy and effective way for content area teachers to teach students a comprehension strategy without taking a lot of classroom time from critical content instruction. Due to the simplicity of the approach, it would be simple to teach and easy for students to memorize for later long-term recall.

Implementation by Teachers

Teaching reading comprehension strategies should be a concern of teachers in every content subject area (Wise, 2009). Students need direct instruction in the strategies being taught and should be given adequate time for practice to master the skills. Direct instruction takes learners through steps of learning systematically to help them see both the purpose and result of each step. The basic steps of direct instruction are:

- 1. Set clear goals for students and make sure they understand the goal.
- 2. Present a sequence of well-organized assignments.
- 3. Give students clear, concise explanations and illustrations of the subject matter.
- 4. Ask questions often to see if the students understand the work.
- 5. Give students many chances to practice what they have learned.

An effective method used to teach comprehension strategies is the reciprocal teaching method (Rosenshine & Meister, 1994). The main focus of this teaching approach is thorough explanation and the ability to teach multiple strategies simultaneously. The teacher explains and demonstrates a strategy, which includes how to use the strategy and why it is useful. The clarity of the teacher's explanation is important

in helping the student become successful in learning comprehension strategies. If teaching "question asking," the teacher may say "good readers ask questions when reading which will help them remember and understand what they read. If a good reader finds they do not know the answers to their questions, they will stop and reread to look for the answers before they continue with reading.

The teacher would model this strategy with a sample of text and modeling the thinking process by way of a "think aloud." Think aloud is an effective teaching strategy to assist students in understanding the necessary meta-cognitive strategies a good reader performs while reading (Harvey, 2000). The think-aloud process is a way that teachers can model what good readers think and the questions they ask while reading, and whether students are using the reading strategies correctly. Comprehension strategies need to be explained and modeled by the teacher, and students are checked for understanding before students practice them via think aloud. While listening to their think aloud, if the teacher finds that students have difficulty with a strategy, the teacher would repeat the strategy and have the students practice it again. Having students practice their comprehension strategies using think aloud with a partner is an effective practice (Sporer & Brunstein, 2009). Finally, students would be expected to perform the strategy independently by keeping a chart listing where they stopped in the text, what they asked, and how they answered their own questions. The teacher would need to review their charts to determine whether students have mastered the components of the comprehension strategy that has been taught. If mastery is not indicated by the students' chart, the teacher would have concrete data to show that reteaching of the strategy would be warranted.

Reciprocal teaching, a multiple-strategy approach, has been used in teaching four reading strategies in combination during reading (Shanahan, 2005). These four strategies are prediction, questioning, clarifying, and summarizing. The goal of this multi-strategy approach is that students will use these various strategies in combination so they can solve a variety of problems themselves in trying to understand an author's message.

Descriptions of these strategies are:

Prediction. A prediction is to make an educated guess about what will happen in a story based on the titles and the pictures that appear in the text. While the text is being read, the reader asks themselves whether their predictions are correct.

Questioning. Good readers ask themselves questions about what they have read for a better understanding. They may need to ask questions to identify what is important to remember and ask questions to promote a discussion about a passage. Good questions should include words like "who", "where", "when", "why", and "what".

Clarifying. When a reader runs into words, phrases, sentences or ideas that are not understood, the reader should stop and clarify words, phrases and ideas that are difficult to understand. The reader may need to reread the phrase or sentence carefully and try to understand it, try to figure out the meaning through context clues or look up the meaning in a dictionary.

Summarizing. A reader will summarize or shorten a description of what is read by including only the main idea and important details. This will help the reader understand what they are reading.

When teaching a comprehension strategy, it is important the strategy be a part of classroom instruction for several weeks. A review of successful comprehension studies indicated a common property of thorough instruction that consisted of daily lessons dedicated to a particular strategy for four or more weeks, and would allow for plenty of explanation with frequent practice. For example, when teaching summarizing, it would be the focus of daily lessons for several weeks with lots of explanation and practice. Many commercial programs include comprehension strategies in lessons, but fail to provide thorough coverage in repeated lessons which is necessary according to studies in which comprehension strategy instruction worked well. Teachers need to look for programs and materials that will provide students with sustained attention to particular strategies over several weeks of instruction (Shanahan, 2005).

To be successful, students need lots of experience in reading and applying comprehension strategies to various types of texts, which will help students become active, purposeful, and independent readers of science, history, literary, and mathematics texts (NICHD, 2007). Texts can have different text structure depending on the type of text such as expository or narrative texts. Text structure, which refers to the internal organization of a text, is used by authors as they write a text to communicate an idea. When readers do not have a strong knowledge of the topic of a text, they may depend more on the structure to help them understand and find specific information (Cateldo and Oakhill, 2000). In addition, text structure provides useful information for the strategy of summarizing. When readers summarize, they need to think about the text structure to provide them valuable information in understanding a passage.

By the time students reach high school, they may have been taught comprehension strategies using narrative stories, but may have little exposure to having been taught comprehension strategies within the context of reading expository text. Most of the comprehension strategies students learn to use with narrative stories do not apply to expository text. Since expository text is prevalent in high school, it is essential when teachers teach comprehension strategies that their instruction involve expository text. In order to apply comprehension strategies to expository texts, it is very important that students understand expository text structure. (Santa, 2004). The categories of common text structures that need to be taught along with teaching comprehension strategies are cause/effect, problem/solution, comparison/contrast, chronological order, description, and main idea/detail. A text can contain one overall text structure or several different text structures. For instance, a page from a social studies textbook may be written in chronological order, but contain a paragraph that contains a cause and effect text structure. Descriptions of the types of text structure are as follows.

Cause/effect. This text structure shows how one or more causes led to one or more effects. This text structure also has a strong time component, since causes come before effects. Transition words such as cause, effect, as a result, consequently and because are used. Time order transitions such as first, next, then, are also used, which can lead to some confusion for students. Many texts do not include just one cause leading to one effect, instead there may be several causes and several effects.

Problem/solution. This text structure presents a problem and shows how it can be solved. This text structure can be confused with cause and effect. The main difference is

that problem and solution always has a solution, while cause and effect does not.

Transitions may include problem, solution, solve, effect and hopeful.

Comparison/contrast. This text structure shows how two or more ideas or items are similar or different. This text structure is fairly easy for students to understand. The text may use a clustered approach in which details about one topic are followed by details about the other. The text may also show an alternating approach, with the author going back between the two topics. Transition words may include like, similar, unlike, on the other hand and also. Compare and contrast paragraphs are often embedded in other text structures as an author needs to explain a similarity or difference.

Chronological order. This is also known as time order, sequence or temporal order. This structure is organized from one point in time to another. Transition words such as first, next, later and finally are included to help the reader understand how events relate to one another. Dates and times are also used. This is one of the easiest text structures for students to understand, since it matches the way that they would experience the world.

Description. This text structure shows what an item or place is like. Transitions in this structure might include spatial words, such as next, to on top of and beside. Some texts may categorize typical main idea and detail paragraphs as description.

Main idea and detail. This kind of text makes a statement and uses details to support it. Some texts will also refer to these paragraphs as statement and support.

Transition words include for example, also, one reason, and another reason. This is the typical paragraph structure that is often taught in elementary school.

In teaching text structure, it is helpful to use various types of graphic organizers for teaching the different types of text structure. The various types of graphic organizers which can be used are not covered in this report, but can be readily found in language arts and reading instruction materials. Examples of graphic organizers are diagrams or other visuals that help students identify and see the relationships among concepts, ideas and facts in a text. They are modeled by the teacher to show the different categories of expository text and to encourage students to use them to record and organize important information while reading. After modeling by the teacher is complete, the student would practice using the graphic organizer.

It is important that teachers identify and explain transition or signal words associated with text structures to help students better understand text. For example, by knowing the transition words for cause/effect structure include because, since, and consequently, a student is able to identify the text structure. The teacher can help with the learning process by 1) placing text passages on the overhead; 2) reading the passages aloud; 3) underlining key signal or transition words; 4) explaining how these words provide clues for using text structure.

CHAPTER THREE

APPLICATION

Content area teachers need to teach comprehension strategies within the content subject area to have a greater impact on students' learning. To facilitate this process, in the content area teacher's classroom, there should be a variety of reading materials of different text structure for students to read to practice their comprehension strategies. A content area teacher could use the content textbook along with articles, magazine, essays, and novels pertinent to the content being taught in the classroom when teaching comprehension strategies. It is crucial that content area teachers have a firm understanding of the comprehension strategies to be taught so they can explain the when, why and how reasons of using them to students.

Implementation

After the comprehension strategies to be taught to students have been identified by content area teachers, teachers need to determine how to integrate the teaching of comprehension strategies into their content area lesson plans. Ideally, the strategies can merge seamlessly into lessons without distracting from the content being taught in the classroom. Teachers will need to put forth planning and preparation efforts in order to blend the teaching of comprehension strategies with content. How this occurs can be a decision made by each content area department in a school; collaboration between

content area teachers would certainly assist this process. Certain key points for the teacher to keep in mind when teaching comprehension strategies in class are as follows.

Instruction in class. In the classroom, the teacher needs to introduce and instruct students on how to use the comprehension strategies. The instruction needs to be conducted in a positive way in order to generate enthusiasm and desire to learn the comprehension strategies. An example might be to use multi-media such as a PowerPoint to give students an introduction to a strategy. After introducing a comprehension strategy, the teacher can read out loud, while demonstrating comprehension strategies by performing a think aloud in class.

Practice during class. During class, students should be given plenty of opportunity to practice the strategies. One way students can practice the comprehension strategies is with a partner using the same text. During this time, the teacher would provide the students with a visual reminder of the comprehension strategy steps. Visuals may consist of handouts, notes on the board, or overhead projector. Next, students would practice the comprehension strategies on their own using text. In order to integrate the new comprehension strategy into a students' repertoire of comprehension strategies, the teacher will need to continue promoting, monitoring, and providing time for students to practice.

Independent reading in class. In classes that have independent reading time, students read self-selected books of interest for at least 15 minutes. It is important that the reading materials provided are interesting to students and deal with content areas taught. During reading, students will practice the comprehension strategy. During and

after reading, students document how they used the comprehension strategy by summarizing information on paper. The teacher will periodically review, discuss, and assess students' usage of comprehension strategies during independent reading (Marcell, 2010).

Recommend use in other classes and at home. It is beneficial that the content area teacher share with other building teachers and the home regarding use of comprehension strategies taught in the classroom. Sharing information will help other teachers and parents reinforce the use of these strategies in students' other classes and during reading at home. This will provide students with needed practice which will help make the comprehension strategies a reading habit. To encourage home practice, the classroom teacher should send a letter home to the parents that describes the comprehension strategy and explains how they can check their students' success with using the comprehension strategy. When parents know about students' comprehension strategies, students are more likely to be encouraged to use the reading strategy at home which will improve their reading overall.

Evaluating Implementation

First, to determine whether the implementation of comprehension strategies in the content area classroom has been a success, the building reading teacher, literacy coach, or persons knowledgeable in reading strategies, needs to evaluate the program. This can be accomplished by questioning content area teachers using surveys on their opinions of the program's success. Also, student assessment scores can be compared to before and after

strategy instruction to determine student and class progress. The data can be tabulated to determine success of the program and areas that may show needed improvement.

Second, individual students should be assessed to determine whether they have developed mastery of the comprehension strategies. Assessment can take the form of summative or formative assessments. Collection and analysis of resulting data will help determine if the current program of comprehension strategy instruction is working or if it needs improvement. In addition, it would be ideal if a sampling of students could be tracked to determine whether students have retained and continued to use the comprehension strategies with subsequent reading encounters while in high school.

CHAPTER FOUR

SUMMARY AND RECOMMENDATIONS

Reading comprehension is a vital part of the reading process. Students can be taught to comprehend while they are reading. Improved reading comprehension helps students improve their understanding and memory when reading text. There are over 16 effective comprehension strategies that can be taught. Some of the major strategies mentioned in the research were questioning, summarizing and predicting. Teaching a combination of strategies should be best practice when teaching reading comprehension to improve reading ability. All teachers need to be involved in teaching reading comprehension using expository texts. Instruction and guided practice with comprehension strategies will help students encounter success with reading.

Summary of Important Points

- 1. Teaching reading comprehension is vital at the secondary level.
- 2. A combination of strategies should be taught.
- 3. All content teachers should be involved in teaching reading comprehension.
- 4. Expository texts must be used during instruction.
- 5. Teachers should teach text structure of expository texts.
- 6. Strategies should be taught over several weeks with frequent practice.
- 7. Direct Instruction of comprehension strategies should be used.
- 8. Evaluations of the program to teach comprehension strategies at the secondary level should occur.

Implications of the Study

The research shows that students understand text by using comprehension strategies that have been learned. Students need direct instruction in a variety of techniques in how to read and understand text. Reading comprehension strategies are a necessary teaching element in the content area classroom.

A necessary component in teaching comprehension strategies is also teaching students the different text structures found in expository text. The research showed that text structure was as important as knowing comprehension strategies in determining whether someone has the necessary skills to comprehend expository texts most commonly found in the secondary classroom.

However, researchers do not all agree on the most important reading comprehension strategies that students should learn. Some feel that questioning is necessary while others believe that graphic charts are important. Research shows that several strategies should be taught in combination for best result, but the research does not agree on what those strategies are.

Recommendations

Based on the lack of recent research on the best comprehension strategies that can be effectively taught by content area teachers, the writer recommends further research in this area. The literature is filled with many comprehension strategies, but it is a daunting task to sort through all of the available strategies and to select ones to teach in the classroom. In choosing strategies to teach, teachers need to keep in mind that students

need to be taught strategies that are easy to use and most likely remembered for future use.

Until there is further research on the best comprehension strategies to teach at the secondary level, schools will need to make these decisions. This will require time and resources for teachers and staff to sort through the available strategies in order to choose the ones best suited for their content areas. Involvement by the literacy coach or reading teacher would be recommended for this process. Teachers and identified staff will need professional development time in order to learn these strategies along with effective instructional techniques for teaching comprehension strategies.

The fact that comprehension strategies work best when used in combination to help students' understanding of text has been proven in the research. Although, the research lacked information on which strategies worked best in combination. Addition research on which comprehension strategies work best in combination would be beneficial in assisting content teachers with information on the strategies to teach.

Teaching these strategies in the content area classrooms will help students understand content and succeed in mastering the content material. In addition, by improving their understanding of content material, secondary students will have better academic success overall which will help with graduation success in schools. Follow-up research on academic success and graduation rates, after implementation of reading comprehension in the secondary classrooms, would be recommended.

Content area teachers can be a motivating force to encourage students to use these strategies at school and at home. Therefore, it is recommended that all secondary teachers teach reading comprehension strategies in the content area classroom.

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