A HANDBOOK OF CONTENT AREA READING STRATEGIES

A Project
Presented
to the Faculty of
California State University, Chico

In Partial Fulfillment
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in
Education
Reading/Language Arts Option

by
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Summer 2009

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ABSTRACT

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This project is designed to help content area teachers assist the students in their class that are currently two to four grade levels behind in reading and build sufficient literacy skills to be able to succeed in those classes. The project contains an annotated bibliography identifying resources in content area literacy, and strategies suggested by research to decrease the overall reading gap between student’s current level of reading performance and the reading requirements of content area classes.

The review of the literature provides a rationale for the development of a competent content area literacy program. In Chapter II the literature describes the reading process and how teaching reading differs throughout grade levels and Chapter III examines reading strategies and how they can be applied within the content areas. In
addition, it provides further reviews of methods for teaching content reading skills that recent research recommends.

This project was created based on the information obtained from the literature review, and the data collected which provided evidence of those students who are currently reading two to four grades levels below the reading level expectations for their content area classes. The literature, data, and collaboration with content area teachers indicated that there was a need for additional reading support within the content areas. In order to assist these students, this handbook is intended to be used to assist teachers and other staff, which provides students with strategies that are easily and readily applied to their content area reading requirements.

The handbook is divided into three sections: an annotated bibliography, a description of reading/thinking skills, and nine universal strategies for assisting students with their content areas reading requirements. The research portion of the handbook is an annotated bibliography meant to serve as additional reference for the teacher who may want to further explore content reading strategies beyond those provided in the handbook associated with this project. The reading/thinking section of the handbook is designed to illustrate the skills that students need to use before, during, after and beyond reading as well as explaining the importance of this process and how these skills make students more conscious of their reading. The final section includes nine universal strategies that can be used within the content areas. A brief background of each strategy will be given, along with the purpose of the strategy. This segment will then be followed with examples of how the strategy can be used within each content area.
Recommendations for further development of this handbook include continued review of current literature, maintaining suggested strategies and diagnostic information throughout each school year in order to be assured that student needs are being addressed. It is also suggested that primary and elementary teachers who have students reading below grade level, and who need to develop content reading skills, refer to the handbook for some additional support and strategies.
CHAPTER I

INTRODUCTION

Middle school students need to continue to develop additional literacy skills beyond those acquired in early learning to read processes, in order for them to understand academic content available from text sources, communicate effectively, participate in a variety of communities, and negotiate in the world (Meltzer, 2001). With the adoption of full inclusion, federal laws have mandated that students with special needs generally are to remain in the regular content area classroom (Roe, Stoodt-Hill, & Burns, 2004). This includes students who are considered to be at-risk academically. Coincidently, subject matter textbooks are usually topic specific for different grade levels, but often have a readability level that is more difficult than the designated grade level (Walker, 2004). This creates a discrepancy between what the students will need to read and understand to succeed in the content areas and what they actually can read and understand effectively in the content area materials. This discrepancy should be a clear indicator that literacy skills, especially those for reading content materials, must be taught in every subject.

In order to determine if such a discrepancy was present in a specific middle school setting, Scholastic Reading Inventory (SRI) test data on file at the school was analyzed over a three-year period of time. SRI is a research-based reading comprehension test that assesses students’ reading levels. SRI is also aligned with the Lexile Framework, which allows for the text and the reader to be at the same level while taking the test. The
test is made up of different types of texts, helping to determine student performance in expository as well as narrative texts. The test is made up of a series of excerpts and the students must place a word or words into the passage that best completes the section.

Each year students take the SRI three different times in order to monitor their individual growth. Struggling readers that were identified in the fifth grade were followed for three years to see if they were (1) still at a below basic (two to four years behind grade level), or in some cases far below basic (four or more grade levels behind) reading level, and (2) to determine if they were struggling in the content areas where a content area literacy program currently is not practiced. Figure 1 provides results from the data gathered and illustrates that students who were behind in fifth grade are still behind, or in some instances, some fall relatively further behind over time.

![Lexile Scores](image)

**Figure 1.** Scholastic reading inventory results over past three years.

Figure 1 illustrates that there are several students who fall below the 800 Lexile level, which would be considered below basic at the eighth grade level. Basic eighth grade level is listed as anywhere from 950-1050, above that score would be
advanced and proficient placement. When comparing their recent scores to their scores three years earlier, a gap between demonstrated proficiency on the SRI and current grade placement is clearly indicated and, although growth is shown, two to four grade levels behind is where the students are still found. Figure 1 also supports the impression that if students are not progressing in reading at a rate required to succeed in content reading material at the middle school, then they may continue to not progress will into high school and beyond.

Some adolescent readers are continuously struggling with content area texts because the skills and strategies necessary to understand these texts are not being modeled, and taught uniformly in every subject area (Hirsch, 2003). Jeanne Chall in the early 1980s described two distinct stages for reading: 1) learning to read, and 2) reading to learn (Chall, 1983). More current thinking about the teaching of reading suggests that these stages should not be sequential, but rather developed simultaneously throughout the learners K-12 experience. In other words, a learner should be provided with instruction in learning to read and reading to learn at all stages of reading development. However, since children may not always be taught to read to learn while learning to read and be provided with an appropriate balance of narrative and expository text in early grades, they may not be prepared to respond well to the tasks of reading texts given in the upper elementary grades that includes an increasing amount of expository text, therefore creating what appears to be a “slump” in reading performance of students when they reach the fourth-grade. One leading theory behind the fourth-grade slump is related to the change in reading requirements that take place between the third and fourth grade. During this transition, the primary type of instruction has been based around learning how to read,
usually from narrative materials, and now as students enter the fourth grade they are expected to read several types of information, frequently from expository text, and they struggle because the skills are not being taught to comprehend the text effectively. They are now exposed to different and sometimes more difficult texts. In some cases, this may even be the first encounter with expository text (Snow, 2002). It is further suggested that the majority of our struggling readers can manage simple texts, but the problem occurs when at fourth grade and beyond they attempt more advanced academic texts (Hirsch, 2003).

Every year some student’s literacy needs are missed by schools and they do not get the support they need in order to be successful readers in the content areas. At some point these students’ needs must be attended to or they will continue to fall further and further behind in their academic work. Research conducted by Pearson, Roehler, Dole, and Duffy (1992), Roe, Stoodt-Hill, and Burns (2004), Walker (2004), and Vacca (2002), supports the importance of reading skills in the content areas since reading is a major means to obtaining information and is expected in every subject taught. Different reading skills are needed in order to comprehend the type of text students are expected to interpret; therefore, teachers of every subject should be teaching the specialized reading skills of their content area to assist students in acquiring academic content from text sources.

Teachers see the current need to do something to help the number of students who are struggling, but with the high demands from the state regarding standards, they feel as though time is vital and continue to limit attending to anything “extra” in the classroom beyond the subject matter they teach. However, reading skills can be
integrated into content teaching. If the teachers have the necessary tools to teach content reading skills, students would have better access to the content of texts.

Purpose

This handbook is intended to provide content area teachers with resources that can be used in conjunction with any curriculum for all content areas. The handbook will first include an annotated bibliography of suggested resource materials discussing the value of a content literacy program and providing the teacher with specific resources to use in building their own knowledge and skills to teach academic reading skills to their students. It will also include strategies and skills that can be directly used with their curriculum. This handbook will be kept in a common area, which allows accessibility for everyone. Each content area teacher would probably profit from having his or her own copy to refer to throughout the school year.

Through regular use of the handbook, it is believed that teachers will be better prepared to understand how reading occurs throughout the grade levels, not just in the grade level they teach. In understanding how reading develops, adjustments will be made in how it will be taught in the content areas. Strategies mentioned in the handbook will begin to be used in all content areas, creating a complete literacy program. Also, by having the teachers become aware of those students who remain below grade level early on, and by following them through the grade levels, hopefully the gap will begin to close.

Scope of the Project

The handbook is divided into three sections. The annotated bibliography is a listing of selected resources used for this project, as well as a brief description of what
utility the resource has for teachers. This portion is to be used by the teachers who want
to delve deeper into the knowledge base that has already been established to support the
need for this handbook. It is also important to clear up any prior misconceptions, or
misunderstandings of content area literacy and the role of the teacher within that
program. Next will be the strategies that are suggested by the researchers. These
strategies will be listed in detail, and in some instances have already been adapted and
utilized by the content area teachers as general scaffolding techniques.

Limitations of the Project

The major limitation for this project is that a handbook alone cannot assure
the teachers will learn and use the suggested strategies. In addition, the handbook
provides ideas for the teacher, but is not exhaustive in scope relative to content reading
strategies and does not specifically address content reading strategies that are directly
related to each content area.

An additional limitation would be the assumption that all teachers would
know exactly what to teach. They may not have the proper training to teach the reading
skills necessary for the students to be successful with content area reading. The teachers
would have to have the willingness to get proper training in order for this project to work
and for all content area teachers to be involved in teaching the skills and strategies the
same way in each content area class.
Definitions of Terms

**Active Readers**
Readers who shift between information sources (text and background knowledge) to see if what they are reading is making sense (Walker, 2004).

**Content Area Literacy**
A cognitive and social practice involving the ability to read and write about multiple forms of print, including textbooks, novels, magazines, and Internet material (Vacca, 2000).

**Engagement**
Total involvement in an activity (Walker, 2004).

**Frustration Level**
A level of text that is so demanding and difficulty that the reader is unable to construct meaning (Walker, 2004).

**Independent Level**
A level of text that is read easily without the assistance of a teacher (Walker, 2004).

**Instructional Level**
The level of text that is somewhat challenging and where the reader needs some assistance from the teacher (Walker, 2004).

**Lexile**
A method to measure both reading ability and text difficulty at the same scale (Scholastic Reading Inventory [SRI], 2001).
Literal Comprehension

Understanding the facts in a story (Walker, 2004).

Non-literal Comprehension

Understanding ideas not directly stated in the text (Walker, 2004).

Scaffolding

Supporting readers as they read, first by modeling, then by prompting as they complete the task, then letting them complete the task on their own (Walker, 2004).

Schema

A framework developed by the reader to label and categorize experiences (Walker, 2004).

Strategy and Skill Instruction

Series of mini-lessons to develop or modify reading strategies and skills (Walker, 2004).

Think-aloud Procedures

Problem solving out loud as one reads (Walker, 2004).

Vocabulary

A list or collection of words or phrases usually alphabetically arranged and explained or defined (Walker, 2004).
CHAPTER II

REVIEW OF LITERATURE PART I

Literacy refers to the ability to read, write, speak, listen and think effectively (Way, 2001). Due to the wide range of skills individuals need to possess in order to be considered literate, it is important that the proper instruction is administered at every grade level. Learning to read is explicitly taught in the primary grades, but then reading instruction changes and becomes more focused around reading to learn, which may account for the fourth-grade slump, and creates a larger gap for those struggling readers (Hirsch, 2003). From this basic principle rises the need for a complete content area literacy program filled with knowledge that is gained from the literature on what is suggested when teaching content area reading and the important role of teaching reading strategies within content areas. Therefore, the review of the literature is separated into two parts. Part I discusses the reading process, research supporting the fourth-grade slump, and the need for a content area literacy program, while Part II will focus primarily on a balanced content area literacy program and the strategies suggested by recent research.

The Reading Process

The reading process involves the integration of complex strategies in order to construct meaning in specific contexts (Walker, 2004). The reading process can also be
visualized as a cycle; before reading, during reading, after reading and beyond reading. During the reading process the reader is constantly making a connection with the text (Roe, Stoodt-Hill, & Burns, 2004).

Students continue to build on those skills while developing new ones necessary for the next stage, making this a developmental process. Every time a good reader approaches a new text they engage in the reading process, before reading, during reading, after reading and beyond reading. A successful reader will continue to use a variety of skills in order to construct meaning of text (Pearson, Roehler, Dole, & Duffy, 1992). Some of the skills good readers use while they read include:

- Adjusting the rate of their reading according to the difficulty or simplicity of the text, or their purpose of reading,
- Re-reading when necessary,
- Asking questions or making notations throughout the text,
- Thinking about what they already know and using it to gain additional understanding about the text,
- Make personal connections with the text, and
- Interpret the author’s intentions (Duke & Pearson, 2002).

Less successful readers may have some of these skills, but often do not know when to use them (Vacca & Vacca, 2002). When students fail to use these skills continuously, it has the potential to create more students who begin struggling with reading. This problem led to an increase in interest for early researchers such as, Chall (1983) who noticed and created a belief that there are certain stages a developing reader must go through. This first state is the Initial Reading and Decoding Stage, which occurs
between the first and second grade and deals with word recognition and reading knowledge. Stage two, the Automaticity Stage, occurs between second and third grade and is where a gradual increase of text selection occurs. With this, more recreational reading is practiced and less content area texts are used to enhance and strengthen good reading skills (Beers, 2006). Another stage that is directly tied to middle school students is the Reading for Learning stage. This stage occurs between fourth and eighth grade and where students need to bring prior knowledge to the reading and where they acquire facts (Beers, 2006). When a stage is missed, the reading process is interrupted and a gap is created (Walker, 2004). Her research led to the concept known as the fourth-grade slump which takes a closer look at the teaching of reading and how it changes between the primary and secondary grades.

Expository vs. Narrative

Different types of text require the reader to use different types of skills. Competent readers are able to adjust their reading style as they move from narrative to expository content (Roe, Stoodt-Hill, & Burns, 2004). Both Narrative and Expository texts require a reader to construct meaning while reading, however narrative texts focus more on the elements of story telling. Expository texts often require the use skills of comparing and contrasting, drawing conclusions, and evaluating the overall text (Pearson, Roehler, Dole & Duffy, 1992), while narrative texts require such skills as: understand theme, characterization, setting and overall story structure. Expository texts can include magazines, biographies, newspapers, essays, technical documents and subject matter textbooks (Nauman, 1995). There are a number of skills that can be used with
expository reading such as: summarizing, critical reading, and questioning the author. Narrative reading is grouped around novels, plays, short stories, poetry and folktales (Nauman, 1995). Narrative reading also has its different skills that can be used throughout reading which include: understanding basic structure of a story, such as theme, plot, setting, and character development, using graphic organizers, which assist with analyzing stories, and synthesizing, which is the gathering of information in order to see the big picture (Nauman, 1995). It is critical that teachers teach students the skills necessary to use for different texts, and more importantly, these skills have to be taught in the primary grades and continued on into the secondary grades.

The Purpose of Reading Instead of Reading for Purpose Theory

It has been years since Jeanne Chall (1983) conducted her research on a theory known as the fourth-grade slump, and yet we still find that although young readers can understand a variety of texts, many begin to struggle when they are faced with reading more advanced academic texts (Hirsch, 2003). Even though reading is taught throughout the school years, there seems to be a critical pivotal point in reading development that takes place between the third and fourth grades. During a transition from third to fourth grade, their seems to be this idea that students are no longer asked to read for pleasure, but instead must begin reading for purpose (Bowen, 1999, as cited by Snow, 2002). This may create a problem for readers because it is during these grades that the majority of texts they will be reading are now expository, not narrative. Skills taught up to this point deal primarily with narrative texts. An even larger problem at hand is that, as mentioned previously, most subject matter textbooks are usually content specific, and
are often at a readability level that is more difficult than the designated grade level (Walker, 2004). Therefore, a student in the primary grade who has shown no signs of difficulties reading narrative texts may have sudden comprehension problems when reading expository texts. Meanwhile, a student who is struggling with reading narrative texts may well struggle with expository texts also and continue to fall further and further behind, creating a large reading gap (Hirsch, 2003). This reality is what highlighted the need to not only bridge the gap between the third and fourth grade, but also to develop a way to teach expository and narrative reading strategies at all grade levels.

**The Need for a Content Area Literacy Program**

Throughout the years, educators have been concerned about literacy development beyond the elementary years (Grady, 2002). Content area learning became more fashionable in the 1970s when a distinction was made between reading instruction and literacy development within the content areas (Alvemann & Phelps, 1994, and Ruddell, 2001, as cited by Grady, 2002). Later, in the 1980s much insight was developed pertaining to the connection made between the reader’s background knowledge (schema) and their ability to interpret the text which they were currently reading (Grady, 2002). In fact, research conducted during this time shed light on the idea that a reader’s existing prior knowledge of the subject matter is one of the more important indicators of what the student will actually learn in that particular subject area.

Literacy in the content areas such as science, history and math, requires that the student is able to read and comprehend expository texts. Not only do students need the necessary skills to profit from reading content related materials, but also the students
need to know how they are going to actually read the text in order to complete an assignment. Beginning with the concept that “every teacher is a teacher of reading,” (Gray, 1925, p. 187 as cited in Vacca, 2002) implies that all teachers need to be able to support readers as thinkers and therefore should be aware of reading strategies to help them think within the content areas. It was also pointed out that every student engages in some sort of reading in every content area. For this reason alone it is important that teachers incorporate mini-lessons that foster good reading strategies every single day (Vacca, 2002).

**Summary**

When looking at what it takes to be a good reader and skills necessary in order to succeed with both expository and narrative texts, it is important that every teacher is a teacher of reading. All teachers should be familiar with the reading process and the number of stages a reader passes through in order to become what research refers to as literate. A variety of texts need to be incorporated into all grade level instruction, especially the incorporation of expository text and the skills needed to interpret and comprehend this type of text, with primary students. These skills should be built upon over the years, while adding new skills along the way. Meanwhile, the content area teachers need to also focus on the different types of skills needed for expository and narrative texts and then apply teaching strategies that promote competent readers.
CHAPTER III

REVIEW OF LITERATURE PART II

Creators of a Balanced Content Area Literacy Program

A balanced literacy program at the high school and middle school level first begins with the subject matter teacher. Content areas teachers have a strong influence in shaping students’ attitudes about reading (Bean, 2000). Therefore, if a content area teacher makes students feel as though reading is work without meaning or purpose the teacher can actually limit the student’s engagement with reading and the student’s potential to use content reading skills and strategies effectively (Bean, 2000). This solidifies Richard Vacca’s belief that “every teacher is a teacher of reading” (Gray, 1925, p. 187 as cited in Vacca, 2002). Other supporters of his belief would include the International Reading Association (IRA) who has taken a strong position in focusing on the literacy needs of adolescents. Currently IRA’s main objective has been centered on creating an instructional area enriched with skills in order to build a desire of reading complex materials in the upper grades (Bean, 2000). In 1999, the California Department of Education suggested that the content area standards for grades K-12 include expectations that all students will be engaged in strategies across the curriculum that develop competency in word analysis, vocabulary, literacy response, reading comprehension, writing, listening and speaking (California Department of Education as
cited in Clinard, 1999). Taking this idea one step further the California Department of Education included a blueprint for all teachers to follow that lists skills that need to be taught and strategies in which to teach them (California Department of Education, 1999). Ruddell (2001 as cited in Grady, 2002) who is a strong supporter of content area literacy mentions that several content area teachers may give in to the notion that they are a science teacher, or a physical education teacher and they are not required to teach reading. She sees that as a misconception on their part because, as a teacher of literacy, they should understand and support that teaching skills of literacy can in fact enhance their content area by having students more engaged in learning science or social studies (Vogt & Shearer, 2007).

Content area teachers may like to assume that every student who enters their room can comprehend the textbook that will be used throughout the school year, but unfortunately there will be a group of students who are two to four grade levels behind and they will not be able to comprehend the text, identify important words, understand meaning of certain words, and use the information to construct knowledge and demonstrate understanding (Literacy Matters Organization, 2008). If the student cannot read the text effectively, they may well be hindered in developing knowledge in that content area.

Developing a Balance Literacy Program

A balanced literacy program covers four major teaching areas, 1) social, 2) personal, 3) cognitive, and 4) knowledge-building. Social reading connects the readers to their interests, each other, and the community they are involved in. When students view
reading as personal, then they become aware of the type of reader they really are. They view their purpose for reading and the end result. Cognitively engaged readers develop flexibility with their reading to ensure comprehension. Finally, knowledge-building is where the reader builds his or her schemata and defines vocabulary and text structures (Grady, 2002). Another component to a balanced literacy program is the four different types of reading instruction.

There are four different aspects necessary when creating a balanced literacy program at school. The program should include all four of these components:

1. Developmental reading – includes strategies that are taught to students who are progressing in relation to the expectations of standards for the appropriate grade level. A regular reading teacher instructs this program and focuses on comprehension skills and strategies, vocabulary knowledge, rate of reading, and study skills (Roe, Stoodt-Hill, & Burns, 2004).

2. Content area reading – the students are guided with their comprehension of subject specific matter. Reading skills and strategies required for effective comprehension of the content area materials are used in all content area classes (Roe et al., 2004). Content area reading is also an aspect of developmental reading since a learner needs to develop skills of dealing effectively with content reading at the same time they are learning to read any other material, including narrative text.

3. Recreational reading – the students are encouraged to read a variety of books from all genres. Some books should include content specific topics, and some books should be strictly for pleasure (Roe et al.).
4. Corrective and remedial reading – students who are two or more grade levels below their potential reading level are placed into special learning environments and given instruction to increase basic word recognition and comprehension skills (Roe et al.). A remedial class is typically offered as an additional reading class for the students, but in some cases can be a stand alone remedial English-Language Arts program as well.

Implementing a well balanced and completely developed literacy program is the first step necessary to assist the struggling readers in developing the skills they need to profit from content area text. With the balanced literacy program charted and explained, it is important to understand that the role of the content area teacher is to learn how to teach these reading skills and strategies to their students. These skills and strategies must also be followed in each of the content areas in order to create a consistency between the applications of content reading skills in each of the content areas. Laws have been established which support this consistency.

California Assembly Bill that was passed in 1997, identified specific skills important for upper grade teachers to understand and apply within their classroom. The skills to be taught in the content areas included:

- Word attack skills
- Spelling and vocabulary
- Comprehension skills
- Research on how reading skills are acquired
- Strategic Reading strategies across curriculum (text handling)
- Independent, self-selected reading
- Integration of listening, speaking, reading and writing
- Intervention for and integration of, low performing readers
- Effective ELL (English Language Learner) reading instruction
- Planning and delivery of appropriate reading instruction based on assessment and evaluation. (Clinard, 1999)

Since then there have been classes and credentials offered to teachers, that support the acquisition of these skills by teachers. Two certificates added to a teachers
credentials were the Cross-cultural, Language, and Academic Development (CLAD) and specially designed academic instruction in English (SDAIE) (California Commission on Teacher Credentialing [CCTC], 2006). Both of these certificates deal with supporting those students learning to read and learn in English. Since the passing of No Child Left Behind in 2001, some states require their teachers to hold these specialized certificates. The certificate authorizes the holder of a secondary credential to teach English Language Development (ELD) skills within their content area (CCTC, 2006).

Strategies to Teach Content Area Reading

There are a variety of teaching strategies that have been demonstrated to work in the content areas. Reading strategies draw on the different methods good readers use before, during and after they read (Literacy Matters Organization, 2008). Some of the first strategies mentioned were pre-reading, vocabulary development, reading, responding, exploring, and applying (Tompkins, 2003). Pre-reading strategies include strategies such as anticipation guides, which activate student’s prior knowledge of a subject. Early vocabulary development strategies included focusing on retrieving the student’s word/concept knowledge in order to form new concept and schema (Ruddell, 2001, as cited in Grady, 2002).

During the planning of instruction process the content area teacher must ask the following questions: 1) Do I need to focus on print or meaning processing to assist students’ comprehension of this information? 2) At what point during the lesson will the students need support or guidance to construct meaning of the passage? 3) What strategies will best construct meaning with this passage? 4) Can more writing or
discussion strengthen the student’s overall comprehension of the lesson (Walker, 2004)? Once these questions, along with the consideration of reading levels in that particular class, are determined then selecting from a list of strategies is the next logical step necessary to develop a complete lesson plan.

Strategies to Construct Meaning in the Content Areas

There are several strategies available for teachers to use everyday that have the potential of benefiting the struggling readers in their classrooms. Barbara Walker (2004) has a list of recommended strategies that can be used to enhance meaning processing skills before, during and after reading passages within all content areas with both narrative and expository texts. Some strategies that may be used before reading include: K-W-L, Graphic Organizers, and Guided Reading (Walker, 2004). During reading other strategies that may be used could be: Prediction logs, ReQuest, and SQ3R (Walker, 2004). Incorporating strategies that may be used after reading and beyond reading would also include: Retelling, K-W-L and Question-Answer Relationships (Walker, 2004).

The literature related to content reading suggests that these are strategies that are beneficial at all stages of reading regardless of the type of text the students encounter. The list also highlights that there are multiple strategies that can be used with text to assist readers within the content area to develop skills for meaning processing alone. The annotated bibliography found in this project will assist the teacher to learn more about each of the strategies identified above.
It may also be helpful for the content area teacher to know that certain strategies may be more beneficial in certain subject areas. Deanna Peete (2009) concluded that certain strategies can be used among all of the content areas; such as: SQ3R, Anticipation Guides, Concept Mapping, and Think Aloud (Peete, 2009).

Again, the annotated bibliography, which is a part of this project, will assist the teacher to better understand each of these suggested strategies. As noted by Peete (2009), strategies continue to overlap, thus making it possible for students to transfer reading strategies taught in one content area to another. The strategies suggested by Peete (2009) allow the content area teacher to note what types of strategies students struggling in reading will benefit from. Combining the suggestions of Walker (2004) and Peete (2009) will further guide teachers in developing lessons designed to teach every student in their classroom regardless of their individual reading level.

Other Strategies to Consider Within the Content Areas

In addition to the recommended academic strategies the teachers can utilize within their classroom; research has also shed some light on classroom management strategies that will also assist the struggling readers. The way a classroom is managed can also serve as a beneficial strategy to the struggling reader. Classroom management strategies, along with competent reading strategies have proven to work with students who are struggling with reading (Pierangelo & Giuliani, 2001). Beginning with classroom management, there are several strategies that should be used to promote success in the classroom. Some of the strategies include:
• Noticing and understanding the signs a student makes when reaching their frustration level, and reducing this level of frustration is a primary goal.

• Structure instruction and set clear explanations. This will promote an environment with fewer distractions, and allowing the student to focus clearly.

• Have a regular routine and schedule that everyone in the class can easily follow.

• Learning materials are accessible for everyone.

• Make sure all assignments are given in a clear, easy manner.

• Testing should be flexible which will give students options i.e., time, environment, use of notes, or an aid when taking a test.

• Maintain open communication between students, parents and other teachers.

• Proximity, seating the students closest to you that may require assistance during class time.

Conclusion

Research has provided comprehensive support for the importance of creating a balanced literacy program. Teachers who encounter reading in their classroom need to be aware of certain reading strategies that are recommended to assist those students who are at grade level and those who are two to four years behind grade level in their reading. The strategies listed above may, if used properly and continuously, eventually close the reading gap for those struggling readers who are currently two to four reading levels behind reading while in middle school.
The state of California already requires teachers to complete training that specializes in the teaching of these strategies. Even though, they have the required training, they may need additional resources and support to implement the ideas learned in the training, which they will gain from this handbook. State approved curriculums and instructional materials include these strategies that are helpful for all readers and are also standards based. This is extremely helpful to the classroom teacher when planning their lessons and tying strategies to the reading assignments. However, the classroom teacher may well need assistance in teaching the identified strategies to his or her students.

Understanding the differences of each strategy and how it will help the students be a better reader is the most important part of this section. When to use what strategy and how to monitor student success with that strategy may be difficult for the content area teacher unless he or she has assistance in implementing the strategies with students. The content area teacher may find that certain strategies work better with certain passages than others, but the most important thing for the content area teacher to consider is that teaching student content area reading strategies may have a sizable impact on the students’ overall understanding of an assignment, especially if the learner is a struggling reader (Roe, Stoodt-Hill, & Burns, 2004).

Clearly, there is a need for a balanced literacy program within the content areas. Content area teachers need to work together to create a successful literacy program across the grade levels and content areas. In order for this program to be successful these requirements must be established and followed:

1. An understanding of the reading skills secondary students need in order to read content specific text,
2. Knowledge of the assessment tools used at their school site in order to determine their students’ reading levels,

3. Specific skills and reading strategies will work with groups of students from all reading levels,

4. Collections of study aids and procedures that will assist the struggling readers within the content areas,

5. Effective ways to differentiate instruction and assignments for students reading at all levels,

6. Willingness to work with other staff members to help students reach their full potential within the content areas (Roe, Stoodt-Hill, & Burns, 2004).

Content area teachers may be hesitant in the implementation of a balanced literacy program in their content area classroom. They may not be sure that the time allocated to developing reading strategies with students is worth the time, but after a few months may begin to see how effective it is, as well as witnessing the benefits it is capable of bestowing on the students.
CHAPTER IV

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

This project examined the importance a content area literacy program offers struggling readers. The review of the literature was divided into two sections which focused on recent research that supported content area literacy and was necessary for creating this project. The first part of the review of the literature dealt with establishing a need for the project. It included research directly related to the reading process, the difference between expository and narrative text, and the change in reading instruction from the primary to secondary grades. The second part of the review of the literature focused on what a balanced content area literacy program looks like, how to design one, and the strategies content area teachers need to use in order to teach content area reading literacy.

This project was created primarily to assist content area teachers with teaching reading skills and strategies to help struggling readers. It was the author’s intention to create this handbook to be used directly with the current curriculum being used within the content areas. This project provides evidence that there is a need for such strategies to be taught within the content areas, as well as a generalization of how to use each strategy within the content area classroom. An annotated bibliography is also included within the
project to extend additional support to the teachers who will be using strategies recommended in the research. It is hoped that this project will allow teachers to realize the importance of teaching reading skills and using reading strategies throughout the grade levels, and more importantly, that it is used routinely by all content area teachers, thus resulting in a closing of the gap between current reading performance and the level of reading performance needed to succeed in content area classes for those students currently reading two to four levels below their grade level.

Conclusion

This project is based on literature which suggests a need for a balanced content area literacy program. The benefits that may result from this project are as follows:

1. Schools will be aware of their struggling readers and be better prepared when teaching reading strategies that will offer specific support to those students.
2. Schools will come together and collaborate as a team, noting that students are having difficulties reading at every grade level.
3. Schools will develop an early Response to Intervention program that includes different programs that rely upon using the certain reading strategies recommended in literature.
4. Schools, at district and site levels, develop teacher in-service days for teachers, parents and administrators to teach and demonstrate the strategies suggested in the handbook.
5. Teachers across grade levels are teaching reading strategies that will assist readers with the type of text they are reading, whether it is narrative or expository.

6. Teachers, especially in the content areas, will be teaching reading strategies that will help struggling readers with their subject matter.

7. Teachers will be using research supported reading skills and strategies within their classrooms on a daily basis to develop content reading skills for students across the content areas.

8. Students currently reading two to four grade levels below their current grade level will eventually use these strategies routinely, therefore closing the reading gap.

9. Students will get the reading support they desperately need in every subject matter, not just English and Language Arts.

If this project is used as the author intends, then it is with the greatest hope that the struggling readers who have been labeled as strugglers since the primary grades receive the instructional strategies necessary earlier as opposed to later, which should close the reading gap for them even faster.

**Recommendations**

Based on the information gathered and reviewed from the review of the literature, there is a definite need for a balanced content area literacy program. There is evidence from the data presented that some struggling readers are falling further and further behind in developing reading skills and others are not gaining the skills needed to succeed in content reading. This is practically due to teachers needing to do more directed instruction in helping students acquire the abilities to succeed in content area
classrooms. Explicit instruction of learning to read as well as reading to learn in the primary grades and continuing the development of reading skills and strategies throughout the grades is suggested. Teachers need to understand that learning to read and reading to learn should not be separated into these two categories, but rather work side-by-side in a sequential manner from the very beginning and throughout the students’ school experience. The amount of narrative and expository passages being used for the teaching of reading needs to be balanced at a younger age and continued through middle school. Not only does the text need to be evenly balanced, but teaching strategies need to be developed and monitored throughout the grade levels as well.

**Recommendations for Classroom Teachers**

Teachers will need to understand what the suggested reading strategies are and how they can be taught in the classroom. This may be the hardest part of the implementation of this project. Listing the strategies suggested by research may not be enough, and although the strategies may be familiar to some, it cannot be assumed that all teachers have experience with these strategies or are willing to spend the time teaching these strategies to their content area students. Many teachers may argue that these strategies need to be walked through or demonstrated before using in the classroom. This is a very valuable argument, and is where additional support and development of the strategies may be crucial. Additional time to organize and prepare lessons utilizing these teaching strategies may need to be offered as well.

Another recommendation for teachers is that other components need to be adopted, or created in order to ensure that all students are being reached. This handbook is just a beginning step in the mission to close the gap for struggling reader, and
developing a Response to Intervention (RTI) program, along with a stand alone intervention program in the upper grades would be continuums of this handbook.

Recommendations for Future Research

The concept of a balanced content area literacy program has existed for a long time. Over three decades of research has been conducted on this very principle, yet it is important to remember that new research and the implementation of current understandings is always necessary. Research conducted among schools and districts may be valuable to determine if the strategies used are working. Taking a sample group of students beginning in the second grade and following them throughout the upper grades will give a significant amount of information on the reading level progress, lexile improvement and overall growth and development of the struggling readers. It is the goal of the author that after using these strategies over time, struggling readers will be better prepared to transition into high school and beyond. Although Scholastic Reading Inventory was the assessment used for this project, it is not the only assessment that can be used. There are other assessments including the California Achievement Test that are available that show similar patterns of student performance.
REFERENCES


Five_Stages_of_Reading_Development.html


Pierangelo, R., & Giuliani, G. (2001). *What every teacher should know about students with special needs.* Champaign, IL: Research Press.


A HANDBOOK OF THINKING AND READING STRATEGIES TO BE USED WITHIN THE CONTENT AREAS

by

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Introduction

Research conducted by Roe, Stoodt-Hill, and Burns (2004), Tompkins (2003), and Sadler (2001), support certain reading strategies being used within the content areas and was found to be essential to reading success and overall student achievement in the upper grades. Since reading effectively is a necessary ability within every subject matter area, certain content specific strategies should be taught in every subject matter area. During the primary grades teachers spend a great deal of time teaching skills and strategies to students in order to teach them how to read and use reading to learn new content. Some teachers have been taught that the primary grades are a time to focus on “learning to read” and that beyond the primary grades the focus is replaced with the idea of “reading to learn.” In reality the two should not be viewed as separate, but as a continued learning process developed and practiced beginning in pre-school through college (Robb, 2000). In the middle school reading continues to be a difficult process for some students, and those students who are struggling early on only seem to fall further behind over the years without additional support (Best & McNamara, 2002). However, all students including those who are struggling and those for whom reading is not difficult, need to develop skills, abilities, and strategies in order to prepare for using text materials effectively in content specific classes (Sadler, 2001). Teachers need to take the initiative in determining which students need the extra assistance in learning to read and what can be done within their content area classroom to assist these students with effective reading skills and strategies which support content learning.

Reading is more than just a process of using skills in order to comprehend text. It should be viewed as a means to gain new information and encourage students to think
about the text materials. This allows the reader to expand on thinking through their reading of content specific material. In order to promote this type of reading to occur, teachers need to rely on the use of systematic strategies that support students to “think” while they are reading (Sadler, 2001). It is not the sole responsibility of the reading teacher to teach these reading strategies in the middle school environment (Vacca, 2002). According to Roe, Stoodt-Hill, and Burns (2004) content area teachers need to be aware of what reading skills are required for the texts from which they teach. Roe et al. (2004) also states that in addition to understanding what reading skills are required, the content area teacher must be prepared to teach students those reading strategies for the student’s content learning to be successful.

This handbook provides suggestions for the content teacher to use while teaching students the reading skills necessary for them to succeed in learning from text. Included within the handbook is an annotated bibliography which provides a list of recent literature that supports the importance of teaching certain reading strategies within the content areas. In addition to the annotated bibliography there are nine specific reading strategies that can be used in any content area classroom. A brief description of each strategy is given and an example of how it can be used in each content area is illustrated as well. Although there are several different types of strategies that can be used within the content areas, the nine strategies selected in this handbook deal primarily with connecting to previous knowledge, improving overall organization, promoting independent learning, and teaching to the different ways in which students learn from text.
The strategies suggested in this handbook are designed to be easy for teachers and students to use and not only serve as an additional teaching instrument, but also as a method that supports thinking while reading.
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SECTION I
ANNOTATED BIBLIOGRAPHY

The following resources are included to offer teachers additional information regarding the importance for establishing a balanced literacy program. Although this annotated bibliography recommends certain books and articles pertaining to strategies and skills associated with reading/thinking, these are not the only resources that can be used. It was the purpose of this project to condense the list of resources to make it more applicable for teachers.


  Summary: Comprehension is necessary in all content areas. It is important for readers who are reading for information to be able to understand what they are reading and why it is important. This reference provides numerous suggestions for what it takes to be a good reader and the importance of teaching comprehension strategies. This chapter will help all content area teachers understand what it takes to be a good reader, what skills are necessary when reading for comprehension and how to assist those readers who are struggling in this area. It also includes the basic fundamentals of scaffolding that can be done in the classroom to further comprehension in all areas.


  Summary: This book by Howard Gardner supports the idea that every student is born with lesser and greater abilities. There are many different abilities one uses when learning. When the classroom teachers can identify the students’ greater and lesser abilities as well as their style of learning they are teaching, they will be able to use strategies that are specific to the student’s needs. When applying Gardner’s (1983) suggestions to the content specific classroom results included an increase in motivation, and comprehension. His theory of the multiple intelligences is a great way to understand that students learn in a variety of ways, therefore, instruction must be varied as well.

Summary: This article provides information regarding the “idea” of the suggested fourth-grade slump and how teachers need to be on the same page when it comes to teaching reading. It takes what we already know about how students learn to read and when students learn to read. It then explains the difference between narrative and expository texts and places emphasis on the concept that students start school learning how to read and then reach the fourth grade with the idea that they need to be able to read to learn. The teaching of reading multiple texts is a key argument made in this article. During the fourth grade the students will be held accountable for comprehending different types of texts, expository and narrative, and therefore should be taught how to read several different styles of texts earlier as opposed to later in order to avoid the “fourth-grade slump” altogether.


Summary: This article provides information about why it so important to support readers within the content areas. It also explains what happens to struggling readers when they cannot understand what they are reading or why they have to read. It mentions what past research has suggested over the years that worked and what current research has found to be more helpful. From here it continues to suggest several different strategies that can be utilized by all content area classroom teachers. More importantly it emphasizes the need to increase the overall motivation of the reader, integration of literacy strategies, combining reading and writing strategies, and building an organized support.


Summary: It is important to understand what a good reader must do prior to reading, while they are reading, and when they are finished reading. In this article Pressley looked at what strategies have been taught in the past and how it has changed over the years. Strategies such as connecting to prior knowledge and summarization are two that were popular in the late 1970s, early 1980s that we still use today. Then, he moves ahead to how comprehension instruction changed in the 1990s, and how it benefited content area teachers who used these strategies within their classrooms. It also focuses on how the reader learned to use these strategies to assist them with thinking about the text they are reading within the different content areas.

Summary: Information suggested in this book is centered on the idea that in primary grades students “learn to read” and then in the middle school students “read to learn”. Contrary to that thought, Laura Robb provides reasons that suggest reading is thinking and is not divided process, but rather continuously taught together throughout our school years.


Summary: This book explains the importance of creating as well as what is necessary for establishing a balanced literacy program at any school site. It begins by defining that a balanced literacy program is a literacy program that is created and supported by all teachers at the school site. Certain chapters are designed to address the importance for such a literacy program; other chapters suggest what can be done during early reading instruction and how reading instruction is continued up into the content areas. There are specific chapters that discuss specific strategies important to be taught at specific grade levels and within a specific content area.


Summary: This book introduces fifty-six different strategies to use within the content areas. The strategies are broken into different sections such as: checking for understanding, fostering cooperative learning, and improving organization to name a few. Once the strategy is explained, it is broken into steps of application and then an example is included for each content area.


Summary: This book was designed especially for literacy coaches and reading specialists, however, it also provides good suggestions for all teachers who teach or support students with their reading. In addition, it suggests additional reading and research on subjects discussed within the chapter to further assist the teacher.

Summary: Be a Better Reader is a collection of short lessons that are directly connected to the content areas. These lessons are broken into units that intensely focus on comprehension and study skills the reader must have in order to read strictly to learn. *Be a Better Reader* is a great tool that will work inside of any classroom in addition to the curriculum already being utilized.


Summary: This textbook serves as a tool for developing a reading program within the classroom at any grade level and for any subject taught. It also demonstrates skills, strategies and procedures that can be used with any curriculum and that are tied directly to the state standards. The author pulled several resources together to create a one step approach to gaining knowledge on how to teach reading.


Summary: This article provides information pertaining to the concept of “every teacher is a teacher of reading”. This idea develops the importance of paying attention to those students within the content area classes that are still struggling with the reading materials. Taking it a step further, the article mentions some strategies that can be used in every content area that will support the struggling readers, as well as strengthen every reader. It encourages teachers to work together to help readers in every class regardless of the content.


Summary: This article suggests certain strategies that will benefit students within the content areas. It also suggests that a teacher must support readers and help them to develop good reading skills, which will increase their motivation to read independently. This article also gives a lot of visual aids that teachers may find useful within the content specific class. Most strategies mentioned in this article can be applied to any content area and are ready to be used with any curriculum.
SECTION II

READING/THINKING: BEFORE, DURING, AFTER AND BEYOND

There are many tools that can be used to help students think about the text they are reading. Strategies can support the reader by organizing their thoughts before, during after and beyond their reading within the content areas (Roe, Stoodt-Hill, & Burns, 2004). Section II will focus on the explanation of the four different steps a reader engages in as they read. The purpose of this section is to further discuss the thinking process that occurs while students read content specific text and how strategies assist the reader with their thinking (Sadler, 2001).

Figure A-1 illustrates the steps a reader goes through while reading. This habit of the mind is a continuous cycle where each stage builds upon the other as well as repeats steps as necessary to further develop comprehension (Chall, 1983). The first step to this reading cycle is “before reading,” which may be the most important step and, therefore, needs to be considered carefully when developing a lesson. While on this step it is important that the teacher engages the reader as a thinker. The teacher accomplishes this by using certain strategies that will support the reader with their thinking by helping them with developing a schema, defining vocabulary, making predictions, and connecting the text to prior knowledge. Whether students are reading the selected text silently, with a partner, or as a whole class, there are specific strategies the teacher can use that support these “before reading” skills. As the students continue to read they begin onto the second step which is “during reading.”
The different steps of reading/thinking that occur when learning from text within the content areas

Before Reading/Thinking
- Connecting prior knowledge
- Vocabulary development
- Activating and Developing a schema

During Reading/Thinking
- Continued support on making connections
- Continued vocabulary development
- Guiding the readers through the literature

After Reading/Thinking
- Provide students with review of information
- Vocabulary discussion and new connections
- Combine old and new knowledge to build schemata

Beyond Reading/Thinking
- Transferring information from one concept to another.
- Continue to elaborate on the developing schemata.

Figure A-1. Steps a reader goes through while reading.

In order to continue to support thinking during reading, the teacher must refer back to the content of the students’ work or ideas identified in the previous step, developing a schema, defining vocabulary, making connections as well as guiding the reader to think about the text they are still reading. Using strategies that construct meaning and monitor understanding is critical while the students are on the “during reading” step (Roe, Stoodt-Hill, & Burns, 2004). It is the teacher’s responsibility to use
certain strategies that allow the students to respond to purpose questions, make predictions, and take notes, all of which allow the students to further think and organize what they are reading. Once the students have completed reading the text they begin to enter the third step which is “after reading”.

“After reading” is designed to serve as the time for reflection and revisiting the content dealt with during other steps of the reading cycle (Roe, Stoodt-Hill, & Burns, 2004). This is where the students begin to process their ideas and also where teachers can begin assessing depth of understanding. Strategies used at this time are ones that monitor comprehension. They can be in the form of study guides, which review the information obtained throughout the reading, new and reviewed vocabulary and connect new information with the already established knowledge. The teacher’s main goal during the “after reading” step is to promote retention by using strategies. Through summarizing, graphic organizers, and discussions the students will be able to retain more of the information they read (Roe et al., 2004). These strategies will also encourage the students to think independently, which is important in order for them to take the next and final step of this cycle.

Students who are able to take the information “beyond reading” and actually apply the knowledge have completed the cycle entirely. They have transferred information from one source to another and have elaborated on their developing schemata. Strategies supporting the “beyond reading” step allow the students to apply the knowledge gained from text which may include participation in projects, experiments, and other creative work, which teachers can use as a form of assessment (Roe, Stoodt-
Hill, & Burns, 2004). Not only have they retained the information, but they also continue
to think about what they have read and how it now applies to a new task.

The overall understanding of strategies that support before, during, after and
beyond reading and thinking will provide teachers with the ability to create lessons that
support all steps of reading. In doing this it will allow students to develop and acquire
important skills necessary to make them active thinkers while reading.
SECTION III

STRATEGIES THAT SUPPORT READING/THINKING

Several strategies are listed in order to support the reader during each step of reading. It is the purpose of Section III of this handbook to provide information and examples about how nine strategies can be easily adopted within any content area and created with individual specifications for each teacher. Each of the strategies suggested can also be connected to any of the current standards based curriculums offered on school sites. The strategies include: KWL Chart, Prediction Log, Anticipation Guide, Retelling, Jigsaw, ReQuest, QAR, SQ3R, and PLAN and all support reading/thinking as well as support the reading steps identified above and include: Thinking before reading, during reading, after reading and beyond the specific text read. The nine strategies listed above will be introduced, defined, and explained. In addition, a template with examples will be provided which will demonstrate ways to use each strategy for any content specific text.

KWL Chart

A KWL chart is used as a visual tool for organizing information based on three aspects of thinking while reading; What we Know, What we Want to Know, and What we Learned. This strategy allows students to think about the text before, during, after and beyond their reading. It is a great way to keep the students on track because as they read the text they are developing questions and adding information into each of the three designated columns. It engages the students to be involved with the text they are reading (Sadler, 2001). KWL charts can also be a great strategy for those who need to visualize and manipulate ideas while learning due to the constant addition of information to the
chart itself and having the information in written form. They also serve as a great study guide, or quick review before exams. Many KWL charts are supported or even included within the state adopted curriculums that comply with state standards.

Purpose: Before reading, students will brainstorm individually or as a whole class what they have heard about, or what they already know about, for example, earthquakes. This process is allowing the students to “think” about what they already know about the text, which allows the students to develop or activate a schema, connect prior knowledge, and define vocabulary. All of this information is placed within the “Know” column. Next, they anticipate or create questions that they want answered while reading through the text. They place these questions into the “Want to Know” column. During reading, the students will refer back to their questions and think about what information they have read and will answer them. They will also record any new questions they may have during reading. After reading, students will write their responses into the “Learned” column on their chart and then discuss their thoughts with a partner, or as a whole class.

Example: Science KWL Chart

<table>
<thead>
<tr>
<th>Know</th>
<th>Want to Know</th>
<th>Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic: Earthquakes</td>
<td>What creates an earthquake?</td>
<td>Earthquakes begin when two plates rub against each other. The starting point of an earthquake is the epicenter. 9.5 Chili, 1960</td>
</tr>
<tr>
<td>Shaking ground</td>
<td>Where do they occur?</td>
<td></td>
</tr>
<tr>
<td>Natural disaster</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fault lines</td>
<td>What is the strongest quake recorded?</td>
<td></td>
</tr>
<tr>
<td>Magnitude</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example: Language Arts KWL Chart

<table>
<thead>
<tr>
<th>Know</th>
<th>Want to Know</th>
<th>Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb</td>
<td>gerund</td>
<td>verb ending with “ing”</td>
</tr>
<tr>
<td>Noun</td>
<td></td>
<td>used as a noun</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex. building</td>
</tr>
</tbody>
</table>

Example: Social Studies KWL Chart

<table>
<thead>
<tr>
<th>Know</th>
<th>Want to Know</th>
<th>Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic: Harriet Tubman</td>
<td>Why she was not forced into slavery?</td>
<td>She was born into slavery and then freed after her owner died.</td>
</tr>
<tr>
<td>African American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>Why was she referred to as Moses?</td>
<td>She, like Moses freed slaves.</td>
</tr>
<tr>
<td>Underground Railroad</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: Math KWL Chart

<table>
<thead>
<tr>
<th>Know</th>
<th>Want to Know</th>
<th>Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>addition</td>
<td>division</td>
<td>The inverse of multiplication. Ex. 2x3=6, 6/3=2</td>
</tr>
<tr>
<td>subtraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>multiplication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prediction Log

This strategy is designed to allow the students to self-assess their predictions and correct, if necessary, it/them with accurate information after reading the text.

Purpose: Before reading, ask the students a question about the topic they are about to read. The students will write their prediction, which is allowing them to develop and activate their schema, down on a sheet paper. During reading the students are guided
through the text while they think about their prediction and how it is connected. After reading have the students refer back to the original question and write the answer to it on the paper, they also write whether or not their prediction was correct, this allows them to connect the old and new information to their schemata. Examples are:

- Science Prediction Log: *How is gas formed?*
- Language Arts Prediction Log: *What will happen to Anne Frank while in hiding?*
- Social Studies Prediction Log: *What was it like for Lewis and Clark?*
- Math Prediction Log: *How would we measure a soccer field?*

**Anticipation Guide**

Anticipation guides are a quick and easy way to determine what the students already know or their opinion about a subject/topic they are about to read about. This is a great way to activate prior knowledge and create a conversation to get the students thinking and engaged (Sadler, 2001).

Purpose: Before reading the teacher lists three or more debatable issues pertaining to the topic they will be reading. The students answer whether they agree or disagree with the issues relating to the topic that the teacher has prepared in advance. This allows the students to work with their prior knowledge and form an opinion based on the schema they have already developed. During reading they should be prepared to adjust information when necessary as well as being able to support their responses at the end of class by using facts gained from the reading. After and beyond reading the students discuss their original statements and whether or not their opinion changed based on the
information gathered from the text. Sadler (2001) mentions these rules when designing the statements for the Anticipation Guide:

1. Evaluate and conclude the main ideas.
2. Keep the statements short and declarative.
3. Make sure they promote predictions and anticipations.
4. Contrast statements with the author’s meaning.

Language Arts Anticipation Guide: Topic – Writing a persuasive essay

Statements:

 Students should have access to their cell phones during school hours.
 Religion should be taught in school.
 All schools should require school uniforms.

Social Studies Anticipation Guide: Topic – Egyptian Civilization

Statements:

 Mummification is very similar to what is done today in the states.
 Hieroglyphics is very comparable to the English style of print.
 Pyramids were easily designed and built.

Science Anticipation Guide: Topic – The Table of Elements

Statements:

 Information is organized very clear.
 Fifty of the elements are found in nature.
 The metals are coded differently then the other elements.
Retelling

Retelling is often compared to summarizing, but retelling asks the students to tell what the text was about in their own words instead of ‘summing up’ the information into a few short sentences. The act of retelling information allows the students to use the skills needed before, during, after and beyond reading to accurately retell the importance of the text.

Purpose: Begin the retelling process by modeling how retelling works and how it is different from summarizing in the sense that summarizing only focuses on the main points mentioned in the text. In fiction, the students will focus on points such as plot, conflict, and rise of action, climax, and resolution. For non-fiction reading, the students will focus on main points, details, and description (Sadler, 2001). This strategy best works in a partner reading environment. The students will take turns reading through the assigned text and then retell the information in their own words to their partner. Then it is the other students turn to read the next section of text and do the same thing. This is continued until the entire assigned text is complete. Each student should have a piece of paper to note two to three ideas that they would like to retell from their reading. This strategy allows the students to think about what they read during their reading and then think about how they can retell the information in their own words to demonstrate meaning of the text to their partner.

Jigsaw

Jigsaw is a collaborative strategy that allows the students to work together with other classmates and learn information about text from one another. This places the
thinking, reading and teaching in the student’s hands since it requires the participation of all students to work together.

Purpose: Before reading, you will have to separate students into groups of three to five. Every member of the group is given a topic which they must become an “expert” in. Make sure to go over each topic and answer any questions the students may have on the topics they have been given. Then, each “expert” meets with the other “experts” who share their same topic and they read the text together. During reading the experts share the information they have learned, go over any main details, and share what they thought about the reading. Finally, after reading the “experts” return to their team and share the information. Example Jigsaw topics are:

- **Language Arts Jigsaw:** After reading a story, review by assigning topics such as: characters, plot, setting, climax, conflicts, and resolutions.

- **Social Studies Jigsaw:** When studying the amendments to the constitution assign topics such as: 18th amendment, 19th amendment, 21st amendment, and 1-10th amendments.

- **Math Jigsaw:** After learning about negative numbers assign topics such as: adding, subtracting, multiplying, and dividing.

- **Science Jigsaw:** After learning about rocks give assign topics such as: Igneous, Sedimentary, and Metamorphic.

ReQuest

The ReQuest strategy focuses on having students “think” about the text while they are reading. It allows students to build on previous knowledge by having them focus on the main information and ask themselves why this information would be important (Sadler, 2001). It also allows the students to generate questions about the information they do not understand during reading.
Purpose: After selecting the text the students will be reading, the teacher will have
the students read short sections of the text. While reading the section, they will think
about questions they want to know more about and record them onto a sheet of paper.
After reading, they will review their questions they have written and use the text and
class discussion to answer the questions. The beyond reading step occurs when the
teacher begins to ask the students higher level of thinking questions pertaining to the text.
This process is repeated for all of the sections.

| Language Arts ReQuest: Read an introduction to a short story. Have the students
design questions in relation to the story’s setting, characters, theme, etc. Continue
reading short sections at a time and have questions ready to ask such as:
- Do you think the characters would act that way? Why or why not?
- Would you have done the same thing as the main character?
- What would you have said to the main character if they asked for your opinion? |
| Social Studies ReQuest: Read the introduction to the chapter on the revolutionary war.
Have the students record questions they have about this moment in history. Continue
reading the chapter section by section making sure to stop and have them answer their
questions with facts from the text, as well as asking additional questions such as:
- Could the revolutionary war have been avoided?
- Would you have joined the war to protect your land? |
| Science ReQuest: When discussing a topic such as gravity ask students questions such
as:
- Does the size of an object matter when it comes to the speed at which it falls to
  the ground? |

QAR

Question-Answer-Relationship, (QAR) was designed in the 1980s to give students
the tools needed to determine what type of questions are being asked and how to think
about the answering process. There are primarily four types of questions: 1) Right There
QARs were those in which the question and the answer were explicitly stated in the text,
2) Think and Search QARs had questions and answers in the text, but some searching and
inferential text connections were required to make the link, 3) *On My Own* QARs were those in which the question was motivated by some text element or item of information, but the answer had to be generated from the student’s prior knowledge, and 4) *Writer and me* QARs which is a combination of the information found in the text and the reader’s prior knowledge (Duke& Pearson, 2000).

Purpose: Have the students read a short text selection, considering the different types of questions that can be asked, create four questions, one for each type in each section they will read. Before reading the text, have the students read over the questions and list whether they are a “right there,” “think and search,” “on my own” or “writer and me” question. During reading, the students can see whether or not they were right in categorizing the questions. After reading, have the students answer the set of questions using the text when they need to in order to generate correct answers.

- **Examples of Language Arts QARs:**

  Topic: Narrative
  1. Right there: Who are the main characters?
  2. Think and search: Why might the main character want to leave?
  3. On my own: When was there a time when you wanted to leave?
  4. Writer and me: What skills would you need to survive on your own?

- **Examples of Science QARs:**

  Topic: Tide pools
  1. Right there: What are tide pools?
  2. Think and search: How many tide pools are along the California coast?
  3. On my own: Have you ever seen a tide pool in real life?
  4. Writer and me: In what ways does the tide affect the actual tide pool?
Examples of Math QARs:

Topic: Decimal points
1. Right there: What is a decimal point?
2. Think and search: How does the decimal point change?
3. On my own: When would decimals be used?
4. Writer and me: How would decimals be helpful when budgeting?

Examples of Social Studies QARs:

Topic: Washington, D.C.
1. Right there: What is the current population of Washington, D.C.?
2. Think and Search: What were the first monuments?
3. On my own: Why would people want to visit the monuments?
4. Writer and me: What are some of the monuments in your local city?

SQ3R

SQ3R stands for “Survey, Question, Read, Recite and Review,” which was developed by Francis Robinson in 1961. This strategy allows the student to use all steps of reading before, during, after and beyond and is designed to help enhance comprehension and retention. Although this is a strategy that needs to be modeled, once the steps are understood, students can use it independently.

Purpose: This five-step process begins with the Survey step where a student previews what they are going to be reading to get the overall idea of what they are going to be reading. Next, the student Questions each heading of the text by turning the section headings into questions. Finally, the 3 R’s are needed; Review, the students reads the text and tries to answer the questions. Recite, during reading the students stops at the end of
each section and tries to answer the questions without looking through the text. Review, after reading the student reviews the previous questions and tries to answer them without referring back to the text for support.

<table>
<thead>
<tr>
<th>Social Studies SQ3R:</th>
<th>Science SQ3R:</th>
</tr>
</thead>
<tbody>
<tr>
<td>S: Battle fields of the Revolutionary War</td>
<td>S: Genes</td>
</tr>
<tr>
<td>Q: Where did the war begin? Where was the first battle located? Who were the main patriots of the Revolutionary War?</td>
<td>Q: What are recessive genes? Who carries the recessive gene for male baldness? What are some genetic problems associated with chromosome splicing?</td>
</tr>
<tr>
<td>Read- Recite answers -Review</td>
<td>Read – Recite answers - Review</td>
</tr>
</tbody>
</table>

PLAN

This is a graphic organizer which students can use to visually map out in order to better understand the information that had been discussed.

Purpose: PLAN stands for Predict, Locate, Add, and Note. Like many of the other strategies mentioned before, this strategy focuses on taking the text one step at a time. Before reading, the students skim the material and begin thinking about what the text is going to be about. During reading, the student begins locating the most important information by placing a check by the known information and placing a question mark by the unknown. From here they need to add words or phrases to help them better understand some of the harder details. After reading, they make notes of what they read, understood, struggled with and learned which requires them to think about the text they have just finished.
Examples of Language Arts PLAN:

- Elements of Writing
  - Introduction
  - Thesis Statement
  - √ Body
  - Transition
  - √ Conclusion
  - Concluding words
  - Topic Sentence

Example of Science PLAN:

- Weather
  - Sunny
  - Cloudy
  - Rainy
  - Stormy
  - Snowy

Example of Social Studies PLAN:

- Amendments
  - 5th
  - 19th
  - 21st
  - 1st
  - 8th
  - 18th

Example of Math PLAN:

- Geometry
  - Angle
  - Theorems
  - Proofs
  - Degrees
SECTION IV
CONCLUSION

The teaching of reading as a process of thinking is critical, especially within the content areas. When developing a literacy program in the middle school setting and beyond, it is important to make sure that every teacher views himself, or herself as a “teacher of reading” (Vacca, 2002), regardless of the grade level they teach or the content area. The annotated bibliography provides several resources that support this concept. The resources included in the handbook are intended to be used as a reference for teachers to easily seek additional information regarding the teaching of reading. In addition to the current research, an illustration was created to demonstrate what the reading process looks like and the skills readers as thinkers encounter before, during, after and beyond reading. As a content area teacher, it is important to notice what reading skills are necessary for students to be successful thinkers during each step of the reading process. The final section of the handbook contains nine strategies to give content area teachers suggestions of what can be done within their classroom that supports and enhances reading as a thinking process. It is only when all teachers view themselves as content/reading teachers and use strategies to make students better readers, that students will be able to develop the reading skills needed in order to think about text before, during, after and beyond, a skill that will lead to greater overall reading comprehension and will help struggling readers succeed in content area classes.
REFERENCES


