

PROMOTING LEARNING THROUGH CONTENT LITERACY INSTRUCTION

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ABSTRACT

Research has confirmed that many students in the middle grades and high schools experience serious challenges with respect to content area tasks that involve literacy. Over time, educators have become more knowledgeable and informed about content literacy instructional practices for developing vocabulary, comprehension, study strategies, and writing. However, consistent and long-term application of content literacy practices remains a challenge and a goal. This article examines theoretical bases associated with content literacy instruction. In addition, selected content literacy strategies are presented and described.

Assessment data such as the report by the National Institute for Literacy (2007) confirm that many students in the middle grades and high schools experience serious challenges with respect to tasks involving content area literacy. Educators often ask: How is it possible to facilitate students' learning and comprehension of subject matter, to help them transfer what has been learned to other subject areas, and to equip them with tools that promote independent learning? Questions such as these are addressed in this article.

The report of the National Reading Panel (2000) reviewed the factors associated with reading success, including the critical roles of vocabulary and comprehension reinforcement. These are skills that transcend grade levels and subject areas. It is becoming ever more necessary to ensure that literacy instruction does not end with elementary level instruction; but rath-

er becomes an integral component of content area instruction at all grade levels, especially as the need to apply literacy skills within content areas increases (Moore, Bean, Birdyshaw & Rycik, 1999; Rycik, 2008).

An important consideration in addressing this issue is the degree to which educators understand, acknowledge, and apply the components of content literacy instruction. From the early research initiated by Dr. Harold Herber (1978) to more recent times, educators have come a long way in acknowledging the need to help students acquire literacy skills for learning in all subject areas at all grade levels. Professional organizations have issued position statements that reflect the prevailing research associated with adolescent literacy at the middle and high school levels (Rycik, 2008).

Increased attention has resulted in a better understanding of the factors associated with content literacy and a search for instructional strategies that can be manageably implemented in classrooms. That search has been conducted through years of research, through professional development in school settings, through undergraduate and graduate university courses, through conferences and workshops, and through independent professional study.

After some initial resistance, many educators have arrived at a more comprehensive understanding of instructional practices that maximize learning for students in middle grades and high schools (Alvermann, 2001). The field of content literacy instruction has grown, but opportunities remain for continued professional development and, more importantly, for increased application of content literacy strategies in classroom settings with adolescent learners.

CONTENT LITERACY INSTRUCTION: INVESTIGATING BELIEFS

It is important to examine beliefs regarding content literacy instruction, what it is, what it means, and how it can be implemented. Some educators believe that content literacy instruction is simply adding literacy instruction to content instruction. Given that perspective, the task of connecting reading and writing skills to the demands of subject area instruction may present a challenge for students, and surely a daunting task for teachers. A more comprehensive understanding of content literacy instruction and familiarity with instructional strategies that are known to be effective can help teachers address issues of literacy learning across all subject areas for all grade levels and for all students (McConachie, Hall, Resnick, Ravi, Bill, Bintz, & Taylor, 2006).

Too often, educators consider that content literacy instruction is one more addition to their instruction and that time is not available for anything

other than focused teaching of content. Because time is often a constraint for teachers, it is important to identify instructional practices that are manageable to plan for and to implement within the context of a busy instructional day.

The perceived dichotomy (on the part of many) between content instruction and literacy instruction can result in learning that is even more fragmented and difficult to achieve. Alvermann (2001) reminded teachers to consider the complexity of the learner, including their perceptions of themselves as literacy learners, their motivation, and prior knowledge. As an alternative to a “fragmented” approach a more integrated model would reflect the perspective pioneered by Herber (1978), that content literacy instruction is, ideally, the integration of content (or subject matter) instruction and communication skills instruction, with both occurring at the same time. This requires comprehensive thinking about what content literacy learning could be and should be, rather than reducing content area literacy to mere imposition of a set of skills and activities.

CONTENT LITERACY INSTRUCTION: INSTRUCTIONAL APPLICATIONS

Teachers and students need to make decisions about not only *what* they are attempting to accomplish with respect to literacy learning, but also *why* and *under what conditions* the literacy curriculum would be most effective. This requires planning, substantive dialogue, exploration, literacy mentoring, and metacognitive discussion. These are characteristic of the Reading Apprenticeship model (Schoenbach, Braunger, Greenleaf, & Litman, 2003; Greenleaf, Schoenbach, Cziko, & Mueller, 2001). That model provides a systematic way for teachers to use the knowledge that they have about content and literacy processes. It requires teachers to model the use of strategies within a classroom context that features discussion, enhanced thinking about the usefulness of various strategies and apprenticeship-like application by students.

With the Apprenticeship model, instructional strategies are not just imposed and used in piecemeal fashion. Rather, the classroom “climate” is one in which teachers and students work together to use what they know about literacy and to grow in its application. This concept applies to content instruction of every subject area and is applicable across all grade levels. Content literacy instruction includes all of the communication skills. It also involves thinking/reasoning abilities and higher-level thinking skills. (Conley, 1995, 2008; Herber, 1978; McConachie, Hall, Resnick, Ravi, Bill, Bintz, & Taylor, 2006; Vacca & Vacca, 2008).

Instructional planning, including identification of goals and objectives,

provides the foundation for subsequent application of instructional options (Alvermann, Phelps, & Ridgeway, 2007). The first step for teachers is to examine the demands of content, the set of information and ideas they are trying to impart to students. Completion of a Content Analysis, the teacher's detailed analysis of the concepts that are to be covered in instruction, is a tool that helps with the decision-making associated with instructional planning and preparation (Misulis, 2004).

Teachers also need in-depth understanding of their students, especially the extent of the prior knowledge they bring to the learning situation. It is also important to identify the skills and competencies students need in order for them to be successful learners of the content associated with subject matter instruction. Teachers must then be willing to address students' literacy learning needs by taking a proactive approach to learning and doing what is needed to nurture the literacy growth of students at all grade levels and within all subject areas.

MANAGEABLE STRATEGIES FOR DEVELOPING LITERACY SKILLS

Content literacy instruction can be described in terms of strategies for developing students' skills in several major areas: vocabulary, comprehension, study strategies, and writing. Because these skills facilitate subject matter learning, they might be thought of as "instructional tools." As students use these tools, they learn for the present time; however they are also learning to apply their skills across subject areas and to do so with greater independence. Instructional strategies have been identified that can enhance students' learning within each of these areas. For educators, effective instruction becomes a matter of learning about these strategies and more importantly, learning how to select and use them within classroom instruction.

VOCABULARY STRATEGIES

The National Reading Panel (2000) confirmed the importance of vocabulary for comprehension and for literacy learning. As teachers analyze their subject matter to identify concepts that they wish to teach, they can develop a vocabulary list that reflects those concepts and contains words that are needed in order to learn the content. Teachers can also select words that provide opportunities for students to review skills that will lead to independent vocabulary acquisition such as use of context clues, structural analysis (or word structure skills), and dictionary skills. Vocabulary reinforcement activities can provide students with opportunities to learn the meanings of words directly within subject area instruction, and therefore, in meaningful situations that warrant their use.

Vocabulary activities include use of brainstorming, word puzzles, categorizing exercises, multiple choice, analogies, graphic organizers, projects, writing activities, and demonstration/performance activities. Some types of vocabulary activities such as categorizing promote vocabulary knowledge through higher levels of thinking. Figure 1 presents an example of a vocabulary categorizing activity.

Figure 1. Sample Vocabulary Categorizing Activity

Topic of Lesson/Unit: Nutrition

References/Resources Used: My Pyramid.gov website:

<http://www.mypyramid.gov>

Directions: Below are words that we have reviewed in our unit on Health and Nutrition. On a separate sheet of paper place each of the terms within the following categories:

Grains, Vegetables, Fruits, Milk Products, Meats, and Oils.

Alternative Directions: Below are words that we have reviewed in our unit on Health and Nutrition. On a separate sheet of paper categorize these words within category titles of your choice. Be ready to discuss the categories that you have selected and the placement of the terms within those categories.

Vocabulary Terms:

cheddar cheese	canola oil	oranges
flour	brown rice	chicken
apples	nuts	raisins
lettuce	refined grains	tomatoes
olives	yogurt	strawberries
kidney beans	onions	whole wheat bread
butter	bananas	pork
mayonnaise	cottage cheese	oatmeal

COMPREHENSION STRATEGIES

Teachers can use comprehension strategies within subject area instruction to help students comprehend at various levels, to scaffold their learning, and to guide them through a process they will eventually use independently. Students should gain facility with comprehension at all levels: from acquiring information, to making inferences, to carefully analyzing, synthesizing, and evaluating what has been learned. Students should also learn to think beyond the information and ideas required for the immediate lesson. Questions that have been developed using any of the comprehension taxonomies remain a standard way of helping students think through subject matter at increasingly higher levels of comprehension.

Study guides serve as instructional scaffolds to provide guidance until

students acquire and apply comprehension processes with greater degrees of independence (Alvermann, Phelps, & Ridgeway, 2007; Herber, 1978; Vacca & Vacca, 2008). Representative types of guides include Levels of Comprehension Guides or Three Level Guides (Herber, 1978, Vacca & Vacca, 2008), Reasoning Guides, Anticipation Guides (Vacca & Vacca, 2008) and the K-W-L strategy (Ogle, 1992, 1986). When teachers follow the recommended procedures, they will find these guides and strategies are manageable to create and to implement within instruction. A sample Levels of Comprehension Guide is provided in Figure 2 below.

Figure 2. Sample Levels of Comprehension Guide

Topic of Lesson/Unit: Health and Nutrition

References/Resources Used: Dietary Guidelines for Americans and MyPyramid.gov

Web Address:

<http://www.health.gov/dietaryguidelines>

<http://www.mypyramid.gov>

Level I: Literal Level

Directions: Read each statement below and place a check beside those that represent information/facts/details stated in our lesson. Be ready to provide reasons for your responses.

1. ☐ The Food Pyramid includes guidelines associated with the following categories: grains, vegetables, fruits, milk, and meat and beans.
2. ☐ Nutritional benefits from foods are preferred to using dietary supplements.
3. ☐ It is important to participate in physical activity each day.
4. ☐ It is important to limit fats and added sugars and salt.
5. ☐ Whole grains, bread, cereal, and pasta are examples of grains in the Food Pyramid.
6. ☐ The USDA Food Guide and the DASH Eating Plan are two examples of balanced eating plans.
7. ☐ Weight management includes control of caloric intake and physical activity.
8. ☐ A healthy food plan should include consumption of fruits, vegetables, and whole grains.

Level II: Interpretive Level

Directions: Read each of the following statements. Place a check beside each statement that represents ideas related to the information in our lesson. Be ready to provide reasons for your responses.

1. A balanced and healthy eating plan includes consumption of a variety of foods along with regular exercise or physical activity.
2. Americans need to consume fewer calories, to increase physical activity, and to make better choices regarding their diet.
3. Regular physical activity contributes to health-related rewards.
4. A balanced diet can promote health benefits.
5. A diet with excessive amounts of salt, refined sugar, and saturated fats can contribute to serious health problems including cardiovascular disease and diabetes.
6. Healthy nutritional practices are essential to growth and health.

Figure 2. Sample Levels of Comprehension Guide (cont.)**Level III: Applied Level**

Directions: Respond to any five (5) of the following items based on your understanding of this lesson and your own prior knowledge and experience. Your responses may reflect what you have learned about health and nutrition, yet they may also reflect ideas and your insight beyond the immediate lesson. Be ready to provide reasons for your responses.

1. Our choices can result in life-changing consequences.
2. Respond to the following: "Repeated short-term behaviors can have long-term effects."
3. Respond to the following: "Our health and well-being are important to the development of the whole person."
4. Respond to the following: "Motivation is important in attaining our goals."
5. Using the tools on MyPyramid.gov, identify your nutritional needs per day. Then, plan a series of meals for one week of foods that reflect the Dietary Guidelines. Keep a journal each day of your nutrition and physical activity.
6. Respond to the following: "How can we help people become better informed about the effects of nutrition on health?"
7. Write a story, essay, newspaper article, or poem about an issue or problem associated with health and nutritional practices. Describe potential solutions provided by others and also your own suggested potential solutions.
8. Create a collage or other work of art that reflects some aspect of our unit of study on health, nutrition, and choices that we make.

Critical literacy has become an important component in assisting students to analyze text, consider multiple viewpoints and perspectives, identify perspective or "voice" of characters, and to recognize the social context and considerations surrounding a text (Clarke and Whitney, 2009; Molden, 2007). The types of instructional activities that contribute to critical literacy require forming a classroom learning environment in which diversity of opinion and multiple viewpoints are not merely tolerated, but are appreciated and such discussions are encouraged (Hall and Piazza, 2008).

STUDY STRATEGIES

Study strategies include techniques that facilitate students' learning, understanding, and retention. Acquisition and use of study strategies helps students to develop their own "systems" or approaches to learning. Teachers can promote students' development of personal approaches to learning by demonstrating and reinforcing a number of options.

Utilizing study strategies involves helping learners formulate purposes for learning, providing guidance through a learning experience, and then helping learners to reflect on what has been learned. Examples of study strategies include use of reference skills, note taking, outlining, reading and interpreting diagrams, charts, graphs, varying reading rate, and exercising effective time management.

One type of study strategy that helps students to acquire a preview of text material while also helping them focus is the Survey Technique (Aukerman, 1972). This technique is applied to one chapter at a time and utilizes the features of well-organized text. It includes six steps:

1. Discussion of the chapter title. Ask prior knowledge questions (e.g., "What do you already know about this topic?") Also ask prediction questions (e.g., "What do you think this chapter will be about?")
2. Ask students to review the subtitles in the chapter.
3. Ask students to review the pictorially presented information in the chapter, e.g., maps, charts, diagrams, tables.
4. Direct the students to read the introductory materials at the beginning of the chapter.
5. Direct the students to go to the end of the chapter and read the concluding material, e.g., summary, key points, conclusion, etc.
6. Ask the students to identify the main idea of the chapter.

After students have completed the six steps of the Survey Technique, they are ready to return to the beginning of the chapter to read it word for word. This technique provides focus and a sense of direction during the subsequent, more in-depth reading of text material.

WRITING STRATEGIES

Writing activities can be integrated directly within the instruction of subject areas and can positively impact learning. These activities may involve longer forms of written discourse such as papers and essays on a variety of topics, or critiques of the "products" of subject areas such as music, theatre, or art. They may also include relatively short forms of writing such as journals and diaries, anecdotal records, writing the steps and/or solutions to mathematical problems, or documenting notes for a science experiment or observation.

Vacca and Vacca (2008) discuss a number of writing activities that can be used within content instruction including Unscent Letters, Biopoems, Dialogues, and a variety of journals such as Double-Entry Journals, Math Journals, and Learning Logs. Activities and tasks that include writing can be incorporated within subject-area instruction to facilitate students' learning of the content, and to promote writing proficiency. Including writing within content area instruction helps students to perceive the relevance of writing, as they are writing for real purposes within a setting that warrants its use.

CONCLUDING THOUGHTS

It is important for secondary educators to examine and reexamine views

related to content literacy instruction. Effective implementation of content literacy instruction requires a proactive effort on the part of educators to actively seek strategies that will promote student learning. Having examined perspectives regarding content literacy instruction, and having continued the search for new ideas and techniques, teachers must actually apply what has been learned through careful planning, selection and implementation of instructional strategies, and then reflection. Reflection helps teachers fine-tune the use of instructional strategies and perhaps, create revised or new strategies for particular groups of students. Just as we monitor students' learning, perhaps we also need to monitor our own learning through this content literacy process.

One final thought: If it is possible to use instructional strategies that help students learn subject matter more effectively while equipping them with tools that can contribute to their future independent learning of subject matter, and if this can be done manageably, then -- in this age of accountability and assessment -- can we really afford not to do so?

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