A SYNTHESIS OF CONTENT ENHANCEMENT STRATEGIES FOR TEACHING STUDENTS WITH LEARNING PROBLEMS AT THE SECONDARY LEVEL

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Abstract:

A synthesis of the literature identifies content enhancements used by general education and special education teachers, who collaborate and co-teach in science and social studies. This paper will provide general and special education teachers at the middle school and secondary level with numerous content enhancements for effectively teaching science and social studies to students with learning problems.

The majority of secondary students with exceptionalities are educated in general education classrooms, and few secondary teachers in general education have training in special education. Most general education teachers in Missouri only take one course in special education, which provides an overview of the various exceptionalities. Unfortunately, secondary teachers never learn how to implement effective teaching strategies for students with learning problems; they learn the importance of content knowledge in their specific area, yet they seldom learn the significance of pedagogical content knowledge. Special education teachers serve as consultants and provide direct and indirect services by modeling instructional methods, but secondary educators should be prepared to meet the needs of students with disabilities throughout the day (Schloss, Smith, & Schloss, 2001).

McKenzie (1991) differentiated between two methods for providing secondary special education services: a content approach and a skills approach. A special education teacher using the content approach provides instruction in the core subject areas to students, who will not benefit from inclusion. The skills approach enhances basic reading, writing, computation, and social skills so that secondary students with disabilities can be more successful in the secondary classroom. McKenzie (1991) reported that the content approach was used by 79% of the special education teachers surveyed and the skills approach by 19%. Special education teachers need to focus more on teaching the acquisition of skills. Most special education teachers, who teach content, do not possess a teaching certificate in the specific area, and students with disabilities would benefit from staying in the classroom and learning from a teacher who possesses expertise in the content area. Although secondary teachers are responsible for academic instruction, they may often lack the pedagogical knowledge associated with effective methods for augmenting the success of students with disabilities.

Since many students with disabilities are unable to learn the content material through common instructional methods, they would benefit from differentiated instructional methods or adaptations. Adaptations or techniques that help students identify, organize, understand, and remember information are called content enhancements (Schloss, Smith, & Schloss, 2001). According to Platt (1996) and Schloss, Smith, and Schloss (2001), a content enhancement is based on the premise that students learn more when (1) they are more actively involved, (2) abstract concepts are presented in concrete form, (3) information is organized, (4) relationships between pieces of information are made explicit, and (5) important information is differentiated between unimportant information. Specifically, in an interview with Dr. Janis Bulgren as reported by Walther-Thomas & Brownell (2000), content enhancement devices are instructional techniques designed to achieve a single goal in promoting learning. Dr. Bulgren distinguishes between a device and a routine; she states that a device is may be an analogy, a study guide, table, diagram, visual or verbal organizer, or a story that promotes understanding (Walter-Thomas & Brownell, 2000). Dr. Bulgren expounds by identifying a routine, which is a set of integrated instructional procedures revolving around one of these specific teaching devices that is designed to promote broad learning goals associated with acquiring, storing, expressing, demonstrating, manipulating, or generalizing knowledge of content information (Walter-Thomas & Brownell, 2000).

Special education teachers possess expertise in the development and use of content enhancements and through collaborative efforts, they model and teach general education teachers how to implement the methods effectively in the classroom. All students benefit from content enhancements, not only the students with disabilities. General education teachers can recognize the relevance associated with the success of content enhancements for all students.

In this review, the best practices for teaching specific content enhancement strategies to students with learning problems are described and summarized. Analysis of the literature reveals high effects for many of the devices and routines, which have empirical support for improving student performance in the areas of science and social studies. Specific content enhancement strategies, which have emerged from a review of the literature, are presented in the following categories: (a) content enhancement devices (techniques) and (b) content enhancement routines.

CONTENT ENHANCEMENT DEVICES (TECHNIQUES)

The purpose of content enhancement devices is to promote learning and comprehension. Content enhancements inform students of the purpose of instruction, increase motivation, and use effective instructional procedures (Mastropieri & Scruggs, 2000). According to Haager and Klingner (2005) powerful teaching devices are instructional tools that the teacher uses to enhance learning. These devices are powerful in that they enable the teacher to (a) focus on a specific point, (b) make learning explicit, (c) prompt elaboration on specific points, and (d) make ideas and relationships concrete (Haager & Klingner, 2005). These devices include advanced organizers, graphic organizers, mnemonic devices, and peer-mediated strategies.

Advanced Organizers

Advanced organizers are often used at the beginning of a lesson. The material is presented in advance of what is expected to be learned by the students, and the presentation of the material allows a student to mentally organize the new material with existing knowledge. The material can include the tasks that will be performed, topics to be presented, background information, new vocabulary, or anticipated student outcomes (Schloss, Smith, & Schloss, 2001). Common features of advanced organizers include linking the lesson content to prior lessons or information, introducing the targeted content, explaining tasks to be performed by the teacher and student, providing a rationale for the lesson, and introducing materials and new vocabulary (Mercer and Mercer, 2001). At-risk students learn are more likely to succeed, when class content is structured around a set of advanced organizers. Figure 1 is a sample of an advanced organizer.

Figure 1
Advanced Organizer for a Social Studies Lesson on Global Studies

The Civilizations of Africa

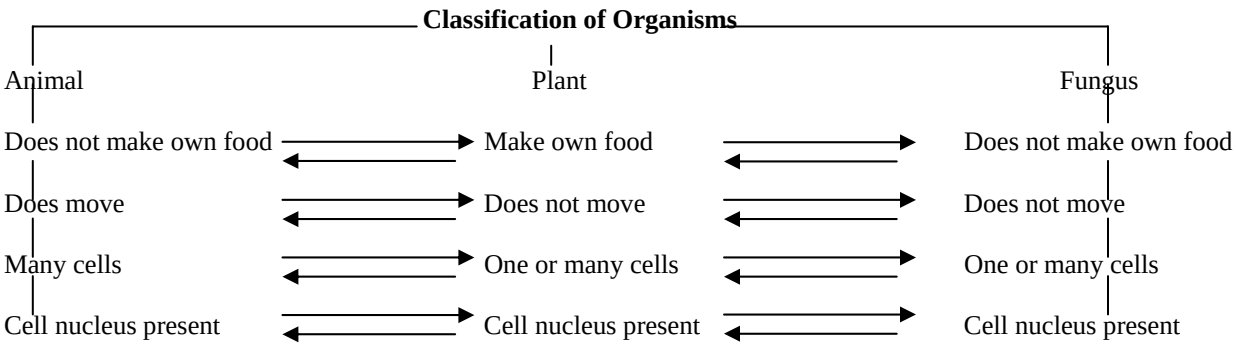
I. Influence of Geography
  A. Rivers
    1. Limited navigability
  B. Savannahs
  C. Mountains and plateaus
  D. Lakes
II. Languages
  A. The role of linguists
  B. Bantu
  C. Nilotes
III. Oral Traditions
  A. Examples
  B. Importance to African clans, villages, and dynasties
IV. Music and Archeology

Source: Schloss, P. J., Smith, M. A., & Schloss, C. A. (2001*). Instructional methods for secondary students with learning and behavior problems*. Boston, MA: Allyn & Bacon.

Graphic Organizers

Graphic organizers are visual displays used by teachers to organize information in a manner that makes the information easier to understand and learn (Fisher & Schumaker, 1995). Many secondary teachers in the areas of science and social studies rely heavily on textbooks for presenting information to the students, which causes difficulty for students with learning problems because they often have reading comprehension problems. The use of a graphic organizer helps to illustrate the relationship between two or more pieces of information contained in a content area lesson (Schloss, Smith, & Schloss, 2001). Essentially, graphic organizers are flexible instructional tools used to improve students' comprehension of stories, organization of their own written stories, and understanding of difficult concepts. Figure 2 is a sample of a graphic organizer.

Figure 2
Graphic Organizer for Life Science



Source: Schloss, P. J., Smith, M. A., & Schloss, C. A. (2001*). Instructional methods for secondary students with learning and behavior problems*. Boston, MA: Allyn & Bacon.

Mnemonic Devices

These enhancement devices are designed to assist students in remembering content information. Rather than focusing solely on rote memory to remember vocabulary words, mnemonics link target words to carefully chosen words or illustrations. Mnemonics provide students with better ways to encode information, thus making it easier for them to retrieve it (Mastropieri & Scruggs, 1998). According to Mastropieri and Scruggs (2000) mnemonic devices are most effective when they are (a) used to reinforce objectives to remember specific content information, (b) directly taught and practiced, (c) combined with comprehension instruction, and (d) included with application activities.

Types of Mnemonic Devices

Mnemonic devices include reconstructive elaborations, letter strategies, and the keyword method. Reconstructive elaborations refers to procedures for reconstructing information into more meaningful and memorable forms (Mastropieri & Scruggs, 2000). The reconstructions provide more concrete information in a meaningful manner compared to simple text and use pictures as aids for students to remember information because pictures last much longer (Bender, 2002). Figure 3 is a sample of a reconstructive elaboration.

Figure 3
Sample Reconstructive Elaboration on Dwight D. Eisenhower

Facts to be taught: Dwight D. Eisenhower was a general in the United States Army, who later became the president of the United States. He was the supreme allied commander during the final years of World War II and planned the famous "D-Day" invasion in which the allied armies invaded France in order to force the German and Italian forces to leave France and return to their own countries. His election to President was, in a large measure, because of his successful leadership in World War II.

Reconstructive elaboration: (Show an overhead transparency of Eisenhower represented as the "tower" of a man—that is, taller than others in the picture—with the letters "I Tower" and "WWII" on his chest). To remember that Dwight Eisenhower was a great general in World War II, remember the words *I-Tower*. That should help students remember his name. See it sounds like Eisenhower to say "I-Tower." What does the "I" mean on his chest? What picture will we think of when we hear Eisenhower? (Elicit response.) What does the "WWII" on his chest mean? (Elicit responses.) Now, close your eyes and describe this picture to me. Who is the tallest man or "Tower" in this picture? (Elicit responses.) What letters are on his chest?

Source: Bender, W. N. (2002). *Differentiating Instruction for Students with Learning Disabilities*. Thousand Oaks, CA: Corwin Press

Letter strategies can involve the creation of an acronym or an acrostic. An acronym is a first letter mnemonic, which requires the student to learn the first letter of a word, e.g. TEENS, which represents the sensory organs, including tongue, ears, eyes, nose, and skin. Another acronym is HOMES, which represents the Great Lakes, including Huron, Ontario, Michigan, Erie, and Superior. Acrostics are phrases, which require the student to learn the first letter of each word in the phrase. For example, the acrostic "Please excuse my dear aunt Sally" represents the order of operations to solve an algebraic equation, including parentheses, exponents, multiplication, division, addition, and subtraction.

Finally, the keyword method involves a word that sounds like the word or factual material to be mastered (Bender, 2004). According to Mastropieri and Scruggs (2000), the keyword method is used to strengthen the connection between a new word and its associated information. Keyword strategies have been successfully used to teach the following: (1) foreign language vocabulary, (2) scientific terms, (3) English vocabulary, (4) people and their accomplishments, (5) map locations of the Revolutionary War battles, and (6) states and capitals , see figure 4, (Mastropieri & Scruggs, 2000).

Figure 4
Keyword Method for Teaching States and Capital Cities

State—Keyword	**Capital (Keyword)**	**Mnemonic Picture**
Kentucky (kennel)	Frankfort (frankfurter)	Dogs in a kennel eating frankfurters.
Tennessee (tennis)	Nashville (cash)	Playing tennis for cash.
Florida (flower)	Tallahassee (television)	A flower on a television set.

Source: Mastropieri, M. A. & Scruggs, T. E. (2000*). The inclusive classroom: Strategies for effective instruction*. Upper Saddle River, NJ: Merrill Prentice-Hall.

Peer-Mediated Strategies (Peer Tutoring)

This content enhancement strategy involves classmates teaching one another. Peer tutoring is a category of inclusive practice in which one student (the tutor) acts as a teacher, providing instruction to a peer (tutee) (Fisher & Schumaker, 1995). Peer tutoring is an instructional method that is intended to assist in the development of both academic and social skills among children with learning problems (Bender, 2004). According to Maheady, Sacca, & Harper (1988), peer tutoring can be successful with secondary students, who have learning problems, in science and social studies if the teacher carefully plans effectively and teaches the students how to ask questions, judge the accuracy of a response, record, praise, provide corrective feedback, and display materials.

Types of Peer-Mediated Strategies

There are two specific models of peer-medicated strategies used at the secondary level: class-wide peer tutoring and cooperative learning. Class-wide peer tutoring involves dividing the students into pairs. They alternate roles of tutor and tutee to master the content. Following the teacher-led instruction in a structured format, the students tutor each other on the same material, reinforcing correct responses and correcting any

errors. An example of class-wide peer tutoring involves the Peabody Class-wide Peer Tutoring Model in reading, which is in Figure 5 (Fuchs & Fuchs, 1992).

Figure 5
Peabody Class-Wide Peer Tutoring Model

In this program, all students are paired with a partner. After the teacher announces the reading selection and tells the class to start, the stronger reader reads the passage aloud to the partner for 5 minutes. The roles are then reversed, and the weaker reader reads for 5 minutes. During oral reading, the partner follows along and corrects the reading errors. After the 10-minute total reading session is a 2-minute "Retell" session, in which the weaker reader is prompted to answer the following questions:

- What did you learn first?
- What did you learn next?

The partner provides feedback on the answers. In the third segment, "Paragraph Shrinking," the weaker student is asked by the partner to provide the following information for each paragraph:

- Name the "who" or "what."
- State the most important thing about the who or what.
- Say the main idea in 10 words or less.

If an error is made, the partners are told to say, "No, that's not quite correct," and encourage the student to skim through the passage for the answer. The last segment is the "Prediction Relay," which is composed of four segments:

Predict	____ What do you predict will happen next?
Read	____ Read half a page.
Check	____ Did the prediction come true?
Summarize	____ Name the who or what.
	____ Tell the most important thing about the who or what.
	____ Say the main idea in 10 words or less

Source: Mastropieri, M. A. & Scruggs, T. E. (2000*). The inclusive classroom: Strategies for effective instruction*. Upper Saddle River, NJ: Merrill Prentice-Hall.

In class-wide peer tutoring, the entire class is divided into two teams, and each pair of students accumulates points for its team by responding correctly during the tutoring session. At the end of the two week competition, a test is given over the skills studied, and additional points are given to each team for correct test responses. Each team's points are totaled, and the winning team is announced (Pomerantz, Windell, & Smith, 1994).

Cooperative learning is another peer-mediated strategy. Cooperative learning involves placing students in small groups of 3 - 5 students. The students collaborate to complete academic assignments and achieve academic goals (Schloss, Smith, & Schloss, 2001). To use cooperative learning in the secondary classroom, teachers should follow these steps: (1) select a task, (2) assign students to heterogeneous groups, (3) pre-teach essential social skills, (4) monitor groups while they are working, and (5) allow students to evaluate their performance (Schloss, Smith, & Schloss, 2001). Figure 6 identifies students' responsibilities when working in cooperative groups.

Figure 6
Student Cooperative Learning Roles in the Full Option Science System

Role	Responsibility
Reader	**Reader** reads all print instructions, ensures that all students in the group understand the task, and summarizes the activity.
Recorder	**Recorder** is responsible for recording all the data, including observations, predictions, and Estimations. This involves using pens, pencils, and the appropriate chart and graph paper.
Getter	**Getter** is responsible for getting all the necessary materials and for returning them at the end of the activity. This involves walking and carrying equipment, such as trays, microscopes, water, slides, pans, and eye droppers.
Starter	**Starter** begins the manipulations of the materials, supervises the assembly of materials, and ensures that all group members have equal opportunity at using the hands-on materials.

Source: Mastropieri, M. A. & Scruggs, T. E. (1993). *A practical guide for teaching science to students with special needs in inclusive settings.* Austin, TX: PRO-ED.

Study Guides

Study guides are flexible tools that teachers use to support student understanding of textbook passages, which are often organized poorly and difficult to comprehend for secondary students (Lovitt & Horton, 1988). The study guide highlights the most important information presented in the textbook. They can be used as a review prior to the presentation of new information, during a lesson to maintain student engagement, or after a lesson as notes (Boyle & Yeager, 1997). Study guides have been designed with varying formats and can be used at any time during the presentation of a lesson. For example, a study guide may take the form of a teacher-prepared outline, given prior to reading a chapter, listing the important main ideas from the chapter, or it may consist of a list of questions, given following instruction, highlighting the important main concepts and vocabulary terms in a unit of study (Fisher & Schumaker, 1995). A sample study guide is presented in figure 7.

Figure 7
Study Guide on Astronomy Using a Framed Outline

A. *Sun and Earth*

1. The Sun is the star closest to Earth. It provides the ____, ____, and energy for the life.

2. Changes in solar energy output affect the Earth's ____, ____, and weather, as well as modern power transmission and communication systems.

B. *Sun's Structure*

1. The three outer layers of Sun are called the Sun's ____.
   a. The ____, from the Greek "light ball," is the visible surface of the Sun.
   b. The ____ from the Greek "color ball," is a thin, transparent layer that extends about 10,000 kilometers above the photosphere.
   c. The ____, from the Latin "crown," is the outermost atmosphere just above the chromosphere.

2. Photons are repeatedly absorbed and re-emitted at lower energies in the crowded ____ ____.

3. Circulating currents of gas in the ____ ____ transfer energy as heat to the outer layers.

C. *Sun's Surface*

1. Optical telescopes reveal that the photosphere has a grainy appearance, called ____.

2. ____, jets of gas up 10,000 kilometers tall and 1000 kilometers across, rise like fiery spikes into the chromosphere around the edges of ____, which are large, organized convection cells.

3. Bright, white surface patches, called ____, from the Latin "little torches," may be visible near the Sun's limb. Their appearance seems to signal coming solar activity.

CONTENT ENHANCEMENT ROUTINES

Curricular demands of secondary school may compound existing learning problems (Deshler, Schumaker, Lenz, & Ellis, 1984). The curriculum at the secondary level focuses primarily on content teaching and learning. Content area demands center around learning domain-specific and general concepts (Bulgren & Scanlon, 1998). Understanding of concepts is the foundation of acquisition and application of much knowledge in content areas (Meyer, 1991). According to Fisher and Schumaker (1995), content enhancement routines are inclusive teaching practices that combine an interactive instructional sequence with a teaching device, and they are designed to involve students during the learning process and to prompt teachers' explicit use of the teaching device.

The primary responsibility of teachers at the secondary level is to present the content. The students are concerned with implementing the required skills to learn the material, yet many students with learning problems have difficulty engaging the processes of learning. They often fail to effectively use questioning techniques, analogic thought, or recognize the structure of expository relationships (Bulgren & Scanlon, 1998; Pressley & McCormick, 1995). Effective teachers at the secondary level use explicit teaching routines to enhance student learning. This is accomplished by explaining to the students the purpose of the teaching device and routine along with using the same teaching routine as an ongoing part of the instruction. Content enhancement routines include comparison routines and concept mastery routines.

Comparison Routine

The comparison routine requires the students to complete a table, which analyzes the similarities and differences between two or more concepts. Dickson, Simmons, & Kameenui, (1995) identified the following steps for helping students to compare and contrast concepts in secondary textbooks:

1. Identify two topics being compared and contrasted.
2. Look for key compare/contrast words such as "alike," "different," or "but."
3. Determine organization of the compare/contrast structure. This can be:
   a. Whole/whole, where the author describes each topic separately, with a different paragraph or set of paragraphs for each.
   b. Part/part, where the author presents a feature-by-feature comparison of two topics.
   c. Mixed, where the author might first discuss each topic separately, and then in another paragraph provide a feature-by-feature analysis.
4. Locate the explanation of how the topics are the same.
5. Locate the explanation of how the topics are different.

Semantic feature analysis is an activity intended to help students learn the vocabulary and major concepts from a science or social studies chapter (Bos & Anders, 1987; Mastropieri & Scruggs, 2000). The following description identifies the process for implementing semantic feature analysis:

> To use semantic feature analysis, first, analyze the content within a chapter and develop a relationship chart as seen in Figure 8. The chart contains all the vocabulary in a hierarchy of main ideas to lesser ideas. The main ideas are placed along separate columns on the top of the chart, and the related vocabulary are listed in separate rows along the left side

of the chart. Several blank spaces can remain to add new ideas that result from class discussions. During instruction, present the information on the chart and have students participate in the discussion of the vocabulary and related concepts. After discussion, students complete the relationship chart by marking whether or not the words in the rows and columns are positively or negatively related or unrelated (Bos & Anders, 1987; Mastropieri & Scruggs, 2000).

Figure 8
Semantic Feature Relationship Chart

	Important Ideas						
	Type of Life		**Location**			**Extinct**	
Important Words	Plant	Animal	Sea	Land	Lakes	Not Extinct	Extinct
Trilobites							
Crinoids							
Giant cats							
Coral							
Bryozoans							
Guide fossils							
Dinosaurs							
Fresh water fish							
Brachiopods							
Small horses							
Ferns							
Enormous winged bugs							
Trees							

Key: + = positive relationship; – = negative relationship; 0 = non relationship; ? = uncertain

Source: Bos, C. S. & Anders, P. L. (1987). Semantic feature analysis: An interactive teaching strategy for facilitating learning from the text. *Learning Disabilities Focus, 3*(1), p. 57.

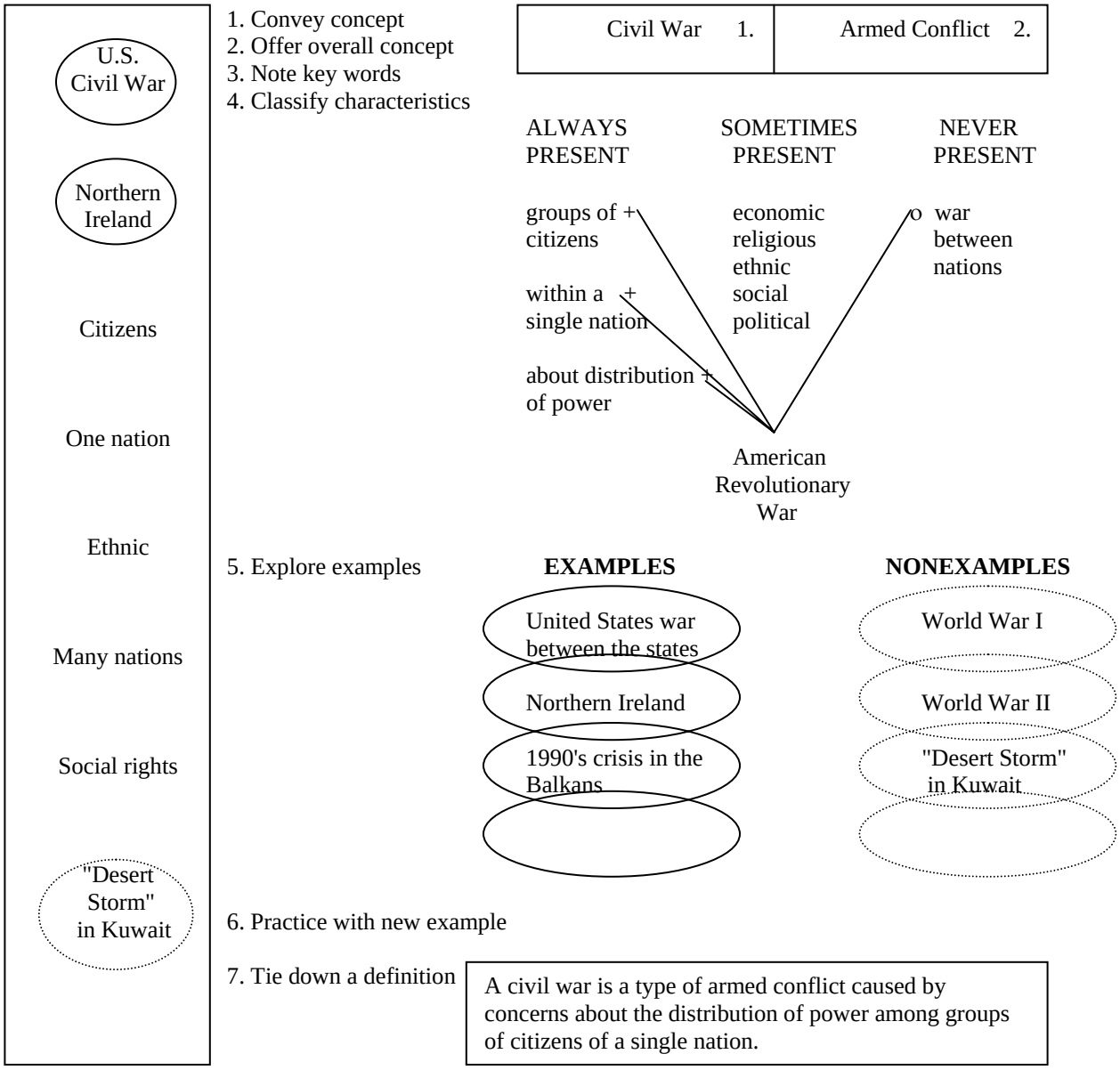
Concept Mastery Routine

The concept mastery routine is a content enhancement designed around a concept diagram, and it includes the following components: (1) concept name, (2) class or category of concept, (3) important information associated with the concept, (4) instances and noninstrances of the concept, (5) blank space for additions to the diagram, and (6) concept definition (Bulgren, Deshler & Schumaker, 1993). Figure 9 contains a sample concept diagram.

In an interview with Walther-Thomas and Brownell (2000), Dr. Janis Bulgren states that a concept mastery routine ensures that the students have adequate knowledge of a concept to benefit from instruction. The following is a description of a concept diagram by Dr. Janis Bulgren:

> In a concept diagram, teachers work with students to develop characteristics always, sometimes, and never present in the various examples of the concept, and then to apply their knowledge to examples and nonexamples of the concept. These characteristics are then used to form a definition of the concept. This process helps fill in the missing information for students. Teachers use this type of routine to teach concepts that are absolutely essential to the course content. (Walther-Thomas & Brownell, 2000).

Figure 9
Concept Diagram



Source: Deshler, D. D., Ellis, E. S., & Lenz, B. K. (Eds.) (1996*). Teaching adolescents with learning disabilities: Strategies and methods*. Denver, CO: Love Publishing.

CONCLUSION

Much of the research validates the use of content enhancements at the secondary level. Students with learning problems show improved achievement; and in most studies examined by Fisher and Schumaker (1995), the application of a content enhancement device or routine significantly improved the performance of students without disabilities as well. Special education teachers serve as consultant teachers to general education teachers and are available to assist in the development and use of content enhancement strategies. These techniques enable all students to succeed at the secondary level by learning the required content.

REFERENCES

Bender, W. N. (2002). *Differentiating Instruction for Students with Learning Disabilities*. Thousand Oaks, CA: Corwin Press

Bender, W. N. (2004). *Learning disabilities: Characteristics, identification, and teaching strategies*. Boston, MA: Allyn & Bacon.

Bos, C. S. & Anders, P. L. (1987). Semantic feature analysis: An interactive teaching strategy for facilitating learning from the text. *Learning Disabilities Focus*, *3*(1), p. 57.

Boyle, J. R. & Yeager, N. (1997). Blueprints for learning: Using cognitive frameworks for understanding. *Teaching Exceptional Children*, *29*(4), 26-31.

Bulgren, J. & Deshler, D. D., & Schumaker, J. B. (1993). *The concept mastery routine*. Lawrence, KS: Edge Enterprises.

Bulgren, J. & Scanlon, D. (1998). Instructional routines and learning strategies that promote understanding of content area concepts. *Adolescent & Adult Literacy*, *41*(4), 1-10.

Deshler, D. D., Ellis, E. S., & Lenz, B. K. (Eds.) (1996*). Teaching adolescents with learning disabilities: Strategies and methods*. Denver, CO: Love Publishing.

Deshler, D. D., Shumaker, J. B., Lenz, B. K., & Ellis, E. S. (1984). Academic and cognitive interventions for LD adolescents: Part II. *Journal of Learning Disabilities, 17*, 170-187.

Dickson, S. V., Simmons, D., & Kameenui, E. J. (1995). Instruction in expository text: A focus on compare/contrast structure. *LD Forum*, *20*(2), 8-15.

Fisher, J. B. & Schumaker, J. B. (1995). Searching for validated inclusive practices: A review of the literature. *Focus on Exceptional Children*, *28*(1), 1-25.

Fuchs, D. & Fuchs, L. S. (1992). *Class-wide peer tutoring to accommodate student diversity in reading* [videotape]. Nashville, TN: Peabody College, Vanderbilt University.

Haager, D. & Klingner, J. K. (2005). *Differentiating instruction in inclusive classrooms: The special educator's guide*. Boston, MA: Allyn & Bacon.

Lovitt, T. C. & Horton, S. V. (1988). How to develop study guides. *Journal of Reading, Writing, and Learning Disabilities*. *2*, 213-221.

McKenzie, R. G. (1991). Content area instruction delivered by secondary learning disabilities teachers: A national survey. *Learning Disabilities Quarterly*, *14*, 467-470.

Mercer, C. D. & Mercer, A. R. (2001). *Teaching students with learning problems*. Upper Saddle River, NJ: Merrill Prentice-Hall.

Maheady, L., Sacca, K. C., & Harper, G. F. (1988). Class-wide peer tutoring with mildly handicapped high school students. *Exceptional Children*, *55*, 52-89

Mastropieri, M. A. & Scruggs, T. E. (1993). *A practical guide for teaching science to students with special needs in inclusive settings.* Austin, TX: PRO-ED.

Mastropieri, M. A. & Scruggs, T. E. (2000*). The inclusive classroom: Strategies for effective instruction.* Upper Saddle River, NJ: Merrill Prentice-Hall.

Meyer, L. A. (1991). Are science textbooks considerate? In C.M. Santa & D.E. Alvermann (Eds.), *Science learning: Processes and applications* (pp. 28-37). Newark, DE: International Reading Association.

Platt, J. (1996, April). *Could this be magic? Instructional approaches for students with mild disabilities within regular education settings.* Presentation at the annual meeting of the Council for Exceptional Children. Orlando, FL.

Pomerantz, D. J., Windell, I. J., & Smith, M. A. (1994). The effects of class-wide peer tutoring and accommodations on the acquistion of content area knowledge by elementary students with learning disabilities. *LD Forum*, *19*(2), 28-32.

Pressley, M. & McCormick, C. (1995). *Advances educational psychology for educators, researchers, and policy makers*. New York, NY: HarperCollins.

Schloss, P. J., Smith, M. A., & Schloss, C. A. (2001*). Instructional methods for secondary students with learning and behavior problems*. Boston, MA: Allyn & Bacon.

Walther-Thomas, C. & Brownell, M. (2000). An interview with Dr. Janis Bulgren. *Intervention in School and Clinic*, *35*(4), 232-236.