Strategic Instruction Model

Content Enhancement

The teaching routines described here have been successfully field tested in general education classrooms characterized by significant academic diversity. The classes contained students judged to be at risk for academic school failure as well as students judged to have learning disabilities. Research has demonstrated that consistent and explicit instruction and use of each routine is a key ingredient for instructional success.

The research took place in public schools, primarily in middle and high school settings, and the routines were field tested by teachers.

The routines were designed for use during group instruction to help a teacher provide instruction more sensitive to the learning needs of individuals in the group. A combination of instructional models involving general education teachers and special education teachers, individually and collaboratively, have been successfully tested. All of the routines are taught using a standard set of instructional procedures, which define the necessary instructional conditions needed regardless of where the routine is used.

Routines for planning & leading learning

• The *Course Organizer Routine* is used to plan courses around essential learning and critical concepts. The teacher uses the routine to introduce the course and the rituals that will be used throughout the course. The teacher then uses this framework throughout the year to maintain the big ideas and rituals. Research showed that the use of the *Course Organizer Routine* helps teachers and students keep the big ideas in mind and focus their attention to understand important relationships. Instruction results in learning more about the big picture and less in trying to cover large amounts of

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information. Teachers using the routine spent more time introducing major course ideas, concepts, themes, and routines to students than did the comparison teachers who did not learn the routine. Students with LD answered an average of three "big idea" course questions correctly at the beginning of the year. Students with LD in the class that used the *Course Organizer* answered correctly an average of eight "big idea" questions by the end of the course while students with LD in the class that did not use the *Course Organizer* answered only an average of four of the "big idea" questions correctly.

• The *Unit Organizer Routine* is used to plan units; introduce and maintain the big ideas in units; and show how units, critical information, and concepts are related. Research results showed that when teachers used the *Unit Organizer Routine,* understanding and retention of information by low-achieving students, students with learning disabilities, and average-achieving students improved substantially over baseline as reflected in unit test scores and in scores on unit content maps and explanations of these maps. Students of teachers who used the *Unit Organizer Routine* regularly and consistently scored an average of 15 percentage points higher on unit tests than students of teachers who used it only irregularly.

• The *Lesson Organizer Routine* is used to plan lessons and then introduce and connect ideas to the unit and the course. Research has shown that regular, explicit, and flexible use of the lesson organizer routine by secondary classroom teachers can have a significant influence on student learning. Studies showed that use of the routine increased student learning and performance. Research results showed that the students of teachers who used the *Lesson Organizer Routine* regularly and consistently

scored an average of 15 percentage points higher on unit tests than students of teachers who used it irregularly.

Routines for exploring text, topics & details

• The *Clarifying Routine* is used to focus on a topic and then explore related details and the topic's importance to the critical ideas and concepts. Using this routine, teachers can help students master the meaning of targeted words and phrases. Studies in upper-elementary and middle-school general education classes composed of highly diverse student populations, including students with learning disabilities and those for whom English is a second language, have shown that students benefit from teacher use of the routine. When teachers used the *Clarifying Routine,* high socioeconomic level students improved their number of correct answers by an average of 14 percentage points, middle socioeconomic level students by an average of 30 percentage points, and low socioeconomic level students by an average of 20 percentage points.

• The *Framing Routine* is used to transform abstract main ideas and key topics into a concrete representation that helps students think and talk about the key topic and essential related information. Research results have consistently demonstrated that the routine can effectively facilitate subject-matter learning as well as the development of literacy and thinking skills. In a study focusing on written products of 35 eighth-grade students, students who were taught with the *Framing Routine* wrote an average of 102 words more per product than did the students who were in the comparison group.

• The *ORDER Routine* is used to organize and make sense of information once it has been "received." Students take a second pass at
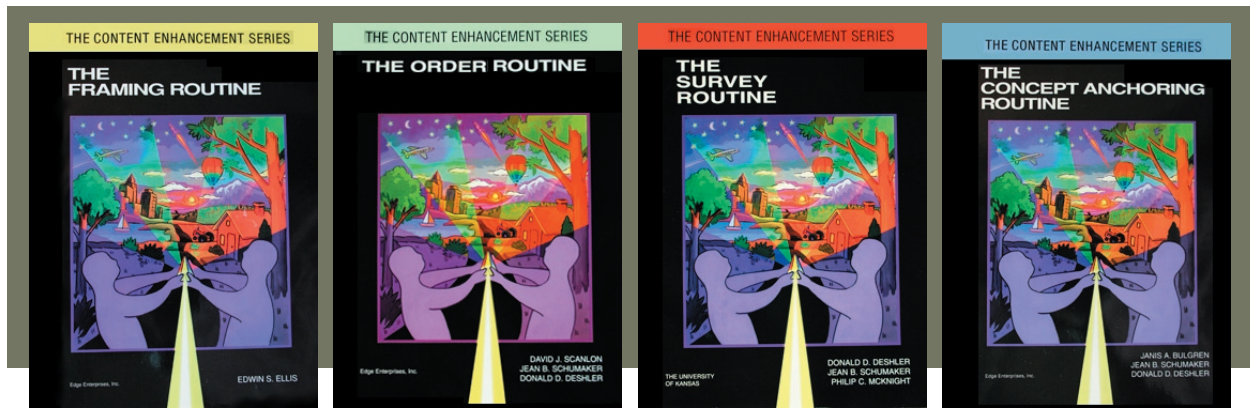
new information, think about what they have just learned or read, understand how it all fits together, look for any missing information or errors in their notes, and begin to apply it by trying to fit it all together to make a graphic organizer. The *ORDER Routine* was studied in intermediate and secondary classes (grades 7 to 12) characterized by diversity. In each study, teachers and researchers observed student learning gains. In one study, students without LD in the ORDER classes far outperformed comparison students during the posttest, even though comparison students, on average, earned more points during the pretest. Average gains for students with LD in the ORDER classes also were greater than those of students in comparison classes.

• The *Survey Routine* provides an overview of a reading assignment when students are having difficulty reading and sorting out information from inconsiderate text. Research has shown that students with LD and other low-achieving students as well as average- and high-achieving students correctly answered an average of 10 percent to 15 percent more of their test questions when the *Survey Routine* was used than when the *Survey Routine* was not used.
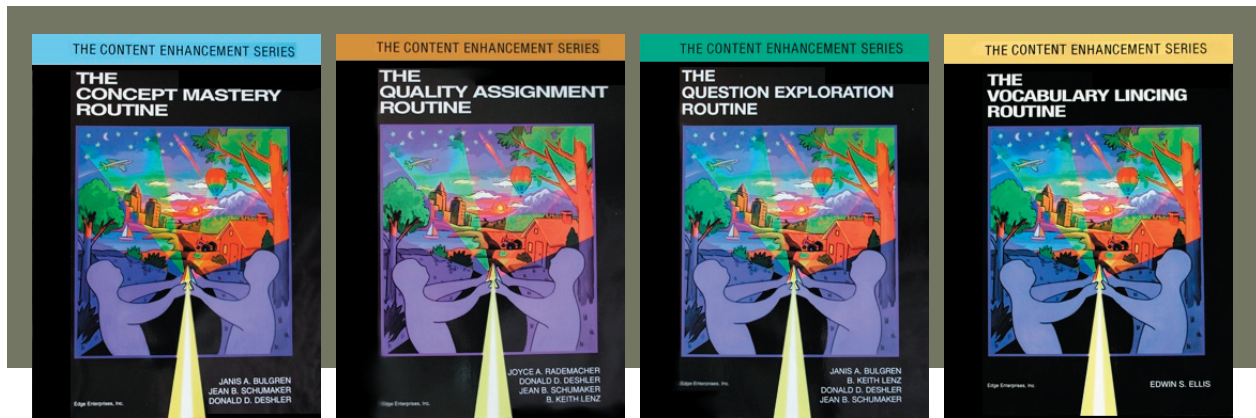
Routines for teaching concepts

• The *Concept Anchoring Routine* is used to introduce and anchor a new concept to a concept that is already familiar to students. In research studies with students in secondary science and social studies classes, high-achieving, average-achieving, and low-achieving students (including those with learning disabilities) who had been taught with the *Concept Anchoring Routine* correctly answered more test questions than students who had not received the routine instruction. Students with

LD taught with the *Concept Anchoring Routine* scored an average of 25 percentage points higher than those who were not taught with the routine. Low-achieving, average-achieving, and high-achieving students taught with the *Concept Anchoring Routine* scored averages of 27, 19, and 7 percentage points higher than their respective groups that were not taught with the routine.

• The *Concept Comparison Routine* is used to help students compare and contrast key concepts. Research with students enrolled in general secondary science and social studies classes showed that students correctly answered substantially more test questions related to information that had been presented through the use of the routine than test questions related to information presented using traditional teaching methods. Students with LD and other low-achieving students correctly answered an average of 71.2 percent (LD) and 86.4 percent (NLD) of the test questions associated with information presented through the use of the routine, compared to 56.7 percent (LD) and 62.6 percent (NLD) of the questions associated with information presented through traditional means. The experimental study involved 107 students.

• The *Concept Mastery Routine* is used to define, summarize, and explain a major concept and where it fits within a larger body of knowledge. Research shows that secondary teacher use of the routine benefits the student in several ways. First, students scored significantly better on tests designed to assess concept acquisition. Second, students scored significantly better on regularly scheduled, teacher-made or commercial unit tests during the enhancement condition than during baseline. Gains by students with LD (from a mean score of 60 percent to 71 percent) were com-

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parable to those of their NLD peers (from a mean score of 72 percent to 87 percent) on these regular tests. The percentage of students with LD who passed increased from 57 percent to 75 percent; the percentage of NLD students who passed increased from 68 percent to 97 percent. Third, the students took better notes during the enhancement condition than before using the routine.

Routines for increasing performance

• The *Quality Assignment Routine* is used to plan, present, and engage students in quality assignments and then evaluate assignments with students. In a research study, teachers and students completed surveys and groups of teachers and students participated in focus groups. From these activities, researchers identified characteristics of good assignments and the important elements such as planning behaviors, presentation behaviors, and evaluation procedures. Research study results showed the following: Before the study, teachers were observed to include an average of 50.5 percent of the planning behaviors, 32.8 percent of the presentation behaviors, and 8.2 percent of the evaluation procedures. After the intervention, participants used an average of 96.1 percent of the planning behaviors, 89.3 percent of the presentation behaviors, and 93.8 percent of the evaluation procedures. In contrast, a group of comparison teachers used an average of 45 percent of the planning behaviors, 26 percent of the assignment presentation behaviors, and 10 percent of the evaluation procedures at the end of the study. Teachers who received instruction in the use of the routine and their students were significantly more satisfied with assignments.

• The *Question Exploration Routine* is a package of instructional methods that teachers can use to help a diverse student population understand a body of content information by carefully answering a "critical question" to arrive at a main idea answer. Research results showed that students who were taught a lesson using the *Question Exploration Routine* earned an average test score of 70 percent while students who were taught the lesson with traditional methods scored an average of 48 percent.

• The *Recall Enhancement Routine* focuses on procedures teachers can use to help students remember information. A post-test only comparison group study indicated that performance of students was related to the teacher's use of the routine. Students with or without disabilities in the classes of teachers who used the routine performed significantly better on test items that could best be addressed through the creation of the types of Recall Devices that their teachers had presented than did students in the comparison classes. The recall performance of both LD and NLD students in the experimental group was higher by 29.10 and 20.5 points, respectively, than the performance of similar students in the control group on reviewed facts.

• The *Vocabulary LINCing Routine* is designed to facilitate student use of two powerful tools—an auditory memory device and a visual memory device—that will help them learn and remember the meaning of complex terms. Research results showed that students, including those with LD, improved their performance by an average of 19 percentage points on vocabulary tests.

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