

Strategram™

STRATEGIES INTERVENTION MODEL

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Strategic Learning Through Apprenticeship

— Part One of the "Learning Through Apprenticeship Series" —

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KU-IRLD

"Through metacognitive instruction students learn the self-appraisal and self-management skills necessary for the efficient selection and use of strategies..."

In those few, rare moments you have available to you in which to pause and reflect upon the nature of your instruction, have you ever found yourself wondering if you are having the kind of impact on student learning that allows students to be *really* prepared for the demands of the future? Do you ever wonder whether the students leaving your classroom will be independent and skilled enough to succeed in post-secondary education or in a 21st century job market which demands sophisticated thinking and problem-solving skills? Do you wonder if those same students have truly internalized not only the strategies you have taught but also the cognitive and metacognitive skills imbedded within the Strategies Intervention Model? And, do you believe they are capable of using strategies to deploy the appropriate skills beyond the context of your watchful eye in the current school setting?

If these or other thoughts related to the development of students as independent thinkers and cooperative problem solvers concern you, I invite you to join me on a journey aimed at refining our implementation of the Strategies Intervention Model. If not, tag along anyway; you may be able to help the rest of us grapple with the dilemmas we face. Please consider this issue of *Strategram* as an attempt to stimulate thinking with regard to increasing the richness of the cognitive and metacognitive environment that you can create for your students. In addition, consider this issue of *Strategram* an attempt to stimulate dialogue related to the question, "What can SIM practitioners and researchers do to more effectively incorporate within their

instructional practices, methods that ensure attainment of the explicit and implied cognitive and metacognitive outcomes associated with the Strategies Intervention Model?"

CREATING GOOD INFORMATION PROCESSORS

One aspect of SIM that has intrigued me over the years has been SIM's potential for using cognitive and metacognitive strategy instruction to transform ineffective and inefficient learners into Good Information Processors (Pressley, Borkowski, & Schneider, 1989). Through cognitive instruction students learn the processes (strategies) involved in the acquisition, storage, and expression of knowledge and how to apply those strategies in solving problems associated with such learning. Through metacognitive instruction, students learn the self-appraisal and self-management skills necessary for the efficient selection and use of strategies and the knowledge relative to when to use strategies, how to monitor the effectiveness of strategies, and how to create or modify strategies to meet specific setting demands. Good Information Processors or "strategic learners," as some of us like to call them, are individuals who have internalized and integrated the various skills, strategies, and thought processes which ultimately allow one to acquire new knowledge and solve complex problems. For example, Good Information Processors might be viewed as individuals who know **many** useful learning strategies, know **when**, **where**

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and how to use these strategies, know why strategies are important, know how to select and monitor their strategy use wisely, know how to create and modify strategies, and are reflective and planful in their learning. In addition, Good Information Processors are constantly increasing their overall knowledge base and relating new information to prior knowledge. In short, a Good Information Processor, or a strategic learner, is someone who has the skills, strategies, beliefs, and metacognitive

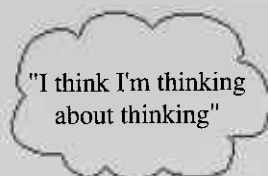
"Good Information Processors or "strategic learners"... are individuals who have internalized and integrated the various skills, strategies which ultimately allow one to acquire new knowledge and solve complex problems"

awareness necessary to creatively solve new and unique situation-specific problems. While this may be an ideal conceptualization of the strategic learner, it is the type of learner that SIM was designed to develop. It is the type of learner we must nurture if our commitment to the development of independent, life-long learners is to be realized.

BEYOND "COOKBOOK" STRATEGY INSTRUCTION

The vision of the strategic learner presented above is more robust than the vision of a learner who has simply mastered several task-specific strategies. To be sure, task-specific strategy mastery is a critical element of strategic instruction, but it is only

one important element of strategic learning. Strategy instruction that focuses solely on instruction in task-specific strategies has sometimes been referred to as "cookbook" strategy instruction. "Cookbook" strategy instruction occurs when instruction becomes focused upon mastery of and movement from one task-specific strategy to another task-specific strategy without regard to the real-life and academic demands facing the learner. In contrast, strategy instruction which is focused on helping students acquire the characteristics and skills of Good Information Processors allows students to be guided more effectively toward the attainment of independent strategic learner status. With this more holistic vision of the strategic learner, hopefully, students will come to realize not only the importance of "seeing the trees" (mastery of learning strategies), but also the importance of being able to "see the forest" (being a strategic learner). Thus, one of the challenges facing educators is to ensure complete implementation of SIM beyond task-specific strategy instruction to a more complex "systems approach" to strategy instruction.



AN APPRENTICESHIP IN LEARNING

One such systems approach to strategy instruction might be called a "learning apprenticeship." A learning apprenticeship can be defined as a cognitive and metacognitive approach

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to learning which involves existing Good Information Processors (SIM teachers) teaching and modeling strategic learning processes to apprentice learners while encouraging and expecting students to acquire and deploy strategic learner behaviors as the students develop into Good Information Processors themselves. Thus, a learning apprenticeship includes instruction not only in task-specific strategies, but also in cognitive and metacognitive problem-solving processes within real-life contexts. Within a learning apprenticeship, the teaching of task-specific strategies is viewed as an initial opportunity for cognitive and metacognitive instruction. Therefore, in the learning apprenticeship approach to strategy instruction, the instructor overtly and continuously models Good Information Processor characteristics and processes in addition to providing instruction in learning strategies whenever interacting with students. The instructor also draws the students into the process of creating, applying, and evaluating strategies whenever possible. This systems approach to strategy instruction has as one of its

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major goals not only the acquisition of strategies such as Paraphrasing, Sentence Writing, etc., but the development of learners who are capable of using these and other tools for learning as they solve authentic tasks.

Let's continue our exploration of learning apprenticeship by thinking of it as the "glue" that holds SIM together. For example, if task-specific strategies such as the First-Letter Mnemonics Strategy, Sentence Writing Strategy, the Math Strategies, the Word Identification Strategy, etc., make up the *SIM Learning Strategies*



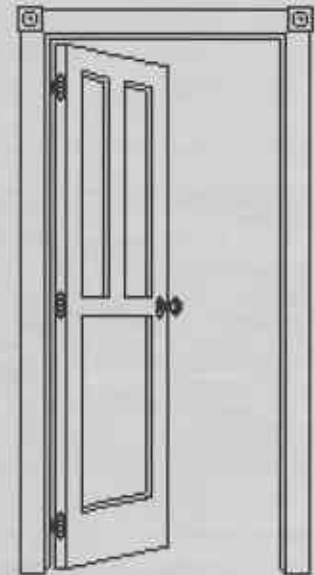
Curriculum, then, through a learning apprenticeship, the learner masters how to determine *when* to use these specific strategies, *how* to use them, whether they are *working*, and how to *modify* and/or *invent* new strategies while problem solving. In short, the learning apprenticeship is the glue that enables the student to hold together the elements of strategy instruction required to attain strategic learner status.

If a learning apprenticeship enables the learner to see the big picture of strategy instruction and acts to hold the strategy system together, it is important that educators emphasize this cognitive and metacognitive approach to strategy instruction. Strategy instruction delivered from the apprenticeship perspective can be visualized as a relationship between a

"master" learner and her "apprentice." In an ideal apprenticeship, the novice learner is assigned to work with a recognized master in a chosen field. In such a relationship, the "wise" master is expected to impart specific and general knowledge and skills to the apprentice. The process usually begins with an assessment of the current level of knowledge and skills of the apprentice. Initially, the objective is to find out exactly how the learner approaches a given task. If the learner experiences difficulty with the task, the master gives the learner the opportunity to commit to learning a more efficient and effective

period of progress, the apprentice is formally recognized as a master and accepted as one able to do work independently and at a level which reflects positively on him.

In the next issue of *Strategram* the subject of learner apprenticeship will be explored more fully along with tips for implementation.



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From the SIM Scrapbook

TIPS FROM GRADS

Graduate students enrolled in the 1992 Summer Session of Methods of Classroom Organization and Management at Northwestern State University in Natchitoches, Louisiana, were required to teach the Sentence Writing Strategy to elementary lab students. In order to assist the younger students in learning and mastering the strategy, graduate students were required to use the following techniques daily including: advance, lesson, and post organizers; visual organizers; remembering devices; goal setting; and motivational devices. The following are classroom tips developed by these students.



Introducing Strategies to Younger Students by Janet Kuhlmann

When introducing strategies to young children, Janet made a visual device with two overlapping circles to help students to remember the planets in the solar system. The device utilized the mnemonic **My Very Excellent Mother Just Made Us Nine Pizzas**. The left circle features each word of the memory device, while the name of the corresponding planets are written on the right.



Advance Organizers by Melissa Butler & Connie Dingeldein

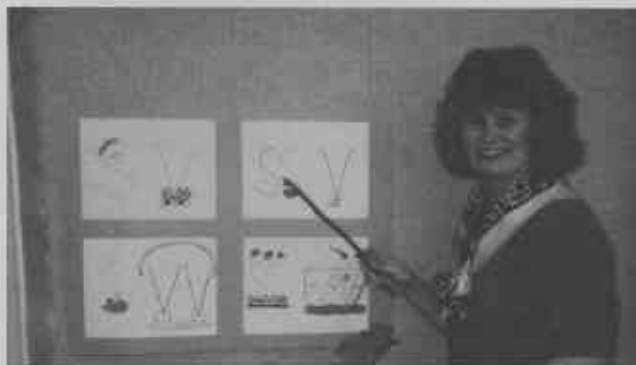
Melissa and Connie devised a way to use a daily advance organizer. They wrote the definition of advance organizer on the top of the poster. In the center, they cut four slits, so an index card could be placed on the poster. Every day they put a new advance organizer index card in the poster listing and numbering the tasks they would complete that day.



Motivational Ideas/Goal Setting by Janet Kuhlmann

Janet had a funeral for "I can't's." She made a graveyard out of a small box, filled it with dirt and added a tombstone labeled "I cant's". In addition, Janet also made a football field goal setting poster. The footballs correspond to the advance organizer for the day. Each goal achieved is worth 10 yards on the football field. When a students completes all tasks listed on the advance organizer, he/she scores a touchdown.

TIPS FROM GRADS (Cont.)



Simple Sentence Formulas/Activity by Beth Lewis

Beth drew pictures of the four simple sentence formulas to help her students remember them. In addition, she devised two games using a fishing pond. **Game #1 : Noun & Verb Game** Using a fishing pole with a magnet on the end, student's "catch" paper fish with large paper clips on each. On each "fish" is written a noun or verb. Students had to tell whether the word was a noun or verb. **Game #2: Make a Sentence Game** As in game #1, students' "fish" for sentence formulas. Students make sentences out of each formula "caught."



Motivational Ideas by Janet Kuhlmann & Michelle Newton

Janet and Michelle used a "news reporter" format as a less threatening approach to interview students and collect information for a personal reinforcement questionnaire. Props such as a reporter's hat and tape recorder made the experience more authentic. After the initial interview, roles were reversed and the student questions the teachers. A less threatening approach might be to allow the student to interview the teacher(s) first.



Ideas to Teach Sentences by Bonnie Buckelew

Bonnie created a Sentence-O-Saurus (shown here) to help her students learn the difference between a non-sentence and a sentence. Students were given bones with words written on them. Students would identify it as a sentence or a non-sentence by placing the bone in the correct dinosaur's mouth. Bonnie also created a "planet" of noun phrases ("Home of the Nountians). When students successfully identify the noun in the phrase on the "Nountian" figures they may place the figure on the planet.

HAPPY HOLIDAYS TO EVERYONE
FROM KU-IRLD

What's New

TWO NEW PRODUCTS FROM EDGE ENTERPRISES!

Collaborative Problem Solving by E. Ann Knackendoffel, Suzanne M. Robinson, Donald Deshler and Jean B. Schumaker is an excellent book for special education teachers who are working with children enrolled in mainstream/regular classrooms. It includes instruction in the basic and advanced skills needed to work with regular classroom teachers who are encountering problems with regard to teaching children. The book is also appropriate for administrators, support service personnel, and teachers who team teach. In essence, the instruction is appropriate for all those who work with others in a problem-solving capacity on behalf of children. It fits within the "Strategic Environment" component of the Strategies Intervention Model.

The book not only includes instruction in the basic and advanced skills involved in collaborative work; it also includes examples, models, a section

on basic instructional principles that should guide the problem solving process, Self-Evaluation Checklists, and a Problem Solving Worksheet. It received excellent ratings from the teachers who participated in the research. *Price: \$10.00.*

LINCS: A Starter Strategy for Vocabulary Learning by Ed Ellis is the second book in the Starter Strategy Series (The first book was SLANT). This book provides a guide to instruction in the LINCS Strategy, a strategy students can use to learn the meaning of new vocabulary words. It can also be used to memorize the significance of a name. The instruction follows a simplified version of the eight-stage instructional process. The strategy involves the use of three kinds of memory devices; imagery, key words (called "Reminding Words"), and LINCing Stories (sentences created by the students that link the meaning of the new word to the key word).

Research has shown that the LINCS Strategy can be taught successfully in mainstream classes in which students with learning disabilities are enrolled. Although the students with learning disabilities needed more time than other

students to complete each practice activity, they required about the same number of practice attempts as the other students. These students' average test scores on social studies vocabulary tests improved from 53% to 77%. The LINCS Strategy is viewed as an addition to the Storage Strand Strategies. The FIRST Strategy is to be used in memorizing lists, the Paired Associates Strategy (not yet available) is to be used in memorizing pairs of facts, and the LINCS Strategy is to be used in memorizing the meaning and significance of words. *Price: \$6.50.*

To order either of these exciting new books mail a check or money order [price+ 10% for shipping & handling + 5.9% Kansas sales tax (Kansas residents only)] to **Edge Enterprises**, P.O. Box 1304, Lawrence, Kansas 66044.

Strategram

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Prefix-Suffix Nonsense

Bev McKinney, Kemptville, PA has developed an activity that she calls a “playful learning experience.” This activity was designed to precede the *Word Identification Strategy* and stressed learning prefixes and suffixes. The following are the materials needed for the activity.

Materials Required

1. Flashcards - prefixes (color #1); suffixes (color #2) - The colors are not truly necessary but may be useful as an additional cue.
2. Chart paper and pen or overhead materials and writing materials for the students.

Her students (5th & 6th grade) created interesting nonsense words by working cooperatively in groups of two or three. Students worked individually but “checked in” with the group if they needed help. The steps for creating the prefix-suffix nonsense words are as follows:

Step #1: Choose a “stack” of prefixes and a “stack” of suffixes.

Step #2: Play, shuffle, and spread out the cards in a work area and compose words that;
a) are made only of suffixes and only of prefixes; b) can be pronounced; and c) have meaning.

Step #3: Each student presents their word(s) to their group for input on pronunciation and word meaning.

Students clapped the words as they said them again and again while deciding how to say them. The stressed syllable was clapped harder or in a different way and the stressed part was marked when written. Having a “feel” for the accent in words helps greatly in deciding how to pronounce them. Bev reports that the activity was “low-key” and challenging, and students began to see that the prefixes and suffixes had meaning which might give them clues to word meaning. Below are some examples of nonsense words created from prefixes and suffixes from Bev’s class.

Examples

1. *age-expercon'em* - a computer which can tell your age.
2. *auto-or'ful* - 1) a vehicle which is an old wreck., or 2) name of a garage.
3. *distel'ipro* - a man who is an expert at disconnecting phones.
4. *epiconex'ly* - a disease of the skin.
5. *for'estcircum'con* - a bad guy running around in the woods.
6. *Lessernage'imhood* - Robin Hood’s son.

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Examples (cont.)

- 7. *tele-autoring* - calling on your car phone.
- 8. *ultrahydroness'auto* - a car that travels on water.
- 9. *interinual'ment* - a subject to study in school.
- 10. *multi-ishless'ion* - alien math.
- 11. *opurealex* - opera singer at the Royal Alex.
- 12. *ultra-auto'man* - a robot who works at the post office.

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