A Model for Teaching Content Area Reading Strategies to Preservice Teachers

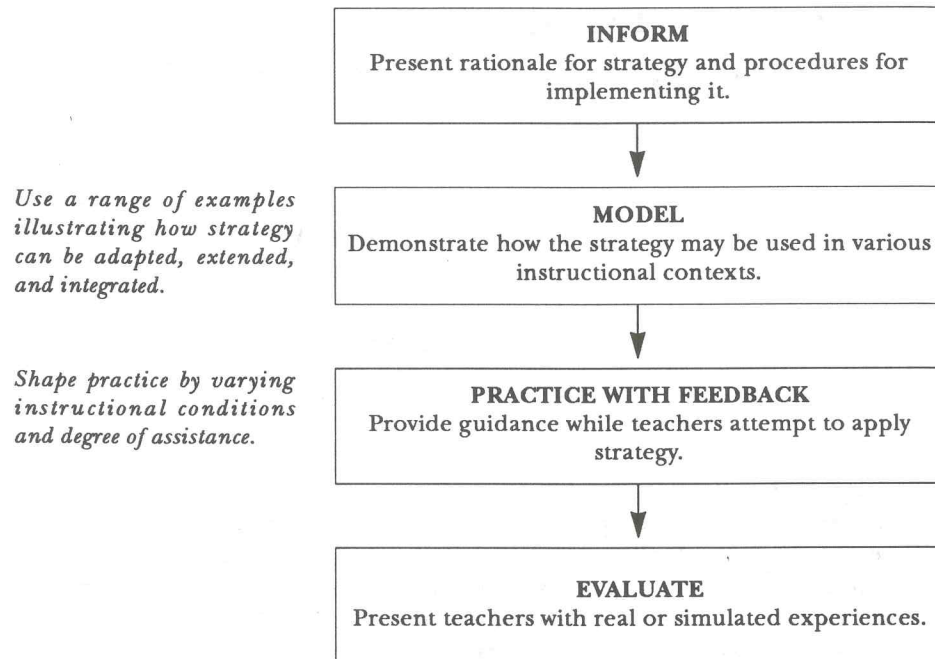Victoria G. Ridgeway
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This paper addresses what we believe to be a neglected concern in the teaching of content area reading courses to preservice teachers. In these courses, we perceive a lack of systematic concern for helping students (1) to select appropriate strategies from those presented and (2) to adapt strategies to various teaching situations. Typically, strategy instruction is focused on procedural knowledge, that is, how the strategy is implemented in the classroom. Conditional knowledge, which includes information relative to the conditions under which each strategy is most effective, appears to be neglected. Two questions summarize our concerns: How do we help students in content area reading courses select appropriate strategies from among the many strategies we have taught them? How do we help them adapt these strategies to the diverse contingencies of real teaching situations? Failure to address these concerns may lead students to view strategies as recipes instead of game plans that need continual fine tuning and adjustment.

When preservice teachers are introduced to a new strategy for teaching content area lessons, we believe instructors should have three goals: (1) provide students with the rationale for the strategy and the procedures for implementing it, (2) acquaint students with the conditions under which the strategy is used appropriately, and (3) demonstrate how they can extend, adapt, and integrate the strategy based on a consideration of relevant instructional factors. We believe many content area reading courses and textbooks focus disproportionately on the first of these three goals. To address this shortcoming, we propose an instructional model for introducing teachers to

a new teaching strategy. The model groups activities into four successive stages: inform, model, practice with feedback, and evaluate. A graphic representation of the model is shown in Figure 1. In the discussion that follows, we describe each stage of the model, and then we provide an example of implementation using a vocabulary strategy.
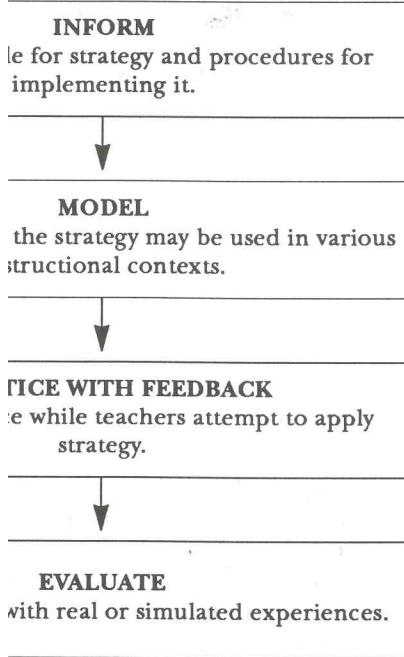
Use a range of examples illustrating how strategy can be adapted, extended, and integrated.

Shape practice by varying instructional conditions and degree of assistance.

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│              INFORM                   │
│  Present rationale for strategy and   │
│  procedures for implementing it.      │
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│              MODEL                    │
│ Demonstrate how the strategy may be   │
│ used in various instructional         │
│ contexts.                             │
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│       PRACTICE WITH FEEDBACK          │
│ Provide guidance while teachers       │
│ attempt to apply strategy.            │
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│             EVALUATE                  │
│ Present teachers with real or         │
│ simulated experiences.                │
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Figure 1. A model for introducing teachers to a new strategy for teaching content area lessons

FOUR STAGES

In the first stage the instructor informs students about the strategy. Both the rationale for its use and the procedures for implementing it are presented. Informing students about strategies is a common goal in content area reading courses and therefore requires little elaboration here.

In the second stage the instructor models several examples of the strategy. A range of examples should be offered to demonstrate how the strategy may be modified, adapted, and extended to accommodate a variety of instructional contexts. At this stage we recommend that students be asked to

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consider the factors that would affect a decision to use the strategy and, if used, how it might be implemented. Table 1 is an attempt to provide a comprehensive listing of factors that might be considered in making such decisions. We believe it is crucial to demonstrate a variety of examples and to explain why each example might be selected relative to these factors. Additionally, an instructor should demonstrate how the various examples might be adapted, extended, and integrated with other strategies.

TABLE 1
Factors to Consider when Extending and Integrating Activities into Content Area Lessons

Instructional Purposes/Goals

Reinforcement
Evaluation/Assessment goals
Introduce concepts
Review
Elaborate concepts
Increase interest
Enhance independent learning
Develop reference skills

Student Characteristics

Background knowledge
Academic ability
Reading ability
Ability to learn/work independently
Motivation
Metacognitive ability

Characteristics of Text

Organizational structure
Purpose/genre
Difficulty relative to student's ability/background knowledge
Difficulty relative to subject area
Strong versus weak contextual information
Considerateness
Density of new concepts/terms

Characteristics of Target Words and Concepts

Degree of relatedness
Label versus concept familiarity
Concrete versus abstract
Connotative versus denotative significance

Teaching Environment

Time available for preparation and instruction
Small versus large group work

In the third stage, students practice developing lessons using the strategy and receive feedback for their efforts. Practice should be shaped, if possible, by presenting students with a variety of relevant circumstances and by gradually reducing the level of assistance provided by the instructor. Finally, at stage four, students' ability to adapt, integrate, and extend the strategy should be evaluated through real or simulated teaching experiences.

As suggested in Table 1, introducing students to strategies should involve acquainting them not only with the rationale and procedures for implementing a strategy but also with relevant considerations such as the characteristics of students, text, concepts being taught, and other factors in the teaching environment. A consideration of these factors is important in order for students to select appropriate strategies. One way to accomplish this would be to have students complete a strategy analysis sheet. Table 2 is an example of a completed strategy analysis for a structured overview. Students might complete such an analysis in small groups.

TEACHING ABOUT STRUCTURED OVERVIEWS

In providing examples of structured overviews, an instructor might demonstrate how the strategy could be used to introduce a topic prior to reading, as a review technique, or as a way to evaluate student learning. The structured overview shown in Figure 2 is an example of one that could be used to introduce a reading selection about atomic structure in a science class. This example would allow the instructor to highlight the fact that the hierarchical nature of the concepts involved make a structured overview an appropriate strategy choice. The instructor could also show an example of a partially competed overview and suggest that it might be used as a guide during reading with students completing the overview as they read. Student ability and background knowledge would determine whether reading was accomplished for homework or in small collaborative groups during class.

Thus, in presenting the structured overview strategy, an instructor should point out factors involving instructional purpose (are you introducing terms or providing guidance for reading?), concept characteristics (structured overviews are well suited to hierarchical concepts but less well suited to sequential concepts), student characteristics (less able students would profit from collaborative reading of text while completing the structured overview), and teaching environment (structured overviews require more teacher preparation time than other strategies such as mapping).

The possibilities for developing a categorization activity based on a structured overview would illustrate to students how strategies can be integrated and extended. The categorization activity illustrated in Table 3 is an extension of the structured overview. With reinforcement exercises such as categorization, preservice teachers should be alerted to the likelihood that their students will derive multiple solutions to the task, thus highlighting the fact that the results of a strategy used in the classroom may not look like a text-

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TABLE 2

Strategy Analysis for the Structured Overview

Strategy Analysis
Strategy: Structured Overview
Key features that may affect a decision to select strategy

Instructional Purposes

Well suited for introduction of new terms, shown in relation to terms already known. Can evolve into a guided reading activity and may be used to evaluate student knowledge.

Student Characteristics

A completed structured overview might be used with less able students or those with little background knowledge. More able students or those with much background knowledge might be provided with partially blank overviews to be completed.

Characteristics of Text

Works with informational text, particularly text with a high density of unfamiliar terms. Is not particularly suited to fiction.

Characteristics of Target Words and Concepts

Works best with hierarchical concepts.

Teaching Environment

Teacher preparation required. Overviews may be with transparencies, drawn on chalkboards, or on handouts for students. A novel use might be for a bulletin board.

Adapting, extending, and integrating strategy

1. Terms in structured overview serve as basis for categorization exercise.
2. Partially completed overviews may be used to guide student reading, done individually (as homework) or in groups during class.
3. Students might be required to annotate structured overviews as they read and/or discuss the text.
4. Blank structured overviews, with only one or two slots filled in, may be used to evaluate student learning.
5. Structured overviews might become "maps" for writing about the concept on which the overview is built.

book example. Preservice teachers need to be aware that a significant feature of exercises such as these is that students' lines of reasoning in arriving at solutions are at least as important as the product.

Students should practice strategy implementation in a variety of situations, varying the purpose for use, student characteristics, text, and teaching environment. In situations in which practice teaching with real students is not possible, preservice teachers might be divided into teams of three or four, each provided with a different scenario in which to apply the same
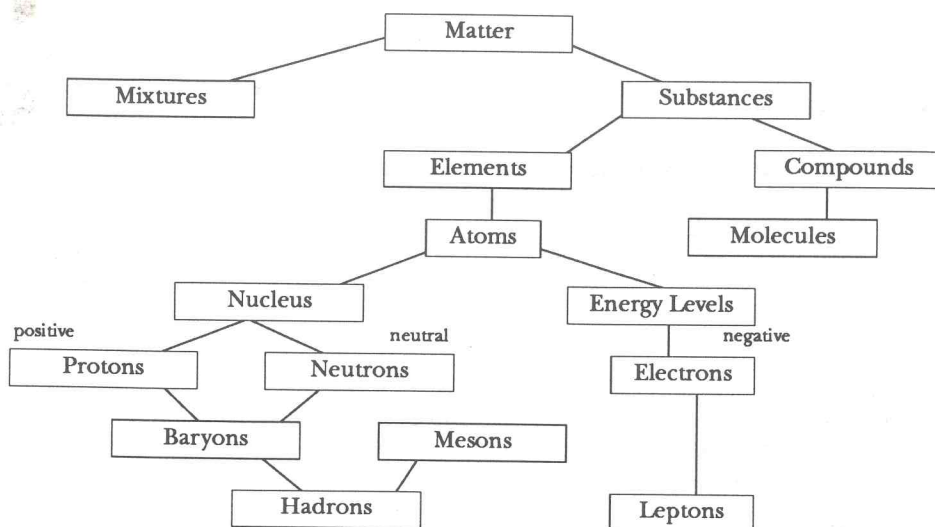
Figure 2. A structured overview developed for the concept of atomic structure

strategy. Peer evaluation of each team's adaptation would provide appropriate closure for the activity.

In conclusion, we believe the use of an instructional model that goes beyond procedural knowledge, that provides for practice under a variety of instructional conditions, and that provides for instructor and peer feedback will enable preservice teachers to select strategies rationally. In addition, novice teachers will have had practice in acquiring the flexibility necessary to adapt and extend the strategies to meet the complexities of diverse teaching situations.

Substances

Compounds

Molecules

Energy Levels

negative

Electrons

Leptons

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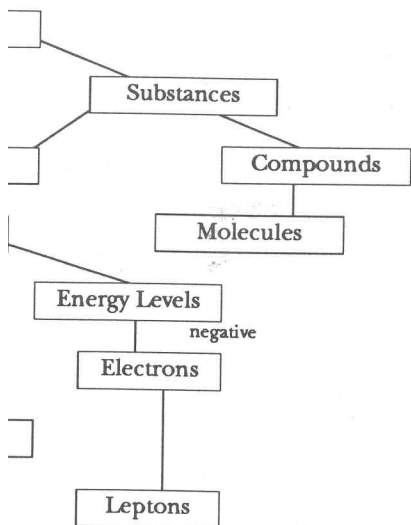
TABLE 3

Categorization Exercise Derived from a Structured Overview

I. In the following groups of related terms, one term does not belong. Circle the term that is unrelated, and give a title to the remaining terms. Be prepared to give your line of reasoning.

1. _____	2. _____	3. _____
atoms	proton	atom
elements	neutron	neutral
compounds	electron	lepton
molecules	baryons	hadron

II. A title has been given to the following groups of related terms. Circle the unrelated term. Be prepared to give the reason for your choice.

1. elements	2. molecule	3. nucleus
atoms	atom	baryon
molecules	element	proton
compounds	compound	electron
substance	mixture	neutron