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**ABSTRACT**

Because of the difference between narrative and expository material, students in grades 4-12 require different reading skills, as well as different levels of skills to comprehend subject matter reading. This means the content area teacher has two roles: subject matter specialist and instructional leader. The following model suggests a process by which instructional strategies for teaching content area material are determined by the content itself. First, the teacher lists instructional objectives in sequence according to their importance. Factors by which objectives are determined include the material to be read, the background of the students, and the resources available. Next, the teacher determines the levels of intellectual involvement dictated by the objectives, that is, the reading/thinking skills required to comprehend the material. Last, the teacher considers the methodology appropriate to teach the content at the requisite thinking levels. Choosing instructional strategies independently of determining objectives often leads to instruction only at the literal level. Use of the model in which the content determines the instructional process provides for more efficient and effective planning and implementing of instruction. (LLZ)

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The Content Determines the Process: An Ignored Relationship in

Content Area Reading\*

by

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In 1970, Harold Herber of Syracuse University made a major contribution to secondary school reading instruction. Specifically, the first edition of Herber's book Teaching Reading in Content Areas was published. Herber broke new ground by suggesting that the type of reading instruction required in subject matter classrooms was different than the type of instruction offered in teaching children how to read. He acknowledged the difference in reading narrative style material and expository style material. He postulated that different skills and different degrees of skills were needed by students to first comprehend and then to understand the meanings found in subject matter texts. In effect, Herber recognized that the requisite skills needed to translate written symbols into speech utterances and to glean primary meanings were not sufficient to extrapolate the various meanings associated with subject matter reading. He suggested that a different set of skills and expectations were needed for effective reading instruction and efficient learning in subject matter classrooms.

Herber's work was based in part upon that of David Ausbell. Ausbell (1963; 1968) had postulated that three conditions were necessary for meaningful learning about abstract ideas. These conditions are: that abstract material must be organized in a meaningful way; that the learner must possess a cognitive

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foundation to which new learning can be attached; that the learner must have a strategy to learn from and the will to learn about the new ideas.

Consider if you will the import of these three conditions. Specifically, they define a subject matter classroom in grades 4 through 12. The first addresses the uniqueness of the subject matter, i.e., its abstractness. The second describes the needs of the learner, i.e., previous relevant experiences. The third recognizes the interface between learner and lesson, i.e., a mechanism to learn from and the motivation to do so. Taken individually, these conditions are necessary for learning but are not sufficient. However, when they are considered collectively one can begin to see the interrelationships that begin to exist between learner and text and teacher. This relationship is symbiotic. All three conditions must be present in order for effective instruction and efficient learning to take place.

In the past fifteen years, the artifacts of content reading have proliferated. We have seen refinements and modifications of good ideas. Advance organizers became structured overviews which became graphic organizers which became post-graphic organizers which became semantic maps. Similarly, "study guide" became a generic term with a subset of such specialized items as pattern guides, anticipation guides, reasoning guides, concept guides, three-level concept guides, and on and on. Most recently, a new array of strategies has appeared. These new kids on the block include problem solving, synectics (analogies which use forced comparisons), sociodrama and the like. These types of artifacts are reasonable and well intentioned. Their collective purpose is to guide reading and reaction to the ideas proposed in subject matter classrooms. The success of such techniques, however, is mixed. Therefore, the purposes of this paper are to discuss the instructional artifacts of subject matter reading

within the context of a content/process model and to stress the judgment that the content does determine the process.

### Content determines process

A model describing the content/process relationship can be configured by examining the relationships which exist between and among these two ideas. The ideas, content and process, both contain elements which are necessary if effective instruction and efficient learning are to take place. The key to the success of this model is the subject matter teacher. The teacher exercises perception and judgment in planning, presenting, and evaluating the lesson. The teacher plays two roles in this process. The first is that of subject matter specialist. The second is that of instructional leader. While these roles cannot be divorced from each other, they do require differing levels of instructional anticipation and expectation.

/ Insert Figure 1 about here /

As the subject matter specialist, the teacher must first determine what it is that should be taught. This is done by considering the many possible objectives which could be taught in the context of a lesson. Teachers should keep in mind, at this stage, that not everything can be taught. Such limitations as time, background of students, available resources and the like all influence what can be taught. Further, not all ideas are of equal importance. Therefore, it is strongly suggested that the teacher first list all possible objectives, then sequence these objectives, and then prioritize them. In this manner, a reasonable instructional plan begins to develop. Once objectives have been determined, key vocabulary should be listed for each objective. Vocabulary knowledge is oftentimes the biggest stumbling block for students in acquiring new information. Again, not all vocabulary can be taught. It is suggested that the

teacher select key vocabulary which is both general, i.e., important to the curriculum as a whole, and specific, i.e., vocabulary found within the reading selection or vocabulary that will be used in a unique way. By developing a list of key words and terms for each objective, the teacher has a greater sense for teaching vocabulary which will complement rather than hinder his or her instruction.

. . . instruction in vocabulary can complement any curriculum when placed within the proper perspective. It is our recommendation that teachers think of vocabulary teaching in the framework of a developmental process. That is, vocabulary teaching has far greater utility and longer lasting effects when it is done in small but regular increments. Five minutes of daily instruction is far superior to intense but infrequent use of the dictionary or excessive amounts of time spent on vocabulary recognition or memorization. (Smith and Kepner, 1981, p. 24)

Finally, the teacher should consider the amount of reading required in the learning of each objective. As with the teaching of vocabulary, reasonable amounts of reading material are recommended. Students should be told to read selectively. Certain paragraphs would obviously require their more close attention while others could be skimmed over or skipped entirely. These types of directions allow for a more positive interface with the reading material. In effect, the teacher guides student reading as a prelude to guiding student reaction.

/ Insert Figure 2 about here /

As the instructional leader, the teacher performs two functions. Both of these functions are based upon a completed content analysis. After objectives have been sequenced and prioritized, vocabulary has been determined, and reasonable amounts of reading selected for assignment, the teacher considers the types of reading/thinking skills that students will be exposed to. The selection of these reading/thinking skills is the first stage of a process analysis. The objectives to be taught obviously dictate the level of intellectual involvement.

Objectives which have been sequenced and prioritized regarding their level of concreteness or abstractness can now be considered in terms of lower or higher order thinking. In a sense, the teacher anticipates how he or she will guide student reaction to the objectives being taught. Teachers are encouraged to challenge students at levels commensurate with their abilities. The selected objectives can now be identified which would require students to think convergently, divergently, or evaluatively. Similarly, the teacher can now begin to anticipate the types of instructional strategies he or she would use for students to learn these objectives in such a way as to internalize, extend or reinforce the ideas.

/ Insert Figure 3 about here /

The teacher is now ready to consider the methodology he or she can use for teaching the content at appropriate thinking levels. Readiness, assimilation, and follow-up activities should be considered. Certain strategies, obviously, are more appropriate for convergent or divergent or evaluative thinking. The teacher though is now in a more viable position of selecting a strategy for more optimal instructional use. In effect, the content has determined the process.

/ Insert Figure 4 about here /

The main intent of this paper was to reaffirm the position that content determines process. A rationale and a model for depicting the content/process relationship have been presented. It has been my experience that oftentimes subject matter teachers in grades 4 through 12 use this process in reverse. That is, they decide that today a graphic organizer or a study guide or a vocabulary extension activity will be used in their classroom. Objectives are not considered, and the type of intellectual interface that students typically have is at the literal level. It is my contention that this type of lesson planning

should be reversed. That is, objectives should be considered first, followed by potential levels of intellectual involvement, and then instructional strategies selected. This type of sequencing is more efficient and more effective for both planning and implementing instruction. Teachers are urged to consider it as they begin the process of planning their lessons.

/ Insert Figure 5 about here /

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