

corrective courses, working with individual or small groups of poor readers, administering reading labs, testing programs or sustained silent reading activities. (Witte and Otto, 1981).

Many individuals who begin working in schools as reading teachers have hopes of becoming reading specialists but few seem to accomplish this in any other form than that of obtaining state certification. Any many who start out as reading specialist resort to finding groups of students to teach. The dream every reading specialist has of being sought out by teachers for advice and being invited to assist in course planning and teaching seems to be just that—a dream.

I don't mean to sound pessimistic or to be negative about the role of the reading specialist. I just want to reflect to you some of the things I see, think, and feel after spending two years as a reading specialist in a public school system.

True, teachers do attend reading in-service sessions when mandated by the administration and they do enroll in university level courses when mandated by departments of public instruction. Yet this instruction seems to have made little impact on teachers' perceptions of the reading specialist as a resource person or on what it means to incorporate reading into a content area course. I'm frankly confused about the kind of impact these inservices and courses have had. In attempts to start conversations, teachers have said to me such things as: "I took a reading course once and now I can read a thousand words per minute." or "I always encourage my students to use SQ3R." or "I want to get a new text. Which readability formula should I use?"—On second thought, maybe the reading courses teachers have taken have had a clear impact. And the resulting perceptions have been that reading specialists are concerned with reading rate, readability formulas, and a few well-publicized study techniques. Teachers do not see the reading specialist as someone who can help them convey a complex content through the use of printed materials. Teachers appear to view the specialist as someone who can only help them with short-term tasks such as selecting textbooks or teaching specific study techniques not as a resource person who could be involved with them in the process of creating instructional materials and planning ways of helping students develop the habit of learning through reading. The insights that reading educators have gained in recent years in the areas of text analysis, the reading process, and study behaviors have yet to be conveyed to teachers even though many of these ideas represent a meaningful way of dealing with texts that are often too difficult for students to understand and too boring to sustain a natural interest.

In his opening address to the first session of the American Reading Forum Otto (1981), talked about the gap between research and application. He pointed out that most reading educators either choose to align themselves with researchers or with practitioners and that virtually no one makes a commitment to translating research into practice. Then he tentatively and cautiously suggested that marginal gloss might be a vehicle for applying some of the findings and insights gained from research. As a practitioner and teacher, I'm not sure I know what researchers mean when they talk about translating research into practice. In other words, what would researchers expect to see if someone said to them, "I have translated research into practice." I'm not even sure that the results of research always need to be translated. Maybe they only need to be communicated. But speaking as a practitioner and based on admittedly limited work with small groups of teachers, I believe that marginal gloss does indeed provide a way of translating or communicating the results of research to teachers. The gloss technique is, of course, similar to the Directed Reading Activity and other types of reading guides, yet, because of the way gloss has been conceptualized and developed, it seems to be a technique that easily incorporates theory, specific research findings, and accepted instructional

GLOSSING CONTENT-AREA TEXTS: A VEHICLE FOR INSERVICE TRAINING

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Even though reading educators have for years encouraged, directed, and insisted that reading instruction ought to be part of every content area course, surveys conducted by reading educators such as Early (1973) and Hill (1975) indicate that there are few successful school-wide programs where the emphasis is on the content-area course and the reading specialist serves as a consultant. Many postelementary reading specialists appear to spend their time teaching developmental or

practices.

Otto (1981) mentioned three categories of studies that he felt could make a contribution to reading education. They were related to the reader, the text, and the interaction of the reader with the text. I would like to give a few examples of how I have seen some teachers respond to the knowledge gained from these studies when it was presented to them in the context of learning how to write marginal glosses.

The Reader

Writers such as Anderson (1978), Rumelhart and Ortony (1977), and Rumelhart and Norman (1978) have attempted to explain how the prior knowledge of readers affects what they understand and remember. They discuss theories designed to explain how new information can be added to existing knowledge structures without causing change and how new information may result in a returning or restructuring of ideas and learned concepts.

Teachers seemed responsive and interested when these ideas were presented to them. Certainly, the idea of reviewing what is already known before attempting to learn new information and the idea that new information causes change make sense and are concepts that most teachers have used in one form or another. But hearing about the work of researchers seemed to clarify what teachers already knew and to convince them that these concepts are important and should be incorporated into their teaching. And some of the gloss activities written by teachers seemed to reflect an understanding of the concept of prior knowledge. A biology teacher for example wrote, "You think that your heart is on the left side. Right? Wrong! Read the information in 24 and then explain why so many people make this mistake. (Austad, 1981). Several social studies teachers began their gloss activities by instructing students to make a list of important ideas they had or facts they already knew about a particular historical topic. A fourth grade teacher incorporated the prior knowledge concept into her instruction in another way. After she had finished reading *Charlotte's Web* to her class she decided to have the students "do research" or find more information about pigs. But first they listed what they already knew. Following the reading of books, pamphlets, and encyclopedia entries they found that they had to go back to their original list and change several items such as "Pig means someone who eats too much." Apparently they found that left to their own devices pigs are no more inclined to over-eat than any other creature.

The Text

Kintsch and Vipond (1977) begin their paper "Reading comprehension and readability in educational practice," by lamenting the schism between psychology and education. They point out that for the most part psychologists are not interested in the educational implications of their theories and educational researchers are in general disillusioned by psychological theories that are too crude to be useful. The problem according to Kintsch and Vipond is that educational research instead of being based in psychology has become empirical and atheoretical. They suggest that educational researchers have done many studies and gathered much data on topics that have little depth or relevance to how human being process information. Kintsch and Vipond then present their model of text comprehension and the implications this model has for the educational problem of readability. Readily acknowledging that their model is in an unfinished state, they suggest only that it might provide some insight into an important applied problem, that of matching the reader with printed material written at an appropriate level.

When I worked with teachers to help them learn to write marginal glosses, the first step in the process was to in some way analyze their selected texts. The model proposed by

Kintsch and Vipond and their discussion of the inadequacies of commonly used readability formulas provided a meaningful starting point.

Teachers are familiar with readability formulas and they also realize that somehow these formulas are supposed to assist them to select texts that will match their students' reading abilities. Though most will say that they base their final text selection on other factors such as the focus of the content, the emphasis given certain topics, the equality and type of illustrations, or their own ability to read and understand the text. Teachers also indicate that they are confused by readability formulas. Reading experts say they are supposed to identify the difficulty level of a text but how they do this is not that logical or clear. Science and math teachers who are comfortable with numbers and familiar with how constants like those used in readability formulas are derived seem particularly skeptical. But they were interested in discussions which focused on the idea that readability formulas based on word and sentence length give no indication of the difficulty and the number of concepts presented or of the clarity of the presentation itself. Readability formulas only give a prediction that some typical student at a specific grade level ought to be able to read the passage and answer an unspecified type and number of comprehension questions correctly. And sometimes readability formulas are not even good predictors. It's not difficult to find materials with low readability levels that include very complex concepts. A technical report entitled "The construction and use of a propositional text base" by Turner and Greene begins with a discussion of propositions as abstract word concepts. Beyond a doubt, this discussion would be unintelligible to anyone without an extensive background in propositional analysis. Yet the Fry readability rating for this passage is ninth grade.

But the fact that readability formulas are not always good predictors is not the real issue. The problem is that approaches to analyzing text which are based on empirical evidence rather than carefully thought out ideas encourage teachers to accept simplistic answers instead of becoming actively involved in understanding the text from the viewpoint of a student who knows little or nothing about the subject matter.

Without going into a detailed discussion of Kintsch's system of analyzing text in the form of propositions and arguments, it is possible to explain to teachers that the question they ought to have in mind as they evaluate their tests is: "How well do the words or the surface structure of the language used by the author explain or reflect the concepts the author is trying to convey?" A number of ideas presented by Kintsch and Vipond seem to provide a basis teachers can use to analyze text from this perspective.

Kintsch and Vipond offer a detailed discussion of characteristics that contribute to textual difficulty and use a complex terminology. But essentially what they seem to be saying is that readers need more time to comprehend text that presents many concepts, new concepts, and concepts without interconnections thus requiring the reader to make inferences. They also explain that more time is needed if the reader is required to go back and reread and if the reader is prompted to reorganize previously read information as a result of ideas that appear later.

As a result of a discussion of these ideas, one teacher said something to the effect that the nature of written communication is such that some ideas must be stated first and others must follow even though it would be ideal to somehow demonstrate or explain the complete concept all at once. Rereading and reorganizing are necessary in order to understand many types of written materials. The problem seems to be that students who learned to read through the use of a typical basal program where most of the material is presented in a predictable narrative style, do not seem accustomed to using these strategies.

Following an analysis in which teachers attempted to identify

sections of text where many and new concepts were introduced and where rereading and reorganizing appeared to be required, teachers wrote gloss activities designed to assist students. In a section of a biology text where many ideas were introduced the teacher wrote a gloss activity which directed students to construct a brief outline so that the ideas could be organized and remembered. At points where the text seemed to lack apparent connections or to require inferences, some teachers wrote activities in which students were asked to paraphrase or write summaries. When the text indirectly defined a term through context, one teacher indicated that the definition was in fact indirect thus eliminating the need to make a type of inference. Many teachers made use of gloss activities to direct students to go back to a section of text and reread or to note a concept that would be important when the next section in the text was read.

This approach to analyzing text and subsequently writing gloss activities was certainly not systemitized. Yet it seemed to be credible when another reader, myself, read the text and the glosses. Teachers seemed to have glossed those portions of text that were in fact difficult, i.e. that required rereading, reorganizing and a very conscious effort to remember.

The Interaction of the Reader With the Text

In a comprehensive review of the research on study strategies Anderson and Armbruster (1980) suggested that one study technique or approach is not necessarily better than another. They indicate that the important factor is the involvement of the student or reader in the process of understanding and remembering. Again teachers seemed to accept this idea for its common sense value and to realize that gloss activities could be written which would encourage students to become actively involved.

At first, teachers balked at the idea of drawing brackets on their activity sheets to direct students to the portion of text referred to in the activity. They wanted to just write the activities without bothering with all the lines. But after using the bracketed activities they seemed to be convinced that students were more deliberate about responding to the gloss activities than when they answered questions that appeared at the end of a typical chapter in a textbook. Someone also said that students appeared to be reassured by the brackets. Instead of saying that they couldn't find an answer, they read and reread the material within the bracketed space. In general, teachers' perceptions of students' reactions to gloss activities were similar to my own after I had worked with students as they responded to marginal gloss. Students do perform the tasks required. They do become involved with the text. Often they say that the work is difficult but they also convey a sense of satisfaction once they have completed it.

Writing marginal glosses and discussing the research ideas and insights that can be associated with them appears to be one way of working with teachers and their texts in a public school setting. The gloss concept is comprehensive enough to include many approaches and ideas related to effective reading and studying and teachers seem to accept it for what it is—a credible technique that requires much work and effort on the part of both teachers and students. Perhaps gloss and other similar techniques can be used by reading specialists as they attempt to develop meaningful content area reading programs.

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