

ADJUNCT AIDS AND TEACHER REGULATION OF LEARNING FROM TEXT

JANE WARREN MEEKS
Old Dominion University

"Prose text appeals to premises and rules of logic for deriving implications. Whether or not premises correspond to common sense is irrelevant. All that is critical is that the premises are explicit and inferences correctly drawn. The appeal is formal rather than intuitive. As a consequence, the criterion for the success of a statement in explicit prose text is its formal structure; if the text is formally adequate and the reader fails to understand, that is the reader's problem. The meaning is in the text." (Olsen, 1977, p. 277)

"Instruction is one of the principal sources of the school child's concepts and is also a powerful force in directing their evaluation; it determines the fate of his total mental development." (Vygotsky, 1962, p. 23)

An ancient philosopher once stated awareness of difference precedes awareness of likeness. In examining the views stated above, the development of models and theories of text processing (basic research) should lead us to the relationship of those models with the real world of classroom instruction (applied research). Unfortunately, that cognitive leap has not seemed to occur. The widespread use of adjunct aids of published textbooks is minimum at best. Since the use of questions and aids thus falls to the purview of teachers, the teachers' role in eliciting meaning from text should be central. Unfortunately, this has not been the case. This paper is an attempt to 1) examine the literature for evidence of teacher regulation of text, 2) propose a new mindset for future research in development of adjunct aids, i.e., the training component and, 3) to raise once again the ugly question of effectiveness of adjunct aids and for whom, under what conditions? Recognizing that the questions are interrelated, so hopefully will be the discussion. Most of the research chosen for the examination in this paper will focus on teacher and student interaction with text. There are a few studies and/or theoretical papers that have attempted to span the bridge from conceptualization to application, but the most promising note is the number of researchers who call for textbook publishers and teachers to become part of the team. Vygotsky, the noted Russian psychologist, addressed this same matter. He felt instruction to be imperative; that children should move from dependence to independence in language acquisition and reasoning and that the main vehicle for this movement must be direct instruction. Adjunct aids are a means of achieving that independence while reading thus setting in motion that "inner speech" that tells children they comprehend and as importantly, an instructional device for teachers in helping their youngsters to *become* independent readers.

Rothkopt (1981) has drafted a "second assault" addition to the literature of adjunct aids and mathemagentic activities. He began his work in 1963 by manipulating interspersed questions into text. Other factions were indeed busy with the same line of pursuit, only their efforts were not limited to questions. Ausubel's (1960) work with advanced organizers, Barron's (1969), development of structured overviews, Manzo (1980), and Meeks (1979, 1980) with imbedded aids were all efforts to incorporate flexibility and comprehensive reading aids into otherwise immutable text. Rothkopt's current concern is that the relationship between information in text and instructional purpose is a neglected avenue of research (1981). For example, the selective functions of mathemagentic activities are in part regulated by the perceived importance of text elements. Thus, goal-descriptive directions are of value when there is a discrepancy between what the teacher and student perceive as important in the text.

In that goal-descriptive directions are not uniform and thus do not consistently facilitate mathemagentic behaviors, we cannot

conclude that the phrasing of goal descriptions interact with learning. Rothkopt is quick to point out, however, that teachers probably have intuitively formulated goal-descriptive directions, but very little systematic study has been done in this area to determine classifications of directions and with what impact these directions interact with levels of reading ability.

Rothkopt, incidentally, reported positive effects with students who were classified as "ineffective readers." However, he operationally defines "ineffective reader" by measuring how much or how little they learned from the first 24-pages of a 90-page science text, but also, who showed an increase in rate of reading (1972). This is an unusual result as poor readers seldom do well with adjunct aids; however, the definition of "ineffective readers" is hardly one that a seventh grade science teacher would use to describe his/her low ability readers.

In sum, adjunct aids probably make little contribution to text processing in schools. What is needed is a systematic model of application of both learning goals and adjunct questions. Teachers must have formulated text-directed goals and a prioritization scheme as to what is important in text processing. One suggested (and may I add divergent) technique might be a rating system of importance of statements. This procedure was developed by Manzo as one of a series of Imbedded Aids and tested by this author in her doctoral dissertation. The aid was labeled "Rating of Importance of Facts," parenthesis were placed at the end of each fact in a textbook. Students were instructed to rate the importance of each fact on a 1 (high) to 5 (low) scale. The rating of "1" indicated that the student perceived that fact as very important; the rating of "5" indicated that the fact was virtually unimportant. Students were to compare their rating to similar ratings of each fact placed in the margin by the author (or the teacher). If a wide difference between the two ratings occurred, students were instructed to re-read the paragraph and re-evaluate the importance of that fact.

A similar aid, "Rating of Understanding of Facts," was incorporated to further extend reader's monitoring of their own understanding. Each cluster of facts was enclosed in brackets and within the parenthesis placed beside the bracket, students were asked to indicate their understanding of that cluster on a 1 (high) to 5 (low) scale. The rating of "1" would indicate complete understanding and rating of "5" would indicate no understanding. Students were told that when understanding fell below a "2" rating, they were to seek help from the instructor.

Task differentiation is also one of the primary teacher behaviors that can affect text processing. Rothkopt challenges teachers to master strategies other than "read to learn." It would seem that inserted prediction devices might be applicable in purpose setting. Again a useful tool might be the format taken from the series of studies concerning Imbedded Aids. An example of such a device was the aid, "Making a Prediction." Based on facts in the chapter, students were asked to predict answers to specific questions. After an answer was predicted, they were instructed to check appropriate lines of text to determine if their prediction was correct. These aids were included in a cluster of other similar text extensions and labeled Reading/Thinking/Evaluating Skills. Good readers again showed better results than did poor readers. Students, however, were only given cursory instruction with the use of aids. In a second study, statistically significant results were found when the teachers were given systematic instruction in the use of aids in their reading assignments. In reflection, aids appeared to be means of expanding childrens' schema for reading the passages. Current research has not identified what effect schemata has on comprehension, but in the context of this notion, Anderson and Biddle (1975) remark "We do not need another demonstration that adjunct questions 'work,' (what we need to know) is why they work." (p. 108) I would add, and for whom?, and if they don't work for low readers, why not? My suspicion is that

low readers need more instruction and modifications with use of aids.

Schema theorists emphasize the role of cognitive readiness in acquiring meaning from text. However, only a few attempts at classroom research have been conducted to validate teaching strategies. Moore and Readence (1980) applied a meta-analysis technique on research relating to graphic organizers which was one of the early attempts to translate cognitive readiness into regular classroom methodology. Meta-analysis, a technique developed by Glass (1978), enables reviewers to look at research in a systematic statistical manner, or as they state an "analysis of analyses" (p. 213). What this analysis revealed is startling. Generally small effects were found for graphic organizers as a strategy for learning from text. Again the only population that benefitted was high verbal ability students while reading expository material, and yet three current secondary texts detail the use of graphic organizers. It would appear that application strategies preceded applied research.

Meyer's (1978) work is well-known for its thoroughness as well as its replicability. Her analyses of protocols conducted with ninth-grade students indicates that most high level ability readers used the same schema for organizing their recall of the passage while most low ability students did not. Palmer, Seater, and Graves (1980) re-examined Meyer's work in an effort to determine if simplifying reading passages would aid low ability ninth-grade students. The simplification of difficult vocabulary did not have a significant effect on either student's use of the author's schema or the amount of information they recalled. The notable adjustment to this study was that the materials developed were more similar in nature to those used in classrooms.

With the current emphasis on schema theory, the notion of recall and the qualifying of recalls must be examined. As Vygotsky so artfully stated, . . . "Rather than tapping the child's thinking, often we elicit a mere reproduction of verbal knowledge, in lieu of a study of intellectual process." With the low ability readers, I still do not believe we have tapped the process of reasoning.

Much more research needs to be conducted with these youngsters, looking in depth at their process of understanding text (or the lack thereof). So often in many studies, the subjects are not adequately described so that other research might replicate or extend hypothesis. Who are the children? What is their history of instruction? What sex, race, national origin makes up the experimental groups? Case study research is sorely needed at this juncture in time. Vygotsky would call this microgenetic research. I would modify the notion to study classrooms rather than an individual approach.

In the same vein, an article by Langer appeared in the November, 1981 issue of the *Journal of Reading* entitled "From theory to practice: A Prereading Plan." Langer states ". . . only general guidelines and a few instructional strategies have been available for helping students realize what they know and how to relate that knowledge to text. Teachers have experimented with ways to bridge the gap. Still, they support that these activities are not as successful as they would like, particularly with the poorest achievers. . . instruction can lead to ineffective intervention without the teacher really knowing what went wrong (p. 152)." Langer went on to describe a technique that she proposes, named Pre-Reading Plan or (PReP). She states that the theoretical framework for this technique is in press, but nowhere does she allude to the research conducted in developing the technique with "real-live" teachers and "real-live" children. Again we must ask, for whom does it work, at what level, in what scenario?

Pearson and Camperell (1981) state that the "renaissance of the methodological study is now (p. 50)" and that students do indeed learn new strategies for comprehending text when they are systematically taught. I would caution researchers to not fall victim to the findings of the First Grade Studies, but to

examine the teacher variable very closely. Studies must investigate how good teacher uses adjunct aids, under that conditions, and with what results. We must develop a practical, working paradigm for text comprehension and I believe we are well on the way, but to use military jargon, "Let's don't send up a new plane without first teaching and training the pilot."

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