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Eliminating the Literal Pursuit in Reading Comprehension

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Abstract

During the 1983-1984 academic year a study of comprehension development was conducted at the Northwestern State University Laboratory School. The question addressed in the study was — can students' literal comprehension in reading be improved if they are asked inferential and evaluative level questions exclusively? If so, reading educators could concentrate on developing their students' higher comprehension levels with the assurance that literal skills would evolve concurrently. Similarly, a revision of basal materials favoring higher cognitive development would seem warranted. Results of the study indicate that reading teachers can more efficiently teach literal comprehension skills by simply focusing instruction of higher cognitive levels. Because higher level reasoning is dependent upon literal knowledge, all comprehension skills continue to develop. Statistical evidence is provided to help validate the conclusions.

Do basal reading programs truly help educators to teach comprehension skills, or do they tend to waste valuable class time with trivial pursuits? Recent studies (e.g., Durkin, 1978-79; 1981) have strongly suggested that what publishers of basal readers include in their series for comprehension instruction will be implemented by teachers as their primary curriculum source. However, problems often arise when teachers attempt to provide sufficient practice in the various areas of reading comprehension.

The researchers in this study wanted to know if literal comprehension skills would continue to develop if reading teachers asked only the higher level questions associated with their basal reader selections. In an earlier study, Hansen (1981) found that areas of reading comprehension can be developed by teaching lessons which encourage children to always interpret reading materials in the context of their own experiences. Additionally, Hansen's lessons which focused instruction on inferential comprehension were found to be more effective than those lessons prescribed by basal readers. An ancillary finding in Hansen's experiment seemed to indicate that two levels of reading comprehension — literal thinking and inferential thinking — were improved by the lessons which were intended to improve only inferential thinking skills. Hansen's results seem to indicate that teachers may be able to reduce the amount of time spent on teaching literal skills by simply concentrating instruction on the higher level comprehension abilities to be developed.

Background Information

Asking questions of students following the reading of a basal selection is an integral part of basal reader instruction. Indeed, it is the primary means by which teachers assess students' understanding of what the author has written. With the current emphasis on developing comprehension abilities, it is generally suggested in reading methodology texts as well as college level reading courses that reading teachers should use various types of questions.

Barrett (1974) developed a taxonomy of reading comprehension skills that has been widely utilized by basal series. This system describes three levels of questioning and cognitive understanding — literal, inferential, and evaluative. Literal skills are considered most basic or "textually explicit" (Pearson and Johnson, 1978). Literal questions involve factual recall and thereby, are answerable with information specifically stated in the story or text.

Inferential and evaluative level questions on the other hand are more "textually implicit." At these levels, readers must derive information that is not specifically stated in the story or text (Pearson and Johnson, 1978). Laymen often refer to these levels as "reading between the lines," and "reading beyond the lines."

A basic assumption that seems to underlie most of what has been written concerning the higher levels of comprehension is that children must understand most of the basic or literal points in a story if they are to be successful in reading on the higher levels. However, using literal questions as necessary prerequisites to inferential and evaluative questions may result in the devotion of too much instructional time on literal questions, while not providing ample practice in asking and responding to inferential and evaluative questions. Several research studies (Banton, 1977; Hawkins, 1982) have illustrated this point.

Banton (1977) analyzed the cognitive level of questions in basal reader teachers' manuals to see what percentage of questions asked were on higher levels (inferential and evaluative) and found that seventy-five percent of the questions were on the literal level. In a more recent study, Hawkins (1982) found that fifty percent of the comprehension questions occurred at the literal level. The results of these studies suggest that we do have higher levels of questions available to classroom teachers, but because of a preponderance of literal questions teachers may spend more time than is warranted developing literal skills.

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Procedures

During the 1983-84 academic year, an experiment was conducted to determine the effects of eliminating all literal questions on (a) students' literal comprehension abilities and (b) students' inferential comprehension skills. A simple five month study was conducted with four groups of third and fourth grade students ($N = 33$) who were reading on grade level in their school's adopted basal series. Two third and two fourth grade reading groups were selected for the experimental and control groups on the basis of equivalent basal group placement. All four groups were pre- and post-tested using the *Stanford Diagnostic Reading Test* (Green Level) comprehension subtest. The *SDRT* comprehension subtest provides three separate scores — literal comprehension, inferential comprehension, and total comprehension.

The control group received regular basal instruction for the duration of the study. The experimental groups received a variation of typical basal instruction. The variation consisted of allowing the two teachers with experimental groups to pose only inferential or higher level questions following basal selection. To ensure that the treatment groups received only inferential or higher level questions, the teachers' manuals were altered by the masking-out (with tape) of all questions and activities that were of a literal nature. In addition, the experimental groups were observed twice a week during the study to verify compliance with the program and to gain insights into how teachers and students were responding to the treatment.

At the end of the five month period, the alternate form of the *Stanford Diagnostic Reading Test's* comprehension subtest was administered in order to determine if there were significant differences between the treatment and control groups in literal and inferential comprehension achievement.

Results

The students involved in the study were never informed that they were participating in an experiment, yet some seemed to notice a difference very quickly. Teachers reported that several students in the experimental groups complained that the work was more difficult, while others felt that the reading class was more stimulating. One teacher of an experimental group indicated that not only did her students seem to be thinking more critically in the reading class, but that similar results were occurring in science and social studies.

To determine whether or not a significant difference existed between the control and experimental groups, an analysis of covariance was used with data derived from the *Stanford Diagnostic Reading Test*. The third and fourth graders were compared first by grade and then as a whole group, distinguishing in each case between experimental and control treatments. Again, the researchers were interested in learning if literal skills would be improved as higher comprehension levels were developed. It was hoped that this increased attention to higher comprehension skills would result in improved inferential comprehension as had been seen in a previous experiment (Hansen, 1981).

Success could be measured in several ways. If literal and inferential levels for the experimental group improved significantly over the control group, then the experiment could be viewed as successful. Another measure of success would be if the experimental group's skills were improved significantly over the control group's and their literal comprehension was as least as good as the control group. Again the hypothesis would be successfully demonstrated. Only if there was a sig-

nificant decline in literal and/or inferential comprehension would the hypothesis be rejected.

Tables 1 and 2 suggest that the hypothesis is both reasonable and demonstrable. In the whole group comparison between control and experimental groups, the experimental group performed significantly better on the inferential comprehension subtest of the *Stanford Diagnostic Reading Test* as compared to the control group. Table 2 reveals no significant difference on literal comprehension between the two groups.

Table I
Post-test results of control and experimental groups on the inferential comprehension subtest of the *Stanford Diagnostic Reading Test*.

Treatment	Mean*	F	PR>F
Control	27.31	3.33	P<.05
Experimental	29.35		

*Subtest ceiling of 30

Table II
Post-test results of control and experimental groups on the literal comprehension subtest of the *Stanford Diagnostic Reading Test*.

Treatment	Mean*	F	PR>F
Control	28.00	1.94	P<.16
Experimental	29.47		

*Subtest ceiling of 30

When comparing the groups by grade levels, there was no significant difference between groups on the literal and inferential scores. However, inferential scores approached significance as indicated by the mean scores. The researchers feel that two factors may have prevented the data from achieving significance. First, the number of students in the study was small ($N = 33$). Secondly, for this group of students the *Stanford Diagnostic Reading Test* was apparently not sensitive enough at the upper limits to prevent a ceiling effect for the control and experimental groups. Specifically, many students scored a perfect thirty out of thirty on the inferential subtest. This was especially the case with the fourth graders. Nevertheless, when looking at the total sample, notwithstanding its smallness, the premise was successfully demonstrated and has implications for teachers and producers of commercial materials worth explicating.

Discussion

Since the days of Socrates, questioning has been an integral part of teaching. Classification systems which analyze questions, have shown that questioning can be used to elicit a variety of cognitive responses. However, for many years teachers have spent much of their time during reading instruction asking questions on the literal level.

As a result of this study, it seems plausible that during directed reading lessons, concentration on higher levels of questioning and thinking can improve inferential performance by students. Additionally, this procedure appears to improve students' literal skills. The researchers encourage classroom teachers to conduct their own action research in this

area. Specifically, teachers should determine if de-emphasizing literal tasks and questions in favor of accenting higher comprehension skills practice produces favorable or unfavorable results in overall comprehension skill development. Producers of commercial materials should likewise examine the degree of stress being placed on literal level questions and tasks within their materials. It is hoped that through an examination and modification of classroom practices and teaching materials students can become more skilled at interpreting and evaluating the messages that they read, thus becoming more attuned to thinking and reacting as opposed to "just" remembering what was said.

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