Teacher verbal behaviors following oral reading errors of primary grade children were the focus of this study. The incidence, location, and type of verbal interruption behaviors that occurred during classroom reading instruction were contrasted for high- and low-ability readers. Results for 20 teachers indicated that they were more likely to interrupt poor readers than good readers who erred when reading aloud. Further analyses indicated that the location and type of teacher verbal behaviors differed as a function of reading ability level. Additionally, good readers read over twice as many words per lesson as did poor readers. (Author/AA)
ARE GOOD AND POOR READERS TAUGHT DIFFERENTLY?

IS THAT WHY POOR READERS ARE POOR READERS?

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Appreciation is expressed to the administrators and teachers in the cooperating schools for participating in this study.
Recent research on classroom teaching practices and processes has generated different answers to the first part of the question posed in the title of this paper. For instance, Alpert (1974) found no differences in the "good" verbal behaviors provided by teachers across ability groups during reading instruction, where small differences did appear they seemed to favor lower ability students. She also found no difference in the amount of reading instructional time between groups nor in the number of materials used. Brophy and Good (1970) also failed to find differences in allocation of instructional time between ability groups.

On the other hand, Rist (1970) provided evidence of preferential treatment of high ability children in one kindergarten classroom and concluded that the children perceived as low ability would probably perform to these expectations since they got the least amount of instructional time. Brophy and Good (1970) found that high-ability students received preferential treatment and were granted more autonomy than low-achievement students. McDermott (1976), in another study of a single classroom, found poor readers spent less time reading than good readers and differential interaction patterns between the teacher and the different groups — differences which seemed to favor the good readers. He presents some similar additional evidence in a more recent paper (1977). Good and Brophy (1971, 1972) suggest that low-achievement students typically receive less opportunities to respond than high-achievement students. Archer (1977) argues that poor readers are less likely to be praised and were less likely to be dealt with sympathetically than were good readers. Duffy (1978) presents evidence that the content of instruction differs between good and poor readers in some classrooms.
Several other researchers (Allington, 1977; Quirk, et al., 1975, 1976), while not directly comparing instruction of good and poor readers, provide data on current practices in compensatory reading programs which strongly suggest that differences exist between the instruction received by good and poor readers.

Finally, Weinstein (1976) found few interactional differences between the teacher and students from different ability groups during whole class instruction but noted that the teachers did act and react differently towards these same students when dealing with them in their reading groups. However, she reports that in reading groups, the good readers typically received fewer evaluative comments and were criticized more while the poor readers were more likely to be praised after correct responses and after oral reading performance.

Much of what seems to be basic disagreements in the data presented above can be accounted for by noting that the various investigators looked at, and for, different kinds of behaviors, in different types of settings, and generally with different instruments. Whether differences exist in the instruction provided good and poor readers depends then, on what aspects of the instructional environment are studied and whether one wishes to consider a single classroom or reading instruction generally.

While a number of studies (c.f. Brophy and Good, 1970; Brophy and Evertson, 1976) have examined teacher-pupil interactions during reading instruction on what might be considered a "surface" level (positive-negative, teacher vs. student initiated, etc.) fewer have focused specifically on the semantic content of these interactions. Alpert (1974)
generated a list of "good" verbal behaviors during reading lessons through a process of expert consensual validation. Her "good" verbal behaviors ranged from "praised reading" to "word family" and "question all." Unfortunately, we have no comprehensive listing of effective teacher verbal behaviors for reading instruction, though Clay (1972), like Alpert, presents a list of comments elicited from teachers and indicates which she prefers in particular situations. Brophy and Evertson (1975, 1976) presented evidence that successful teachers did not focus on minor inaccuracies but rather either pronounced a word for a student or expanded a partial response quickly in order to move the lesson along. They found directing attention to phonic cues correlated well with learning in low SES schools, while having the student reread the sentence, a focus on the semantic and syntactic cues, correlated well with learning in the high SES schools.

Of particular interest in the present study is the semantic content of teacher verbal behaviors during reading instruction and the impact these comments have upon the development of reading ability. In order to clarify whether differences existed in this aspect of the reading instruction delivered to good and poor readers, the focus was narrowed to teacher interruption behaviors during the oral reading segment of reading instructional sessions. Though a focus on silent reading is typically recommended, as opposed to oral reading (Harris and Sipay, 1975), a recent survey of instructional practices indicated that over four-fifths of the primary grade teachers allocated some daily segment of instruction to oral reading (Howlett and Weintraub, in press). Thus,
oral reading seems to be a common feature of reading instructional sessions in the primary grades. At the same time however, we know little about either the nature of teacher verbal behavior during this component or the effects of the teacher verbal behaviors which occur.

METHOD

The cooperation of the reading directors or building principals in three school districts was elicited and they were asked to distribute a participation form and brief questionnaire to all primary grade teachers under their administrative direction. The participation form in some ways masked the true purpose of the study since it indicated only that the investigator was interested in the development of oral reading fluency in beginning readers. Additionally, teachers were informed that the investigator wished to audio-tape record reading lessons, particularly oral reading segments. The questionnaire simply asked the teacher whether the teacher grouped by reading achievement for reading instruction and whether oral reading, or rereading, was a relatively common feature of reading instructional sessions. Additional questions asked for grade level, number of reading groups, and approximate scheduling of instructional sessions.

Twenty teachers were ultimately selected from (a) those who indicated a willingness to participate, (b) who arranged reading instruction around reading ability groups, and (c) who indicated oral reading was typically part of the reading instructional session. Audio-tape recordings were
then made of a single reading instructional session for the two groups the teachers identified as the best and worst readers. The recordings were made by either the classroom teacher or the researcher (or research assistants). Teacher participants were given the option of self-recording their reading instructional sessions or having researchers operate the equipment. Six teachers chose to operate the recording equipment themselves. None of these teachers seemed particularly uncomfortable with the researcher in the classroom, but instead utilized rather flexible instructional scheduling and seemed concerned about keeping the researchers waiting around for reading instructional sessions to begin.

All teacher participants were asked to simply conduct the reading instructional sessions as they normally would. Several asked whether the students could read the material silently first, or whether they should teach the "hard" words, etc. In all cases, they were simply directed to conduct the instructional session as they normally did.

Copies of the materials used in the reading instructional sessions were collected and used to record the several sets of data of particular interest. These data were: number of pages read, number of words read in text, and the errors made by each child while reading.

The data of primary interest were the teacher's interruption behaviors which occurred while the students were orally reading connected text. Figure 1 shows the categorization scheme imposed upon these behaviors.

All responses made while reading orally which did not agree with the printed text were scored as errors and entered on the data sheets. The teacher's verbal behaviors cued by these errors were categorized on two dimensions: point of interruption and direction of interruption.
<table>
<thead>
<tr>
<th>Miscue/Expected</th>
<th>Point of Interruption</th>
<th>Direction of Interruption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>At Error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After Error but not at phrase or sentence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graphemic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phonemic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semantic/syntactic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teacher pronounce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>
The point of interruption categories included:

None - the teacher made no verbal response to the error.

At error - the teacher interrupted the reader at the point of the error. Teacher comments when students hesitated or paused at a word were scored as "at error" responses.

After error but not at phrase - the teacher interrupted the reader after the error but not at a phrase or sentence boundary.

After error at phrase or sentence boundary - the teacher allowed the reader to continue reading after the error but interrupted at a phrase boundary or at the end of the sentence.

The direction of interruption categories included:

Graphemic - teacher comments which directed the reader to attend to a visual aspect of the word were scored as graphemic. Agreed upon comments included: What was the first letter? Look at that letter again. That's not a b. No, it's another word that looks like that. etc.

Phonemic - teacher comments which directed the reader to attend to a grapheme-phoneme correspondence, or to produce the appropriate phoneme were coded as phonemic. Agreed upon comments included: Sound it out. What sound does that letter make? It's the short sound. Blend those sounds together. etc.

Semantic and Syntactic - teacher comments which directed the reader to attend to either syntactic or semantic aspects of the sentence, or story, were coded as semantic-syntactic. Agreed upon comments included: Does that make sense? Read that again. Are you sure that's what it says? That doesn't sound right to me. etc.

Teacher pronounce - teacher simply provided correct pronunciation of word.

Other - All responses which were not categorizable in any of the preceding categories were coded other and a brief written description of the verbal behavior was noted. Agreed upon comments included: That's not that word. Try to get that word. You know that word. etc.

The audio-tape recorded instructional sessions were scored for both oral reading errors and teacher interruption behaviors by the researcher and a research assistant. Questions about errors and categorization of interruption behaviors were resolved by repeated listening to the audio-tape recording and discussion.
RESULTS

An analysis of variance with repeated measures was carried out following arcsine transformations of the proportion of interruptions by each teacher for each group. Table 1 summarizes these analyses.

Table 1: Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between teachers</td>
<td>19.38</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within teachers</td>
<td>23.50</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading groups</td>
<td>13.51</td>
<td>1</td>
<td>13.51</td>
<td>25.98</td>
</tr>
<tr>
<td>Residual</td>
<td>9.99</td>
<td>19</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>42.88</td>
<td>39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*F.99 (1,19)=8.18

There were significant differences (p. < .01) in the proportion of interruptions, with the poor readers interrupted at a higher rate of incidence than the good readers. Since the analyses were performed on the proportion of interruptions to reading errors, it seems that teachers are more inclined to interrupt the oral reading of poor readers. Another way of looking at these data is to consider that, overall, teachers interrupted poor readers on 68% of their errors and good readers on only 24% of their errors.

A second point of interest was whether there were differences in the location of the teacher interruptions. Table 2 presents a summary of these data. Small, but consistent, differences are evident with the poor
readers more likely to be interrupted at the point of the error than the good readers.

Table 2: Percentage of teacher interruptions by point of interruption and direction of interruption as a function of reading group placement

<table>
<thead>
<tr>
<th>Point of Interruption</th>
<th>Direction of Interruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>At Error</td>
</tr>
<tr>
<td></td>
<td>After Error but not at Phrase +</td>
</tr>
<tr>
<td></td>
<td>After Error at Phrase or Sentence</td>
</tr>
<tr>
<td></td>
<td>Graphemic</td>
</tr>
<tr>
<td></td>
<td>Phonemic</td>
</tr>
<tr>
<td></td>
<td>Semantic/Syntactic</td>
</tr>
<tr>
<td></td>
<td>Teacher Pronounce</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Good Reader Group</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>Poor Reader Group</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
</tr>
</tbody>
</table>

Table 2 also presents data on the direction of the interruption, or to which of the available cues the teacher seemed to be directing attention. The most common interruption behavior for both groups was for the teacher to simply pronounce the correct word for the reader. Teachers were a bit more likely to cue poor readers to graphemic cues while directing good readers to attend to semantic and syntactic cues. Teachers directed the attention of both groups to phonemic cues at nearly equivalent levels. As an additional note, the interruptions in the final category (other), were primarily a simple "no" statement indicating to the student an incorrect pronunciation of a word.
There were a variety of patterns within teachers however, on the incidence, point, and direction of the interruption behaviors. For instance, teacher K never interrupted on 20 errors by good readers and interrupted only twice on 18 poor reader errors. Teacher L, on the other hand, interrupted on 5 of 13 good reader errors and 19 of 21 poor reader errors. All teachers, except one who had no interruptions for either group, were more likely to interrupt the poor readers. Some teachers consistently interrupted at the same point for each group (at the error or at the sentence boundary) and some consistently provided interruption comments in a single category (such as "sound it out" or "look at that word again"). Teacher M, for instance, provided the correct pronunciation after each of the 23 interruptions for both groups.

In an attempt to identify whether there was a general "tendency to interrupt," or a correlation between the incidence of interruptions across groups, the proportion of interruptions for each teacher with each group were ranked and compared using the Kendall Tau for tied ranks (Glass and Stanley, 1970). This analysis indicated there was no significant correlation in the incidence of interruptions for the two groups (T = .23 with S, 38/N, 20). It appears that there is no single teacher interruption tendency, as such. In other words, no prediction about a teacher's interruption behaviors with good readers can be made from the interruption behaviors exhibited with poor readers or vice versa -- except, of course, that the poor readers are more likely to be interrupted.

Several other sets of data are presented in Table 3. Basically, these data illustrate that good readers read more words per lesson than poor readers. All teachers followed this pattern even though the range of words read was quite wide. Interestingly, the poor readers completed
more pages than the good readers but read fewer words. This points to
a possible problem for researchers who attempt to compare the number of
units of instruction completed. If pages had been the only unit of
instruction observed in this study, one might conclude that the poor
readers were doing more reading than the good readers when in actuality
they read about half the number of words the good readers did.

Table 3: Differences in number of words and pages read as a function of
reading group placement

<table>
<thead>
<tr>
<th></th>
<th>Words read</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X (SD) range</td>
<td>X (SD)</td>
<td>range</td>
</tr>
<tr>
<td>Good reader groups</td>
<td>530 (307) 141-1306</td>
<td>6.4 (2.5)</td>
<td>3-15</td>
</tr>
<tr>
<td>Poor reader groups</td>
<td>249 (130) 56-686</td>
<td>7.3 (4.2)</td>
<td>4-19</td>
</tr>
</tbody>
</table>

DISCUSSION

To return briefly to the first question posed in the title -- it

seems poor readers do receive reading instruction that differs from that

provided good readers. That is, good readers are less likely to be
interrupted when reading orally and will generally read more in each
instructional session. The interesting question though is posed in the
latter part of the title. Is that why poor readers are poor readers?

Unfortunately, the data collected do not provide any satisfactory
answer. Several recent studies though seem to suggest a possible answer.
Niles, Graham and Winstead (1976) instructed teachers to interrupt at
every error during an oral reading tutorial session or to never interrupt subjects when reading, regardless of the errors produced. The nature of the oral reading errors made under each condition and the comprehension levels of the readers were examined after these sessions. Teacher interruption produced both different error patterns and lower comprehension than did non-interruption. The errors induced by the interruption behaviors reflected attention to graphic and phonic cues and a disregard for semantic and syntactic information. The authors suggest that teacher interruption behaviors tended to direct student attention to surface features of text rather than on the reconstruction of meaning. Additionally, students in the interruption condition read fewer words and at a slower rate than those in the non-interruption condition.

If one considers the location and content of teacher verbal behaviors as a type of orienting instruction, then several possible effects might be expected. Mishler (1972) discusses "what is learned" and "how it is learned." Mishler's three components of a teaching lesson; (1) how attention is focused, (2) search and evaluation procedures used, and (3) structure of alternatives presented can be used to analyze the present data. These teachers seemed to focus student attention differently—the good readers were given more autonomy. The good readers seemed also to have their attention directed towards a divergent problem-solving search while the poor readers were relegated a matching convergent strategy. Basically, the good readers were more often left alone while the poor readers were constantly having their performance interrupted.
An adaptation of the Craik and Lockhart (1972) "levels of processing" model for human memory provides yet other insights into possible effects of the differential verbal behaviors observed in this study. Allington, Mosenthal, Gormley, and Walmsley (1978) argue that poor readers often seem to process at a graphemic or phonemic level while good readers seem to most often process at a semantic-syntactic level. It may be that learning to read is facilitated, like much other human learning (Epstein, Phillips, and Johnson, 1975; Eysenyk, 1974), by processing at semantic levels. The teacher interruption behaviors observed with poor readers then would not seem to facilitate learning to read. Rather, frequent interruptions at the point of the error, and particularly those directing attention to graphemic or phonemic aspects of the text would produce readers who processed at these surface levels. These readers could logically be expected to adopt a convergent matching strategy with attention focused on surface level features of text, while the less frequently interrupted good reader would adopt a convergent search strategy with attention focused upon reconstruction of meaning. The latter group would be performing then in a manner more consistent with recent formulations of good reader behaviors (Mason, 1977) while the poor readers would perform in a manner generally consistent with descriptions of poor readers (Allington, et al., 1978).

The second facet of the present data was confirmation of the suggestion that poor readers read fewer words during reading instructional sessions than good readers. A key point here is the possible relationship between pacing of instruction and rate of acquisition. As long as poor readers
read less than half as much as good readers, one cannot expect them to equal the performance level of the better readers. While the comment by Rist (1970), that low-achieving students don't learn because they aren't taught, is perhaps too strong, it does seem reasonable to suggest that poor readers cannot learn what they are not taught and will never equal the learning of the good readers if they continue to proceed at half the pace. Guthrie and Seifert (no date) suggest that, based upon their analysis of instructional time effects, poor readers might very well achieve at levels equal to good readers if instructional time were increased. One might also suggest that in addition to increasing instructional time, the poor reader will have to read more words per lesson than the good reader and constant teacher interruption serves to reduce the rate of progress and seems to induce many of the processing strategies associated with poor readers.

SUMMARY

This study was exploratory and descriptive and as such it served to raise more questions than it answered. While we know different teaching strategies induce different production strategies in primary reading instruction (Barr, 1971; Cohen, 1975), we have little understanding of the complex relationship between process and product. We still know little about why teachers interrupt poor readers more often and why they provide different verbal reactions to the reading errors of good and poor
readers. Neither do we know whether one strategy is always more effective or whether different strategies are appropriate at different stages of development.

A primary purpose of this paper is to reiterate what Emans and Fox (1974) suggested; investigators of teaching processes must not only attend to what the teacher says and does, but must also take into account the student as a receiver of the message. We must, as Winne and Marx (1977) suggest, reconceptualize our research on teaching. By drawing upon what we already know about the complex cognitive activity called reading, we can begin to analyze observed classroom practices for their potential for developing the skilled interactive reader. Attending only to global features of instruction and attempting to infer causation from correlation will not provide the insights necessary to produce a model of the effective teaching of reading.

BIBLIOGRAPHY

Allington, R.L. "If they don't read much how they ever gonna get good?" Journal of Reading, 1977, 21, 57-61.


Alpert, J.L. "Teacher behavior across ability groups: a consideration of the mediation of pygmalion effects". Journal of Educational Psychology, 1974, 66, 348-353.


Barr, R. "The Influence of Instructional conditions on word recognition errors". Reading Research Quarterly, 1971, 7, 509-529.
Brophy, J.E. and Evertson, C.M. Teacher Behavior and Student Learning in Second and Third Grades, Report #75-4, Research and Development Center for Teacher Education, University of Texas, Austin, TX, 1975.


Duffy, G. "Teacher's conceptions of reading project: a working paper (or more than you ever wanted to know)." Institute for Research on Teaching, Michigan State University, January 1978.


Good, T.L. and Brophy, J.E. "Behavioral expression of teacher attitudes". Journal of Educational Psychology, 1972, 63, 617-627.


Hawlett, N. and Weintraub, S. "Instructional Procedures" in R.C. Calfee, An Analytic Study of Compensatory Reading Programs, Newark, Delaware: International Reading Association (in press).


McDermott, R.P. "Social relations as contexts for learning in school", Harvard Educational Review, 1977, 47, 198-


Weinstein, R. "Reading group membership in first grade: teacher behaviors and pupil experience over time". Journal of Educational Psychology, 1976, 68, 103-116.