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AUTHOR Allington, Richard L.
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ABSTRACT

Teacher logs for 600 reading group sessions from grades 1, 3, and 5 were analyzed to identify whether the amount and mode of assigned contextual reading differed systematically between "good" and "poor" reading groups. Analyses indicated that groups comprised of good readers read more total words and more words silently than did groups composed of poor readers at all grade levels. At grade levels 1 and 5, however, poor readers read more words orally than did good readers. The pacing of instruction was different within grade levels, with the good reader groups progressing at a faster pace through assigned materials. Poor readers seemed to be moving at a pace more closely approximating that of the younger better readers than that of their age-matched peers. The findings suggest that while teachers allocate the same amount of time for reading instruction to both poor and good readers, the good readers are allowed to cover much more material in that time. (FL)

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Content Coverage and Contextual Reading
in Reading Groups

Richard L. Allington, Ph. D.
Department of Reading
State University of New York at Albany
1400 Washington Avenue
Albany, NY 12222

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ABSTRACT

Teacher logs for 600 reading group sessions from grades 1, 3 and 5 were analyzed in an effort to identify whether the amount and mode of assigned contextual reading differed systematically between reading groups. Analyses indicated that groups designated as "good readers" read more total words and more words silently than groups designated as "poor readers" at all grade levels. At two of the three grade levels, however, poor readers read more words orally than good readers. When the reading instruction of younger good readers at grade 3 is compared to that of older poor readers at grade 5 similar differences exist but to a lesser degree. These data reinforce and extend other research on differences in content coverage and the pacing of instruction between groups of good readers and groups of poor readers.

Content Coverage of Contextual Reading in Reading Groups

Fifteen years ago Bond and Dykstra (1967) recommended that "future research might well center on teacher and learning situation characteristics rather than methods and materials..." (p. 123). In the intervening period we have seen reading research shift away from comparing the efficacy of various reading programs but this shift has only recently been in the direction of investigating the complexities of classroom processes. Duffy (1980) has noted that most researchers in reading have focused on the nature of the reading process but have, by and large, neglected investigation of classroom instruction. In particular, he notes "to date descriptive research has been little utilized by reading researchers..." (p. 19). Descriptive research attempts to delineate the status quo and would seem a necessary undertaking prior to any recommendations concerning pedagogical change.

Recently we have been examining specific facets of the reading instructional environments provided the high and low reading ability groups in elementary school classrooms (Allington, 1977; 1980a, 1980b). In the course of this research we have noted several interesting trends. First, oral reading seems to predominate as the mode of reading for poorer readers with proportionally less time allocated for silent reading than is found in the instruction provided better readers. Second, while time allocations for both good and poor reader groups tend to be approximately equivalent the poor readers accomplish less reading. These findings may seem obvious but then

descriptive research is, in part, designed to explicate what exists as common practice. However, descriptive research often identifies patterns of behavior which had previously gone unnoticed. It may also raise questions previously unaddressed due to the inadequacy of existing descriptions of situations or events. Such may be the case with the findings noted above.

Brophy (1979) has argued that "students' opportunity to learn materials is a major determinant of their learning" while Yates (1966) has noted that "in the typical situation, the differences between groups are differences in the amount of 'content' taught..." (p. 105). The related concepts of content coverage and pacing have received relatively little attention in traditional reading research though both are important aspects of the instructional environment. These concepts relate to the rate at which a curriculum is presented to a learner or a group of learners. Differences in learning outcomes are, in a large part, related to the amount of content covered or the pace at which learners are moved through curricular materials and the types of learning tasks learners experience (Anderson, Evertson & Brophy, 1979; Barr, 1975; 1981; Calfee & Piontkowski, 1981; Good, Grouws and Beckerman, 1978; Leinhardt, Zigmond & Cooley, 1981).

The present study was carried out to further pursue description of the instruction offered good and poor reader groups in classrooms. Of particular concern was the amount of contextual reading accomplished during instructional sessions. While other investigators have used various measures (e.g. number

of pages completed, number of new words introduced) as indications of content coverage it was felt that the use of the number of words read would provide a more sensitive measure. In order to obtain a representative sample schools in several states were used as data sources. In addition, classrooms at three grade levels were selected to allow both a developmental perspective and comparisons by reader ability group designation and grade level assignment. Much of the available research is limited in these respects with teachers generally drawn from one locale and many studies include participants from only a single grade level.

METHOD

Volunteer teacher participants were identified in seven states with assistance from university and elementary school staff members in each geographic area. Table 1 depicts the distribution of the teacher participants by grade level and a dichotomous split of New York State participants and those from other states. These participants reported data for 600 reading group sessions (2 groups (good and poor) x 5 days x 60 teachers). Participants were provided with a single sheet of directions for reporting the data, two sets of five index cards prepared for recording the data on a daily basis, and a stamped envelope addressed to the author for returning the data sets.

The letter eliciting cooperation indicated two basic conditions necessary for participation. First, the teacher had to be assigned a class with a grade level one, three or five designation. Since over 90% of schools reported

either totally graded (82%) of a combination graded and ungraded (9%) in a recent survey (Pikulski and Kirsch, 1979), limiting participating to grade level designated classrooms did not seem to present any severe selection bias. The second condition necessary was a classroom reading instructional program organized by ability or achievement grouping. Again, such in-class organizational patterns are the most frequently reported (Pikulski and Kirsch, 1979) and thus the conditions required for participation seemed characteristic of the instructional organization provided learners most frequently during reading instruction in American schools.

The purpose of the study was masked from participants in the elicitation letter and the directions for recording data. The participants were informed that the primary purpose of the study was to investigate children's affective responses to their reading materials. The letter indicated that the various data required were to allow the investigators to complete post-hoc analyses of reader content once teacher reports of affective response had been collected. This masking procedure, or deception, was undertaken in an attempt to minimize inaccurate reports of data essential to the study stemming from the participants desire to be "ranked well" by the investigator.

Since the data sources were geographically widespread direct observation could not reasonably be employed. In its stead an especially designed teacher log procedure was employed as suggested by Marliave, Fisher and Filby (1977). They note that in their study the data from teacher logs "agreed at an acceptable level with the criterion of observational data..." (p. 57) and

suggest that the "economical researcher may well be encouraged to use teacher records..." (p. 67). The data that was reliably reported was that which was relatively concrete and recorded immediately after an event. The present study was designed that teachers would be asked to record only concrete data (except for the distractor item as noted below) with the record completed immediately following the instructional session. The necessary data could be recorded in less than minute on especially designed teacher log forms.

The directions for supplying the data detailed how to record the following information. Group, the participants were simply to circle either good or poor depending upon their designation of the group ranking on reading achievement within their classroom. Date, participants were to record the date of lesson since the directions asked for five consecutive school days. Participants were asked to indicate with a brief comment on the data card if a group did not meet on any day in the sequence. Grade, participants were to circle either 1, 3, 5 on the top of the data card indicating grade level designation of the classroom. Material/Publisher/Copyright, the title of the material read, the publisher and date of copyright were to be listed, though if this remained consistent across lessons it only had to be indicated on initial data card. Pages, participants were directed to indicate the beginning and ending page numbers of the material read during the instructional group lesson. Mode, this was simply an indication of whether the pages had been read "primarily orally or silently." Reaction, this, of course, was the data masking requirement; participants were to provide a



single sentence indicating the general affective responses to the material they observed during and after the reading activity. The data were collected during the latter half of the school year.

Each of the reading materials identified by the teacher was collected and the total number of words appearing on the pages identified by the participants was calculated either by exact counting or using a ten-line estimation method. For counting, each word including titles, captions and so on were tallied. This method was employed on the lower level material where few lines appear per page and whenever type size, style or form produced unusual content for estimation, which is fairly frequently (c.f. Willows, Borwich, and Hayvren, 1981). The ten-line estimation method simply entails selecting 10 lines of typical print in a story, counting the words and then computing the average words per line ($X = x/10$). The number of lines on the page are then counted and the total words per page estimated. These words per page totals were summed for all the pages the participants indicated were read during a reading session and the words for each session were summed across the five day period to arrive at the total number of words read. Similar word totals were also computed by mode of reading.

Two estimates of the reliability of the estimation method and the exact counting were computed. First, after estimating the number of words for ten randomly selected sessions an exact counting of the words was carried out. In each case the error in the estimate was less than $\pm 10\%$. Second, on the words counted separate counts by two researchers were used for another ten randomly

selected sessions. For the word counts agreement was always within +5% of the initial count on each session. Thus, the data reported seem reliable estimates of the words read during instructional sessions.

As noted briefly above there were various reading instructional data from the teacher logs. These data were identified for the statistical analyses as follows:

Total words read. These data are the number of words read during reading group instruction for the five consecutive days.

Total pages read. Simply the number of pages read during reading group instruction for the five consecutive days.

Words read orally. These data are the number of words read orally during the five days.

Words read silently. As above except these are number of words read silently.

Unique text read. These data are similar to total words read except that material which was reread was excluded. Thus, if group A read each of two 500 word stories twice during the five days their total words read would be 2000 (4 x 500) but their unique text read would only be 1000 words (2 x 500). This category was included when the second reading of stories appeared as an obviously common procedure for some groups. While total words read provides an indication of the amount of contextual reading the unique text read provides a better indication of content coverage.

Unique pages read. As above, pages reread were not included in this figure though they would have been included in the total pages data.

Days reading. These data reflect the number of days during the five day period that the teachers indicated contextual reading was completed during reading group instruction.

RESULTS

A 2 (regions) x 3 (grade levels) analysis of variance with repeated measures was conducted with the classroom as the unit of analysis. There were no statistically significant differences ($p > .05$) by region on any of the variables. As might be expected there were statistically significant differences ($p < .001$) for grade level on all variables save one. Only the number of days reading did not differ by grade level ($F(2,54) = .28, p > .760$). There were no statistically significant interactions between region and grade.

Insert Table 1 about here

These analyses suggest the larger number of classroom teachers selected from New York state did not bias the results since the data they report are similar to that from the other regions and that, as one would expect, a) older pupils complete more reading during instructional sessions and b) teachers schedule reading instruction nearly everyday regardless of grade

level in the elementary school.

Of particular interest, however, were the analyses by reader group within the classrooms. On the most general data set, total words read, there was a statistically significant difference ($F(1,54) = 54.65, p < .01$) with the better reader groups completing more reading during the instructional session at all grade levels as indicated by the significant interaction between reader group and grade level ($F(2,54) = 5.29, p < .01$). Similar results were obtained for the analysis of total pages read with a significant effect for reading group ($F(1,54) = 12.68, p < .001$) though no significant interaction effect between grade and reading group was produced. Of interest here though is the relative inadequacy of page counts in reflecting the extent of group differences in amount of contextual reading assigned. While page counts differ only moderately the words read data indicate a far greater discrepancy in content coverage. (Table 2 presents the means and standard deviations for all groups by grade level on all measures).

Insert Table 2 about here

There were no statistically significant differences between reader groups on the number of words read orally ($F(1,54) = .06, p > .05$) nor a significant

interaction between grade level and reader groups ($F(2,54) = .77, p > .05$).

An inspection of the means and standard deviations for this variable (see Table 2) shows a mixed pattern with poor readers at grade 1 and 5 reading more words orally than good reader groups but with the reverse true at grade 3. The differences between groups are not large while the standard deviations nearly equal the means in most cases suggesting wide variety in teacher instructional patterns. No three way interaction was found however indicating any such variability is geographically well distributed.

There were statistically significant differences between reader groups on the number of words read silently ($F(1,54) = 38.20, p < .001$) and a significant grade level by reader group interaction ($F(2,54) = 4.82, p < .05$). Good reader groups read more words silently during instructional sessions than poor reader groups at all levels. These differences in means are striking at all three grade levels. The amount of unique text read and pages read were selected as finer measures of pacing since stories that were reread were eliminated from the total words and total pages read data. However, after subtracting the words or pages reread the trends obvious in the total words and pages read data were still present and reanalyses again identified significant differences ($p < .01$) between reader groups on both variables but no reader group by grade interaction ($p > .05$). Only at grade 1 where poor readers reread about 25% of the material compared to the 10% reread by the good readers is there any difference of note between groups. By grade 3 both groups reread about 15% of the material and this drops to about 5% by

grade 6 for both groups. These analyses suggest that total words read and even total pages read, as defined here, are adequate measures of content covered with only the poor readers at grade 1 having a slight inflation in the estimate of content covered using these variables as metrics.

In order to examine whether the differences in amount and mode of reading identified when comparing good and poor reader groups within grade levels held constant between grade levels additional comparisons were made. In both cases older poor reader groups were contrasted with younger good reader groups on several variables. While good and poor reader group instruction differs within grade levels it is possible that the poor readers' instruction is similar to that of younger good readers. That is, the differences observed may be related to the lower achievement levels of the poor readers and teachers attempt to provide instruction that matches their developmental level. Unfortunately the comparisons here are, at best, crude since we have no data on the reading ability levels of the groups, only that the groups were comprised of good or poor readers relative to overall class achievement. Given the diversity of the sample we do not suppose, for instance, that all groups designated as poor readers in fifth grade classrooms were reading at approximately the same level, nor do we suppose that the fifth grade poor readers were reading at the same levels as the third grade better readers. Nonetheless the comparisons offer some evidence on the question.

In comparing grade 1 good reader groups with grade 3 poor reader groups we find the older poor readers read more total words and more words orally and

silently. The grade 1 good readers however read more than twice as many words silently as orally while the older poor readers read nearly an equivalent number of words orally and silently. Thus while grade 3 poor readers do more contextual reading in reading groups the distribution of oral and silent reading experience is different from the younger good readers. When comparing grade 3 good reader groups with grade 5 poor reader groups we find a slight advantage for the younger good readers in total words read and words read silently. On the other hand, the older poor readers read more words orally than the younger good readers. Thus the data suggest no blatant differences in the pacing of older poor reader groups when these are compared to younger good reader instruction though there is a tendency for the poor reader groups to do proportionally more oral reading indicating, perhaps, a shift in instructional emphasis.

DISCUSSION

Similar to other studies of allocated instructional time (Berliner, 1981) and content coverage (Barr, 1975) the data reported in the teacher logs virtually defies characterization. The diversity in the instructional plans and in the pacing of the instruction was quite surprising. A fair number of teachers, even at grade 1, met only three days a week with their groups for contextual reading, utilizing the other days to complete workbooks, worksheets, skills pages, skills testing or some other activity. Likewise, there were a variety of patterns of instructional materials used, the predominant pattern being one of using a single material (typically a basal reader) and completing a segment or story per day. A substantial number of

the teacher logs however reported use of multiple materials and odd sorts of reading instructional materials (e.g. geography texts). In some classrooms all reading groups read everything orally while in other classrooms all groups read everything silently. Most teachers moved the better readers at the pace of one story per session while the poor readers were often paced at a slower rate. Poor reader groups often simply read pages while good readers invariably read complete stories with some good reader groups regularly completing more than one story per day. The data in Table 3 show a wide range in amount of contextual reading accomplished during the five consecutive instructional days reported. As can easily be seen the within group differences (i.e. from the greatest number of words read to the least number read) are often as large as the between group differences.

Insert Table 3 about here

Given this variability, then what can be concluded from these data?

First, there is an obvious trend for better readers to complete more contextual reading during reading instructional sessions than poor readers at every grade level. Similarly the better reader groups read more material silently and less orally than do poor reader groups. This finding parallels Shavelson and Borko's (1979) report that "teachers' plans for high- and low-

achievement reading groups differed considerably with the teachers' plans for better reader groups emphasizing silent reading and comprehension while their plans for poorer reader groups centered around decoding skills and reading aloud." The between grade comparisons of younger better readers with older poorer readers seems to present a less radical difference in both amount and mode of contextual reading, suggesting some support for the hypothesis that teachers are simply instructing poor readers in much the same way as younger better readers are taught. Even here though the better readers read proportionally more words silently and fewer orally suggesting some support for the argument that poor readers are presented an instructional environment that differs from that presented better readers (Allington, 1983).

The pacing of instruction is quite different within grade levels with the good reader groups progressing at a faster rate through assigned materials. Poor readers seem to be moving at a pace more closely approximating that of the younger better readers than that of their age-matched peers. While at first glance, this seems reasonable, there may be cause for concern. There is a reasonable amount of evidence that suggests most teachers allocate equivalent amounts of reading instructional time for both good and poor reader groups (Alpert, 1975; Rosenshine, 1979). This seems to suggest that teachers believe that an equivalent allocation of instructional time is equitable. While this belief seems widespread (Hiebert, 1981) it does ensure that poor readers will not narrow their achievement deficit. Given Brophy's (1979) assertion that the "opportunity to learn" is a critical factor in the amount of learning that can be expected and the fact that poor readers

are paced at a substantially slower rate when instructional time allocations are roughly equivalent, it seems that only through increased time allocations can we expect to narrow achievement differences between good and poor readers. This, of course, assures that additional time allocations will allow poor reader groups to be paced at a rate similar to the pacing of good reader groups. Pacing the poor reader groups at a rate of content coverage below that of the better readers ensures that the achievement deficit will widen. In the present study no poor reader group read more words over the five instructional days than the good reader group in their classroom. Choosing to differentially allocate instructional time would alter the current classroom environment since the additional time given to the poor reader group would have to be taken from some other group or content area. Such a shift would require a dramatic change in teacher behaviors, as well as teacher beliefs. One alternative to such a shift which would provide the additional instructional time allocation would be to have reading specialists provide support instruction for the classroom reading curriculum. Currently such specialists may provide additional instruction but this instruction is typically from a curriculum separate from, and often quite incongruent with, the classroom reading program (Johnston, Allington & Afflerbach, 1983). Additional instruction offered in compensatory educational settings that allowed faster pacing on the classroom reading program should increase the achievement of the poor readers. However, compensatory reading programs currently seldom are organized in this manner. That is, the lack of curricular congruence between programs and the lack of coordination of instructional goals or efforts seldom works to facilitate an increased pacing

of classroom reading instruction.

Currently we have only the barest notions of what constitutes the reading instructional environment in classrooms. The present study adds descriptive data but much further research is necessary. The descriptions of reading instructional environments have given us the solid impression of the variability from one classroom to another and other studies provide a base for predicting some effects of such variability (c.f. Berliner, 1981; Brophy and Evertson, 1981; Rosenshine, 1979). But we have little knowledge of why such variation exists. Good readers and poor readers within grade levels are taught similarly in some respects (e.g. equivalent time, similar sized groups, reading instruction daily) but there does seem to be a few quite consistent differences in the instructional tasks set for the two groups. This good vs. poor reader difference remains to some extent even when the comparison is between the instruction provided younger good readers and older poor readers. We can only speculate why such a state of affairs exists. Identifying the bases for teacher decisions in these areas and actions would be profitable next steps in efforts to better understand classroom reading instruction.

Given what we know about the relationship between content covered and achievement (Barr, 1981; Anderson, Evertson & Brophy 1980) it seems unlikely, given the present findings, that the poorer readers will even maintain, much less narrow, the achievement deficits they bring to reading instructional sessions. It has been our impression that teachers organize their reading groups around a fixed period of time (usually 20-30 minutes) and otherwise pay little attention to content coverage. These impressions are supported by

Barr's (1975) study that found no teacher able to explicitly describe how instructional pacing was determined. There are undoubtedly a number of reasons why the pacing of instruction for poor reader groups is slower when allocated time is roughly equivalent to that of better reader groups. First, the larger amounts of silent reading completed by the better readers is a potential source of the differences since silent reading is generally more efficient (Harris and Sipay, 1980). Second, several investigators have reported that poor readers are more often placed in material relatively more difficult compared to their ability than good readers (Alpert, 1975; Gambrell, Wilson and Gannt, 1981) and this seems to slow the reading since more teacher and student interruptions of reading activity occur (see also, Eder, 1982). Finally, poor readers seem to be presented with proportionally more activities (e.g. word study, drill, worksheets) other than contextual reading during reading group sessions compared to better readers. Each of these factors seem unintentional sources of the differences in content covered identified in this study.

Future research needs to be directed not only at understanding why and how teachers reach such decisions about instruction, but also on the effects of pedagogical change. Barr (1982) notes there is no simple solution to the problem of designing more effective instruction for poor readers. One cannot simply increase the content covered, or increase time allocations, or increase the amount of silent reading and expect that poor readers' instructional needs will automatically be better served. What we need instead is a far better understanding of teacher decisions, learning outcomes and classroom processes

before any substantial recommendations can be made. This, then, is the task before us.

FOOTNOTES

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Table 1: Distribution of teachers by grade and region.

Grade Region	1	3	5	Total
New York	10	7	9	(26)
Other ^a	11	13	10	(34)
Total	(21)	(20)	(19)	(60)

a. Arizona, Illinois, Maryland, Montana, North Carolina, Tennessee

Table 2: Means and standard deviations of groups by grade and measures.

	1		3		5		Poor	
	Good	Poor	Good	Poor	Good	Poor	Good	Poor
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Total words	1121 (495)	386 (240)	4783 (1740)	2601 (1943)	6926 (3068)	4363 (2394)		
Total pages	26 (8.3)	20 (10.8)	39 (14.5)	28 (13.0)	36 (15)	33 (14.8)		
Words oral	318 (253)	322 (231)	1589 (1462)	1285 (1060)	1365 (1956)	1771 (1518)		
Words silent	786 (511)	60 (94)	3171 (1993)	1261 (1182)	5561 (2893)	2582 (2204)		
Unique words	1010 (546)	288 (204)	4048 (1521)	2145 (1263)	6513 (2840)	4115 (2398)		
Unique pages	23 (10.6)	15 (7.0)	34 (14.8)	27 (17.3)	34 (14.5)	31 (15.6)		
Total days	4.3 (1.0)	4.3 (1.0)	4.3 (0.8)	4.4 (.99)	4.2 (0.8)	4.7 (0.4)		

Table 3: Range of total words read for each group by grade level.

	Good ¹	Poor	Good ³	Poor	Good ⁵	Poor
Low	181	16	1427	416	1003	570
High	1933	739	7544	7257	11338	8853
Difference	(1752)	(723)	(6117)	(6841)	(10335)	(8283)